



gamma

GAMMA
Building Management Systems



SIEMENS

Electrical Installation from A to Z

Catalogs for the division: Electrical Installation Technology

ALPHA Distribution Boards, Terminal Blocks and Meter Cabinets

ALPHA Distribution Boards and Terminal Blocks

ET A1

Order No.:
pdf only: (E86060-K8210-A101-A8-7600)



ALPHA 400-ZS Meter Cabinets

ET A2

Order No.:
Regional catalogs available on request
(available in German only)



BETA Low-Voltage Circuit Protection

Order No.:
pdf only: (E86060-K8220-A101-A9-7600)

ET B1



GAMMA Building Management Systems

Order No.:
pdf only: (E86060-K8230-A101-A8-7600)

ET G1



DELTA Switches and Socket Outlets

Order No.:
pdf only: (E86060-K8240-A101-A8-7600)

ET D1



The A&D Offline Mall

Order No.:
E86060-D4001-A110-C6-7600 (CD-ROM)
E86060-D4001-A510-C6-7600 (DVD)

CA 01



Internet

Visit our Automation and Drives Web site on the Internet. You will find us at the following addresses

- Automation and Drives:
<http://www.siemens.com/automation>
- Electrical Installation Technology:
<http://www.siemens.com/e-installation>
- for the A&D Mall:
<http://www.siemens.com/automation/mall>

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Figures given in inches are only valid for export purposes according to the „Law on units in measuring systems“.

GAMMA Building Management Systems

Catalog ET G1 · 2008

Supersedes: Catalog ET G1 · 2007



The products contained in this catalog can also be found in the Offline Mall CA 01
Order No.:
E86060-D4001-A110-C6-7600 (CD-ROM)
E86060-D4001-A510-C6-7600 (DVD)



The products and systems listed in this catalog are developed and manufactured using a quality management system certified by VDE and according to DIN EN ISO 9001:2000.

1	Display, Operation Pushbuttons, multifunction pushbuttons, pushbutton accessories, displays, touch panels, remote controls, visualization
2	Output Devices Analog output devices, binary output devices, switchable socket outlets
3	Input Devices Analog input devices, binary input devices
4	Combination Devices Input/output devices
5	Devices for Special Applications Lighting, sun protection, anti-glare protection, utilization of daylight, heating, cooling, ventilation, air-conditioning, load management, safety, quick-assembly systems
6	Gateways, Interface Converters RS232, USB, infrared, DALI, Ethernet, radio, telephone, PROFIBUS DP, LOGO!, EnOcean
7	Physical Sensors Motion/presence, brightness, temperature, leakage, fire, dual sensors
8	Control and Automation Devices Programmable logic controllers, logic modules, scene modules, time/event modules, time switches and accessories
9	System Products Bus coupling units and accessories, power supply units, reactors, line couplers, network gateways
10	System Accessories Cover strips, bus terminals, connectors, data rails, overvoltage protection
11	Counters Operating hour/pulse counters, counters for electrical energy
12	wave Display, operation, output devices, input devices, devices for special applications, gateways, interface converters, system products
13	Technical Information Switch actuators, switch/dimming actuators, shutter/blind actuators
14	Appendix

Siemens Automation and Drives. Welcome

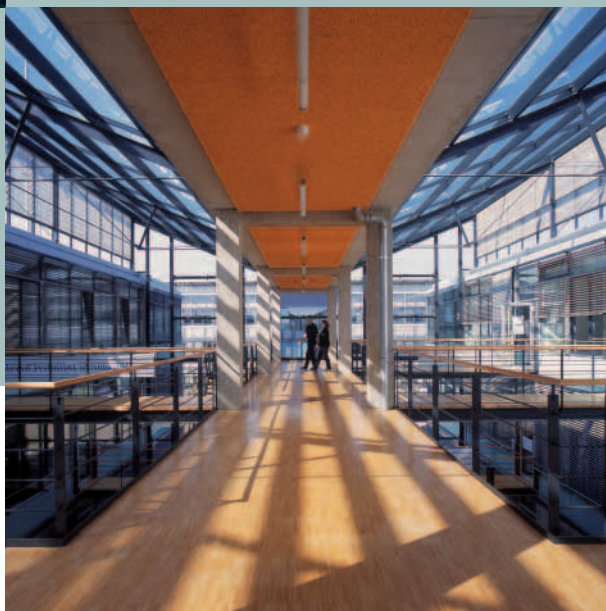
More than 70,000 people aiming for the same goal: increasing your competitiveness. That's Siemens Automation and Drives.

We offer you a comprehensive portfolio for sustained success in your sector, whether you're talking automation engineering, drives or electrical installation systems. Totally Integrated Automation (TIA) and Totally Integrated Power (TIP) form the core of our offering. TIA and TIP are the basis of our integrated range of products and systems for the manufacturing and process industries as well as building automation. This portfolio is rounded off by innovative services over the entire life cycle of your plants.

Learn for yourself the potential our products and systems offer. And discover how you can permanently increase your productivity with us.

Your regional Siemens contact can provide more information. He or she will be glad to help.

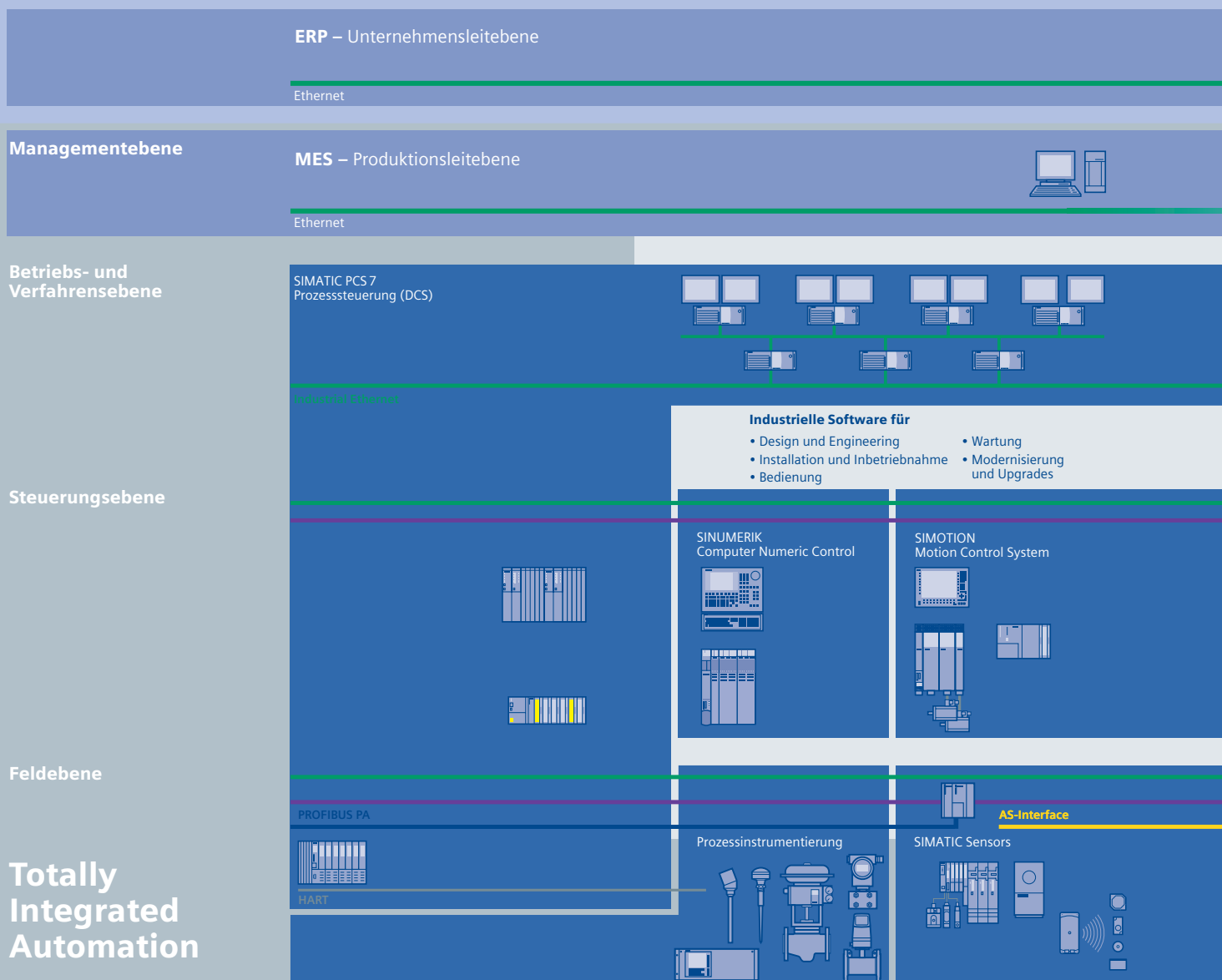




Sharpen your competitive edge. Totally Integrated Automation

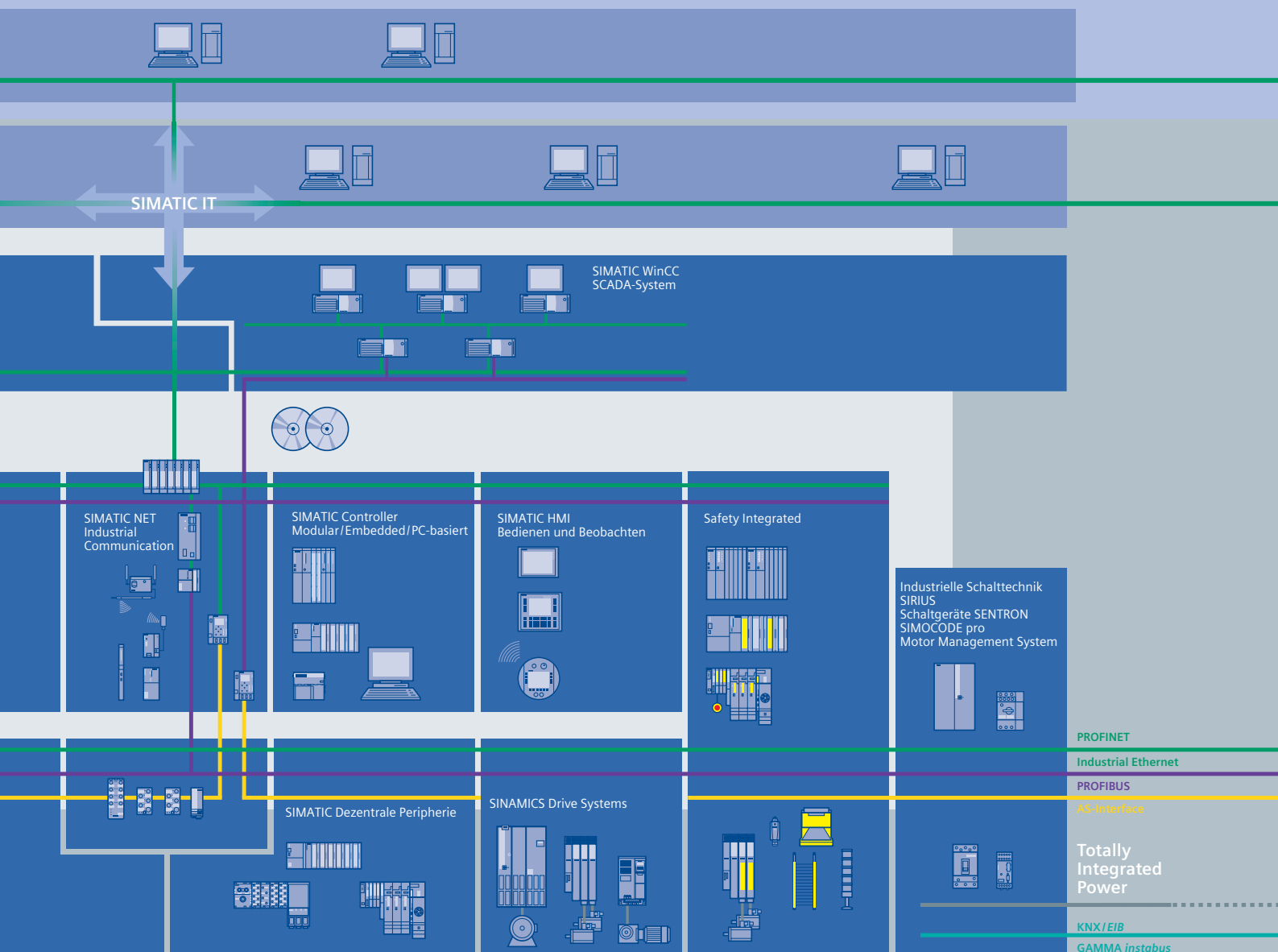
With Totally Integrated Automation (TIA), Siemens is the only manufacturer to offer an integrated range of products and systems for automation in all sectors - from incoming goods to outgoing goods, from the field level through the production control level to connection with the corporate management level.

On the basis of TIA, we implement solutions that are perfectly tailored to your specific requirements and are characterized by a unique level of integration. This integration not only ensures significant reductions in interface costs but also guarantees the highest level of transparency across all levels.



It goes without saying that you profit from Totally Integrated Automation during the entire life cycle of your plants - from the first planning steps, through operation, right up to modernization. Consistent integration in the further development of our products and systems guarantees a high degree of investment security here.

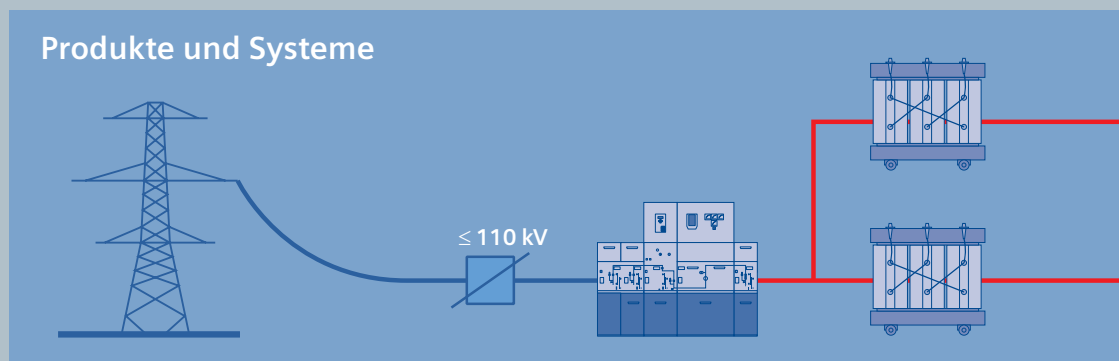
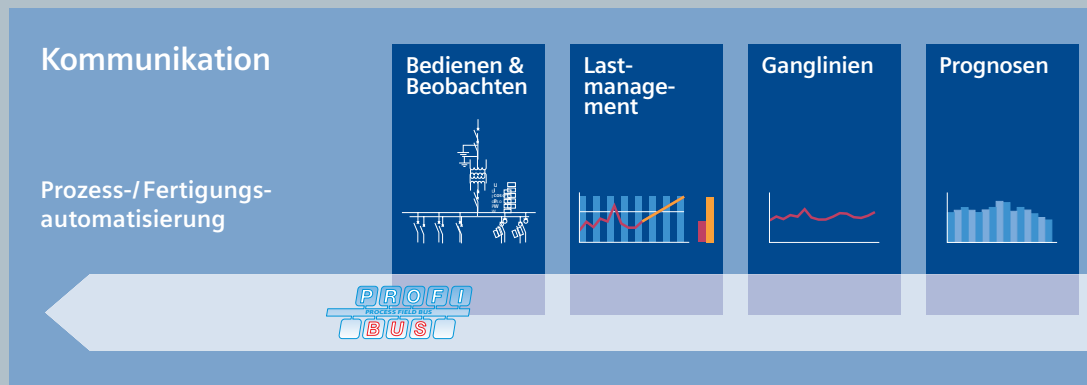
Totally Integrated Automation makes a crucial contribution towards optimizing everything that happens in the plant and thus creates the conditions for a significant increase in productivity.



Integrated energy distribution from a single source. Totally Integrated Power

Totally Integrated Power (TIP) brings together all the components of electrical energy distribution into an integrated whole. Thus TIP provides the answer to growing market demands in the planning, construction and use of utility buildings and industrial buildings.

On the basis of TIP, we offer integrated solutions for energy distribution, from medium voltage to the power outlet. Totally Integrated Power is based here on integration in planning and configuring as well as on perfectly matched products and systems.



Siemens Electrical Installation: The World of Installation Technology



ALPHA Distribution Boards and Terminal Blocks

The ALPHA range comprises small distribution boards, meter cabinets, wall and floor-mounted distribution boards and molded-plastic distribution boards. The ALPHA FIX terminal blocks meet all your needs for clear and manageable wiring using a full range of connection methods.



BETA Low-Voltage Circuit Protection

Siemens offers a broad range of mutually compatible devices for line protection, personnel and fire protection, lightning and overvoltage protection, device and plant protection.

Our device range comprises all the protective devices required for an all-round protection concept, such as fuses, miniature circuit breakers, residual current protection equipment and overvoltage protection devices, as well as switching devices, measuring and monitoring devices.



GAMMA Building Management Systems

The innovative GAMMA *instabus* Building Management Systems let you increase safety and convenience and maximize efficiency. GAMMA *instabus* controls lighting, shading and room temperature. All the electrical functions of a building can be intelligently integrated into the system. Connection to other systems of a building, such as LAN, opens up a whole new world of applications. A key feature of GAMMA *instabus* is its great flexibility.



DELTA Switches and Socket Outlets

The DELTA switch and socket outlet range combines a wide range of different design interfaces with more innovative and safe technology. And because the operator interfaces are simple to interchange, you can enjoy complete safety – even when your taste or the environment changes.

Modern electrical switching and installation technology

These days it's hard to imagine daily life without electricity. Modern electrical switching and installation technology is an essential requirement for ensuring that our use of electricity is safe and user-friendly.

Shaping the future with innovations

Without innovations there can be no progress. That is a well-known fact. And that is why, in the area of electrical installation technology, we do everything in our power to produce innovations, continue improving existing products and develop new applications. All this with the aim of offering innovative and high-quality products across the whole spectrum of electrical installation technology in order to further increase our competitive edge and open up new market opportunities.

Our factory in Regensburg and our branches worldwide

For 120 years, Siemens has been developing products and innovative solutions for residential buildings, non-residential buildings and industry. While production began in Berlin, our production has now been based in Regensburg since 1948. Today, this factory is one of the key international manufacturers of installation technology using cutting edge equipment, such as CAD, simulation and automated laboratory equipment.

We now have more than 17 production sites in Europe, Asia and America. Which is the best way to ensure compliance with country-specific standards – and the best way to ensure that our customers have the benefit of local support.



Industrial buildings



Non-residential buildings



Residential buildings

Quality and the Environment

Quality in the context of the environment

Increasing urbanization and a growing global population have meant that it has become one of our key challenges to look after and preserve our natural resources – a challenge we are happy to meet head on.

Acting responsibly

As part of the ecologically responsible and globally active Siemens Group, we are setting the bar high. Our environmental protection objectives are an integral part of our rigorous quality management.

Even during the development of our products and systems, we take a critical look at their possible effects on the environment. So, without exception, they all comply with the EC Directive RoHS (Restriction of Hazardous Substances). During this development phase, we also lay the foundations for the highest quality: From the very outset, we define reliability requirements and the related quality assurance measures, and these are incorporated into all drafts.

All products and systems are also subject to strict quality specifications during production and testing. We take great care to ensure compliance with these specifications in order to guarantee our customers nothing but the very best quality. Our many certificates bear witness to our success.



Pro-active environmental protection

It goes without saying that we are certified to DIN ISO 14001 – as are all Siemens premises. Furthermore, as an active member of ZVEI (German Electrical and Electronic Manufacturers' Association), we pro-actively support the protection of the environment with a wide range of measures, such as the development of binding environmental management systems.

In 2006 – following 1995, 1999 and 2002 – our factory in Regensburg was awarded the Environmental Award of the City of Regensburg for the fourth time. This latest prize was awarded for the fact that we have voluntarily renounced the use of hazardous substances in our products and for our consistent application of this aim in our galvanic processes.

Functions in the context of the environment

The functions of the GAMMA Building Management Systems make a huge contribution to environmental protection. For example, GAMMA *instabus* links the management functions lighting and shutter/blind control with heating, cooling, ventilation, air-conditioning and safety.

The automatic shutter/blind control controls the blind slats so that maximum daylight is allowed to penetrate without dazzling. A constant light level control ensures that the level of light is always just right. This saves electricity – which is good for the environment – and also reduces energy costs. By reducing the heating when a room is being aired, the system also ensures that no heating energy is wasted.

These are just a few examples of the wide range of options offered by GAMMA *instabus* that help save energy and make building management more cost-efficient. Thus the convenience of modern technology pro-actively supports environmental protection.

Our Added Extra

Build on a sound basis

With our basic and advanced courses, you can lay the foundations for your business success. In our modern training center in Regensburg you will learn the necessary theoretical and practical essentials from lecturers who are experts in their fields. Dynamic and easy to understand training with multimedia teaching equipment. Available in German and English. If required, we also provide training in-house or in one of our more local Siemens branches.

Our range of training courses covers the whole span of electrical installation. You will get to know our entire portfolio of products and their application. Step-by-step we will familiarize you with the entire spectrum of modern installation options, thus opening up a whole new world of business opportunities.

Oh, and by the way: In 1991, the ET Training Center was the first certified training center in the world to offer KNX/EIB training courses, and is still the only manufacturer training center to offer the whole range of KNX-certified courses in both German and English.

For details of our current range of courses, please visit our Web site at:

<http://www.siemens.de/installationstechnik/kurse>

Or contact us:

Tel.: +49 (0) 941 790 2950

e-mail: cscet.aud@siemens.com



Comprehensive support

We offer all-round support: If you have any queries regarding our products, the planning of your electrical installation or the availability of technical documentation.

Just give us a call:

Tel.: +49 (0) 180 50 50 222 (0.14 €/minute from a German landline)

Fax: +49 (0) 180 50 50 223

e-mail: ad.support@siemens.com

Installation technology on the net

Visit us on the Internet. Our Web site offers information on all our products – ALPHA Distribution Boards and Terminal Blocks, BETA Low-Voltage Circuit Protection, GAMMA Building Management Systems and DELTA Switches and Socket Outlets, so visit us at: <http://www.siemens.com/e-installation>



Software at your Service

Labeling software for complete electrical installations

The Siemens labeling software means it has never been easier to label your switches and socket outlets, distribution boards and low-voltage controls.

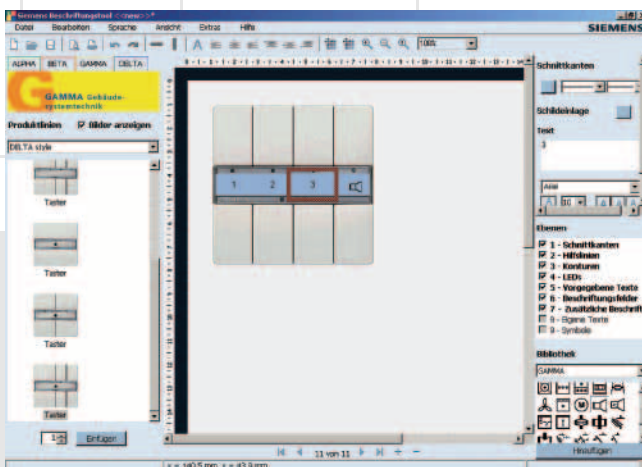
Each product is labeled using a standard printer on prepunched adhesive film or simply on DIN A4 paper. Generally any device used in electrical installation can be labeled using this labeling system. This allows you to create a neat and tidy distribution board and clearly labeled switches and socket outlets – long after installation.

The benefits:

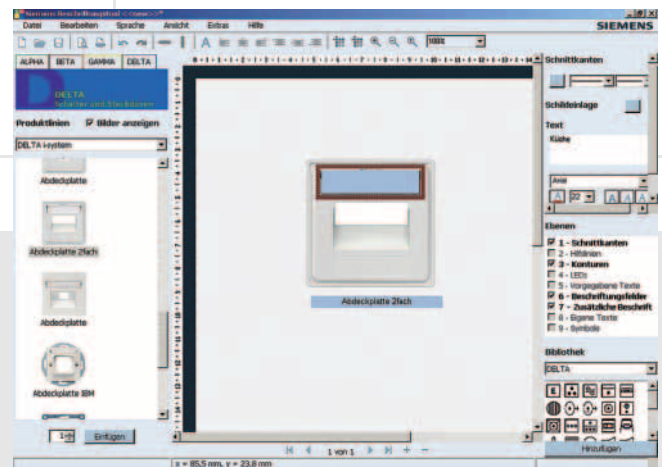
- Your work is made easier and your installation has a uniform appearance, thanks to a single and consistent labeling system
- Adhesive labels are durable, simple to apply and can be used for all devices.

The program is simple to use and available free of charge on the Internet:

<http://www.siemens.de/beschriftungstool>



Labeling tool, example GAMMA



Labeling tool, example DELTA

We offer a wide range of tools designed especially to support you when using GAMMA Building Management Systems.

GAMMA Planner and Installation Engineer Tool

This tool lets you call up the "Siemens. GAMMA Catalog" for building management systems, compile product descriptions and specifications and download them in a range of formats – online, STLB-Bau-compliant and free of charge.

The "Siemens. GAMMA Planner Tool" enables the simple creation of STLB-Bau-compliant and test-safe master specifications on the basis of the Siemens. GAMMA Catalog. The fact that prices for material and labor are also taken into account means that cost estimates can be drawn up in no time at all.

The free calculation software for installation engineers "Siemens. GAMMA Installation Engineer Tool" enables the simple creation of offers for building management systems on the basis of Siemens GAMMA Catalog in a minimum of time.

<http://www.din-bauportal.de/siemens>

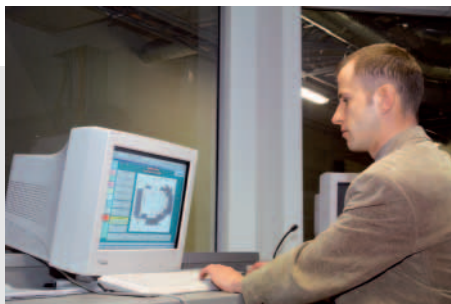
Visualization

The visualization function provides an overview of all the relevant building states and allows the appropriate action to be taken where required. It is also suitable for remote control. This forms the basis of an efficient building management system. The visualization is scalable for all applications and the functions are of modular design (see Chapter 1).

ETS

ETS is the software for the planning and configuration of intelligent KNX/EIB building management systems. This commissioning tool is based on the KNX standard and is maintained by the KNX Association. It is used for the manufacturer-independent commissioning of all KNX/EIB products. You only need ETS for Siemens products – no other tools are necessary. This allows users to create up-to-the-minute and complete project documentation at the touch of a button.

<http://www.konnex.org>



Our GAMMA Building Management Systems

GAMMA *instabus*



Display, Operation



Output Devices



Input Devices



Combination Devices



Devices for Special Applications

- Lighting
- Sun protection
- Anti-glare protection
- Utilization of daylight
- Heating
- Cooling
- Ventilation
- Air-conditioning
- Load management
- Safety



Gateways, Interface Converters



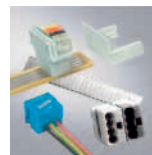
Physical Sensors



Control and Automation Devices



System Products



System Accessories

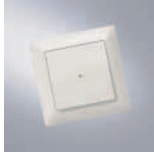


Counters

Our innovative GAMMA *instabus* Building Management Systems let you increase safety and convenience and maximize efficiency. GAMMA *instabus* controls lighting, shading and room temperature.

All the electrical functions of a building can be intelligently integrated into the system. Connection to other systems of a building, such as LAN, opens up a whole new world of applications. A key feature of GAMMA *instabus* is its great flexibility.

GAMMA wave



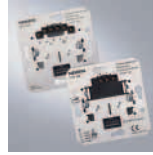
Display, Operation



Output Devices

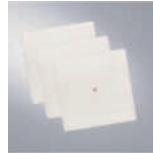


Input Devices



Devices for Special Applications

- Lighting
- Sun protection
- Anti-glare protection
- Utilization of daylight
- Safety



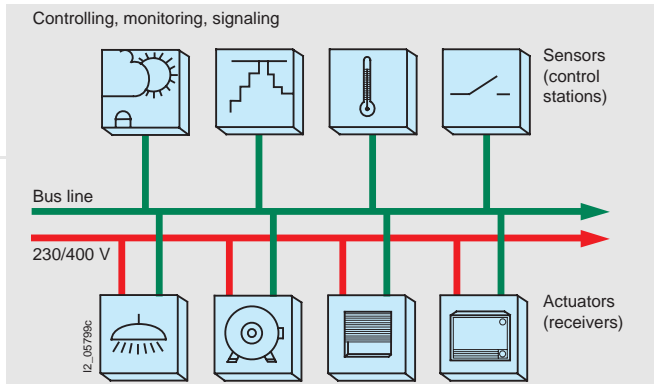
Gateways



System Products

General data

General information



Ever increasing demands made on the flexibility and convenience of electrical installations, combined with the demand to minimize energy requirements, have led to the development of building management systems. The bus technology used in these systems is based on manufacture-independent and internationally standardized technology: KNX/EIB. More than 100 manufacturers support this standard and have joined forces to form the KNX Association.

The member companies ensure the availability of bus-compatible products. This has made it possible for devices from various manufacturers to be used in a single KNX/EIB plant.

Demand for more convenience and the fact that more and more is technically possible means that an increasing amount of time and effort is being devoted to electrical installations. While conventional electrical installation technology has reached the limits of its capabilities, GAMMA *instabus*, the intelligent building management systems from Siemens based on KNX/EIB, has made it possible to satisfy these comprehensive demands with solutions that are both easy to manage and cost-effective.

System arguments

In conventional electrical installations, each function needs its own cable and each control system a separate network. By contrast, GAMMA *instabus* allows all operational functions and processes to be controlled, monitored and signaled over a single common cable. This means that the energy feeder can be routed directly to consumers without any detours.

Not only does this reduce the amount cables required, it also has other huge advantages: Electrical installations in buildings are far simpler to install and it is also easy to add any subsequent extensions and make modifications. If the purpose or configuration of a building is changed, the GAMMA *instabus* system is easy to adapt by simply reassigning the various bus devices (changing their parameters), without the need to lay any new cables. These parameters can be reassigned using a PC connected to GAMMA *instabus* and the configuration and commissioning software ETS (Engineering Tool Software).

With the right interfaces, GAMMA *instabus* can also be connected to the control centers of other building management and automation systems (e.g. SICLIMAT X) or to a public telephone network (e.g. ISDN) or using a LAN/Internet connection. It is therefore just as cost-effective to use the GAMMA *instabus* in the family home as in hotels, schools, banks, office buildings or complex non-residential buildings.

Transmission technology

GAMMA *instabus* based on KNX/EIB is a distributed, event-controlled bus system with serial data transmission for the controlling, monitoring and signaling of operational functions.

All the connected bus devices can exchange data over a common transmission path, the bus. Data is transmitted in serial mode and in compliance with precisely defined rules (the bus protocol). The data to be transmitted is packed into a telegram and sent over the bus from a sensor (the command output) to one or more actuators (the command receiver).

Each recipient acknowledges receipt of the telegram when the transmission is successful. If no acknowledgement is issued, transmission is repeated up to three times. If the telegram is still not acknowledged, the send operation is aborted and the error noted in the memory of the transmitter.

Transmission of data using KNX/EIB is not electrically isolated as the power supply for the bus devices (24 V DC) is transmitted at the same time. The telegrams are modulated on this direct voltage, whereby a logic zero is transmitted as a pulse. The omission of a pulse is interpreted as a logic one.

The individual data of the telegrams are transmitted in asynchronous mode. However, transmission is synchronized by start and stop bits.

Access to the bus as the shared physical medium of communication for asynchronous transmission must be controlled unambiguously. In the case of KNX/EIB, the CSMA/CA procedure is used for this purpose. The CSMA/CA procedure guarantees collision-free access to the bus without any reduction of bus data throughput.

All stations listen in but only those actuators actually addressed respond. If a station wants to transmit, it first has to listen in and wait until no other station is transmitting (Carrier Sense). When the bus is unoccupied, any station can begin a transmission operation (Multiple Access).

If two stations begin to transmit simultaneously, the higher-priority station instantly asserts itself on the bus (Collision Avoidance), while the other station pulls back and restarts the transmission operation some time later.

If the two stations have an identical level of priority, the one with the smaller physical address asserts itself.

Addressing

Every letter needs an address in order for it to be correctly delivered by the postal service. The addressing of bus devices is similar, but the form used for postal purposes is unsuitable in this case.

During configuration with the ETS, each bus device is assigned its own physical address with which it can be uniquely identified; just like a postal address is a unique ID for the recipient of a letter. However, the physical address has to be expressed in the language of the bus and is based on the topological structure of the KNX/EIB system.

Physical addressing is used by the ETS only for commissioning the individual bus devices or for servicing and diagnostics activities. In this case the addressing is performed along the same lines as for the postal delivery service.

By contrast, the KNX/EIB system uses a different address for telegram traffic: the logical or so-called group address. This address is not based on the bus topology but on the operational functions (applications) of the building.

Unlike the postal service, which delivers a letter to the recipient's address, the configured group address is written into each telegram sent by the transmitter. Every bus device listens to this telegram, reads the group address contained in it, and checks whether the telegram is addressed to it or not.

The group address to which a bus device should respond is assigned during configuration of the KNX/EIB system using ETS. Unlike the postal delivery service, several group addresses can be assigned to one bus device.

When a bus device is listening to a telegram on the bus, it will always receive the telegram if it responds to the group address entered in the telegram. If not, it will discard the telegram as not being intended for it.

Topology

Up to 64 bus-compatible devices (stations) can be connected to and operated on the smallest unit of the KNX/EIB system, i.e. on a single line. Using line couplers connected to the so-called main line it is possible to bundle up to 15 lines in an area.

Fifteen areas can be joined together by means of backbone couplers, which are connected to the so-called backbone lines, in order to form a larger unit.

Interfaces (gateways) to third-party systems (SICLIMAT X, LAN, etc.), or additional KNX/EIB systems are connected to the backbone line.

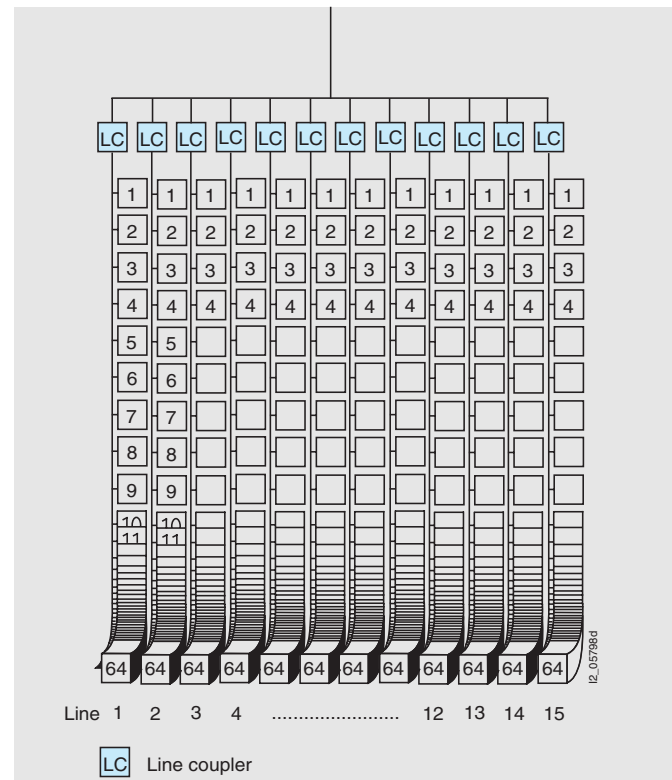
Although more than 14,000 devices can be interconnected in a single unit, the clear-cut logic of the system is preserved. Telegrams only ever overstep the interfaces to other lines and function areas if they are needed in those areas. This minimizes the telegram load on the main line. Line/backbone couplers carry out the necessary filter function.

The physical address is based on this topological structure: Every device can be uniquely identified through the specification of its area, line and device number. For assignment of the devices to the operational functions the group addresses are divided into main groups and subgroups.

During configuration it is possible to divide the group addresses for different management functions into as many as 14 main groups, e.g. for

- Lighting control
- Shutter/blind control
- Room control for heating, ventilation, air conditioning.

Each main group can include as many as 2048 subgroups, to suit the user's requirements. This means that each device is able to communicate with every other one.



Technology

Each line requires its own power supply unit for the devices and is therefore self-sufficient.

The Siemens power supply unit supplies the individual devices on the line with SELV (safety extra-low voltage) of 24 V DC and, depending on the version, can be loaded with 160 mA, 320 mA or 640 mA. It features both voltage and current limiting and is therefore short-circuit resistant. Short system interruptions are jumped with a buffer period of 200 ms.

The bus load depends on the type of devices connected. The devices are ready for operation at a minimum of 21 V DC and typically draw 150 mW from the bus. If there is a concentration of a large number of bus devices in a single location, the power supply unit must be located in the near vicinity.

A maximum of two power supply units are permissible in one line. A minimum distance of 200 m of cable length must be observed between the two power supply units.

The length of a line plus all junctions must not exceed 1000 m. The distance between a power supply unit and a device must not exceed 350 m. In order to guarantee no telegram collisions, the distance between two devices should be limited to a maximum 700 m.

The bus cable can be laid parallel to the mains cable. It can be looped and branched. A cable terminating resistor is not required. The devices are connected to the bus by means of either pressure contact or bus terminals. Connection by means of pressure contact is effected by snap-fitting the devices (designed for installation in distribution boards) on to the standard mounting rail (DIN EN 50022-35 mm × 7.5 mm) with integrated data rail. Transition from the data rail to the bus cable is effected by a connector. The bus cable is connected to surface-mounting, flush-mounting, wall-mounting, ceiling-mounting and built-in devices by plugging on the bus terminal.

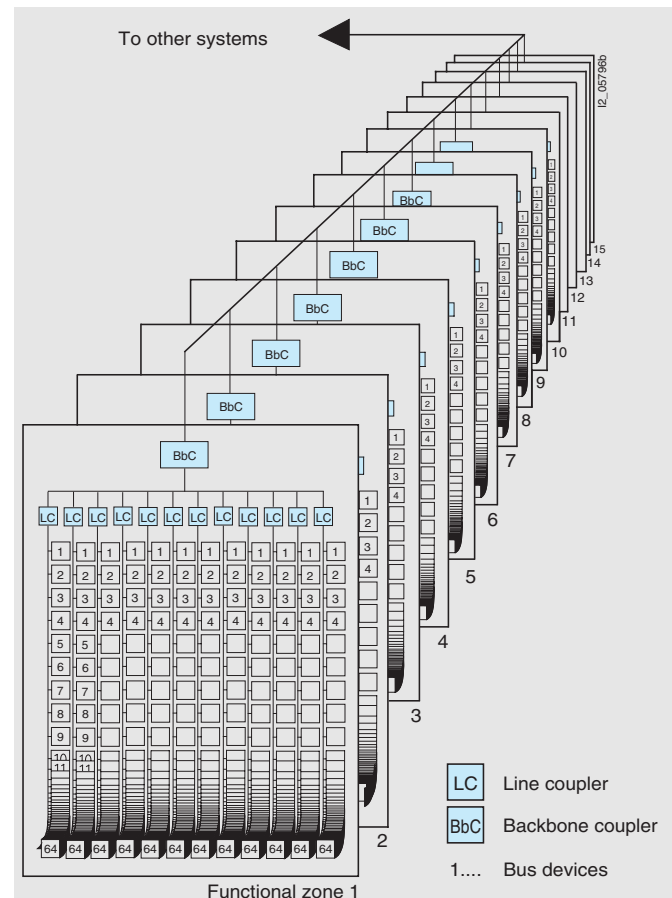
Devices

Each device generally comprises a universal *Bus Coupling Unit* (BCU) and a task-specific *Bus Terminal* (BT, e.g. pushbutton or display), which exchanges information with the BCU over the *User Interface* (UI). The BCU receives telegrams from the bus, decodes them and actuates the BT. Conversely, the BT sends information to the BCU, which encodes it and sends it as a telegram onto the bus.

During configuration and commissioning with the ETS the BCU receives the parameterization data for the function that is to be performed. For this purpose, the BCU contains a *Microprocessor* (MP) with a non-volatile ROM (Read Only Memory), a volatile RAM (Random Access Memory) and a non-volatile EEPROM (Electrically Erasable Programmable ROM).

The ROM contains the system-specific software that cannot be changed by the user. The parameterization data for the function of the BCU to be performed are saved by the ETS in the EEPROM. The current data are saved by the MP in the RAM.

The assignment of the UI pins differs on the various BTs. This ensures that a BT connected through the UI is able to communicate error-free with the BCU when the relevant application program has been loaded by ETS in the EEPROM of the BCU.



System data		
Bus cable		
• Cable type	mm ²	YCYM 2 x 2 x 0.8 One core pair (red, black) for signal transmission and power supply, One core pair (yellow, white) for additional applications (SELV or voice)
Cable length		
• Cable lengths of one line in total (core diameter: 0.8 mm)	m	Max. 1000 (including all junctions)
• Length between two bus devices	m	Max. 700
• Length between bus device and power supply unit (320 mA)/reactor	m	Max. 350
• Length between power supply unit (320 mA) and reactor		Side-by-side mounting necessary (on standard mounting rail with integrated data rail)
Bus devices		
• Number of areas		Max. 15
• Number of lines per area		Max. 15
• Number of bus devices per line		Max. 64
Topology		Line, star or tree structure
Power supply		
• Power supply	V DC	24 (SELV safety extra-low voltage)
• Power supply units per line		One power supply unit (160, 320 or 640 mA)
• Power supply units per line for high current demand		Max. two power supply units at a distance of at least 200 m
Transmission		
• Transmission technology		Distributed, event-controlled, serial, symmetric
• Baud rate	bit/s	9600
Device features (unless otherwise specified)		
Degree of protection according to EN 60529		IP 20
Protective measure		Bus: safety extra-low voltage SELV 24 V DC
Overvoltage category		III
Rated insulation voltage U_i	V	250
Degree of pollution		2
EMC requirements		Complies with EN 50081-1 and prEN 50082-2 (severity 3), prEN 50090-2-2, KNX/EIB manual
Resistance to climate		prEN 50090-2-2, KNX/EIB manual
Operating conditions		
• Application		For fixed installation indoors, for dry rooms and installation in heavy-current distribution boards
• Ambient operating temperature	°C	-5 to +45
• Humidity in operation	%	Max. 93
• Storage temperature	°C	-40 to +55
• Humidity in storage	%	Max. 93
Certification		KNX/EIB certified
CE marking		Compliant with EMC Directive (residential and non-residential buildings), Low Voltage Directive

Explanations

DT (delivery time class)

DT	Meaning
▶	preferred type
A	two workdays
B	one week
C	three weeks
D	six weeks
X	on request

Preferred types are device types that can be delivered immediately ex works, i.e. they are dispatched within 24 hours.

If ordered in normal quantities, the products are usually delivered within the specified delivery times, calculated from the date we receive your order.

In exceptional cases, delivery times may vary from those specified.

The delivery times are valid ex works from Siemens AG (products ready for dispatch).

Shipping times depend on the destination and the method of shipping. The standard shipping time for Germany is one day.

The delivery time classes specified in the catalog are valid as of 10/2007 and are constantly being optimized. For more up-to-the-minute information, please visit our site at:

<http://www.siemens.com/automation/mall>.

PU (price unit)

The PU column (price unit) specifies the quantity to which the price and weight refer.

PS/P. unit (packaging size/ packaging unit)

The first digit in the PS/P. unit column (packaging size/packaging unit) indicates the minimum order quantity. You can only order this specified quantity or a multiple thereof.

The second digit in the PS/P. unit column (packaging size/packaging unit) specifies the number of units contained in larger packaging (e.g. in a carton). You must order this quantity or a multiple thereof if you want the item to be delivered in a larger packaging quantity. Examples:

PS/P. unit	Meaning
1	You can order one item or a multiple thereof.
5	Five units are packed in a bag. Because the bags cannot be opened, you can only order a multiple of the quantity contained in the bag: 5, 10, 15, 20 etc.
5/100	One carton contains 20 bags, each containing 5 units, i.e. a total of 100 units. If only cartons are available for delivery, you need to order a multiple of the carton quantity: 100, 200, 300, etc. Ordering a quantity of 220 units, would produce the following delivery: two cartons, each containing 100 units (= 200 units) and 4 bags, each containing 5 units (= 20 units).

PG (price group)

Each product is allocated to a price group.

Weight

The value specified in the Weight column specifies the weight in kg for the quantity specified in the PU column (price unit).

Dimensions

Unless stated otherwise, all dimensions are specified in mm.

Display, Operation

1

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Note: Only the chapters indicated in black on this page contain selection and ordering data.

1 Display, Operation

Introduction

Overview

Pushbuttons



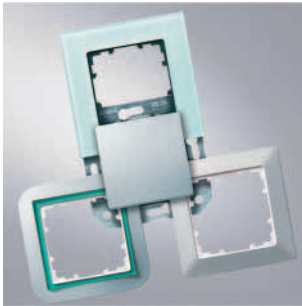
No matter which style you prefer, DELTA has the right switch and socket outlet product range.

Multifunction pushbuttons



These include pushbuttons with IR receivers, with room temperature controllers and with motion detectors and LCD.

Pushbutton accessories



More information on rockers, color elements, pictographs, frames, intermediate frames and accessories for trunking systems.

Displays



A space-saving combination that offers optimum display and operator friendliness.

Touch panels



Touch panels are visually attractive and easy to use.

Remote controls



A range of room functions, such as lighting, can be wirelessly operated over either infrared or radio control.

Visualization



Use a PC for display, operation and archiving - from one or more operator terminals.






Technical specifications

Design	i-system							DELTA profil/style							DELTA ambiente			DELTA millennium		
Type	UP 221	UP 222	UP 223	UP 221E		UP 222E		UP 241	UP 242	UP 285	UP 243	UP 244	UP 286	UP 245	UP 246	UP 287	UP 284		UP 284	
Application program	211501	221501	230201	212001	908402	222001	908502	211301	907402		221301	907502	241301	241901	907602	241401	241D01	907802	904101	904201
Enclosure data																				
Homogeneous aluminum surface, ground conductor and ground terminal	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Module for channel installation	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Dimensions																				
• Height	mm	55						65 (DELTA profil), 68 (DELTA style)								65			80	
• Width	mm	55						65 (DELTA profil), 68 (DELTA style)								65			166	
• Depth	mm	11						14								14			41	
Display/control elements																				
Individual pushbuttons	2	4	6	2	2	4	4	2	2	4	4	8	8	8	8	8	8	8	1	2
Pushbutton pairs	1	2	3	1	1	2	2	1	1	2	2	4	4	4	4	4	4	4	--	--
Operation (v: vertical, h: horizontal)	h	h	h	h	h	h	h	v	v	v	v	v	v	v	v	v	v	v	--	--
LED per pushbutton pair for status indication or configurable as orientation light	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	--
Red luminous bar for status indication or configurable as orientation light	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Separate LED for orientation light (ON/OFF configurable)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	--
Labeling field	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	--	✓	✓
Individually engravable pushbutton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Pictographs supplied	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓	✓	--	--
Bus connection																				
Integrated bus coupling unit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Plugs onto UP 110 bus coupling unit	✓	✓	✓	✓	--	✓	--	✓	--	✓	--	✓	✓	✓	--	✓	✓	--	--	--
Plugs onto UP 114 bus coupling unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	--
General functions																				
Maximum number of group addresses	9	9	9	13	38	13	38	13	38	13	38	9	27	38	12	27	38	28	28	28
Maximum number of assignments	9	9	9	13	38	13	38	13	38	13	38	9	27	38	12	27	38	28	28	28
Input functions																				
Switching																				
Switching ON/OFF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Switching over	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	--	✓	✓	✓	✓
Pushbutton function (bell function)	--	--	--	--	✓	--	✓	--	✓	--	✓	--	✓	✓	✓	--	✓	✓	✓	✓
Dimming																				
Dimming with stop telegram (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	--	✓	✓	✓	✓
Dimming with cyclic transmission (4-bit) Short button press, ON/OFF Long button press, brighter/darker	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	--	✓	✓	✓	✓
One-pushbutton dimming	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Value transmission																				
Value transmission (8-bit)	✓	✓	✓	✓	✓	✓	✓	--	✓	--	✓	--	✓	✓	✓	--	✓	✓	✓	✓
Shutter/blind																				
Shutter/blind control Short button press, slat OPEN/CLOSED or STOP, long button press, UP/DOWN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	--	✓	✓	✓	✓
One-pushbutton operation	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓	✓
Scene																				
Store and call up scene, 8-bit	2	4	6	2	2	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--
Store and call up scene, 1-bit in conjunction with scene module	2	4	6	2	2	4	4	--	2	--	4	--	--	8	--	--	8	1	2	4
Short or long button press (store/call up scene), configurable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	✓
Status																				
Display of any status objects (1-bit)	--	--	--	✓	✓	--	✓	✓	✓	✓	✓	✓	--	✓	✓	--	✓	✓	✓	✓
Display of pushbutton objects	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	✓







Display, Operation

Pushbuttons

Selection and ordering data





Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
i-system				Unit(s)	Unit(s)		
 <p>UP 221 pushbuttons, single, neutral</p> <ul style="list-style-type: none"> • Electrical white • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 221-2AB01		1	1	030	0.025
	A	5WG1 221-2AB11		1	1	030	0.025
	B	5WG1 221-2AB21		1	1	030	0.025
	B	5WG1 221-2AB31		1	1	030	0.025
5WG1 221-2AB11							
 <p>UP 222 pushbuttons, double, neutral</p> <ul style="list-style-type: none"> • Electrical white • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 222-2AB01		1	1	030	0.025
	A	5WG1 222-2AB11		1	1	030	0.025
	B	5WG1 222-2AB21		1	1	030	0.025
	B	5WG1 222-2AB31		1	1	030	0.025
5WG1 222-2AB11							
 <p>UP 223 pushbuttons, triple, neutral</p> <ul style="list-style-type: none"> • Electrical white • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 223-2AB01		1	1	030	0.025
	A	5WG1 223-2AB11		1	1	030	0.025
	B	5WG1 223-2AB21		1	1	030	0.025
	B	5WG1 223-2AB31		1	1	030	0.025
5WG1 223-2AB11							
 <p>UP 221E pushbuttons, single, with status LED, neutral</p> <ul style="list-style-type: none"> • Electrical white • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 221-2EB01		1	1	030	0.025
	A	5WG1 221-2EB11		1	1	030	0.048
	B	5WG1 221-2EB21		1	1	030	0.025
	B	5WG1 221-2EB31		1	1	030	0.025
5WG1 221-2EB11							
 <p>UP 222E pushbuttons, double, with status LED, neutral</p> <ul style="list-style-type: none"> • Electrical white • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 222-2EB01		1	1	030	0.025
	A	5WG1 222-2EB11		1	1	030	0.048
	B	5WG1 222-2EB21		1	1	030	0.025
	B	5WG1 222-2EB31		1	1	030	0.025
5WG1 222-2EB11							

Pushbuttons



Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
DELTA profil				Unit(s)	Unit(s)		
 <p>UP 241 pushbuttons, single, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 241-2AB01		1	1	030	0.036
	A	5WG1 241-2AB11		1	1	030	0.036
	B	5WG1 241-2AB21		1	1	030	0.036
	B	5WG1 241-2AB71		1	1	030	0.036
5WG1 241-2AB11							
 <p>UP 242 pushbuttons, single, with I/O symbols</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 242-2AB01		1	1	030	0.036
	A	5WG1 242-2AB11		1	1	030	0.036
	B	5WG1 242-2AB21		1	1	030	0.036
	B	5WG1 242-2AB71		1	1	030	0.036
5WG1 242-2AB11							
 <p>UP 243 pushbuttons, double, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 243-2AB01		1	1	030	0.036
	A	5WG1 243-2AB11		1	1	030	0.036
	B	5WG1 243-2AB21		1	1	030	0.036
	B	5WG1 243-2AB71		1	1	030	0.036
5WG1 243-2AB11							
 <p>UP 244 pushbuttons, double, with I/O symbols</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 244-2AB01		1	1	030	0.036
	A	5WG1 244-2AB11		1	1	030	0.036
	B	5WG1 244-2AB21		1	1	030	0.036
	B	5WG1 244-2AB71		1	1	030	0.036
5WG1 244-2AB11							
 <p>UP 245 pushbuttons, quadruple, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 245-2AB01		1	1	030	0.036
	A	5WG1 245-2AB11		1	1	030	0.036
	B	5WG1 245-2AB21		1	1	030	0.036
	B	5WG1 245-2AB71		1	1	030	0.036
5WG1 245-2AB11							
 <p>UP 246 pushbuttons, quadruple, with I/O symbols</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 246-2AB01		1	1	030	0.036
	A	5WG1 246-2AB11		1	1	030	0.036
	B	5WG1 246-2AB21		1	1	030	0.036
	B	5WG1 246-2AB71		1	1	030	0.036
5WG1 246-2AB11							

Display, Operation

Pushbuttons

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA style							
	UP 285 pushbuttons, single, neutral						
		<ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver 					
	B	5WG1 285-2AB01		1	1	030	0.036
	A	5WG1 285-2AB11		1	1	030	0.036
	B	5WG1 285-2AB21		1	1	030	0.036
	B	5WG1 285-2AB81		1	1	030	0.036
Note: The bus coupling units and matching frames must be ordered separately.							
5WG1 285-2AB11							
	UP 286 pushbuttons, double, neutral						
		<ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver 					
	B	5WG1 286-2AB01		1	1	030	0.036
	A	5WG1 286-2AB11		1	1	030	0.036
	B	5WG1 286-2AB21		1	1	030	0.036
	B	5WG1 286-2AB81		1	1	030	0.036
Note: The bus coupling units and matching frames must be ordered separately.							
5WG1 286-2AB11							
	UP 287 pushbuttons, quadruple, neutral						
		<ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver 					
	B	5WG1 287-2AB01		1	1	030	0.036
	A	5WG1 287-2AB11		1	1	030	0.036
	B	5WG1 287-2AB21		1	1	030	0.036
	B	5WG1 287-2AB81		1	1	030	0.036
Note: The bus coupling units and matching frames must be ordered separately.							
5WG1 287-2AB11							
DELTA ambiente							
	UP 284 pushbuttons, quadruple						
		<ul style="list-style-type: none"> • Arctic white/arctic white • Arctic white/steel 					
	B	5WG1 284-2AB01		1	1	030	0.035
Note: The bus coupling units and matching frames must be ordered separately.							
5WG1 284-2AB01							
		B	5WG1 284-2AB03	1	1	030	0.035

Pushbuttons

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
DELTA millennium				Unit(s)	Unit(s)		kg
 5WG1 281-8AB01	C	5WG1 281-8AB01		1	1	030	0.356
	C	5WG1 282-8AB01		1	1	030	0.362
	C	5WG1 283-8AB01		1	1	030	0.360
Note: The text for the labeling field and the symbol for the pushbutton are engraved. Please specify the text and symbols you require when placing your order (see page 1/27 "Ordering data").							
 5WG1 282-8AB01							
 5WG1 283-8AB01							

Display, Operation

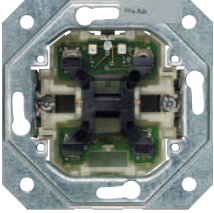
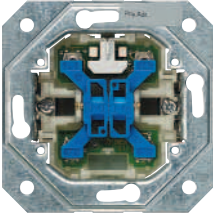
Pushbuttons for DELTA bus coupling units

Technical specifications

	UP 116/01	UP 116/11	UP 116/21	UP 116/31
Type	211001	221001	210F01	220F01
Application program				
Enclosure data				
For installation in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm	✓	✓	✓	✓
Dimensions				
• Height	mm 71	71	71	71
• Width	mm 71	71	71	71
• Depth	mm 32	32	32	32
Mounting type				
Claw fixing	✓	✓	✓	✓
Screw fixing	✓	✓	✓	✓
Display/control elements				
LED per pushbutton pair for status indication or configurable as orientation light	1	1	1	1
Mounting of rockers from the DELTA product ranges	✓	✓	✓	✓
Rocker button, intermediate position (pushbutton with 2 operating points)	1	2	--	--
Rocker button, pushbutton position (pushbutton with 1 operating point)	--	--	1	2
Bus connection				
Integrated bus coupling unit	✓	✓	✓	✓
General functions				
Maximum number of group addresses	4	8	3	4
Maximum number of assignments	4	8	3	5
Input functions				
Switching				
Switching ON/OFF	✓	✓	✓	✓
Switching over	✓	✓	✓	✓
Dimming				
Dimming with stop telegram (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	--	✓
Dimming with cyclic transmission (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	--	✓
Shutter/blind				
Shutter/blind control Short button press, slat OPEN/CLOSED or STOP Long button press, UP/DOWN	✓	✓	--	✓
Scene				
Store and call up scene, 1-bit in conjunction with scene module	1	2	--	--
Short or long button press (store/call up scene), configurable	✓	✓	--	--
Status				
Display of any status objects (1-bit)	✓	--	--	--
Display of pushbutton objects	✓	--	✓	✓

Pushbuttons for DELTA bus coupling units

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
	UP 116 bus coupling units, single						
	<ul style="list-style-type: none"> • Intermediate position • Pushbutton position 						
	Note: The required single or multiple rocker (with or without window) and the frame in matching DELTA design (see Catalog ET D1) must be ordered separately.						
5WG1 116-2AB01	B	5WG1 116-2AB01		1	1	030	0.080
	B	5WG1 116-2AB21		1	1	030	0.080
	UP 116 bus coupling units, double						
	<ul style="list-style-type: none"> • Intermediate position • Pushbutton position 						
	Note: The required single or multiple rocker (with or without window) and the frame in matching DELTA design (see Catalog ET D1) must be ordered separately.						
5WG1 116-2AB11	B	5WG1 116-2AB11		1	1	030	0.080
	B	5WG1 116-2AB31		1	1	030	0.080

Display, Operation



Surface-mounting pushbuttons, IP44

Technical specifications

	211001 AP 115/01	221001 AP 115/11	210F01 AP 115/21	220F01 AP 115/31
Type				
Application program				
Enclosure data				
Surface-mounting enclosure	✓	✓	✓	✓
Degree of protection	IP44	IP44	IP44	IP44
Dimensions				
• Height	mm 75	75	75	75
• Width	mm 66	66	66	66
• Depth	mm 52	52	52	52
Display/control elements				
LED per pushbutton pair for status indication or configurable as orientation light	1	--	1	--
Rocker button, intermediate position (pushbutton with 2 operating points)	1	2	--	--
Rocker button, pushbutton position (pushbutton with 1 operating point)	--	--	1	2
Bus connection				
Integrated bus coupling unit	✓	✓	✓	✓
General functions				
Maximum number of group addresses	4	8	3	4
Maximum number of assignments	4	8	3	5
Input functions				
Switching				
Switching ON/OFF	✓	✓	✓	✓
Switching over	✓	✓	✓	✓
Dimming				
Dimming with stop telegram (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	--	✓
Dimming with cyclic transmission (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	--	✓
Shutter/blind				
Shutter/blind control Short button press, slat OPEN/CLOSED or STOP Long button press, UP/DOWN	✓	✓	--	✓
Scene				
Store and call up scene, 1-bit in conjunction with scene module	1	2	--	--
Short or long button press (store/call up scene), configurable	✓	✓	--	--
Status				
Display of any status objects (1-bit)	✓	--	--	--
Display of pushbutton objects	✓	--	✓	✓

Surface-mounting pushbuttons, IP44

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 <p>AP 115 pushbuttons, single, IP44</p> <ul style="list-style-type: none"> • Intermediate position • Pushbutton position 	B	5WG1 115-3AB01		1	1	030	0.080
	B	5WG1 115-3AB21		1	1	030	0.080
5WG1 115-3AB01							
 <p>AP 115 pushbuttons, double, IP44</p> <ul style="list-style-type: none"> • Intermediate position • Pushbutton position 	B	5WG1 115-3AB11		1	1	030	0.080
	B	5WG1 115-3AB31		1	1	030	0.080
5WG1 115-3AB11							

1 Display, Operation Multifunction Pushbuttons

Introduction

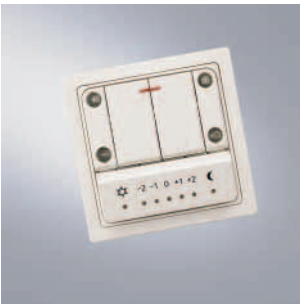
Overview

Pushbuttons with IR receiver



Pushbuttons with IR receiver pass on commands from the remote control.

Pushbuttons with room temperature controllers



Pushbutton with integrated room temperature controller in designs DELTA profil and DELTA style

Pushbuttons with motion detectors



Pushbutton with integrated motion detectors in designs DELTA profil and DELTA style

Overview

The flush-mounting UP pushbuttons with IR use the UP 114 bus coupling unit and an application program to carry out actions, such as issuing commands to actuators for defined ON/OFF

switching or for dimming lighting, for the raising/lowering of shutters/blinds, adjustment of slats or other configurable functional units.

Technical specifications

Design	DELTA profil			DELTA style			DELTA ambiente
	UP 233	UP 234	UP 235	UP 285E	UP 286E	UP 287E	
Type	900B02						
Application program							
Display/control elements							
Individual pushbuttons	2	4	8	2	4	8	8
Pushbutton pairs	1	2	4	1	2	4	4
Operation (v: vertical, h: horizontal)	v	v	v	v	v	v	v
LED per pushbutton pair for status indication or configurable as orientation light	✓	✓	✓	✓	✓	✓	✓
Separate LED for orientation light (ON/OFF configurable)	--	--	--	--	--	--	✓
Labeling field	✓	✓	✓	✓	✓	✓	--
Pictographs supplied	--	--	--	--	--	--	✓
Bus connection							
Plugs onto UP 114 bus coupling unit	✓	✓	✓	✓	✓	✓	✓
Inputs							
IR receiver/decoder	✓	✓	✓	✓	✓	✓	✓
Integration of 14 further pushbutton pairs of IR hand-held/wall-mounted transmitters	✓	✓	✓	✓	✓	✓	✓
General functions							
Maximum number of group addresses	39	39	39	39	39	39	39
Maximum number of assignments	40	40	40	40	40	40	40
Input functions							
Switching							
Switching ON/OFF	✓	✓	✓	✓	✓	✓	✓
Switching over	✓	✓	✓	✓	✓	✓	✓
Pushbutton function (bell function)	✓	✓	✓	✓	✓	✓	✓
Dimming							
Dimming with stop telegram (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	✓	✓	✓	✓	✓
Dimming with cyclic transmission (4-bit) Short button press, ON/OFF Long button press, brighter/darker	✓	✓	✓	✓	✓	✓	✓
Value transmission							
Value transmission (8-bit)	✓	✓	✓	✓	✓	✓	✓
Shutter/blind							
Shutter/blind control Short button press, slat OPEN/CLOSED or STOP Long button press, UP/DOWN	✓	✓	✓	✓	✓	✓	✓
Scene							
Store and call up scene, 1-bit in conjunction with scene module	2	4	8	2	4	8	8
Short or long button press (store/call up scene), configurable	✓	✓	✓	✓	✓	✓	✓
Status							
Display of any status objects (1-bit)	✓	✓	✓	✓	✓	✓	✓
Display of pushbutton objects	✓	✓	✓	✓	✓	✓	✓

1 Display, Operation

Multifunction Pushbuttons

Pushbuttons with IR receiver

Selection and ordering data



Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 <p>UP 233 pushbuttons, single, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 233-2AB01		1	1	030	0.038
	A	5WG1 233-2AB11		1	1	030	0.038
	B	5WG1 233-2AB21		1	1	030	0.038
	B	5WG1 233-2AB71		1	1	030	0.038
5WG1 233-2AB11							
 <p>UP 234 pushbuttons, double, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 234-2AB01		1	1	030	0.038
	A	5WG1 234-2AB11		1	1	030	0.038
	B	5WG1 234-2AB21		1	1	030	0.038
	B	5WG1 234-2AB71		1	1	030	0.038
5WG1 234-2AB11							
 <p>UP 235 pushbuttons, quadruple, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 235-2AB01		1	1	030	0.038
	A	5WG1 235-2AB11		1	1	030	0.038
	B	5WG1 235-2AB21		1	1	030	0.038
	B	5WG1 235-2AB71		1	1	030	0.038
5WG1 235-2AB11							
DELTA style							
 <p>UP 285E pushbuttons, single, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 285-2EB01		1	1	030	0.038
	A	5WG1 285-2EB11		1	1	030	0.038
	B	5WG1 285-2EB21		1	1	030	0.055
	B	5WG1 285-2EB81		1	1	030	0.038
5WG1 285-2EB11							
 <p>UP 286E pushbuttons, double, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 286-2EB01		1	1	030	0.038
	A	5WG1 286-2EB11		1	1	030	0.038
	B	5WG1 286-2EB21		1	1	030	0.036
	B	5WG1 286-2EB81		1	1	030	0.038
5WG1 286-2EB11							

Display, Operation

Multifunction Pushbuttons

1

Pushbuttons with IR receiver

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 <p>UP 287E pushbuttons, quadruple, with IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 287-2EB01		1	1	030	0.038
	A	5WG1 287-2EB11		1	1	030	0.038
	B	5WG1 287-2EB21		1	1	030	0.036
	B	5WG1 287-2EB81		1	1	030	0.038
5WG1 287-2EB11							
DELTA ambiente							
 <p>UP 284E pushbuttons, quadruple, with IR receiver</p> <ul style="list-style-type: none"> • Arctic white/arctic white • Arctic white/steel <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 284-2EB01		1	1	030	0.084
	B	5WG1 284-2EB03		1	1	030	0.084
5WG1 284-2EB01							



1 Display, Operation Multifunction Pushbuttons

Pushbuttons with room temperature controllers

Technical specifications

- Vertical operation
- Two wide inner rocker buttons
- Function can be user-assigned: switching over, switching ON/OFF, switching ON/OFF and dimming, shutter/blind, value transmission, store and call up scenes of up to four 1-bit scenes in conjunction with scene module
- Short and long button press for ON/OFF/over, brighter/darker for dimming, and UP/DOWN and adjustment of slats for shutter/blind control
- Operation/status indication over one LED per rocker button
- Integrated room temperature sensors and controllers for heating only, cooling only or combined heating/cooling
- Control over an algorithm for adaptive control and/or a two-point algorithm
- With monitoring of room temperature over a room temperature sensor integrated in the controller and an external room temperature sensor connected to the *EIB*, and with adjustable weighting between the temperature measured internally and externally
- Two narrow outer rocker buttons for setpoint offsetting in comfort mode and one for switching between comfort and standby mode
- Operating modes that can be switched over *EIB*: comfort mode, standby mode, night mode, frost or heat protection mode, with adjustable offset of the room temperature setpoint for comfort mode
- Adjustable dead zone, selectable either symmetric to the setpoint value for comfort mode or between the heating and cooling setpoint value for comfort mode
- Selectable sequence control for heating and cooling mode (required e.g. for the combination of floor and radiator heating)
- Output of the control variable(s) either as ON/OFF switch command or as positioning command in the range 0 % ... 100 %, with LEDs for the indication of the current operating mode and setpoint offsetting
- For plugging onto a UP 114 bus coupling unit
- Dimensions (H x W x D): 65 x 65 x 15 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA profil							
 UP 231/3 pushbuttons, double, adaptive room temperature controller <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <u>Note:</u> The matching cut-out frames, the bus coupling units and the pictographs must be ordered separately.	B	5WG1 231-2AB03		1	1	030	0.036
	A	5WG1 231-2AB13		1	1	030	0.036
	B	5WG1 231-2AB23		1	1	030	0.036
	B	5WG1 231-2AB73		1	1	030	0.036
DELTA style							
 UP 231E pushbuttons, double, adaptive room temperature controller <ul style="list-style-type: none"> • Titanium white • Basalt black <u>Note:</u> The matching frames, the intermediate frames, bus coupling units and the pictographs must be ordered separately.	A	5WG1 231-2EB13		1	1	030	0.036
	B	5WG1 231-2EB23		1	1	030	0.036

5WG1 231-2AB13



5WG1 231-2EB13

Pushbuttons with motion detectors

Technical specifications

- Vertical operation
- Four rocker buttons
- Function can be user-assigned: switching ON/OFF/over, switching ON/OFF/over and dimming, shutter/blind, value transmission, store and call up scenes of up to eight 1-bit scenes in conjunction with scene module
- Short and long button press for ON/OFF/over, brighter/darker for dimming, and UP/DOWN and adjustment of slats for shutter/blind control
- Operation/status indication over one LED each for the middle rocker buttons and over two LEDs each for the outer rocker buttons
- With LED windows in the outer rocker buttons for the insertion of pictographs
- With integrated motion detector and brightness sensor, transmission of brightness value over *EIB*
- Motion detector with operation either dependent and/or independent of brightness
- With brightness operating point adjustable in various steps
- Adjustable sensing range 90° or 180°
- Adjustable cyclic transmission time
- Integrated LED for indication of detected movements
- For plugging onto a UP 110 or UP 114 bus coupling unit
- Dimensions (H x W x D): 65 x 65 x 17 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA profil							
UP 230 pushbuttons, quadruple, motion detector							
 <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The matching cut-out frames, the bus coupling units and the pictographs must be ordered separately.</p>	B	5WG1 230-2AB02		1	1	030	0.036
	A	5WG1 230-2AB12		1	1	030	0.036
	B	5WG1 230-2AB22		1	1	030	0.036
	B	5WG1 230-2AB72		1	1	030	0.036
DELTA style							
UP 230E pushbuttons, quadruple, motion detector							
 <ul style="list-style-type: none"> • Titanium white • Basalt black <p><u>Note:</u> The matching frames, the intermediate frames, bus coupling units and the pictographs must be ordered separately.</p>	A	5WG1 230-2EB11		1	1	030	0.036
	B	5WG1 230-2EB21		1	1	030	0.036

5WG1 230-2AB12

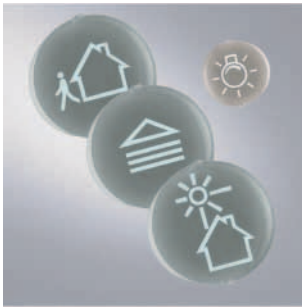
5WG1 230-2EB11

1 Display, Operation Pushbutton Accessories

Introduction

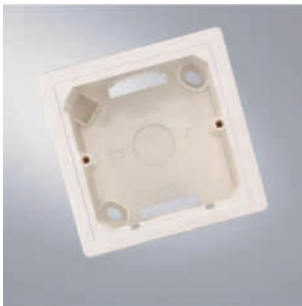
Overview

Pictographs



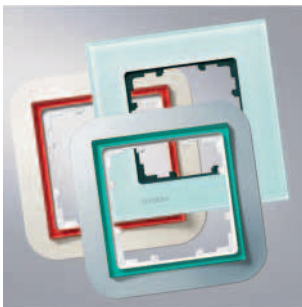
Offer a clear overview of the functions of multifunction pushbuttons

Surface-mounting enclosures



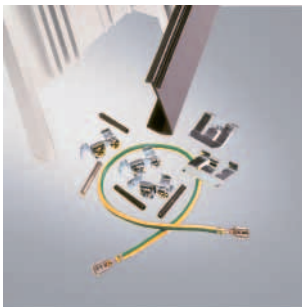
Available in the designs of DELTA line, DELTA profil and DELTA style

Frames, DELTA design



No matter which frame you require – we have models available in single to quintuple versions

Accessories for trunking systems













It's easy to select modules and accessories for the flexibly designed DELTA millennium.

Technical specifications

- For a clear overview of all functions
- For insertion in the two outer pushbutton rockers of the UP 230, UP 230E, UP 231, UP 231E multifunction pushbuttons
- Dimensions: Ø 8 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
Pictographs for multifunction pushbuttons							
 Dimming	A	5WG1 293-8AB00		100	10	030	0.600
 Switching	A	5WG1 293-8AB01		100	10	030	0.600
 Shutter/blind	A	5WG1 293-8AB02		100	10	030	0.600
 Presence/convenience	A	5WG1 293-8AB03		100	10	030	0.600
 Absence/standby	A	5WG1 293-8AB04		100	10	030	0.600
 Nighttime reduction	A	5WG1 293-8AB05		100	10	030	0.600
 Frost protection	A	5WG1 293-8AB06		100	10	030	0.600
 Heat protection	A	5WG1 293-8AB07		100	10	030	0.600
 Dew point	A	5WG1 293-8AB08		100	10	030	0.600
 Storm warning	A	5WG1 293-8AB10		100	10	030	0.600

1 Display, Operation Pushbutton Accessories

Surface mounting enclosures

Technical specifications

		DELTA line			DELTA profil			DELTA style		
		Single	Double	Triple	Single	Double	M 110	Single	Double	Triple
Dimensions	• Length	mm 84	155	155	80	125	80	84	155	155
	• Width	mm 84	84	84	80	80	80	84	84	84
	• Depth	mm 42.5	42.5	42.5	42.5	42.5	30	42.5	42.5	42.5
Flame-retardant floor plate		✓	✓	✓	✓	✓	--	✓	✓	✓
For horizontal and vertical mounting		✓	✓	✓	✓	✓	✓	✓	✓	✓

Selection and ordering data



Version		DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
DELTA line								
	Surface-mounting enclosures, for flush-mounting devices, 84 mm							
	• Titanium white - single - double - triple							
• Electrical white - single - double - triple								
5TG2 901								
DELTA profil								
	Surface-mounting enclosures, for flush-mounting devices, 80 mm							
	• Titanium white - single - double							
5TG1 825								
	M 110 surface-mounting enclosures, single							
5WG3 110-8AB11								
DELTA style								
	Surface-mounting enclosures, for flush-mounting devices, 84 mm							
5TG2 901								

Technical specifications

- For horizontal and vertical mounting
- Degree of protection IP20.

		DELTA line				
		Single	Double	Triple	Quadruple	Quintuple
Dimensions						
• Length	mm	80	151	222	293	364
• Width	mm	80	80	80	80	80

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
Frames, 80 mm							
 5TG2 551-0	<ul style="list-style-type: none"> • Titanium white (similar to RAL 9010) <ul style="list-style-type: none"> - single - double - triple - quadruple - quintuple • Electrical white (RAL 1013) <ul style="list-style-type: none"> - single - double - triple - quadruple - quintuple • Titanium white (similar to RAL 9006) <ul style="list-style-type: none"> - single - double - triple - quadruple - quintuple • Carbon metallic (similar to RAL 7016) <ul style="list-style-type: none"> - single - double - triple - quadruple - quintuple 	▶	5TG2 551-0	1	1/10	021	0.013
		▶	5TG2 552-0	1	1/10	021	0.023
		▶	5TG2 553-0	1	1/10	021	0.033
		▶	5TG2 554-0	1	1/10	021	0.044
		▶	5TG2 555-0	1	1/5	021	0.055
		▶	5TG2 581-0	1	1/10	021	0.013
		▶	5TG2 582-0	1	1/10	021	0.023
		▶	5TG2 583-0	1	1/10	021	0.033
		▶	5TG2 584-0	1	1/10	021	0.044
		▶	5TG2 585-0	1	1/5	021	0.055
 5TG2 551-1	<ul style="list-style-type: none"> • Titanium white (similar to RAL 9010) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical - triple, horizontal - triple, vertical - quadruple, horizontal - quadruple, vertical • Electrical white (RAL 1013) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical - triple, horizontal - triple, vertical - quadruple, horizontal - quadruple, vertical • Titanium white (similar to RAL 9006) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical • Carbon metallic (similar to RAL 7016) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical 	▶	5TG2 551-1	1	1/10	021	0.016
		▶	5TG2 552-1	1	1/10	021	0.028
		▶	5TG2 552-2	1	1/10	021	0.028
		▶	5TG2 553-1	1	1/10	021	0.041
		▶	5TG2 553-2	1	1/10	021	0.041
		▶	5TG2 554-1	1	1/10	021	0.054
		▶	5TG2 554-2	1	1/10	021	0.054
		▶	5TG2 581-1	1	1/10	021	0.019
		▶	5TG2 582-1	1	1/10	021	0.028
		▶	5TG2 582-2	1	1/10	021	0.028
	<ul style="list-style-type: none"> • Titanium white (similar to RAL 9006) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical • Carbon metallic (similar to RAL 7016) <ul style="list-style-type: none"> - single - double, horizontal - double, vertical 	▶	5TG2 583-1	1	1/10	021	0.041
		▶	5TG2 583-2	1	1/10	021	0.041
		▶	5TG2 584-1	1	1/10	021	0.054
		▶	5TG2 584-2	1	1/10	021	0.054
		▶	5TG2 551-4	1	1/10	021	0.017
		▶	5TG2 552-4	1	1/10	021	0.031
		▶	5TG2 552-5	1	1/10	021	0.031
		▶	5TG2 551-7	1	1/10	021	0.017
		▶	5TG2 552-7	1	1/10	021	0.031
		▶	5TG2 552-8	1	1/10	021	0.031

Note:

Our free labeling tool can help you create individual labels.

Download at: <http://www.siemens.de/beschriftungstool>

1 Display, Operation Pushbutton Accessories

DELTA vita frames

Technical specifications

Frames

- For horizontal and vertical mounting
- Degree of protection IP20.

Note:



Frames can only be used with color elements.

Color element

- For horizontal and vertical mounting
- Degree of protection IP20
- Size of color elements: 62 mm x 62 mm
- For installing in frames.

		DELTA vita				
		Single	Double	Triple	Quadruple	Quintuple
Dimensions	• Length	mm 83	154	225	296	367
	• Width	mm 83	83	83	83	83

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 5TG1 141	Frames, 83 mm							
	• Titanium white (similar to RAL 9010)							
	- single		▶ 5TG1 141		1	1/10	021	0.012
	- double		▶ 5TG1 142		1	1/10	021	0.019
	- Triple		▶ 5TG1 143		1	1/10	021	0.027
	- quadruple		▶ 5TG1 144		1	1/10	021	0.041
	- quintuple		▶ 5TG1 145		1	1/5	021	0.065
	• Titanium white (similar to RAL 9006)							
	- single		▶ 5TG1 161		1	1/10	021	0.014
	- double		▶ 5TG1 162		1	1/10	021	0.022
	- triple		▶ 5TG1 163		1	1/10	021	0.031
	- quadruple		▶ 5TG1 164		1	1/10	021	0.046
	- quintuple		▶ 5TG1 165		1	1/5	021	0.071
	• Carbon metallic (similar to RAL 7016)							
	- single		▶ 5TG1 151		1	1/10	021	0.014
	- double		▶ 5TG1 152		1	1/10	021	0.022
	- triple		▶ 5TG1 153		1	1/10	021	0.031
	- quadruple		▶ 5TG1 154		1	1/10	021	0.046
	- quintuple		▶ 5TG1 155		1	1/5	021	0.071
	• Gold (similar to RAL 1036)							
	- single		▶ 5TG1 171		1	1/10	021	0.014
	- double		▶ 5TG1 172		1	1/10	021	0.022
	- triple		▶ 5TG1 173		1	1/10	021	0.031
	- quadruple		▶ 5TG1 174		1	1/10	021	0.046
	- quintuple		▶ 5TG1 175		1	1/5	021	0.071
 5TG1 178	Color elements							
	• Titanium white (similar to RAL 9010)		▶ 5TG1 178		1	1/10	021	0.008
	• Yellow (similar to RAL 1021)		▶ 5TG1 188-1		1	1/10	021	0.008
	• Green (translucent)		▶ 5TG1 182		1	1/10	021	0.008
	• Orange (translucent)		▶ 5TG1 183		1	1/10	021	0.008
	• Red (translucent)		▶ 5TG1 184		1	1/10	021	0.008
	• Blue (translucent)		▶ 5TG1 185		1	1/10	021	0.008
	• Dark red (painted)		▶ 5TG1 186		1	1/10	021	0.009
	• Dark blue (painted)		▶ 5TG1 187		1	1/10	021	0.009
	• Platinum (galvanized, matt)		▶ 5TG1 177		1	1/10	021	0.009
	• Chrome (galvanized, polished)		▶ 5TG1 181		1	1/10	021	0.009
	• Gold (galvanized, polished)		▶ 5TG1 180		1	1/10	021	0.009

Technical specifications




- For horizontal and vertical mounting
- Degree of protection IP20.

Note:

Variations in the color of the wood are typical of natural products

		DELTA miro				
		Single	Double	Triple	Quadruple	Quintuple
Dimensions	Length	mm 90	mm 161	mm 232	mm 303	mm 374
	Width	mm 90	mm 90	mm 90	mm 90	mm 90

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	Frames, 90 mm, real glass							
	• Single	▶	5TG1 201		1	1	021	0.197
	• Double	▶	5TG1 202		1	1	021	0.243
	• Triple	▶	5TG1 203		1	1	021	0.305
	• Quadruple	▶	5TG1 204		1	1	021	0.370
	• Quintuple	▶	5TG1 205		1	1	021	0.480
5TG1 201								
	Frames, 90 mm, real wood							
	• Maple red							
	- single	▶	5TG1 101-2		1	1	021	0.037
	- double	▶	5TG1 102-2		1	1	021	0.057
	- triple	▶	5TG1 103-2		1	1	021	0.081
	- quadruple	▶	5TG1 104-2		1	1	021	0.104
	• Maple							
	- single	▶	5TG1 101-3		1	1	021	0.037
	- double	▶	5TG1 102-3		1	1	021	0.057
	- triple	▶	5TG1 103-3		1	1	021	0.081
	- quadruple	▶	5TG1 104-3		1	1	021	0.104
	• Beech (color achieved through staining)							
	- single	▶	5TG1 101-4		1	1	021	0.037
	- double	▶	5TG1 102-4		1	1	021	0.057
	- triple	▶	5TG1 103-4		1	1	021	0.081
	- quadruple	▶	5TG1 104-4		1	1	021	0.104
	• Cherry (color achieved through staining)							
	- single	▶	5TG1 101-1		1	1	021	0.037
	- double	▶	5TG1 102-1		1	1	021	0.057
	- triple	▶	5TG1 103-1		1	1	021	0.081
	- quadruple	▶	5TG1 104-1		1	1	021	0.104
	• Wenge							
	- single	▶	5TG1 101-0		1	1	021	0.037
	- double	▶	5TG1 102-0		1	1	021	0.057
	- triple	▶	5TG1 103-0		1	1	021	0.081
	- quadruple	▶	5TG1 104-0		1	1	021	0.104
5TG1 101-2								
	Frames, 90 mm, plastic							
	• Titanium white (similar to RAL 9010)							
	- single	▶	5TG1 111-0		1	1/10	021	0.022
	- double	▶	5TG1 112-0		1	1/10	021	0.035
	- triple	▶	5TG1 113-0		1	1/10	021	0.046
	- quadruple	▶	5TG1 114-0		1	1/10	021	0.060
	- quintuple	▶	5TG1 115-0		1	1/3	021	0.100
	• Titanium white (similar to RAL 9006)							
	- single	▶	5TG1 111-1		1	1/10	021	0.022
	- double	▶	5TG1 112-1		1	1/10	021	0.035
	- triple	▶	5TG1 113-1		1	1/10	021	0.046
	- quadruple	▶	5TG1 114-1		1	1/10	021	0.060
	- quintuple	▶	5TG1 115-1		1	1/3	021	0.100
	• Carbon metallic (similar to RAL 7016)							
	- single	▶	5TG1 111-2		1	1/10	021	0.022
	- double	▶	5TG1 112-2		1	1/10	021	0.035
	- triple	▶	5TG1 113-2		1	1/10	021	0.046
	- quadruple	▶	5TG1 114-2		1	1/10	021	0.060
	- quintuple	▶	5TG1 115-2		1	1/3	021	0.100
5TG1 111-0								

* You can order this quantity or a multiple thereof.

1 Display, Operation Pushbutton Accessories




DELTA profil frames

Technical specifications

- For horizontal and vertical mounting
- Degree of protection IP20.

DELTA profil				
		Single	Double	Triple
Dimensions	• Length	mm 80	151	222
	• Width	mm 80	80	80

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
Frames, 80 mm, cut out							
 5TG1 801	• Titanium white (similar to RAL 9010)			1	1/10	021	0.014
	- single	▶	5TG1 801	1	1/10	021	0.024
	- double	▶	5TG1 802	1	1/10	021	0.024
	- double, with one cut-out	▶	5TG1 803	1	1/10	021	0.024
	- triple, with one cut-out	▶	5TG1 804	1	1/10	021	0.033
 5TG1 803 (frame part cut out)	• Pearl gray (similar to RAL 7035)			1	1/10	021	0.014
	- single	▶	5TG1 861	1	1/10	021	0.024
	- double	▶	5TG1 862	1	1/10	021	0.024
	- double, with one cut-out	▶	5TG1 863	1	1/10	021	0.024
	- triple, with one cut-out	▶	5TG1 864	1	1/10	021	0.033
 5TG1 804 (frame part cut out)	• Silver (similar to RAL 9006)			1	1/10	021	0.014
	- single	▶	5TG1 761	1	1/10	021	0.024
	- double, with one cut-out	▶	5TG1 763	1	1/10	021	0.024
	- triple, with one cut-out	▶	5TG1 764	1	1/10	021	0.033
	• Anthracite (similar to RAL 7016)			1	1/10	021	0.014
	- single	▶	5TG1 831	1	1/10	021	0.024
	- double	▶	5TG1 832	1	1/10	021	0.024
	- double, with one cut-out	▶	5TG1 833	1	1/10	021	0.024
	- triple, with one cut-out	▶	5TG1 834	1	1/10	021	0.033
	• Champagne (similar to RAL 7048), single	▶	5TG1 701-1	1	1/10	021	0.017
	• Bronze (similar to RAL 3012), single	▶	5TG1 741-1	1	1/10	021	0.017

Technical specifications

Frames



- For horizontal and vertical mounting
- Degree of protection IP20.

Intermediate frames

For installation of devices with cover plate
65 mm x 65 mm and GAMMA *instabus* sensors.

		DELTA style				
		Single	Double	Triple	Quadruple	Quintuple
Dimensions	Length	mm 82	mm 153	mm 224	mm 295	mm 366
	Width	mm 82	mm 82	mm 82	mm 82	mm 82

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 5TG1 321	Frames, 82 mm							
	• Titanium white (similar to RAL 9010)		▶ 5TG1 321		1	1/10	021	0.022
	- single		▶ 5TG1 322		1	1/10	021	0.034
	- double		▶ 5TG1 323		1	1/10	021	0.049
	- triple		▶ 5TG1 324		1	1/10	021	0.062
	- quadruple		▶ 5TG1 325		1	1/5	021	0.088
	- quintuple							
	• Basalt black (similar to RAL 7016)		▶ 5TG1 361		1	1/10	021	0.021
	- single		▶ 5TG1 362		1	1/10	021	0.039
	- double		▶ 5TG1 363		1	1/10	021	0.047
 5TG1 328	Intermediate frames, 68 mm							
	• Titanium white (similar to RAL 9010)		▶ 5TG1 328		1	1/10	021	0.008
	• Basalt black (similar to RAL 7016)		▶ 5TG1 368		1	1/10	021	0.008

1 Display, Operation Pushbutton Accessories


DELTA ambiente frames

Technical specifications

- For horizontal and vertical mounting
- Degree of protection IP20.

		DELTA ambiente				
		Single	Double	Triple	Quadruple	Quintuple
Dimensions	• Length	mm 83	154	225	296	367
	• Width	mm 83	83	83	83	83

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 Frames, 83 mm, contour <ul style="list-style-type: none"> • Arctic white (RAL 9002) <ul style="list-style-type: none"> - single - double - triple - quadruple - quintuple 								
			▶ 5TG1 511		1	1/5	021	0.081
			▶ 5TG1 512		1	1/5	021	0.135
			▶ 5TG1 513		1	1/5	021	0.187
			▶ 5TG1 514		1	1/5	021	0.218
			▶ 5TG1 515		1	1/5	021	0.263

5TG1 511

Overview



The DELTA millennium *instabus* KNX EIB trunking system has an impressive homogeneous, smooth and clearly structured operator interface made of anodized aluminum.

It hides a wealth of innovative technology, exclusively for use with the *instabus* KNX EIB:

- Independent of country-specific switch and socket boxes
- Linking element between ceilings and floors
- Installation of devices from the *N system*, e.g. *instabus* KNX EIB actuators

The trunking comprises a trunking base and a trunking lid. The trunking lid is easily and quickly snap-fitted in the trunking base in the same way as the modules.

The individual modules can be arranged side by side in any order and be used in any number.

Design

The modular design provides great flexibility during the planning phase:

- Trunking
 - surface-mounting version
 - flush-mounting version (available soon)
- Modules
 - *instabus* KNX EIB modules (pushbuttons, room temperature controllers)
 - socket outlet module
 - masking module (with Siemens logo)
- Accessories
 - set of end plates
 - wall junction cover
 - cable holder
 - grounding set
 - disassembly tool

Design

DELTA millennium is also unique in terms of design and operator friendliness:

- Customized labeling with text in the user's national language and symbols
- Uniform, homogeneous and self-explanatory conventional keys
- Homogeneously illuminated, high-intensity status and orientation lighting

Disassembly

One masking module per trunking section is required to open a closed trunking line.

Other modules or trunking lids cannot be disassembled until the masking module has been removed with the disassembly tool.



Ordering data

The following data are required for all orders:

- Trunking
 - the length of the trunking base depends on the room height
 - the number and lengths of the trunking lids depends on the number of modules
- Modules
 - labeling text
 - symbols

Please complete an order form for each module (see page 1/28) and enclose it with your order.

Please send DP orders by fax.

Orders for trunking bases and trunking lids should be made out for the length required in meters, not for a certain number of pieces:

Example:

If you want to order a trunking base with a length of 173 cm.

- Incorrect: 1 x 5WG1 195-3AB01, 173 cm long
- Correct: 1.73 m 5WG1 195-3AB01

Display, Operation

Pushbutton Accessories

Accessories for trunking systems

IV

☐ IKE 281 Pushbutton, single

V

VI

☐

IKE 282 Pushbutton, double

V

VI

☐

IKE 283 Pushbutton, quadruple

V

VI

☐

IKE 250 Temperature controller

V

-2

-1

0

1

2

☀

☾

🏠

👤

—

+

🏠

👤

Symbols:

S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
☀	☀	🕒	🕒	○	🔔	🔑	⚡	1	2	3	4
S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24
☰	☰	☰	△	▽	🌀	—	+	☀	☾	🏠	👤

To Siemens AG, A&D ET LZA4
Regensburg
Fax: +49(0)941 790-2751

Date

Customer's reference
order reference I

① Order item

②

Quantity

③

④ Order no.

5WG1 . . . -

Project

Installation site

Local partner

Notes

How to fill in the order form:

① State order item

② State quantity

③ Fill in required order no.

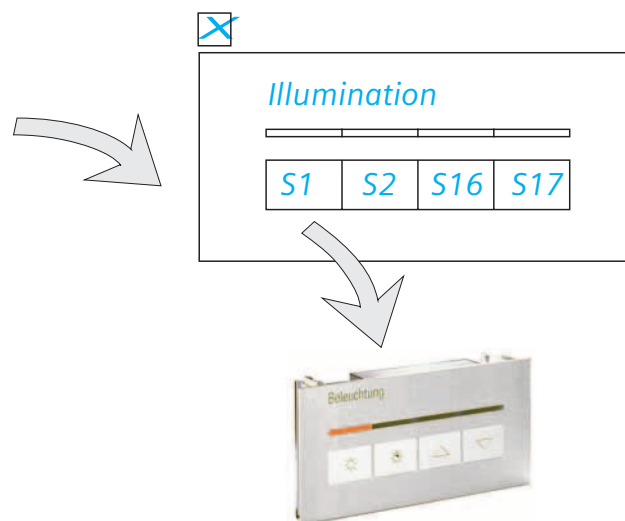
④ Mark required module according to order no.

⑤ State inscription text
(font: Univers S47 Condensed Light 24 point)










⑥ Select and state symbols

Special inscriptions on demand.

Order example:



Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA millennium							
 <p>AP 195 trunking bases</p> <ul style="list-style-type: none"> • For surface mounting • Aluminum • Comprises 1 ground conductor, 3 ground terminals, 1 partition, 4 partition holders, 5 coupling pins <p>Dimensions (W x D): 170 x 68 mm, maximum length 2 m</p> <p><u>Note:</u> Please specify length when ordering, maximum length: 2 m (see page 1/27 "Ordering data").</p>	C	5WG1 195-3AB01		1 m	1 m/ 2 m	030	2.200
5WG1 195-3AB01							
 <p>IKE 197 trunking lids</p> <ul style="list-style-type: none"> • Aluminum • Comprises ground conductor and ground terminal for the trunking base 	C	5WG1 197-8AB01		1 m	1 m/ 2 m	030	1.300
5WG1 197-8AB01							
 <p>IKE 198 socket outlet covers</p> <ul style="list-style-type: none"> • Aluminum • Module for installation in trunking systems, with large hinged lid and engraved plug symbol • Trunking mounting box for AP 195 trunking base, for installation of SCHUKO socket outlets in DELTA design • Comprises ground conductor and ground terminal for the trunking base 	C	5WG1 198-8AB01		1	1	030	0.015
5WG1 198-8AB01							
 <p>IKE 195 masking modules</p> <ul style="list-style-type: none"> • Aluminum • For simple opening of all installed trunking lines • Comprises ground conductor and ground terminal for the trunking base 	C	5WG1 195-8AB41		1	1	030	0.199
5WG1 195-8AB41							
 <p>Disassembly tools</p> <p>With suckers and hooks for simple disassembly of modules, masking modules and trunking lids</p>	C	5WG1 195-8AB51		1	1	030	0.159
5WG1 195-8AB51							
 <p>Sets of end plates</p> <ul style="list-style-type: none"> • Aluminum • For front connection of the trunking • Comprises 2 end plates, 2 ground conductors and 2 ground terminals for the trunking base 	C	5WG1 195-8AB21		1	1	030	0.663
5WG1 195-8AB21							
 <p>Wall junction covers</p> <p>As covers for wall and ceiling openings, for the clean connection of trunking to the wall or the ceiling</p>	C	5WG1 195-8AB31		1	1	030	0.198
5WG1 195-8AB31							
 <p>Cable holders</p> <p>For fixing non-metallic-sheathed cables in the trunking base, comprises 1 mounting rail with 2 slide nuts, 5 cable clips, 2 screws with toothed disks</p>	C	5WG1 195-8AB01		1	1	030	0.112
5WG1 195-8AB01							
 <p>Grounding sets</p> <p>Comprises 3 ground conductors, 3 ground terminals for the trunking base, 3 ground connections for the trunking lid</p>	C	5WG1 195-8AB11		1	1	030	0.127
5WG1 195-8AB11							

* You can order this quantity or a multiple thereof.

1 Display, Operation

Displays

Technical specifications

UP 587/1 text displays

Text displays with UP 587/2 timer

- Horizontal operation of three pushbutton pairs
- Up to nine freely configurable operator functions
 - switching ON/OFF, switching over
 - switching ON/OFF and dimming
 - value transmission
 - sun protection control
 - store and call up 1-bit scenes with the respective scene modules
 - store and call up 8-bit scenes, text display, warning and alarm indication
- With distinction between short and long button press for dimming, scenes and the control of sun protection equipment
- An LCD with two lines, each with 11 characters, which are assigned as a block to the upper two pushbutton pairs
- LCD contrast and brightness can be user adjusted
- LCD backlighting as orientation light
- Four LEDs for switching status indication
- Buzzer for acoustic alarm indication
- Display and input of date and time
- For mounting on UP 117 bus transceiver module.



UP 587/2 also offers:

- Time-controlled switching (weekly switching schedule) for up to 40 time switching commands: switching ON/OFF, switching ON/OFF and dimming, value transmission, sun protection control, call up of 1-bit and 8-bit scenes
- Adjustable time switching commands on the text display
- Dimensions (H x W x D): 55 x 55 x 11 mm.



UP 584, UP 585, UP 586 display/control units

- Graphical LCD with a resolution of 132 x 65 pixels
- Display of up to 30 characters per line and up to 5 lines (font Arial 12 pt)
- Text and special characters uploaded from any Windows fonts and/or freely defined characters and symbols
- Display of up to 16 freely configurable indications
- Indication text lengths of maximum 3 lines, comprising fixed and variable text parts
- Selection of data type for switching for each indication, floating-point value 2/4 byte, percentage value 1 byte, count value 1/2/4 byte, static text, variable text (max. 14 ASCII characters), time or date, with scaling, conversion and text display of values (1/2/4 byte)
- Selection of alarm sound output and/or flashing at each alarm indication, with individual acknowledgement of each alarm indication
- Operation of up to 16 bus functions, such as switching, changing dimming values, changing position of shutters/blinds and/or slats or changing a temperature setpoint value by changing the displayed status or value.
- Limit setting and specification of step sizes for the possible transmission values
- Set green/yellow display backlighting as permanent, time-controlled or to be switched ON/OFF over the bus
- Two pushbuttons for selection of indication to be displayed
- Two additional pushbuttons for operation of configurable bus functions
- Powered over the bus line (double bus load)
- Includes special bus coupling unit
- Dimensions (H x W x D): 65 x 65 x 20 mm.

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.	
					Unit(s)	Unit(s)		kg	
i-system									
	UP 587/1 text displays								
	• Electrical white	A	5WG1 587-2AB01		1	1	030	0.030	
	• Titanium white	A	5WG1 587-2AB11		1	1	030	0.030	
	• Carbon metallic	A	5WG1 587-2AB21		1	1	030	0.030	
	• Aluminum metallic	A	5WG1 587-2AB31		1	1	030	0.030	
	Text displays with UP 587/2 timer								
	• Electrical white	A	5WG1 587-2AB02		1	1	030	0.030	
	• Titanium white	A	5WG1 587-2AB12		1	1	030	0.030	
	• Carbon metallic	A	5WG1 587-2AB22		1	1	030	0.030	
	• Aluminum metallic	A	5WG1 587-2AB32		1	1	030	0.030	
Note:									
The bus transceiver module, the respective frame and the color element for DELTA vita must be ordered separately.									
DELTA profil									
	UP 585 display/control units								
	• Pearl gray	B	5WG1 585-2AB01		1	1	030	0.113	
	• Titanium white	A	5WG1 585-2AB11		1	1	030	0.113	
	• Anthracite	B	5WG1 585-2AB21		1	1	030	0.113	
	• Silver	B	5WG1 585-2AB71		1	1	030	0.113	
	Note:								
	The matching cut-out frame must be ordered separately.								
5WG1 585-2AB11									

Displays

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA style							
	A	5WG1 585-2AB11		1	1	030	0.113
	B	5WG1 584-2AB21		1	1	030	0.113
UP 585 display/control units Titanium white UP 584 display/control units Basalt black <u>Note:</u> The matching frames and intermediate frames must be ordered separately.							
5WG1 585-2AB11							
DELTA ambiente							
	B	5WG1 586-2AB01		1	1	030	0.113
UP 586 display/control units Arctic white <u>Note:</u> The matching frame must be ordered separately.							
5WG1 586-2AB01							

1 Display, Operation

Touch panels

Technical specifications

UP 588 touch panels

- Graphical LCD (monochrome) with 5.5 inches (approx. 14 cm) screen diagonal with 320 x 240 pixel resolution
- Integrated resistive matrix touch with 6 x 10 fields
- Activation of backlighting by touching the screen and automatic deactivation after a configurable time
- Triggering of a switch command telegram by touching the deactivated screen (e.g. for switching on room lighting)
- Display and control of up to 70 *EIB* standard functions on 7 display pages, each with 10 function fields and display of separate alarm page with 4 alarm and 2 text messages
- Selectable function per function field: text display (up to 10 characters), status indication (as symbol or text) or control field (with up to 2 pushbuttons)
- Time program (weekly program) for 5 channels (communication objects) each with up to 10 schedule entries
- Scene control for storing and calling up of 8 scenes with 10 communication objects
- Can be configured using ETS (Engineering Tool Software)
- Display of date and time
- Integrated bus coupling unit
- Bus connection via bus terminal
- Hollow-wall box for flush mounting included in delivery
- Dimensions (H x W x D): 190 x 156 x 58 mm.

Note:

The required design frames (anodized aluminum) must be ordered separately (5WG1 588-8AB01).



UP 583 wave Touch Manager

- Touch-sensitive 5.7" display, with a resolution of 320 x 240 pixels
- With touch-activated and automatically deactivated background lighting
- For monitoring and control of up to 70 actuator and 40 sensor channels
- Display of smoke detector alarms, of connected WebCam images, of the switching status of switchable devices, of the status of door/window contacts, of the battery status and the quality of the radio transmission of battery powered devices with KNX RF communication
- Relaying of alarms and other indications by email
- Scene control for 16 scenes with a total of approx. 200 actuator channels and scene tripping operations (over pushbuttons of the wave Touch Manager, external sensors or times)
- Option for remote operation, monitoring and configuration from any terminal device connected to the same local network with HTML4-capable browser or over the Internet if the network is correctly configured, for use as browser for HTML pages on an external server
- Integrated realtime clock, with synchronization of date and time over Ethernet
- Long-range power supply unit for 110 V 60 Hz/230 V 50 Hz, connection of power supply over screw terminals for 2.5 mm²
- Ethernet connection over RJ45 socket
- Integrated transmitter/receiver for KNX RF (868 MHz)
- For flush mounting
- Silver
- Dimensions (H x W x D): 257 x 222 x 56 mm (mounting depth: 45 mm).

Note:

The wave Touch Manager has to be installed in either a flush-mounting junction box from Kaiser, Item No. 1097-92 or in a hollow-wall junction box from Kaiser, Item No. 9197-91. The junction box must be ordered separately (<http://www.kaiser-elektro.de>).

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	UP 588 touch panels (to be discontinued)	A	5WG1 588-2AB01		1	1	030	0.725
	• Green display backlighting							
	• Rated operational voltage 230 V AC, 50/60 Hz							
	UP 588/11 touch panels (to be discontinued)	A	5WG1 588-2AB11		1	1	030	0.750
	• White display backlighting							
	• Rated operational voltage 230 V AC, 50/60 Hz							
	UP 588/21 touch panels (to be discontinued)	B	5WG1 588-2AB21		1	1	030	0.710
	• White display backlighting							
	• Rated operational voltage 24 V AC/DC							
	Accessories							
5WG1 588-2AB01	Design frames for UP 588 touch panels (to be discontinued)	A	5WG1 588-8AB01		1	1	030	0.128
	Made of anodized aluminum, with Siemens logo.							
5WG1 583-2AB71	UP 583 wave Touch Manager (to be discontinued)	A	5WG3 583-2AB71		1	1	030	1.500
	• Touch-sensitive 5.7" color display							
	• Communication over Ethernet, KNX RF and KNX <i>EIB</i>							

Technical specifications**S 425 IR hand-held transmitters**

- Remote control of 8 of 64 possible channels, can be operated as switchable groups of 4 channels each
- Assignable functions per channel: switching over, switching ON/OFF, switching ON/OFF and dimming, shutter/blind, value transmission, store and call up scenes
- Rotary switches for setting the channel number range
- Transmitter range approx. 20 m
- Black
- Dimensions (H x W x D): 159 x 39 x 23 mm.

Note:

The 4 batteries of type LR03/AAA (1.5 V) required for operation are not included in delivery.



S 425 wave hand-held radio transmitters

- 4 pre-selection pushbuttons and 4 pushbutton pairs for wireless operation of 16 different room functions
- Separate pushbutton pair for a central function (e.g. central ON/OFF),
- Configurable function per pushbutton pair: switch, switch and dim, shutter/blind control, store and call up scenes
- Radio transmitter: 868 MHz
- Black or silver
- Dimensions (H x W x D): 154 x 55 x 24 mm.

Note:

The 2 batteries of type LR03/AAA (1.5 V) required for operation are not included in delivery.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 425-7AB21	S 425 IR hand-held transmitters, 8-channel			1	1	030	0.070
	A	5WG1 425-7AB21					
 5WG1 425-7AB21	S 425 wave hand-held radio transmitters, 17 channels			1	1	030	0.124
	A	5WG3 425-7AB21		1	1	030	0.125
		5WG3 425-7AB71					

5WG1 425-7AB21

1 Display, Operation

Visualization

Overview

Web-Visualization with ComBridge Studio

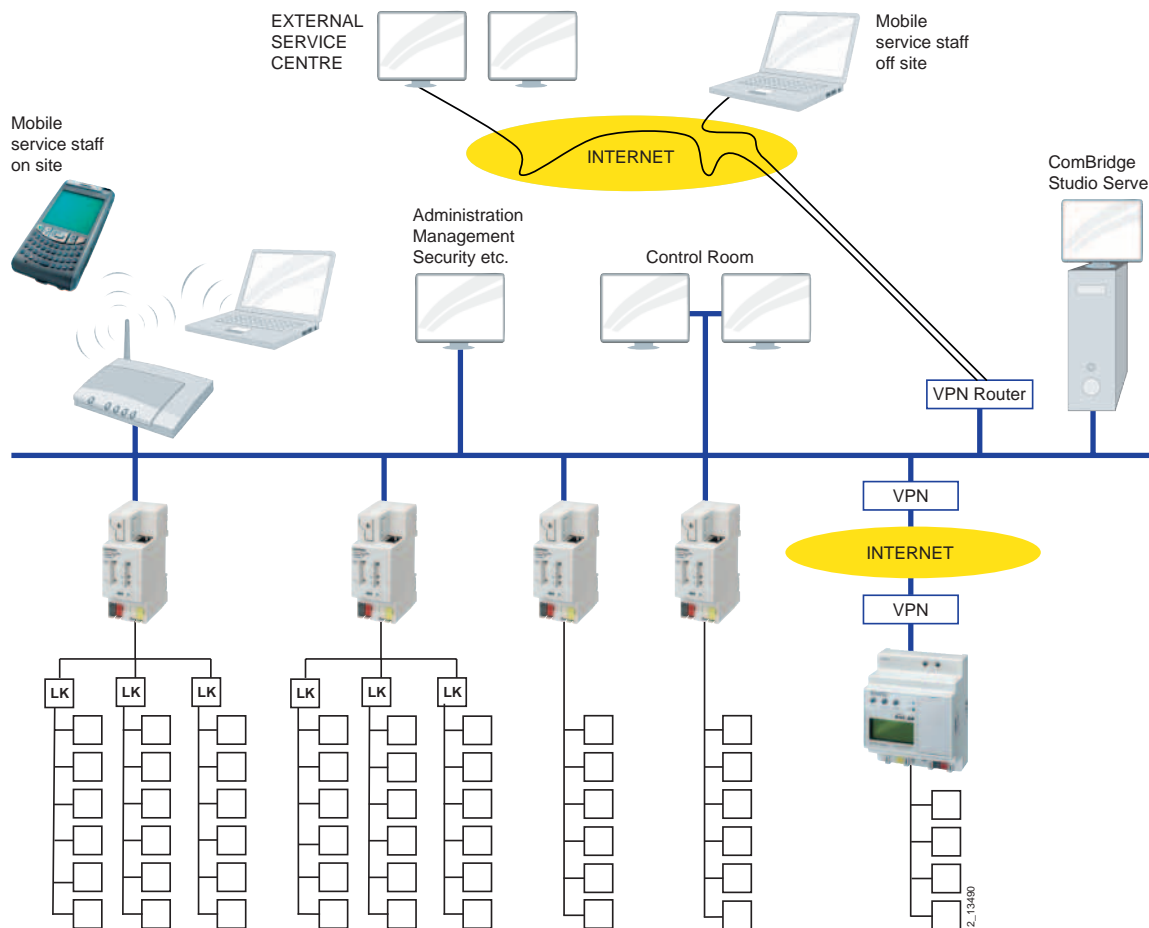
Due to their distributed structure, KNX *EIB* systems support a high degree of automation in building management systems, as well as the detailed and effective management of building-relevant information. The IPAS ComBridge Studio Suite allows you to make optimum use of the options provided by the KNX *EIB* system. The software enables KNX *EIB* to operate, control and visualize systems over the Internet. It also allows users an overview of key information and enables an immediate response if required.

You can use the ComBridge Studio software to manage the KNX *EIB* system and its components from any computer,

whether PC, notebook, tablet PC or Palmtop, as long as the user has the appropriate access rights.

The use of wireless network connections supports the management of the KNX *EIB* system without being tied to a fixed workstation (e.g. central control room). Mobile access to the management system of a building is an invaluable advantage during the local commissioning, maintaining and troubleshooting of plants.

Used together with ComBridge Studio Software, EIBnet/IP devices, such as the N 146 IP router, offer a modular, high-capacity and effective building management system that is unrivaled in flexibility.



Overview of the ComBridge Studio system structure

Using standard communication networks based on Internet protocols, the building management systems of distant premises can be managed over a central service control room. Satellite connections are also supported: The software has been designed so that even prolonged transmission times for the relevant information do not influence the functionality or stability of the system.

The use of standard browser technologies has considerably simplified access to the management system. All applications run exclusively on the server, which is where they are also installed and modified. A client-side installation is therefore not necessary; access to building information, such as room control, building monitoring, etc. is over a standard HTML browser, an extremely cost-effective solution.

Companies that have a multitude of premises, such as store groups, banks, gas stations, logistic platforms, etc., are usually able to use their existing IT networks to link the building manage-

ment systems of their premises with the IPAS building management system. This results in lower installation costs and improves management of the building infrastructures.

The ComBridge Studio software has already been implemented in a multitude of applications, including in:

- Store chains
- Industrial plants
- Apartments
- Vacations sites with individual bungalows
- Distributed premises
- Hotels
- Office buildings
- Sport arenas
- Exclusive villas

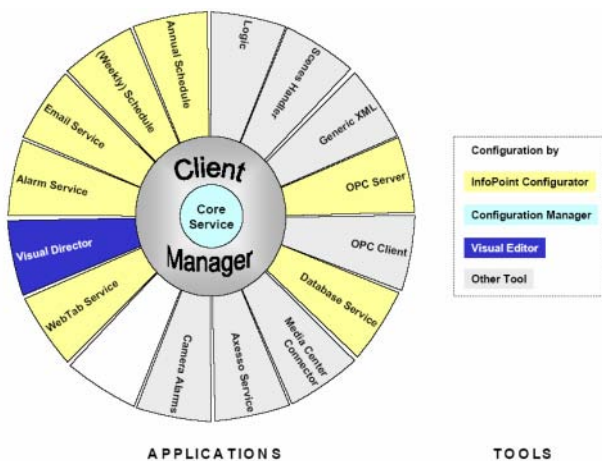
ComBridge Studio software structure

Core and application services

The ComBridge Studio Suite comprises core services that are automatically started with the operating system (Windows) of the server or PC so that no manual intervention is required on the part of the user, i.e. no need to log in.

The ComBridge Studio Suite services include:

- **Core Service**
communicates with all defined EIBnet/IP devices and automatically monitors all configured EIBnet/IP devices. This service is designed to check all configured devices and ensure that the connection is active. If the connection is lost, the device server automatically attempts to reconnect. If the physical connection permits, the device server maintains all connections to the EIBnet/IP devices.
- **EIBnet/IP Service**
ensures communication with the devices using the EIBnet/IP protocol.
- **Client Manager**
acts as communication hub between the Core Service and the Application Services.
- **Automation Service**
executes the application services, e.g. for alarms, email or scheduling programs.
- **MCG Service**
provides the configuration service for the N 350E IP Controller.



ComBridge Studio software structure

The Core Service communicates with the EIBnet/IP devices. Use Configuration Manager to add or remove devices or to monitor communication with them.

The Client Manager acts as communication distributor between the Core Service and the application services, as well as between the application services (e.g. from the OPC server or Generic XML to the Visual Director). The Client Manager interacts with the control room in order to provide current system information and application service configurations.

ComBridge Studio Suite application services:

- **WebTab Service:**
Webtabs operating images in tabular form, each with one line per data point. Each line contains a description text, the group address or object name, the current state of the data point and buttons for operation. Using the InfoPoint Configurator, you can create your own WebTabs in just a few minutes.
- **Visual Director:**
IPAS ComBridge Studio Visual Director is supplementary to Webtab and offers a wide range of free design options. Freely definable navigation, free layout of the graphical display and control elements.
- **Web standards:**
Visual Director is HTML-based so that company Web assets, such as logo, navigation, graphics, dynamic HTML, layouts, scripts and dynamic contents in visualization projects, can be used again. Furthermore, HTML know-how is very prevalent on the market and easily available.
- **User login:**
Visual Director provides complete user management. Users can be assigned their own start page and navigation. User levels let you control user access to data points.
- **Configuration:**
The supplied Visual Director is a menu-assisted, pixel-graphic HTML editor with a multitude of functions for creating your own Web operator interface.
- **Email Service:**
Critical states or events can be monitored so that in the event of their occurrence, emails are sent automatically. The overshooting or undershooting of limit values, 0 or 1 states, or the receipt of specific group addresses can be tested. The contents of emails can be designed to have great impact, and even sent with an attachment, e.g. with photos or circuit diagrams.
- **Database Service:**
You can use the DS to write selected KNX *EIB* group addresses (indications, measured values, count values, switch and positioning commands) to a database for subsequent evaluation and reporting.
- **(Weekly) Scheduling Service:**
Weekly scheduling programs can be stored and managed centrally using the Scheduling Service. Simply checkmark week days to activate. Switch and positioning commands can be executed.
- **Annual Scheduling Service:**
With the Annual Scheduling Service, scheduling programs can be centrally created and managed for selected days or periods. Switch and positioning commands can be executed.
- **Alarm Service:**
Critical states or events can be monitored so that in the event of their occurrence, an alarm indication is automatically displayed in an alarm window. The overshooting or undershooting of limit values, 0 or 1 states, or the receipt of specific group addresses can be tested. Even after they have been acknowledged, alarms are stored in a database for subsequent evaluation.
- **OPC Service:**
ComBridge Studio offers full OPC server functionality, as well as OPC client functionality, to enable the flexible integration of KNX *EIB* systems.
Double advantage: ComBridge Studio OPC Services can also be used at the same time as other ComBridge Studio applications. For example, the plant can be controlled by OPC at the same time as the workplace is controlled using Webtab or a Visual Director application is implemented. It is also possible to ensure mobile access to KNX *EIB* installations for service personnel, or set up an email message service, etc.
- **Scenes:**
Supports the creation of centrally executed scenes.

1 Display, Operation

Visualization

The ComBridge Studio InfoPoint Configurator is a configuration tool with an intuitive interface for application services:

- WebTab Service
- Email Service
- Database Service
- (Weekly) Scheduling Service
- Annual Scheduling Service
- Alarm Service
- OPC server

Licensing

The IPAS ComBridge Studio software license is based on the selected application functions, the number of connected EIBnet/IP devices and the number of simultaneous users.

The IPAS ComBridge Studio software is available in four application function packages: micro, mini, midi and maxi.

All function packages include connection to three EIBnet/IP devices and are for up to three users.

The four basic packages (micro, mini, midi and maxi) can all be combined with the following expansion packages:

- 5 user expansion package
- 5 gateway expansion package
- OPC server expansion package
- OPC client expansion package

Technical specifications

Package functions	Application packages				Expansion packages			
	micro	mini	midi	maxi	5 users	5 gateways	OPC server	OPC client
<ul style="list-style-type: none"> • Core Service • EIBnet/IP Service • Client Manager • Automation Service • MCG Service 	✓	✓	✓	✓	--	--	--	--
WebTab Service	✓	✓	✓	✓	--	--	--	--
Visual Director	✓	✓	✓	✓	--	--	--	--
Email Service	--	--	✓	✓	--	--	--	--
Database Service	--	--	--	✓	--	--	--	--
Scheduling Service (weekly)	--	✓	✓	✓	--	--	--	--
Annual Scheduling Service	--	--	✓	✓	--	--	--	--
Alarm Service	--	✓	✓	✓	--	--	--	--
OPC Service	--	--	--	--	--	--	✓	✓
Scenes	--	--	✓	✓	--	--	--	--
Gateways	3	3	3	3	--	+ 5	--	--
Users	3	3	3	3	+ 5	--	--	--

Visualization software IPAS ComBridge Studio Application packages

micro

- Core functions for the signaling, logging and display of alarms and operating states or operating values, as well as current images on PC (operator terminals)
- Acquisition of all KNX EIB group addresses from ETS2 and ETS3
- Assignment option of data point type, unit and a name of up to 32 characters in length for each operator entry to be displayed
- Editor for the fast creation of tabular images that can be operated over browser
- Dynamic image elements for the display of updated data point states
- Configuration of scheduling programs, event programs, ODBC database interface, OPC server interface
- Visual Director for graphical display and operation, for the signaling, logging and display of alarms and operating states or operating values, as well as current images on PC (operator terminals)
- Operation enable in at least 4 authorization steps, with time-dependent operation enable, with user-dependent operation enable per operator entry
- Acquisition of all KNX EIB group addresses from ETS2 and ETS3
- Assignment option of data point type, unit and a name of up to 32 characters in length for each operator entry to be displayed
- Read-in of background images as pixel and vector graphics, including the graphic editor IPAS ComBridge Studio, Visual Editor for creation of images that can be operated over browser
- Operator-dependent start image and operating image structure

- The following dynamic image elements are available for the display of updated plant images:
 - output variables
 - follow-up image variables
 - switching variables
 - status variables
 - text variables
 - counter variables
- Storage of event information on the hard disk and display on a screen page
- Output of colored screenshots to printers
- Insertion of video camera images, for 3 EIBnet/IP routers or controllers
- Failure monitoring of the EIBnet/IP gateways, as configuration and playback version, for up to three simultaneous users
- Driver software for the KNX EIB connection over EIBnet/IP, including manual
- Hardlock as license key.

mini

- Function and scope of delivery of visualization software IPAS ComBridge Studio micro
- Scheduling program as weekly program
- Unlimited number of channels and entries
- Configuration from the visualization software
- Alarm function, storage of alarms in an alarm indication database
- Unlimited number of channels and entries
- Configuration from the visualization software
- Display in a separate alarm signal window.



2

Output Devices

2

2/2	Introduction
2/3	Analog output devices
2/4	Binary output devices
2/8	Switchable socket outlets

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Output Devices

2

Introduction

Overview

Analog output devices



Flexible application: The universal I/O module provides flexible inputs and outputs.

Binary output devices



Binary outputs and load switches in several versions.

Switchable socket outlets



Electrical devices can be switched over GAMMA instabus.


Technical specifications

- 2 universal inputs/outputs, each adjustable as
 - analog input 0 V ... 10 V DC
 - analog output 0 V ... 10 V DC
 - binary input for 10 V DC
 - binary output for 10 V DC
- Analog input with limit value monitoring and signaling, with adjustable limit values and hysteresis
- Analog output with adjustable lower and upper limit of the output voltage with adjustable voltage value in the event of bus voltage failure and recovery
- Binary input with pulse edge evaluation
- Binary output with adjustable switching position in the event of bus voltage failure and recovery
- 2 inputs for the connection of temperature sensors with Pt1000 measured element for temperature measurement in the range -25 °C ... +45 °C, with limit value monitoring and signaling, with adjustable limit values and hysteresis
- 2 binary outputs, relay contacts rated for 230 V AC, 10 A at p.f. = 1, with
 - configurable actuated position (NO contact/NC contact)
 - positively driven operation
 - configurable switching position in the event of bus voltage failure and recovery
- Electronics powered over an external power supply unit for 24 V AC/DC
- Integrated bus coupling unit
- Bus connection over bus terminal and contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 4 MW (1 MW = 18 mm).

Note:

The external power supply unit with 24 V AC/DC must be ordered separately (e.g. LOGO!Power 6EP1 331-1SH01).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
	A	5WG1 670-1AB03		1	1	030	0.220
Universal N 670 I/O modules, 2 x universal I/O, 2 inputs Pt1000, 2 outputs 230 V AC, 10 A							

5WG1 670-1AB03

Output Devices

2

Binary output devices

Technical specifications

Type	N 562	N 510/03	N 510/04	N 512	N 567	N 567/11	N 567/12	N 567/21	GE 561/02	UP 562	UP 562/11	UP 511/10
Enclosure data												
Design	N	N	N	N	N	N	N	N	GE	UP	UP	UP
Modular installation device for mounting on TH 35 EN 60715 mounting rail	✓	✓	✓	✓	✓	✓	✓	✓	--	--	--	--
For installation in flush-mounting switch and socket boxes with Ø 60 mm	--	--	--	--	--	--	--	--	--	✓	✓	✓
Modular installation device in oblong design, for installation in luminaires for fluorescent lamps	--	--	--	--	--	--	--	--	✓	--	--	--
Integrated user interface for plugging in a single to quadruple bus pushbutton	--	--	--	--	--	--	--	--	--	✓	--	--
Dimensions												
• Height	mm								28	71	51	
• Width/Ø (1 MW = 18 mm)	mm								274.5	71	44	
• Depth	mm	2 MW	4 MW	4 MW	4 MW	4 MW	4 MW	8 MW	42	40	40	53
Mounting type												
Claw fixing	--	--	--	--	--	--	--	--	--	✓	--	--
Screw fixing	--	--	--	--	--	--	--	--	--	✓	--	--
Display/control elements												
Direct operation (local operation)	--	--	--	--	✓	✓	✓	✓	--	--	--	--
Mechanical local operation	--	✓	✓	✓	--	--	--	--	--	--	--	--
Mechanical switching position display	--	✓	✓	✓	--	--	--	--	--	--	--	--
LED for status indication per output	--	--	--	--	✓	✓	✓	✓	--	--	--	--
Power supply												
Electronics powered over bus voltage	✓	✓	✓	✓	--	--	--	--	✓	✓	✓	✓
Electronics powered over an integrated power supply unit for supply voltage 230 V AC	--	--	--	--	✓	✓	✓	✓	--	--	--	--
Bus connection												
Integrated bus coupling unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus connection via bus terminal	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus connection over contact system to data rail	✓	✓	✓	✓	✓	✓	✓	✓	--	--	--	--
Outputs												
Load output												
Floating relay contacts	2	4	4	8	4 ¹⁾	8 ¹⁾	8 ¹⁾	16 ¹⁾	3	1	1	1
Rated contact voltage, AC	V 230	230	230	230	230	230	230	230	230	230	230	230
Rated contact current	A 10	16	16	16	8	8	2	10	10	10	10	16
For load data, see chapter "Technical Information"												
Inputs												
Max. cable length, unshielded, untwisted	m	--	--	--	--	--	--	--	--	--	--	5
Pushbutton inputs												
For signal input (floating contacts)	--	--	--	--	--	--	--	--	--	--	--	2
Determination of switching state over the voltage generated in the device	--	--	--	--	--	--	--	--	--	--	--	✓

¹⁾ Except channel A.

Type	N 562					N 510/03		N 510/04		N 512		N 567		N 567/11		N 567/12		N 567/21		GE 561/02		UP 562		UP 562/11		UP 511/10		
Application program	520401	520501	520901	520B01	520802	906401	906401	900701	908301	980303	980302	980304	980401	530501	530B01	1)	901002	207101										
Output functions																												
Max. number of group addresses	11	19	11	17	10	55	55	52	49	100	100	100	106	19	17	38	38	26										
Max. number of assignments	11	20	12	17	10	56	56	52	49	100	100	100	106	20	17	38	38	27										
Locking function	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	✓										✓
Configurable behavior in the event of a bus power failure	✓	✓	✓	✓	✓	✓	✓	✓	--	--	--	--	--	✓	✓	✓	✓	✓										✓
Configurable behavior in the event of a bus power recovery	--	✓	✓	✓	--	✓	✓	✓	✓	--	--	--	--	✓	✓	✓	✓	✓										✓
Configurable behavior in the event of a system voltage recovery	--	--	--	--	--	--	--	--	--	✓	✓	✓	✓	--	--	--	--	--										--
Behavior in the event of system voltage failure																												
• Positive OFF switching of the outputs	✓	--	✓	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	--	✓	--	✓	✓										--
• Unchanged switching state of outputs	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	✓										✓
Heating control																												
Control of electrothermal position drives	--	--	--	--	✓	--	--	--	--	--	--	--	--	--	--	--	--	--										--
Scene control																												
Integrated 8-bit scene control	--	--	--	--	--	--	--	--	--	✓	✓	✓	✓	--	--	--	--	--										--
Scenes to be integrated per channel	--	--	--	--	--	--	--	--	--	8	8	8	8	--	--	--	--	--										--
Time functions																												
OFF delay	✓	--	✓	--	--	✓	✓	✓	✓	✓	✓	✓	✓	--	--	✓	✓	✓										✓
ON delay	✓	--	✓	--	--	✓	✓	✓	✓	✓	✓	✓	✓	--	--	✓	✓	✓										✓
Timer mode (automatic stairwell switch)	--	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓	--	--	✓	✓	✓										✓
Night mode (lighting for cleaning)	--	--	--	--	--	--	--	--	--	✓	✓	✓	✓	--	--	--	--	--										--
Warning of impending OFF	--	--	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--	--	--										--
Logical functions																												
Positively driven operation	✓	✓	--	--	--	✓	✓	--	✓	--	--	--	--	--	✓	✓	✓	✓										✓
Logic function (1 object)	✓	--	--	✓	--	--	--	✓	✓	✓	✓	✓	✓	✓	--	--	--	--										✓
Logic function (2 objects)	--	--	--	--	--	✓	✓	--	--	--	--	--	--	--	--	✓	✓	✓										✓
Can be inverted per output (NO contact/NC contact)	✓	✓	✓	✓	✓	✓	✓	✓	✓	--	--	--	--	✓	✓	✓	✓	✓										✓
Status																												
Send status per channel	--	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓										✓

1) See table "Application programs and pushbuttons for use with UP 562".

Application programs and pushbuttons for use with UP 562

For DELTA design	i-system				profil/style			ambiente
Application program	901902	901A02	901C02	901D02	901402	901502	901602	901802
Can be used with pushbuttons	UP 221	UP 222	UP 221E	UP 222E	UP 241, UP 242 UP 285	UP 243, UP 244 UP 286	UP 245, UP 246 UP 287	UP 284
Number of pushbutton pairs	1	2	1	2	1	2	4	4

Output Devices

2

Binary output devices




Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 562 binary outputs, 10 A, 2 x 230 V AC	A	5WG1 562-1AB01	209,—	1	1	030	0.105
5WG1 562-1AB01								
	N 510/03 load switches, 16 A, 4 x 230 V AC	A	5WG1 510-1AB03	393,—	1	1	030	0.240
5WG1 510-1AB03 5WG1 510-1AB04	N 510/04 load switches, 16 A, 4 x 230 V AC, C load	A	5WG1 510-1AB04	330,—	1	1	030	0.280
	N 512 load switches, 16 A, 8 x 230 V AC, C load	A	5WG1 512-1AB01	442,—	1	1	030	0.516
5WG1 512-1AB01								
	N 567 switch actuators, 8 A, 4 x 230 V AC	A	5WG1 567-1AB01	221,—	1	1	030	0.220
5WG1 567-1AB01								
	N 567/11 switch actuators, 8 A, 8 x 230 V AC	A	5WG1 567-1AB11	306,—	1	1	030	0.270
5WG1 567-1AB11 5WG1 567-1AB12	N 567/12 switch actuators, 2 A, 8 x 230 V AC	A	5WG1 567-1AB12	247,—	1	1	030	0.265
	N 567/21 switch actuators, 10 A, 16 x 230 V AC	A	5WG1 567-1AB21	494,—	1	1	030	0.623
5WG1 567-1AB21								
	GE 561/02 binary outputs, 10 A, 3 x 230 V AC	A	5WG1 561-4AB02	241,—	1	1	030	0.140
5WG1 561-4AB02								

Output Devices

Binary output devices

2

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG1 562-2AB01	A	5WG1 562-2AB01	164,---	1	1	030	0.080
 5WG1 562-2AB11	A	5WG1 562-2AB11		1	1	030	0.055
 5WG1 511-2AB10	A	5WG1 511-2AB10		1	1	030	0.115

Output Devices

2

Switchable socket outlets

Technical specifications

- For plugging onto SCHUKO socket outlet inserts, with or without status display, of the Siemens DELTA flush mounting product ranges
- Switch actuators for 230 V AC, 10 A, p.f. = 1
- Timer mode (automatic stairwell switch)
- ON delay
- OFF delay
- Logic operation (AND/OR) of two communication objects
- Positively driven object
- Status object
- Configurable behavior in the event of a bus power failure/recovery
- Integrated bus coupling unit

- Bus terminals
- Electronics powered over bus voltage
- For mounting in device junction box with a depth of 60 mm
- Including distance frames in design DELTA profil.
- Dimensions (H x W x D): 46 x 46 x 30 mm.

Note:

The SCHUKO socket outlet (with status display) and the matching frames must be ordered separately; if using device junction boxes for surface mounting in conjunction with the matching leveling ring (24 mm), no distance frame is required.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg

DELTA profil



UP 563 switchable socket outlets, 10 A, 230 V AC
(to be discontinued)

- Titanium white

A **5WG1 563-2AB11** 1 1 030 0.051



5WG1 563-2AB11

3

Input Devices

3

3/2	Introduction
3/3	Analog input devices
3/4	Binary input devices

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Input Devices

Introduction

Overview

Analog input devices



Flexible application: The universal I/O module provides flexible inputs and outputs.

Binary input devices



Binary inputs monitor switching states and signal them on the GAMMA instabus.


Technical specifications

- 2 universal inputs/outputs, each adjustable as
 - analog input 0 V ... 10 V DC
 - analog output 0 V ... 10 V DC
 - binary input for 10 V DC
 - binary output for 10 V DC
- Analog input with limit value monitoring and signaling, with adjustable limit values and hysteresis
- Analog output with adjustable lower and upper limit of the output voltage with adjustable voltage value in the event of bus voltage failure and recovery
- Binary input with pulse edge evaluation
- Binary output with adjustable switching position in the event of bus voltage failure and recovery
- 2 inputs for the connection of temperature sensors with Pt1000 measured element for temperature measurement in the range -25 °C ... +45 °C, with limit value monitoring and signaling, with adjustable limit values and hysteresis
- 2 binary outputs, relay contacts rated for 230 V AC, 10 A at p.f. = 1, with
 - configurable actuated position (NO contact/NC contact)
 - positively driven operation
 - configurable switching position in the event of bus voltage failure and recovery
- Electronics powered over an external power supply unit for 24 V AC/DC
- Integrated bus coupling unit
- Bus connection over bus terminal and contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 4 MW (1 MW = 18 mm).

Note:

The external power supply unit with 24 V AC/DC must be ordered separately (e.g. LOGO!Power 6EP1 331-1SH01).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
	A	5WG1 670-1AB03		1	1	030	0.220
Universal N 670 I/O modules, 2 x universal I/O, 2 inputs Pt1000, 2 outputs 230 V AC, 10 A							

5WG1 670-1AB03

Input Devices

Binary input devices

Technical specifications


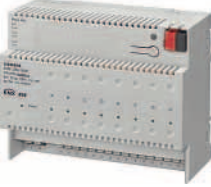





Type	N 260	N 261	N 262E	N 262E11	N 263E	N 263E11	N 264E11	GE 262/02	UP 220/02	UP 220/03	UP 220/13
Enclosure data											
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓	✓	✓	✓	✓	✓	--	--	--	--
For insertion in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm	--	--	--	--	--	--	--	--	✓	✓	✓
Enclosures for device installation	--	--	--	--	--	--	--	✓	--	--	--
Dimensions											
• Height	mm	2 MW	2 MW	6 MW	6 MW	6 MW	6 MW	6 MW	42	38	42
• Width (1 MW = 18 mm)	mm	2 MW	2 MW	6 MW	6 MW	6 MW	6 MW	6 MW	274.5	43	42
• Depth	mm	2 MW	2 MW	6 MW	6 MW	6 MW	6 MW	6 MW	28	17.6	8.5
Display/control elements											
LED for status indication per input	--	--	✓	✓	✓	✓	✓	--	--	--	--
Power supply											
Electronics powered over bus voltage	✓	✓	--	--	--	--	--	✓	✓	✓	✓
Electronics powered over an integrated power supply unit for supply voltage 230 V AC	--	--	✓	✓	✓	✓	✓	--	--	--	--
Bus connection											
Integrated bus coupling unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus connection over contact system to data rail	✓	✓	✓	✓	✓	✓	✓	--	--	--	--
Bus connection via bus terminal	--	--	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inputs											
Max. cable length, unshielded, untwisted	m	100	100	100	100	100	100	100	5	10	10
Pushbutton inputs											
For signal input (floating contacts)	--	--	8	16	--	--	8	4	4	4	2
Determination of switching state over the voltage generated in the device	--	--	✓	✓	--	--	✓	✓	✓	✓	✓
For voltage input (with common ground (N) or (-))	✓	✓	--	--	✓	✓	✓	--	--	--	--
• 230 V AC	4	--	--	--	--	--	--	--	--	--	--
• 24 V AC/DC	--	4	--	--	--	--	--	--	--	--	--
• 12 ... 230 V AC/DC	--	--	--	--	8	--	8	--	--	--	--
• 12 ... 230 V AC/12 ... 115 V DC	--	--	--	--	--	16	--	--	--	--	--

Type	N 260			N 261			N 262E	N 262E11	N 263E	N 263E11	N 264E11	GE 262/02				UP 220/02	UP 220/03			
Application program	240505	240A01	220703	240505	240A01	220703	980901	980D01	980901	980D01	980D01	240505	240A01	220703		900901	240505	220710	240505	220710
Input functions																				
Max. number of group addresses	14	8	27	14	8	27	97	97	97	97	97	14	8	27		20	14	12	14	12
Max. number of assignments	16	9	27	16	9	27	97	97	97	97	97	16	9	27		20	16	12	16	12
Telegram rate limitations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Configurable debounce time	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Locking of inputs using locking objects	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
Adjustable duration of long button press	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--	✓		✓	--	--	--	--
Configurable contact type (NO contact/ NC contact)	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓	✓		✓	--	✓	--	✓
Transmission parameters																				
Adjustable cyclic transmission	✓	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--		✓	✓	--	✓	--
Configurable transmission in the event of changes to the input	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Configurable transmission in the event of bus power recovery	✓	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--		✓	✓	--	✓	--
Transmission delay with adjustable delay time	--	✓	--	--	✓	--	--	--	--	--	--	--	✓	--		--	--	--	--	--
Configurable event-controlled transmission	✓	--	--	✓	--	--	--	--	--	--	--	✓	--	--		✓	✓	--	✓	--
Switching																				
Switching ON/OFF																				
• Rising edge	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓		✓	✓	✓	✓	✓
• Falling edge	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓		✓	✓	✓	✓	✓
• Rising and falling edge	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓		✓	✓	✓	✓	✓
• Short/long button press can be evaluated	✓	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓		✓	✓	✓	✓	✓
Switching over																				
• Rising edge	✓	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--		✓	✓	--	✓	--
• Falling edge	✓	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--		✓	✓	--	✓	--
• Rising and falling edge	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	✓	--	--		✓	✓	--	✓	--
Value transmission																				
8 bit																				
• Rising edge	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓	✓		✓	--	✓	--	✓
• Falling edge	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓	✓		✓	--	✓	--	✓
• Rising and falling edge	--	✓	✓	--	✓	✓	✓	✓	✓	✓	✓	--	✓	✓		✓	--	✓	--	✓
• Short/long button press can be evaluated	--	--	✓	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	✓	--	✓
16 bit																				
• Rising edge	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
• Falling edge	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
• Rising and falling edge	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
• Configurable short/long button press	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
Dimming																				
1-pushbutton dimming	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		✓	--	--	--	--
2-pushbutton dimming with stop telegram (4 bit)	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--	✓		✓	--	✓	--	✓
2-pushbutton dimming with cyclic transmission (4 bit)	--	--	✓	--	--	✓	--	--	--	--	--	--	--	✓		✓	--	--	--	--
2-pushbutton dimming with value setting (8 bit)	--	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--
Short/long button press can be evaluated	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		✓	--	✓	--	✓
Shutter/blind																				
1-pushbutton shutter/blind control	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
2-pushbutton shutter/blind control	--	--	✓	--	--	✓	✓	✓	✓	✓	✓	--	--	✓		✓	--	--	--	--
Short/long button press can be evaluated	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		✓	--	--	--	--
Scene																				
Store and call up scene, 8-bit	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	✓	--	✓
Store and call up scene, 1-bit in conjunction with scene module	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	--	--	--
Pulse counting																				
Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	✓	--	✓
Group control																				
1-pushbutton group control	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	--		--	--	✓	--	✓

Input Devices

Binary input devices

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 260 binary inputs, 4 inputs for 230 V AC	C	5WG1 260-1AB01		1	1	030	0.105
	N 261 binary inputs, 4 inputs for 24 V AC/DC	A	5WG1 261-1AB01		1	1	030	0.105
	N 262E binary input devices, 8 inputs for floating contacts	A	5WG1 262-1EB01		1	1	030	0.374
	N 263E binary input devices, 8 inputs for 12 ... 230 V AC/DC	A	5WG1 263-1EB01		1	1	030	0,.
	N 262E11 binary input devices, 16 inputs for floating contacts	A	5WG1 262-1EB11		1	1	030	0.414
	N 263E11 binary input devices, 16 inputs for 12 ... 230 V AC / 12 ... 115 V DC	A	5WG1 263-1EB11		1	1	030	0.325
	N 264E11 binary input devices, 2 x 8 inputs for 12 ... 230 V AC/DC, 8 for floating contacts	A	5WG1 264-1EB11		1	1	030	0.414
	GE 262/02 binary inputs, 4 inputs for floating contacts	A	5WG1 262-4AB02		1	1	030	0.140
	UP 220/02 pushbutton interfaces, 4 inputs for floating contacts	A	5WG1 220-2AB02		1	1	030	0.043
	UP 220/03 pushbutton interfaces, 4 inputs for floating contacts	A	5WG1 220-2AB03		1	1	030	0.020
	UP 220/13 pushbutton interfaces, 2 inputs for floating contacts	A	5WG1 220-2AB13		1	1	030	0,015

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Combination Devices

4/2

Introduction

4/3

Input/output devices

4

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Combination Devices

Introduction

Overview

Combination devices



Combine inputs and outputs to devices for flexible application

Technical specifications

	900501 N 670/03	906101 N 605	906202 N 605/11	905303 N 526/02	241C01 N 266	207101 UP 511/10
Type						
Application program						
Enclosure data						
Design	N	N	N	N	N	UP
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓	✓	✓	✓	--
For installation in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm	--	--	--	--	--	✓
Dimensions • Width/Ø (1 MW = 18 mm) • Depth	4 MW	6 MW	6 MW	6 MW	4 MW	53 mm 28 mm
Display/control elements						
LED for status indication per input	--	--	--	✓	✓	--
LED for status indication per output	--	✓	✓	✓	--	--
LED for operation/status indication	--	✓	✓	--	--	--
Pushbuttons for local operation on the device	--	✓	✓	✓	--	--
Power supply						
Electronics powered over an integrated power supply unit for supply voltage 230 V	--	✓	✓	✓	--	--
Electronics powered over bus voltage	--	--	--	--	--	✓
Electronics powered over an external power supply unit	24 V AC/DC	--	--	--	12 V DC max. 50 mA	--
Bus connection						
Integrated bus coupling unit	✓	✓	✓	✓	✓	✓
Bus connection via bus terminal	✓	✓	✓	✓	✓	✓
Bus connection over contact system to data rail	✓	--	--	--	--	--
Outputs						
Control output						
1 ... 10 V DC	--	--	--	3	--	--
Max. ECG per output (Osram Dynamik 58 W)	--	--	--	50	--	--
Two 12 V outputs "walk test" and "setting/unsetting" for the control of passive infrared and motion detectors	--	--	--	--	✓	--
Load output						
Floating relay contact	2	--	--	3	--	1
Silent semiconductor switch	--	6	6	--	--	--
Load types						
Rated contact voltage, AC	V	230	230	230	--	230
Rated contact current	A	10	--	6	--	16
Max. short-time current	A	--	1.5	0.5	--	--
Switching capacity for permanent loading	W	--	12	6	--	--
Protection						
Electronic protection of outputs against overload and short circuit	--	✓	✓	--	--	--
Universal inputs/outputs						
Adjustable universal inputs/outputs	2	--	--	--	--	--
Inputs						
Max. cable length, unshielded, untwisted	m	--	50	50	100	¹⁾ 5
Pushbutton inputs						
For signal input (floating contact)	--	2 x 3	2 x 3	--	4	2
Determination of switching state over the voltage generated in the device	--	✓	✓	--	--	✓
PT1000 temperature sensor input	2	--	--	--	--	--
Brightness sensor input for UP 255/AP 255	--	--	--	3	--	--

¹⁾ On request.

Combination Devices

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Input/output devices

Universal N 670 I/O modules, 2 x universal I/O, 2 inputs for Pt1000, 2 outputs 230 V AC, 10 A

- 2 universal inputs/outputs, each adjustable as
 - analog input 0 V ... 10 V DC
 - analog output 0 V ... 10 V DC
 - binary input for 10 V DC
 - binary output for 10 V DC
- Analog output with adjustable lower and upper limit of the output voltage with adjustable voltage value in the event of bus voltage failure and recovery
- Binary input with pulse edge evaluation
- Configurable actuated position (NO contact/NC contact)
- Positively driven operation
- Configurable behavior in the event of a bus power failure/recovery
- Analog input and PT1000 input with
 - limit value monitoring
 - limit value signal
 - adjustable limit values
 - adjustable hysteresis.

Note:

The external power supply unit with 24 V AC/DC must be ordered separately (e.g. LOGO!Power 6EP1 331-1SH01).

N 605 thermal drive actuators with 6 inputs and outputs each

- For control of electrothermal actuators for small valves for heaters and cooling ceilings
- Configurable contact type (NO contact/NC contact)
- Configurable transmission of the input status objects by request, in case of change, cyclically and/or in case of bus or system voltage recovery
- Signaling of a short-circuited or overloaded output and de-energizing of this output
- Configurable valve open and close time
- Configurable valve state (open or closed) in case of de-energized output
- Adjustment to a non-linear valve characteristic curve
- With configurable control per output either by control commands in percentage or by ON/OFF switch commands
- Conversion of percentage control commands into pulse width-modulated switch commands
- With per output configurable position in case of an open window
- With transmission of an output status object on request or if the switching state change
- Configurable behavior in the event of a bus power failure
- With optional calcification protection
- Configurable transmission
- Device operation independent of bus voltage.

N 605/11 thermal drive actuators, 6 inputs, 2 x 3 outputs for control of 2 heating/cooling mats

- For control of electrothermal actuators for small valves for heaters and cooling ceilings
- Configurable contact type (NO contact/NC contact)
- 6 outputs, each with one silent semiconductor switch, divided into 2 groups, each with 3 outputs and fixed assignment of outputs to the forward flow and return valves
- Configurable valve open and close time
- Signaling of a short-circuited or overloaded output and de-energizing of all outputs of the respective group
- Control of all outputs over ON/OFF switch command
- Transmission of the output status object on request or if the switching state changes, optionally with automatic switchover of the return valve between heating and cooling mode or with switchover of the return valve over an object
- De-energizing of return valve output if the forward flow valves are closed
- Configurable behavior in the event of a bus power failure
- Configurable transmission
- Device operation independent of bus voltage.

N 526/02 switch/dimming actuators, 6 A, triple, 230 V AC, with constant light level control

- Integrated constant light level control per output (outputs are master/slave-capable)
- 3 inputs for AP 255/UP 255 brightness sensor
- Configurable starting value
- Adjustable dimming time
- Switching ON/OFF
- Brighter/darker dimming
- Switching ON/OFF possible over brighter/darker dimming
- Set 8-bit value
- Night mode (lighting for cleaning)
- Send switching and dimming status
- Configurable behavior in the event of a bus power failure/recovery
- Max. parallel capacity 163 µF
- Incandescent lamp rating 1380 W
- HO T5 / HE T5 / T8 fluorescent lamps
 - uncorrected 1380 W
 - parallel corrected 1380 W.

AP 255/UP 255 indoor brightness sensors, for N 526/02 switch/dimming actuators

- For measuring the brightness on an illuminated area through measurement of the reflected light
- Measuring range: 0 ... 1500 lux (with a reflectance of the illuminated area of approx. 30 %)
- For direct connection to N 526/02 switch/dimming actuators over a 3-wired cable of up to 100 m in length, which also serves to power the sensor electronics
- Plug-in low-voltage terminal for connection of the cable to N 526/02
- Includes two rigid optical fiber rods painted white: one with a light-sensitive surface parallel to the mounting surface and one with inclined (45°) light-sensitive surface

UP 255 indoor brightness sensor

- For mounting in a hollow-wall or flush-mounting box with ø 58 mm and min. 40 mm mounting depth
- Cover made of white plastic (polystyrene)
- Dimensions (H x W x D): 30 x 52 x 33 mm.

AP 255 indoor brightness sensor

- For mounting to a ceiling or on the wall
- Includes surface-mounting enclosure made of white plastic (polypropylene) with ø 70 mm and 24 mm in height
- Dimensions (H x W x D): 30 x 72 x 33 mm.


N 266 detector group terminals with 4 monitored inputs for passive detectors

- For the monitored connection of passive detectors (e.g. magnetic contacts) and for the connection of floating contacts in applications with increased safety demands
- Setting/unsetting of the detector group terminal over a communication object
- With failure message in case of short circuit or interruption of a signal line
- Monitoring of the external power supply.

UP 511/10 switch actuators, 16 A, 1 x 230 V AC, 2 x binary input

- Max. parallel capacity 105 µF
- Incandescent lamp rating 2500 W
- Configurable behavior in the event of a bus power failure/recovery
- Locking function
- OFF delay
- ON delay
- Positively driven operation
- Logic function (1 object)
- Logic function (2 objects)
- Can be inverted per output (NO contact/NC contact).



Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG1 670-1AB03	A	5WG1 670-1AB03		1	1	030	0.220
Universal N 670 I/O modules, 2 x universal I/O, 2 inputs for Pt1000, 2 outputs 230 V AC, 10 A							
 5WG1 605-1AB01	A	5WG1 605-1AB01		1	1	030	0.434
N 605 thermal drive actuators with 6 inputs and outputs each							
 5WG1 605-1AB11	A	5WG1 605-1AB11		1	1	030	0.434
N 605/11 thermal drive actuators, 6 inputs, 2 x 3 outputs for control of 2 heating/cooling mats							
 5WG1 526-1AB02	A	5WG1 526-1AB02		1	1	030	0.458
N 526/02 switch/dimming actuators, 6 A, triple, 230 V AC, with constant light level control							
Accessories							
 5WG1 255-4AB01	A	5WG1 255-4AB01		1	1	030	0.092
UP 255 indoor brightness sensors for N 526/02 switch/dimming actuators							
 5WG1 255-4AB02	C	5WG1 255-4AB02		1	1	030	0.102
AP 255 indoor brightness sensors for N 526/02 switch/dimming actuators							

Combination Devices

Input/output devices

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Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 <p>N 266 detector group terminals with 4 monitored inputs for passive detectors</p> <p>5WG1 266-1AB01</p>	A	5WG1 266-1AB01		1	1	030	0.180
 <p>UP 511/10 switch actuators, 16 A, 1 x 230 V AC, 2 x binary inputs</p> <p>5WG1 511-2AB10</p>	A	5WG1 511-2AB10		1	1	030	0.115

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Devices for Special Applications

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	Lighting
5/3	Introduction
5/4	Dimmers
5/6	Switch/dimming actuators
5/9	Light level controls
	Sun Protection, Anti-Glare Protection, Utilization of Daylight
5/13	Introduction
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	Heating, Cooling, Ventilation, Air-Conditioning
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Note: Only the chapters indicated in black on this page contain selection and ordering data.

Devices for Special Applications

Introduction

Overview

Lighting



Everything you need for lighting control – from dimming to light level control.

Sun protection, anti-glare protection, utilization of daylight



Optimum sun and anti-glare protection as well as optimum utilization of daylight.

Heating, cooling, ventilation, air-conditioning



Always have the right temperature – saves you energy and keeps you comfortable.

Load management



Load control with load shedding cuts energy costs.

Safety



Whether dealing with intrusion, leakage or fire – a wide range of components ensure your safety.

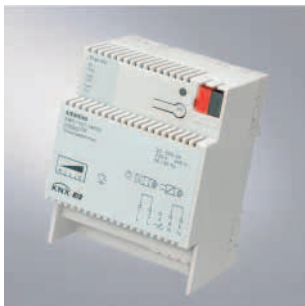
Quick-assembly systems



Our quick-assembly system. Our plug-in modular design cuts costs.

Overview**Dimmers**

Trailing-edge phase dimmers for dimming incandescent lamps, HV halogen lamps and LV halogen lamps with electronic transformer.



Universal dimmers automatically detect the connected load type and adapt accordingly.

Switch/dimming actuators

For the switching and dimming of fluorescent lamps with dimmable electronic controlgear.

Light level controls





Convenience and energy saving in one – these components let you optimize your lighting

Devices for Special Applications

Lighting

Dimmers

Technical specifications









	UP 525	UP 525/11	N 527/02	N 528/02
Type				
Enclosure data				
Design	UP	UP	N	N
Modular installation device for mounting on TH35 EN 60715 mounting rail	--		✓	✓
For installation in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm	✓	✓		
Integrated user interface for plugging in a single to quadruple bus pushbutton	✓			
Dimensions				
• Height	mm 71	51		
• Width (1 MW = 18 mm)	mm 71	44	4 MW	4 MW
• Depth	mm 40	40		
Mounting type				
Screw fixing	✓	--	--	--
Power supply				
Electronics powered over bus voltage	✓	✓	✓	✓
Bus connection				
Integrated bus coupling unit	✓	✓	✓	✓
Bus connection over contact system to data rail	--	--	✓	✓
Bus connection via bus terminal	✓	✓	✓	✓
Outputs				
Load output				
Number of channels	1	1	1	1
Load type				
Load				
Contact rated voltage	230 V AC, 50 Hz	230 V AC, 50 Hz	230 V AC, 50/60 Hz	230 V AC, 50/60 Hz
Dimmer output	VA 20 ... 250	20 ... 250	20 ... 500	20 ... 250
Protection				
Electronic protection of outputs against overload and short circuit	✓	✓	✓	✓
Application program	1)	903002	906703	906703
Output functions				
Max. number of group addresses	38	38	23	23
Max. number of assignments	38	38	24	24
Switching ON/OFF	✓	✓	✓	✓
Configurable starting value	✓	✓	✓	✓
Brighter/darker dimming	✓	✓	✓	✓
Adjustable dimming range	✓	✓	✓	✓
Minimum dimming value (basic brightness)				
Maximum dimming value				
Operation of 2 dimming modules (using two different dimming time curves)	--	--	✓	✓
Dim or startup 8-bit value	✓	✓	✓	✓
Configurable behavior in the event of a bus power failure	--	--	✓	✓
Configurable behavior in the event of a bus power recovery	✓	✓	✓	✓
Status				
Send switching and dimming status	✓	✓	✓	✓
Fault indications overload/short circuit/overtemperature on bus	--	--	✓	✓

1) See table "Application programs and pushbuttons for use with UP 525".

Application programs and pushbuttons for use with UP 525

For design	i-system				DELTA profil/style			DELTA ambiente
Application program	903902	903A02	903C02	903D02	903402	903502	903602	903802
Can be used with pushbuttons	UP 221	UP 222	UP 221E	UP 222E	UP 241, UP 242 UP 285	UP 243, UP 244 UP 286	UP 245, UP 246 UP 287	UP 284
Number of pushbutton pairs	1	2	1	2	1	2	4	4

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	UP 525 trailing-edge phase dimmers, 250 VA, 230 V AC, 50 Hz, with UI 	A	5WG1 525-2AB01		1	1	030	0.055
5WG1 525-2AB01								
	UP 525/11 trailing-edge phase dimmers, 250 VA, 230 V AC, 50 Hz, without UI 	A	5WG1 525-2AB11		1	1	030	0.055
5WG1 525-2AB11								
	N 527/02 universal dimmers, 20 ... 500 VA, 230 V AC, 50/60 Hz 	A	5WG1 527-1AB02		1	1	030	0.216
5WG1 527-1AB02								
	N 528/02 universal dimmers, 20 ... 250 VA, 230 V AC, 50/60 Hz 	A	5WG1 528-1AB02		1	1	030	0.216
5WG1 528-1AB02								

Devices for Special Applications

Lighting

Switch/dimming actuators

Technical specifications

		905001	N 525/02	905303	N 526/02	981301	N 526E02	610106	GE 525/02	610105	GE 526	980801	N 525E
Type													
Application program													
Enclosure data													
Design		N		N		N		GE		GE		N	
Modular installation device for mounting on TH35 EN 60715 mounting rail		✓		✓		✓		--		--		✓	
Modular installation device in oblong design, for installation in luminaires for fluorescent lamps		--		--		--		✓		✓		--	
Dimensions													
• Height	mm							42		28			
• Width (1 MW = 18 mm)	mm	4 MW		6 MW		8 MW		274,5		336			
• Depth	mm							28		28		4 MW	
Display/control elements													
Mechanical switching position display for status indication per output		✓		--		✓		--		--		--	
LED for status indication per output		--		✓		--		--		--		✓	
LED for fault indication (lighting failure) per output		--		--		--		--		--		✓	
Pushbuttons for local operation on the device		--		✓		--		--		--		✓	
Direct operation (local operation)		--		--		--		--		--		✓	
Mechanical local operation		✓		--		✓		--		--		--	
Mechanical switching position display		✓		--		✓		--		--		--	
Power supply													
Electronics powered over bus voltage		✓		--		✓		✓		✓		--	
Electronics powered over an integrated power supply unit, supply voltage 230 V AC		--		✓		--		--		--		✓	
DALI outputs powered over an integrated power supply unit, supply voltage 230 V AC		--		--		--		--		--		✓	
Bus connection													
Integrated bus coupling unit		✓		✓		✓		✓		✓		✓	
Bus connection over contact system to data rail		✓		--		✓		--		--		✓	
Bus connection via bus terminal		--		✓		✓		✓		✓		✓	
Outputs													
Control output													
1 ... 10 V DC		1		3		8		1		1		--	
DALI		--		--		--		--		--		8	
Max. ECG per output (Osram Dynamik 58 W)		50 units		50 units		60 units		50 units		50 units		8 units	
Load output													
Floating relay contacts		1		3 ¹⁾		8		3		1		--	
Contact rated voltage, AC	V	230		230		230		230		230		--	
Contact rated current	A	16		6		16		10		10		--	
For load data, see chapter "Technical Information"													
Inputs													
Sensor inputs													
Input for AP 255/UP 255 brightness sensor		--		3		--		--		--		--	
Max. cable length, unshielded, untwisted	m	--		100		--		--		--		--	

¹⁾ Except channel A.

¹⁾ Except channel A.

Type	905001 N 525/02	905303 N 526/02	981301 N 526E02	610106 GE 525/02	610105 GE 526	980801 N 525E
Application program						
Functions						
Max. number of group addresses	38	35	250	10	10	108
Max. number of assignments	38	47	250	10	10	107
Integrated constant light level control	--	✓	--	--	--	--
Configurable behavior in the event of a bus power failure	✓	✓	✓	✓	✓	✓
Configurable behavior in the event of a bus power recovery	✓	✓	✓	✓	✓	✓
Configurable behavior in the event of system voltage failure	--	--	--	--	--	✓
Configurable behavior in the event of a system voltage recovery	--	✓	--	--	--	✓
Switching						
Switching ON/OFF	✓	✓	✓	✓	✓	✓
Configurable starting value	✓	✓	✓	✓	✓	✓
Switching ON/OFF possible over brighter/darker dimming	✓	✓	✓	✓	✓	✓
Dimming						
Brighter/darker dimming	✓	✓	✓	✓	✓	✓
Adjustable dimming time	✓	✓	✓	✓	✓	✓
Brightness limitation, adjustable min. dimming value/max. dimming value	✓	--	✓	--	--	✓
Value transmission						
Set 8-bit value	✓	✓	✓	✓	✓	--
Scene control						
Integrated 8-bit scene control	--	--	✓	--	--	✓
Scenes to be integrated per DALI output	--	--	--	--	--	16
Scenes to be integrated per channel	--	--	8	--	--	--
Status						
Send switching and dimming status	✓	✓	✓	✓	✓	✓
Transmission of DALI line status	--	--	--	--	--	✓
Lamp status	--	--	--	--	--	✓
Time functions						
ON/OFF delay	✓	--	--	--	--	--
Timer mode, 1-step (stairwell circuits)	✓	--	✓	--	--	✓
Timer mode, 2-step	--	--	✓	--	--	✓
Night mode (lighting for cleaning)	--	✓	✓	--	--	✓
Warning of impending OFF	--	--	✓	--	--	✓

AP 255/UP 255 indoor brightness sensors, for N 526/02 switch/dimming actuators

- For measuring the brightness on an illuminated area through measurement of the reflected light
- Measuring range: 0 ... 1500 lux (with a reflectance of the illuminated area of approx. 30 %)
- For direct connection to N 526/02 switch/dimming actuators over a 3-wired cable of up to 100 m in length, which also serves to power the sensor electronics
- Plug-in low-voltage terminal for connection of the cable to N 526/02
- Includes two rigid optical fiber rods painted white: one with a light-sensitive surface parallel to the mounting surface and one with inclined (45°) lightsensitive surface.

UP 255 indoor brightness sensor

- For mounting in a hollow-wall or flush-mounting box with Ø 58 mm and min. 40 mm mounting depth
- Cover made of white plastic (polystyrene)
- Dimensions (H x W x D): 30 x 52 x 33 mm.

AP 255 indoor brightness sensor



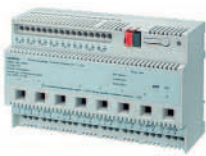



- For mounting to a ceiling or on the wall
- Includes surface-mounting enclosure made of white plastic (polypropylene) with Ø 70 mm and 24 mm in height
- Dimensions (H x W x D): 30 x 72 x 33 mm.

Devices for Special Applications

Lighting

Switch/dimming actuators

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 525/02 switch/dimming actuators, 16 A, single, 230 V AC	A	5WG1 525-1AB02		1	1	030	0.170
5WG1 525-1AB02								
	N 526/02 switch/dimming actuators, 6 A, triple, 230 V AC, with constant light level control	A	5WG1 526-1AB02		1	1	030	0.458
5WG1 526-1AB02								
	Accessories							
	UP 255 indoor brightness sensors for N 526/02 switch/dimming actuators	A	5WG1 255-4AB01		1	1	030	0.092
5WG1 255-4AB01								
	AP 255 indoor brightness sensors for N 526/02 switch/dimming actuators	C	5WG1 255-4AB02		1	1	030	0.102
5WG1 255-4AB02								
	N 526E02 switch/dimming actuators, 16 A, 8-times, 230 V AC	A	5WG1 526-1EB02		1	1	030	0.517
5WG1 526-1EB02								
	N 525E switch/dimming actuators, 8 x DALI, 8 ECG per output	A	5WG1 525-1EB01		1	1	030	0.300
5WG1 525-1EB01								
	GE 525/02 switch/dimming actuators, 10 A, single, 230 V AC	A	5WG1 525-4AB02		1	1	030	0.140
5WG1 525-4AB02								
	GE 526 switch/dimming actuators, 10 A, single, 230 V AC	A	5WG1 526-4AB01		1	1/5	030	0.140
5WG1 526-4AB01								

Overview

Type	N 526/02	UP 255	AP 255	UP 258/11	UP 258/21	N 342	AP 254	GE 252	GE 253	GE 254
Control										
Integrated constant light level control	3-channel	--	--	--	1-channel	--	--	1-channel	--	1-channel
Integrated two-step control	--	--	--	--	1-channel	--	--	1-channel	--	1-channel
Light level control dependent on external light	--	--	--	--	--	✓	--	--	--	--
Light sensor										
External light	--	--	--	--	--	--	✓	--	✓	--
Indoor brightness	--	✓	✓	✓	✓	--	--	✓	--	--
Indoor brightness (indirect lighting)	--	--	--	--	--	--	--	--	--	✓
Transmission of brightness values over EIB	--	--	--	✓	✓	--	✓	✓	✓	✓

Technical specifications

Type	N 526/02	UP 258/11	UP 258/21	N 342	AP 254	GE 252	GE 253	GE 254
Enclosure data								
Design	N	UP	UP	N	AP	GE	GE	GE
Modular installation device in oblong design, for installation in luminaires for fluorescent lamps	--	--	--	--	--	✓	✓	✓
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	--	--	✓	--	--	--	--
Dimensions								
• Height	mm	87	102		110	42	42	42
• Width (1 MW = 18 mm)	mm	87	102	1 MW	72	274,5	274,5	274,5
• Depth	mm	60	33		54	28	28	28
Power supply								
Electronics powered over bus voltage	--	✓	✓	--	✓	--	--	--
Electronics powered over an integrated power supply unit, supply voltage 230 V AC	✓	--	--	✓	--	✓	✓	✓
Bus connection								
Integrated bus coupling unit	✓	--	✓	✓	✓	✓	✓	✓
Plugs onto UP 110 bus coupling unit	--	✓	--	--	--	--	--	--
Plugs onto UP 114 bus coupling unit	--	✓	--	--	--	--	--	--
Bus connection via bus terminal	✓	--	✓	--	✓	✓	✓	✓
Bus connection over contact system to data rail	--	--	--	✓	--	--	--	--

N 526/02 switch/dimming actuators, triple, 230 V, 50/60 Hz, 6 A, with integrated constant light level control

- LED for status indication per input
- LED for status indication per output
- LED for operation/status indication
- Pushbuttons for local operation on the device
- 3 control outputs 1 ... 10 V DC
- Max. 50 ECG per output (Osram Dynamik 58 W)
- 3 floating relay contacts
- Rated contact voltage, 230 V AC
- Rated contact current 6 A
- Max. 100 m cable length, unshielded, untwisted
- 3 inputs for AP 255/UP 255 brightness sensors
- Max. number of group addresses: 35
- Max. number of assignments: 47
- Switching ON/OFF
- Configurable starting value
- ON/OFF switching possible over brighter/darker dimming
- Brighter/darker dimming
- Adjustable dimming time
- Set 8-bit value
- Integrated constant light level control per output (outputs are master/slave-capable)
- Configurable behavior in the event of a bus power failure/recovery
- Send switching and dimming status
- Night mode (lighting for cleaning).

AP 255/UP 255 indoor brightness sensors, for N 526/02 switch/dimming actuators

- For measuring the brightness on an illuminated area through measurement of the reflected light
- Measuring range: 0 ... 1500 lux (with a reflectance of the illuminated area of approx. 30 %)
- For direct connection to N 526/02 switch/dimming actuators over a 3-wired cable of up to 100 m in length, which also serves to power the sensor electronics
- Plug-in low-voltage terminal for connection of the cable to N 526/02
- Includes two rigid optical fiber rods painted white: one with a light-sensitive surface parallel to the mounting surface and one with inclined (45°) light-sensitive surface.

UP 255 indoor brightness sensor

- For mounting in a hollow-wall or flush-mounting box with ø 58 mm and min. 40 mm mounting depth
- Cover made of white plastic (polystyrene)
- Dimensions (H x W x D): 30 x 52 x 33 mm.

AP 255 indoor brightness sensor

- For mounting to a ceiling or on the wall
- Includes surface-mounting enclosure made of white plastic (polypropylene) with ø 70 mm and 24 mm in height
- Dimensions (H x W x D): 30 x 72 x 33 mm.

Devices for Special Applications

Lighting

Light level controls

UP 258/11 presence detectors with brightness sensor

- Degree of protection IP20
- Motion
- Presence
- Horizontal sensing angle: 360°
- Vertical sensing angle: 120°
- Range on either side: 11 m
- Measuring range:
100 ... 1600 lux (standard)
25 ... 200 lux (expanded)
- For measuring indoor brightness
- Transmission of sensor values over bus.

UP 258/21 presence detectors with constant light level control

- For surface mounting
- Degree of protection IP20
- Motion
- Presence
- Horizontal sensing angle: 360°
- Vertical sensing angle: 120°
- Range on either side: 8 m
- Brightness measuring range 10 ... 1500 lux
- For measuring indoor brightness
- Transmission of sensor values over bus.

Accessories

AP 258E surface-mounting enclosures for UP 258/21 presence detectors

- For fixing the presence detector as a surface-mounting device
- Dimensions (H x W x D): 102 x 102 x 46 mm.

GE 252 indoor brightness sensors

- With constant light level control
- For measuring indoor brightness
- 2 m connecting lead of sensor element (cannot be extended)
- For surface mounting
- For mounting in intermediate ceilings
- Degree of protection IP20
- Brightness measuring range 200 ... 1900 lux
- Dimensions (H x W x D):
Converter: 42 x 274.5 x 28 mm,
receiver: 25 x 65.7 x 28.5 mm.

GE 254 indoor brightness sensors

- With constant light level control
- For measuring indoor brightness, taking into account indirect lighting
- 2 m connecting lead of sensorelement (cannot be extended)
- For surface mounting
- For mounting in intermediate ceilings
- Degree of protection IP20
- Brightness measuring range 0 ... 2000 lux
- Dimensions (H x W x D):
Converter: 42 x 274.5 x 28 mm,
receiver: 25 x 65.7 x 28.5 mm.

GE 253 outdoor brightness sensors for indoor mounting

- For measuring outdoor brightness
- 2 m connecting lead of sensor element (cannot be extended)
- For surface mounting
- For mounting in intermediate ceilings
- Degree of protection IP20
- Brightness measuring range 0 ... 16000 lux
- Dimensions (H x W x D):
Converter: 42 x 274.5 x 28 mm,
receiver: 25 x 65.7 x 28.5 mm.

AP 254 dual sensors, brightness measurement, temperature measurement

- For surface mounting
- Degree of protection, IP54
- Brightness measuring range 1 ... 100000 Lux
- For measuring outdoor brightness
- Temperature measuring range -25 ... +55 °C
- 3 threshold values for brightness
- 2 threshold values for temperature
- 1 logic operation between brightness and temperature.

N 342 light level control module

- Ten mutually independent light control functions that control the indoor lighting depending on the outdoor brightness
- Shared current outdoor light intensity value for all 10 light control functions, with light intensity measured by a GE 253 outdoor brightness sensor and sent to the N 342
- Separate brightness curve per light control function
- With configuration option per light control function as continuous dimming control for the detection and transmission of dimming commands to dimming or switch/dimming actuators or as 2-step control with hysteresis for detection and transmission of ON/OFF switch commands to switch actuators
- Automatic adaptation (shifting) of the respective brightness curve to the desired new indoor brightness when the dimming value is manually changed (e.g. using a bus pushbutton) and restoration of the original curve when the lighting is switched off.






Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
Unit(s)	Unit(s)						
 5WG1 526-1AB02		N 526/02 switch/dimming actuators, 6 A, triple, 230 V AC, with constant light level control	A	5WG1 526-1AB02	1	1	030 0.458
 5WG1 255-4AB01		Accessories					
		UP 255 indoor brightness sensors for N 526/02 switch/dimming actuators	A	5WG1 255-4AB01	1	1	030 0.092
 5WG1 255-4AB02		AP 255 indoor brightness sensors for N 526/02 switch/dimming actuators	C	5WG1 255-4AB02	1	1	030 0.102
 5WG1 258-2AB11		UP 258/11 presence detectors with brightness sensor	A	5WG1 258-2AB11	1	1	030 0.221
		Note: The bus coupling unit must be ordered separately.					
 5WG1 258-2AB21		UP 258/21 presence detectors with brightness sensor and constant light level control	B	5WG1 258-2AB21	1	1	030 0.085
 5WG1 258-3EB21		Accessories					
		AP 258E surface-mounting enclosures for UP 258/21 presence detectors	B	5WG1 258-3EB21	1	5	030 0.220

Devices for Special Applications

Lighting

Light level controls

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 342 light level control modules	A	5WG1 342-1AB01		1	1	030	0.092
5WG1 342-1AB01								
	AP 254 dual sensors, brightness measurement, temperature measurement	A	5WG1 254-3EY01		1	1	030	0.174
5WG1 254-3EY01								
	GE 253 outdoor brightness sensors for indoor mounting	B	5WG1 253-4AB01		1	1	030	0.345
5WG1 253-4AB01								
	GE 252 indoor brightness sensors	A	5WG1 252-4AB02		1	1	030	0.345
	GE 254 indoor brightness sensors for indirect lighting	B	5WG1 254-4AB01		1	1	030	0.345
5WG1 252-4AB02 5WG1 254-4AB01								

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Introduction

Overview

Anti-glare/sun protection actuators



Control of shutters and blinds.

Central weather/sun protection systems



The weather system sends the sensor information on the GAMMA instabus.



Whether wind, temperature, light or rain – the weather sensors signal the values gathered by the weather system.

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Anti-glare/sun protection actuators

Technical specifications

Type	N 521	N 522/03	N 523/02	N 523/03	N 523/04	N 523/11	N 524	GE 521/02	UP 520	UP 520/11
Enclosure data										
Design	N	N	N	N	N	N	N	GE	UP	UP
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓	✓	✓	✓	✓	✓	--	--	--
For installation in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm	--	--	--	--	--	--	--	--	✓	✓
Modular installation device in oblong design, for installation in luminaires for fluorescent lamps	--	--	--	--	--	--	--	✓	--	--
Integrated user interface for plugging in a single to quadruple bus pushbutton	--	--	--	--	--	--	--	--	✓	--
Dimensions										
• Height	mm							42	71	51
• Width (1 MW = 18 mm)	mm	3 MW	6 MW	4 MW	4 MW	4 MW	8 MW	274.5	71	44
• Depth	mm							28	40	40
Mounting type										
Screw fixing	--	--	--	--	--	--	--	--	✓	--
Claw fixing	--	--	--	--	--	--	--	--	✓	--
Display/control elements										
LED for status indication per output	--	✓	✓	✓	✓	✓	✓	--	--	--
Direct operation (local operation)	--	✓	✓	✓	✓	✓	✓	--	--	--
Power supply										
Electronics powered over bus voltage	✓	--	--	--	--	--	--	✓	✓	✓
With electronics powered by an integrated power supply unit Supply voltage 230 V AC	--	✓	✓	✓	✓	✓	✓	--	--	--
Bus connection										
Integrated bus coupling unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus connection over contact system to data rail	✓	✓	✓	✓	✓	✓	--	--	--	--
Bus connection via bus terminal	--	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outputs										
Load output										
Number of channels (one UP and one DOWN each)	2	4	4 ¹⁾	4 ¹⁾	4 ¹⁾	8 ²⁾	4	1	1	1
Integrated isolating relay function for connection of 2 drives per channel	✓	--	--	--	--	--	--	✓	--	--
Electrically interlocked relays (for reversing direction of rotation)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Contact rated voltage										
• 230 V AC/50 Hz	✓	✓	✓	✓	✓	✓	--	✓	✓	✓
• 24 V DC	--	--	--	--	--	--	✓	--	--	--
Contact rated current	A	6	8	6	6	6	1 DC	6	6	6

1) 2 floating.

2) 6 floating.

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Anti-glare/sun protection actuators

Type	N 521	N 522/03	N 523/02	N 523/03	N 523/04	N 523/11	N 524	GE 521/02	UP 520	UP 520/11
Application program	520206	981101	980101	980181	981201	980601	980201	510205	1)	902002
Output functions										
Max. number of group addresses	11	114	100	100	110	200	40	12	38	38
Max. number of assignments	12	156	100	100	125	200	65	12	38	38
Configurable behavior in the event of a bus power failure	✓					✓	✓	✓	✓	✓
Configurable behavior in the event of a bus power recovery	--	✓	--	--	--	--	--	--	--	--
Configurable behavior in the event of a system voltage recovery	--	✓	--	--	--	✓	✓	--	--	--
Operating mode										
Automatic mode	--	✓	--	--	✓	✓	✓	--	--	--
Manual mode	--	✓	--	--	✓	✓	✓	--	--	--
Standard mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Status										
Send status per channel	--	✓	✓	✓	✓	✓	✓	--	--	--
Indication of direct operation with status object	--	✓	--	--	✓	✓	--	--	--	--
Status position of sun protection, 8 bit	--	✓	✓	✓	✓	✓	✓	--	--	--
Status position of slats, 8 bit	--	✓	✓	--	✓	✓	✓	--	--	--
Scene control										
Integrated 1-bit scene control	--	--	✓	✓	--	--	--	--	--	--
Integrated 8-bit scene control	--	✓	--	--	--	✓	--	--	--	--
Scenes to be integrated per channel	--	8	2	2	--	8	--	--	--	--
Shutter/blind control										
Travel lock (e.g. for cleaning the outer shutter/blinds)	--	✓	✓	✓	✓	✓	--	--	--	--
Separate raising/lowering protection	--	--	✓	✓	--	--	--	--	--	--
Alarm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
• Move to safety position										
• Locking in this position for as long as alarm is active										
Individual configuration of actuator channels	--	✓	✓	✓	✓	✓	✓	✓	✓	✓
Shared configuration of actuator channels	✓	✓	✓	✓	✓	✓	--	✓	--	--
Adaptation of objects and functions to drive type	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Suitable for integration in a sunlight tracking control system	--	✓	--	--	✓	✓	✓	--	--	--
End position detection	--	✓	--	--	--	--	--	--	--	--
Adaptation of objects and functions to electronic limit switch	--	✓	--	--	--	--	--	--	--	--
Sun protection control (UP/DOWN)										
Over position data (8-bit value)	--	✓	--	--	✓	✓	✓	--	--	--
Travel to end position, stopping, stepwise adjustment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Slat control (OPEN/CLOSE)										
Over position data (8-bit value)	--	✓	--	--	✓	✓	✓	--	--	--
Travel to end position, stopping, stepwise adjustment	✓	✓	✓	--	✓	✓	✓	✓	✓	✓

1) See table "Application programs and pushbuttons for use with UP 520".

Application programs and pushbuttons for use with UP 520

For design	i-system				DELTA profil/style			DELTA ambiente
Application program	902902	902A02	902C02	902D02	902402	902502	902602	902802
Can be used with pushbuttons	UP 221	UP 222	UP 221E	UP 222E	UP 241, UP 242 UP 285	UP 243, UP 244 UP 286	UP 245, UP 246 UP 287	UP 284
Number of pushbutton pairs	1	2	1	2	1	2	4	4

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Anti-glare/sun protection actuators




Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 521 shutter/blind actuators, 6 A (2 x parallel), 4 x 230 V AC	A	5WG1 521-1AB01		1	1	030	0.150
5WG1 521-1AB01								
	N 522/03 shutter/blind actuators, 8 A, 4 x 230 V AC, with end position detection, for sunlight tracking controls	A	5WG1 522-1AB03		1	1	030	0.386
5WG1 522-1AB03								
	N 523/02 shutter/blind actuators, 6 A, 4 x 230 V AC	A	5WG1 523-1AB02		1	1	030	0.260
5WG1 523-1AB02								
	N 523/03 roller shutter actuators, 6 A, 4 x 230 V AC	A	5WG1 523-1AB03		1	1	030	0.260
5WG1 523-1AB03								
	N 523/04 shutter/blind actuators, 6 A, 4 x 230 V AC for sunlight tracking controls	A	5WG1 523-1AB04		1	1	030	0.260
5WG1 523-1AB04								
	N 523/11 shutter/blind actuators, 6 A, 8 x 230 V AC for sunlight tracking controls		5WG1 523-1AB11					
5WG1 523-1AB11								
	N 524 shutter/blind actuators, 1 A, 4 x 6 ... 24 V DC	A	5WG1 524-1AB01		1	1	030	0.422
5WG1 524-1AB01								

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Anti-glare/sun protection actuators

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG1 521-4AB02	A	5WG1 521-4AB02		1	1	030	0.140
 5WG1 520-2AB01	A	5WG1 520-2AB01		1	1	030	0.080
 5WG1 520-2AB11	A	5WG1 520-2AB11		1	1	030	0.055

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Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Central weather/sun protection systems

Technical specifications

AP 257/21 weather systems

- Compact device for mast or wall mounting, including mast/wall mount
- Heated sensor for measuring wind speed
- Measuring range approx. 0 ... 70 m/s
- Measuring range of brightness sensor, approx. 0 ... 99 lux
- Dusk detection in the range of approx. 0 ... 1000 lux
- Measuring range of outdoor temperature sensor approx. -40 ... +80 °C,
- Heated precipitation monitor
- Receiver for DCF 77 time signal
- LED for indication of DCF 77 reception
- Transmission and receipt of date and time over bus
- Transmission of all measured values over bus
- Monitoring of all measured values up to 3 limit values each
- Detection and transmission of the current wind speed, max. brightness and min. and max. outdoor temperature daily
- Input of geographical mounting location by selecting country and city or through input of degree of longitude and latitude
- Calculation and transmission of angle data (azimuth and elevation) for current sun position
- Central command for activation/deactivation of sun protection at the start and end of sunshine
- Taking into account the direction of up to 8 facades and automatic activation/deactivation of the sun protection of a facade for the time period it is affected by direct sunshine
- Shadow edge tracking of lower edge of sun protection in keeping with current sun position, so that the sun only shines into the room for the max. set value permissible
- Sunlight tracking control of slat adjustment for sun anti-glare protection for horizontal and vertical slats. This blocks out direct sunshine while allowing as much diffuse daylight as possible into the room
- Logic OR operation of up to 8 alarm/fault indications to a safety alarm for deactivating the sun protection
- 4 logic AND and OR operations each from up to 4 input objects, can be selected from 40 possible objects
- Power supply: 20 V AC or 24 V DC, max. 120 mA
- Infeed of power supply over white/yellow core pair of the bus cable
- Integrated bus coupling unit
- Bus connection via bus terminal
- Degree of protection, IP44
- Dimensions (H x W x D): 69 x 77 x 118 mm.

Accessories

Power supply for AP 257/21 weather systems

- For powering the AP 257/21 weather system with 24 V DC over the white/yellow core pair of the bus cable
- Max. cable length between power supply unit and weather system: 100 m
- Rated operational voltage 85 ... 265 V AC (50/60 Hz), 85 ... 300 V AC
- Rated secondary voltage 24 V DC, + 5 %,
- Residual ripple < 100 mV
- Rated secondary current 0.35 A
- Electronic overload protection
- Permissible ambient operating temperature: - 20 ... + 60 °C
- Degree of protection IP20
- For mounting on EN 60715-TH35-7,5 mounting rail
- Width: 2 MW (1 MW = 18 mm).

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Central weather/sun protection systems

AP 257 weather systems for 8 sensors AP 257/11 weather systems for 4 sensors

- Inputs for connection of wind, rain, temperature, light and dusk sensors
- Linking of sensor signals for brightness, outdoor temperature, wind and rain to instant control of outer and inner sun and anti-glare protection
- Safety objects for closing window and roof openings
- Transmission of all sensor data (brightness, temperature, wind, etc.)
- Locking function for automatic control sequences within the weather system, e.g. for cleaning the windows

- Optional switching on/off of the automatic sun protection control by EIB telegrams, with a light/time function, which allows a sun protection system to be activated when a set light limit value is reached and is only switched off again by a time command. This prevents repeated activation and deactivation of the sun protection system in the case of rapidly changing light intensities (clouds)
- Priority is given to wind and rain monitoring
- Monitoring of the wind rotor to ensure that a safety telegram is tripped in the event of wind rotor failure/damage
- Electronics powered over an integrated power supply unit for 230 V AC
- Integrated bus coupling unit
- Bus connection via bus terminal
- Surface mounting
- Degree of protection, IP54
- Dimensions (H x W x D): 160 x 250 x 55 mm.

Accessories

Weather sensors for AP 257 and AP 257/11 weather systems

Type	S 258/02	S 258/03	S 258/13	AP 258/11	AP 258/21	AP 258/31	AP 258/41
Enclosure data							
Surface mounting	--	--	--	✓	✓	✓	✓
Degree of protection	IP65	IP65	IP65	IP65	IP65	IP65	IP65
The following connecting leads must be used: JY(ST)Y 2 x 2 x 0.6 or PYCYM 2 x 2 x 0.6 (can be extended for a max. 20 m)	--	--	--	✓	✓	✓	✓
Dimensions							
• Height	mm	178		64	64	64	98
• Width	mm			58	58	58	64
• Depth	mm			38	38	38	38.5
• Diameter of enclosure/impeller	mm	35/150	35/150	--	--	--	--
Mounting type							
Mast mounting	✓	✓	✓	✓	✓	✓	✓
5 m fixed cable	✓	✓	✓	--	--	--	✓
Wind speed							
Detection of current wind speed	✓	✓	✓	--	--	--	--
Detection of rotor breakage	✓	--	--	--	--	--	--
Failure monitoring of wind rotor by the weather system	✓	✓	✓	--	--	--	--
Brightness							
Measuring range	lux	--	--	0 ... 255 (dusk)	--	0 ... 40000 (daylight)	--
Receiving angle	--	--	--	140° ... 160°	--	140° ... 160°	--
Measurement of outdoor brightness	--	--	--	✓	--	✓	--
Temperature							
Measuring range	°C	--	--	--	-20 ... +40	--	--
Rain							
For the detection and tripping of a switching signal by rain drops	--	--	--	--	--	--	✓
Two-step heating of sensor areas (protection against moisture) (fast drying)	--	--	--	--	--	--	✓
Heating voltage generated by weather system	--	--	--	--	--	--	✓

M 258 heating transformers, for S 258 wind rotors, heatable

- Primary voltage 230 V AC
- Secondary voltage 24 V AC
- Fuse 80 mA, slow
- Degree of protection, IP54
- Dimensions (H x W x D): 80 x 120 x 50 mm

M 258/21 mast mountings, outer diameter 40 mm

For mounting 2 opposing sensors on a mast with an outer diameter of 40 mm, for AP 257 weather systems.

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Central weather/sun protection systems






Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
Unit(s)	Unit(s)						
AP 257/21 weather systems		5WG1 257-3AB21					
							
5WG1 257-3AB21							
Accessories							
Electronic power supply units		B	4AC2 402	1	1	027	0.080
							
4AC2 402							
AP 257 weather systems for 8 sensors		A	5WG1 257-3AB01	1	1	030	1.338
							
5WG1 257-3AB01							
AP 257/11 weather systems for 4 sensors		A	5WG1 257-3AB11	1	1	030	1.185
							
5WG1 257-3AB11							
Accessories							
S 258/02 wind rotors, heatable, with detection of rotor breakage, for AP 257 and AP 257/11 weather systems		A	5WG1 258-7AB02	1	1	030	0.950
S 258/03 wind rotors, heatable, without detection of rotor breakage, for AP 257 and AP 257/11 weather systems		A	5WG1 258-7AB03	1	1	030	0.950
S 258/13 wind rotors, not heatable, without detection of rotor breakage, for AP 257 and AP 257/11 weather systems		A	5WG1 258-7AB13	1	1	030	0.575
Note: The inner diameter of the mast must be 36 mm. No additional mast mount is required. The heating transformer must be ordered separately.							
Accessories							
M 258 heating transformers, for S 258 wind rotors, heatable			5WG1 258-8AB01		1	030	0.568
							
5WG1 258-8AB01							

Devices for Special Applications

Sun Protection, Anti-Glare Protection, Utilization of Daylight

Central weather/sun protection systems

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	AP 258/11 dusk sensors, for AP 257 and AP 257/11 weather systems	A	5WG1 258-3AB11		1	1	030	0.124
5WG1 258-3AB11								
	AP 258/21 outdoor temperature sensors, for AP 257 and AP 257/11 weather systems	A	5WG1 258-3AB21		1	1	030	0.123
5WG1 258-3AB21								
	AP 258/31 light sensors, for AP 257 and AP 257/11 weather systems	A	5WG1 258-3AB31		1	1	030	0.125
5WG1 258-3AB31								
	AP 258/41 rain sensors, heated, for AP 257 and AP 257/11 weather systems	A	5WG1 258-3AB41		1	1	030	0.447
5WG1 258-3AB41								
	M 258/21 mast mountings, outer diameter 40 mm	A	5WG1 258-8AB21		1	1	030	0.209
5WG1 258-8AB21								

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Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Introduction

Overview

Sensors for HCVA



The sensors detect the temperature and deliver the basic values for optimum control.

Display/control units for HCVA



Display and operation of room temperature control that is implemented using a REG 540 fan coil unit controller.

The complete i-system and DELTA profil product ranges are available.

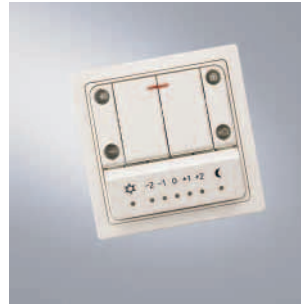
Room temperature controllers



Display, operation, control and temperature sensor in a single flush mounting device.

This offers optimum control of heating, cooling, ventilation and air-conditioning.

Pushbuttons with room temperature controllers



Display, operation, control and temperature sensor and additional, freely assignable, operator buttons in a single flush mounting device.

Actuators for HCVA



These control the drives for the heating, cooling, ventilation and air-conditioning.

Valve actuators for HCVA



For the opening and closing of small valves.

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Sensors for HCVA

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Technical specifications

N258/02 temperature sensors for four Pt1000 sensors

- For the measurement and transmission of 4 temperatures in the range -40 ... +150 °C
- For connection of four Pt1000 temperature sensors, each over an up to 50 m long 2-wire cable
- Configurable smoothing of a measured value through mean value generation
- Monitoring of a lower and upper limit value for each measured value, with configurable hysteresis for limit value signals
- Electronics powered over an integrated power supply unit for 230 V AC
- Green LED for displaying ready-to-run status
- Integrated bus coupling unit
- Bus connection over bus terminal and contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 4 MW (1 MW = 18 mm).

AP 254 dual sensors for brightness and outdoor temperature

- For measuring and transmitting outdoor temperature and brightness
- Temperature measuring range: -25 °C ... +55 °C
- Brightness measuring range 1 ... 100,000 lux
- Horizontal sensing angle -60 ... +60°, vertical -35° ... +66.5°
- Three threshold switches for brightness
- Two threshold switches for temperature
- Two threshold switches with logical combination of brightness and temperature
- Optional deactivation of one or more threshold switches using a blocking object (1-bit)
- Electronics powered over bus voltage
- Integrated bus coupling unit
- Bus connection via bus terminal
- Surface mounting
- Degree of protection, IP54
- Dimensions (H x W x D): 110 x 72 x 54 mm.



Universal N 670 I/O modules, 2 x universal I/O, 2 inputs Pt1000, 2 relay outputs 230 V AC, 10 A

- 2 universal inputs/outputs, each adjustable as
 - analog input 0 V ... 10 V DC
 - analog output 0 V ... 10 V DC
 - binary input for 10 V DC
 - binary output for 10 V DC
- Analog input with limit value monitoring and signaling, with adjustable limit values and hysteresis
- Analog output with adjustable lower and upper limit of the output voltage with adjustable voltage value in the event of bus voltage failure and recovery
- Binary input with pulse edge evaluation
- Binary output with adjustable switching position in the event of bus voltage failure and recovery
- 2 inputs for the connection of temperature sensors with Pt1000 measured element for temperature measurement in the range -25 ... +45 °C, with limit value monitoring and signaling, with adjustable limit values and hysteresis
- 2 binary outputs, relay contacts rated for 230 V AC, 10 A at p.f. = 1, with
 - configurable actuated position (NO contact/NC contact)
 - positively driven operation
 - configurable switching position in the event of bus voltage failure and recovery
- Electronics powered over an external power supply unit for 24 V AC/DC
- Integrated bus coupling unit
- Bus connection over bus terminal and contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 4 MW (1 MW = 18 mm).

Note:

The external power supply unit with 24 V AC/DC must be ordered separately (e.g. LOGO!Power 6EP1 331-1SH01).


Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG1 258-1AB02	B	5WG1 258-1AB02		1	1	030	0.242
 5WG1 670-1AB03	A	5WG1 670-1AB03		1	1	030	0.220

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Sensors for HCVA

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	AP 254 dual sensors, brightness measurement, temperature measurement	A	5WG1 254-3EY01		1	1	030	0.174

5WG1 254-3EY01

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Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Display/control units for HCVA

Technical specifications

		i-system	DELTA profil	DELTA style
Dimensions				
• Height	mm	55	65	65
• Width	mm	55	65	65
• Depth	mm	16	16	16

Fan coil unit controllers for office and hotel

- For the display and operation of the room temperature control using a REG 540 fan coil unit controller
- 5 yellow LEDs for the display of manually set fan speed step or automatic speed input
- 10-pole BTI plug (BTI - Bus Transceiver Interface) for mounting on a Plus UP 117/11 bus transceiver module.

Note:

The required bus transceiver module is not included in delivery and must be ordered separately.

Fan coil unit controllers for offices



- Pushbutton for switching the room operating mode between comfort and energy-saving mode and for setting the required fan speed step or the automatic input of the speed step by the fan coil unit controller

- Rotary button for shifting the room temperature setpoint within a user-defined range
- 3 green LEDs for the display of the current room operating mode (comfort, energy-saving or protection mode)
- A two-colored LED for displaying whether the room is being heated (red LED lights up) or cooled (green LED lights up)

Fan coil unit controllers for hotels

- Pushbutton for setting the required fan speed step or for automatic entry of the speed step by the fan coil unit controller
- Rotary button for setting the room temperature setpoint within the range of 16 ... 26 °C
- 2 green LEDs for displaying whether the room is being heated or cooled.





Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
i-system							
 5WG1 237-2EB11	UP 237E fan coil unit controllers for offices						
		• Titanium white					
		• Carbon metallic					
		• Aluminum metallic					
	A	5WG1 237-2EB11		1	1	030	0.050
	B	5WG1 237-2EB21		1	1	030	0.030
	B	5WG1 237-2EB31		1	1	030	0.030
 5WG1 237-2FB11	UP 237F fan coil unit controllers for hotels						
		• Titanium white					
		• Carbon metallic					
		• Aluminum metallic					
	A	5WG1 237-2FB11		1	1	030	0.050
	B	5WG1 237-2FB21		1	1	030	0.030
	B	5WG1 237-2FB31		1	1	030	0.030

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Display/control units for HCVA

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 <p>UP 252E fan coil unit controllers for offices</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver 	B	5WG1 252-2EB01		1	1	030	0.030
	C	5WG1 252-2EB11		1	1	030	0.052
	B	5WG1 252-2EB21		1	1	030	0.030
	B	5WG1 252-2EB71		1	1	030	0.030
5WG1 252-2EB11							
 <p>UP 252F fan coil unit controllers for hotels</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver 	B	5WG1 252-2FB01		1	1	030	0.030
	C	5WG1 252-2FB11		1	1	030	0.052
	B	5WG1 252-2FB21		1	1	030	0.030
	B	5WG1 252-2FB71		1	1	030	0.030
5WG1 252-2FB11							
DELTA style							
 <p>UP 254E fan coil unit controllers for offices</p> <ul style="list-style-type: none"> • Titanium white/metallic silver • Basalt black/metallic silver 	B	5WG1 254-2EB11		1	1	030	0.062
	B	5WG1 254-2EB21		1	1	030	0.062
5WG1 254-2EB11							
 <p>UP 254F fan coil unit controllers for hotels</p> <ul style="list-style-type: none"> • Titanium white/metallic silver • Basalt black/metallic silver 	A	5WG1 254-2FB11		1	1	030	0.062
	B	5WG1 254-2FB21		1	1	030	0.062
5WG1 254-2FB11							

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Room temperature controllers

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Technical specifications

		i-system	DELTA profil	DELTA style	DELTA ambiente	DELTA millennium
Dimensions						
• Height	mm	55	65	68	65	65
• Width	mm	55	65	68	65	65
• Depth	mm	16	16	16	16	16



UP 237, UP 252, UP 254, UP 253 room temperature controllers

- Integrated room temperature sensor
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating mode only, for cooling mode only, for heating and cooling mode
- Comfort, standby, night, frost and heat protection operating modes, which can be switched via EIB
- Presence pushbutton to locally switch between comfort and standby mode and to extend comfort mode after operating night mode
- Adjusting the room temperature setpoint offset for comfort mode can be set via a rotary button on the controller and via the EIB
- Basic setpoint of the room temperature for comfort mode which can be set via the EIB
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an On/Off switch command or as a positioning command in the range of 0 ... 100 %
- 5 LEDs to display the current operating mode and, if necessary, the dew point alarm
- Mounting on a UP 110 or UP 114 bus coupling unit.

IKE 250 room temperature controllers

- Integrated room temperature sensor
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating mode only, for cooling mode only, for heating and cooling mode
- Comfort, standby, night, frost or heat protection mode which can be switched via EIB
- Two pushbuttons for local switching between comfort and standby mode
- Two pushbuttons for adjusting the basic setpoint
- Basic setpoint of the room temperature for comfort mode which can be set via the EIB
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Output of the control variable(s) either as an On/Off switch command or as a positioning command in the range of 0 ... 100 %
- Red luminous bar for indicating the current setpoint offsetting and the set operating mode
- Integrated bus coupling unit
- 1 ground conductor and 1 ground terminal for the base
- Dimensions (H x W x D): 80 x 166 x 41 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
i-system							
 <p>UP 237 room temperature controllers</p> <ul style="list-style-type: none"> • Titanium white • Carbon metallic • Aluminum metallic <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	A	5WG1 237-2AB11		1	1	030	0.048
	B	5WG1 237-2AB21		1	1	030	0.048
	B	5WG1 237-2AB31		1	1	030	0.048
DELTA profil							
 <p>UP 252 room temperature controllers</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 252-2AB03		1	1	030	0.038
	A	5WG1 252-2AB13		1	1	030	0.038
	B	5WG1 252-2AB23		1	1	030	0.038
	B	5WG1 252-2AB73		1	1	030	0.065




5WG1 237-2AB11

5WG1 252-2AB13

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Room temperature controllers

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA style							
 <p>UP 254 room temperature controllers</p> <ul style="list-style-type: none"> • Titanium white/metallic silver • Basalt black/metallic silver <p><u>Note:</u> The bus coupling unit and matching frames must be ordered separately (no intermediate frame required).</p>	A	5WG1 254-2AB13		1	1	030	0.068
	B	5WG1 254-2AB23		1	1	030	0.068
5WG1 254-2AB13							
DELTA ambiente							
 <p>UP 253 room temperature controllers</p> <ul style="list-style-type: none"> • Arctic white <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 253-2AB03		1	1	030	0.065
5WG1 253-2AB03							
DELTA millennium							
 <p>IKE 250 room temperature controllers</p> <p><u>Note:</u> The text for the labeling field is engraved and must be specified with your order (see page 1/28 DELTA millennium order form).</p>	C	5WG1 250-8AB01		1	1	030	0.341
5WG1 250-8AB01							

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning



Pushbuttons with room temperature controllers

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Technical specifications

- Vertical operation
- Two wide inner rocker buttons
- Function can be user-assigned: switching over, switching ON/OFF, switching ON/OFF and dimming, shutter/blind, value transmission, store and call up scenes of up to four 1-bit scenes in conjunction with scene module
- Short and long button press for ON/OFF/over, brighter/darker for dimming, and UP/DOWN and adjustment of slats for shutter/blind control
- Operation/status indication over one LED per rocker button
- Integrated room temperature sensors and controllers for heating only, cooling only or combined heating/cooling
- Control over an algorithm for adaptive control and/or a two-point algorithm
- With monitoring of room temperature over a room temperature sensor integrated in the controller and an external room temperature sensor connected to the EIB, and with adjustable weighting between the temperature measured internally and externally
- Two narrow outer rocker buttons for setpoint offsetting in comfort mode and one for switching between comfort and standby mode
- Operating modes that can be switched over EIB: comfort mode, standby mode, night mode, frost or heat protection mode, with adjustable offset of the room temperature setpoint for comfort mode
- Adjustable dead zone, selectable either symmetric to the setpoint for comfort mode or between the heating and cooling setpoint for comfort mode
- Selectable sequence control for heating and cooling mode (required e.g. for the combination of floor and radiator heating)
- Output of the control variable(s) either as ON/OFF switch command or as positioning command in the range 0 ... 100 %, with LEDs for the indication of the current operating mode and setpoint offsetting
- For plugging onto a UP 114 bus coupling unit
- Dimensions (H x W x D): 65 x 65 x 15 mm.

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
DELTA profil								
 <p>UP 231 pushbuttons, double, adaptive room temperature controllers</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>			B	5WG1 231-2AB03	1	1	030	0.036
			A	5WG1 231-2AB13	1	1	030	0.036
			B	5WG1 231-2AB23	1	1	030	0.036
			B	5WG1 231-2AB73	1	1	030	0.036
DELTA style								
 <p>UP 231E pushbuttons, double, adaptive room temperature controllers</p> <ul style="list-style-type: none"> • Titanium white • Basalt black <p><u>Note:</u> The bus coupling unit, the matching frames and intermediate frames must be ordered separately.</p>			A	5WG1 231-2EB13	1	1	030	0.036
			B	5WG1 231-2EB23	1	1	030	0.036

5WG1 231-2AB13

5WG1 231-2EB13

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Actuators for HCVA

Technical specifications

		906101 N 605	906202 N 605/11	900501 N 670/03	49550 REG 540	49551 REG 540/11
Type						
Application program						
Enclosure data						
Design		N	N	N	REG	REG
Modular installation device for mounting on TH35 EN 60715 mounting rail		✓	✓	✓	✓	✓
Dimensions						
• Length	mm	90	90	90	90	90
• Width (1 MW = 18 mm)	mm	6 MW	6 MW	4 MW	6 MW	4 MW
• Height	mm	55	55	55	55	55
Display/control elements						
LED for operation/status indication		✓	✓	--	✓	✓
Can be operated with		1)	1)	1)	UP 237E, UP 252E UP 237F, UP 252F	UP 237E, UP 252E UP 237F, UP 252F
Direct operation (local operation)		✓ (manual)	✓ (manual)	--	✓ (test mode)	✓ (test mode)
Power supply						
Electronics powered over an external power supply unit for 24 V AC/DC		--	--	✓	--	✓ (AC only)
With electronics powered by an integrated power supply unit supply voltage 230 V AC		✓	✓	--	✓	--
Bus connection						
Integrated bus coupling unit		✓	✓	✓	✓	✓
Bus connection over contact system to data rail		--	--	✓	--	--
Bus connection via bus terminal		✓	✓	✓	--	--
Bus connection over screw terminals		--	--	--	✓	✓
Outputs						
Load output						
Floating relay contact		--	--	2	3	3
Silent semiconductor switch		6	6	--	--	--
Switching capacity for permanent loading (p.f. = 1)	W	12	6	--	--	--
Contact rated voltage, AC	V	230	230	230	230	230
Contact rated current (p.f. = 1)	A	?	?	10	6	6
Max. short-time current	A	1.5	0.5	--	--	--
Control of 2 small valve actuators (max. AC 24 V)	W				5	15
Protection						
Electronic protection of outputs against over-load and short circuit		✓	✓	--	--	--
Universal inputs/outputs						
Adjustable inputs/outputs as		--	--	2	--	--
• Analog input (0 ... 10 V DC) with limit value monitoring and indication						
• Analog output (0 ... 10 V DC) with adjustable lower and upper limits						
• Binary input for 10 V DC with pulse edge evaluation						
• Binary output (10 V DC)						
Inputs						
Pushbutton inputs						
For signal input (floating contacts)		6	6	--	2	1
Determination of switching state over the voltage generated in the device		✓	✓	--	✓	✓
Sensor inputs						
PT1000 temperature sensor input		--	--	2	--	--
Temperature sensor input		--	--	--	1 ²⁾	1 ²⁾
Potentiometer input (setpoint adjustment)		--	--	--	1	--
Max. cable length, unshielded, untwisted	m	50	50	³⁾	30	30

1) *instabus* room temperature controller.

2) M 540 temperature sensor.

3) On request.

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Actuators for HCVA

Type	906101 N 605	906202 N 605/11	900501 N 670/03	49550 REG 540	49551 REG 540/11
Application program					
Output functions					
Switching (ON/OFF per channel)	✓	✓	✓	✓	✓
Value setting per channel, 8-bit	✓	--	✓	✓	✓
Positively driven operation	✓	--	✓	--	--
Configurable transmission of output status	✓	✓	--	--	--
Send status	✓	✓	--	--	--
Input functions					
Configurable debounce time	--	--	✓	--	--
Configurable pulse edge evaluation	--	--	✓	--	--
Configurable transmission of input status objects	✓	✓	✓	--	--
General functions					
Max. number of group addresses	35	40	40	1)	1)
Max. number of assignments	55	65	40	1)	1)
Integrated controller with PI algorithms	--	--	--	✓	✓
Comfort mode	--	--	--	✓	✓
Standby mode	--	--	--	✓	✓
Night mode	--	--	--	✓	✓
Frost protection mode	--	--	--	✓	✓
Heat protection mode	--	--	--	✓	✓
Energy-saving function	--	✓	--	--	--
Calcification protection	✓	--	--	--	--
Configurable behavior in the event of a bus power failure	✓	✓	--	--	--
Configurable behavior in the event of a bus power failure	--	--	✓	--	--
Configurable behavior in the event of a bus power recovery	✓	✓	✓	--	--


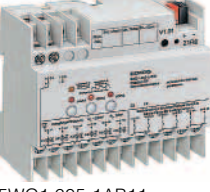




1) On request.

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Actuators for HCVA

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
Unit(s)	Unit(s)						
N 605 thermal drive actuators, 6 inputs, 6 outputs		A	5WG1 605-1AB01	1	1	030	0.434
							
5WG1 605-1AB01							
N 605/11 thermal drive actuators, 6 inputs, 2 x 3 outputs for control of 2 heating/cooling mats		A	5WG1 605-1AB11	1	1	030	0.434
							
5WG1 605-1AB11							
Universal N 670 I/O modules, 2 x universal I/O, 2 inputs for Pt1000, 2 outputs 230 V AC, 10 A		A	5WG1 670-1AB03	1	1	030	0.220
							
5WG1 670-1AB03							
REG 540 fan coil unit controllers		A	5WG1 540-5AS01	1	1	030	0.530
							
5WG1 540-5AS01							
REG 540/11 fan coil unit controllers		A	5WG1 540-5AS11	1	1	030	0.225
							
5WG1 540-5AS11							
Accessories							
M 540 temperature sensors for REG 540, REG 540/11 fan coil controllers		A	5WG1 540-8AS01	1	1	030	0.081
							
5WG1 540-8AS01							
including a 2-m long connecting lead with terminal plug							

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Valve actuators for HCVA

Technical specifications

	AP 560H	AP 560H02	AP 560R	AP 562
Type				
Enclosure data				
Dimensions				
• Height	mm 60	60	--	82
• Width	mm 46	46	--	50
• Depth	mm 47	47	--	65
Power supply				
Bus-powered electronics and drive	✓	✓	--	✓
Bus connection				
Integrated bus coupling unit	✓	✓	--	✓
Bus connection over permanently fixed connecting lead	✓	✓	--	✓
Inputs				
Pushbutton inputs				
For signal input (floating contacts)	--	--	--	2
Output				
Electrothermal actuator (silent) 230 V/50 Hz	--	--	✓ ¹⁾	--
Valve position in de-energized state	--	--	freely selectable	--
Electromotive actuator	✓	✓	--	✓
Stroke max. mm	4.5	4.5	2.5	7.5
Automatic adjustment of travel to the valve used (valve stroke detection)	✓	✓	--	✓
Length of connecting lead m	1	5	0.8	0.8
Mounting on company valves				
• Direct	- Heimeier		- MNG	--
• With spacer ring	--		- Heimeier	- Danfoss RA - Heimeier - MNG - Schlösser (3/93 ff.) - Honeywell - Braukmann - Dumser (distribution boards) - Reich (distribution boards) - Landis + Gyr - Oventrop - Herb - Onda
• Adapter set	For connection to other valve makes, adapters can be obtained from Heimeier		- Oventrop - Danfoss RA 2000	--




¹⁾ Suitable for N 605, N 605/11 thermal drive actuators.

Devices for Special Applications

Heating, Cooling, Ventilation, Air-Conditioning

Valve actuators for HCVA

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 5WG1 560-7AH01	AP 560H valve actuators, electromotive	A	5WG1 560-7AH01		1	1	030	0.215
	AP 560H02 valve actuators, electromotive	A	5WG1 560-7AH02		1	1	030	0.410
	<u>Note:</u> The programming magnet must be ordered separately.							
	Accessories							
	AP 560H and AP 560H02 programming magnets	A	5WG1 590-8AH01		1	1	030	0.011
	For non-contact activation of the programming mode, suitable for Heimeier AP 560H valve actuators							
 5WG1 560-7AR01	AP 560R valve actuators, electrothermal	A	5WG1 560-7AR01		1	1	030	0.226
	<u>Note:</u> Adapters for Danfoss RA 2000 and Oventrop must be ordered separately.							
	Accessories							
	Adapter sets for AP 560R for Danfos RA 2000 valves	D	5WG1 590-7AR01		1	1	030	0.144
	Adapter sets for AP 560R for Oventrop valves	A	5WG1 590-7AR02		1	1	030	0.023
 5WG1 562-7EY01	AP 562 valve actuators, electromotive, with LED valve position indication	A	5WG1 562-7EY01		1	1	030	0.273

Devices for Special Applications

Load Management

Load management

5

Technical specifications

- For peak load limitation in plants with tariff-based power measurement
- Value of an energy pulse configurable in watthours
- Configurable peak load limit of 30... 1000 kW, with configurable warning limit of 25 ... 1000 kW
- Configurable measuring period of 15, 30 or 60 minutes for the calculation of the power mean value
- Configurable cycle time of 15, 30, 60, 120 or 240 seconds for the load extrapolation interval
- Up to 120 loads assignable to peak load limitation
- State monitoring and switching of loads over the EIB
- With parameters assignable per load
- Power consumption of the load
- Turn-off priority (1 ... 10)
- Release/locking of load
- Minimum make time
- Minimum break time
- Maximum break time
- Number of permissible switching cycles in 24 h.
- Transmission of extrapolation data via EIB after each extrapolation
- Transmission of statistics data via EIB at the end of each measuring period

- 3 LEDs for display of availability (operational voltage), of an impending exceeding of the maximum value and of a missing synchronization pulse
- 5 LEDs for display of the current time interval within the measuring interval
- 8 LEDs for status indication of the first 8 loads
- Inputs for connection of demand pulses generated by utility company counters and for connection of synchronous pulses and high/low-tariff contacts
- Electronics powered over an integrated power supply unit for 230 V AC
- Integrated bus coupling unit
- Bus connection over bus terminal and contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail.
- Width 4 MW (1 MW = 18 mm)

Note:

Like the documentation, the statistics software for the peak load limiter can be downloaded free of charge from the Internet at: <http://www.siemens.de/gamma-td>.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
N 360 peak load limiters	A	5WG1 360-1AB01		1	1	030	0.267



5WG1 360-1AB01

Devices for Special Applications

Safety

Introduction

Overview

Intrusion



Presence-simulation modules and detector group terminals reduce the risk of intrusion.

Leakage



The water sensors indicate unexpected water. In DELTA profil or DELTA style design.

Fire



The fire combination alarm with integrated bus coupling unit for the early detection of fires.

Technical specifications**N 345 presence-simulation modules**

- For recording switching, dimming and shutter/blind activities of up to 32 channels and up to a total of 5400 actions over a maximum period of 4 weeks (corresponds to 5 to 6 actions per channel and day)
- Continuous recording or one-off recording of sample weeks
- Detection of public holidays during recording, which is taken into account during simulation, with replay of the recorded telegrams in the same order, but with time-definable random deviation from the recording
- Return to the start of the simulation after 1 to 4 weeks
- Module-internal clock, which requires regular synchronization by a master clock
- Electronics powered over bus voltage
- Integrated bus coupling unit
- Bus connection over contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width 1 MW (1 MW = 18 mm)

Note:

The following devices can be used as a master clock or time source for synchronizing the module-internal real-time clock: a time switch (e.g. 5WG1 372-5EY01), a N350E IP controller (5WG1 350-1EB01) or a wave Touch Manager (5WG3 583-2AB71).



N 266 detector group terminals

- For the monitored connection of passive detectors (e.g. magnetic contacts) and for the connection of floating contacts in applications with increased safety demands
- 4 detector group inputs, each with one LED for status display
- Two 12 V outputs "walk test" and "setting/unsetting" for the control of passive infrared and motion detectors
- Setting/unsetting of the detector group terminal over a communication object
- With failure message in case of short circuit or interruption of a signal line
- Electronics powered over an external power supply unit for 12 V AC/DC, max. 50 mA
- Monitoring of the external power supply
- Integrated bus coupling unit
- Bus connection via bus terminal
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width 4 MW (1 MW = 18 mm)

Note:

The following (e.g.) is suitable as external power supply unit: LOGO!Power 6EP1 321-1SH01.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 345-1AB01	A	5WG1 345-1AB01		1	1	030	0.100
 5WG1 266-1AB01	A	5WG1 266-1AB01		1	1	030	0.180

Devices for Special Applications



Safety

Leakage

Technical specifications

- For detecting water in rooms with risk of leakages
- With water sensor for mounting near the ground with a 2 m long connecting lead (extendable to max. 20 m) with jack plug and of a flush-mounting device
- For plugging onto a UP 110 or UP 114 bus coupling unit
- Indication of water / no water
- Alarm indication with adjustable cyclic transmission time
- Indication of defective device / cable
- Alarm acknowledgement for resetting the alarm indication
- Electronics powered over bus voltage
- Dimensions (H x W x D): 65 x 65 x 42 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA profil							
 5WG1 272-2AB11	UP 272 water sensors						
		<ul style="list-style-type: none">• Pearl gray• Titanium white• Anthracite• Silver					
	B	5WG1 272-2AB01		1	1	030	0.090
	A	5WG1 272-2AB11		1	1	030	0.090
	B	5WG1 272-2AB21		1	1	030	0.090
	B	5WG1 272-2AB71		1	1	030	0.090
<u>Note:</u> The UP 110 or UP 114 bus coupling units and matching cut-out frames must be ordered separately.							
DELTA style							
 5WG1 272-2AB11	UP 272 water sensors						
		<ul style="list-style-type: none">• Titanium white					
	A	5WG1 272-2AB11		1	1	030	0.090
<u>Note:</u> The UP 110 or UP 114 bus coupling units, the matching frames and intermediate frames must be ordered separately.							

Fire


Technical specifications

The fire combination alarm with integrated bus coupling unit can be used for the early detection of fires in buildings that are not required to use VDS-approved fire detection systems (VDS - Verband der Sachversicher - German Association of Insurers). It is of modular design, i.e. it comprises a base with integrated bus coupling unit and a sensor head, which can be removed, e.g. for

maintenance or overhaul tasks. Smoke and heat alarm indications and the current temperature value are output over the bus. It also automatically indicates whether the sensor is defective or soiled or whether the sensor has been separated from the base

Dimensions (Ø x H): 166 x 64 mm

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 256-3AB01		AP 256 fire combination alarms					
	A	5WG1 256-3AB01		1	1	030	0.240

Devices for Special Applications

Quick-Assembly Systems

Introduction

Overview

Modular quick-assembly systems



Flexible modules control shutter/blinds, lighting groups or other loads.

SMS controls, flat



Quick-assembly system in flat design.

Note:

The electrical connections to the devices are fitted exclusively with plug-in connectors. The required plug-in connectors and cable assemblies can be obtained directly from Wieland.

Order address:

Wieland Electric GmbH
Vertriebs- und Marketing Center
Abteilung VSI
Benzstraße 9
D-96052 Bamberg

Telephone: +49 (951) 9324-390
Fax: +49 (951) 9324-390

<http://www.gesis.com>

Devices for Special Applications

Quick-Assembly Systems

Modular quick-assembly systems

Technical specifications

The "Modular quick-assembly system" comprises a basic module (for up to 6 expansion devices) and the respective series-connected expansion modules. The devices are designed for distributed mounting on a TH 35-7.5 mounting rail in false floors or suspended ceilings.

		Basic module	Expansion modules				
			Input AP 611/11	Input AP 611/21	Switch actuators AP 611/31	Shutter/blind actuators AP 611/51	Switch/dimming actuators AP 611/61
Type		AP 611					
Enclosure data							
Plug-in connectors		gesis EST 2i5 Green/black	gesis GST 18i4 Pebble gray	gesis GST 18i5 Light blue	gesis GST 18i3 Black	gesis GST 18i4 Black	gesis GST 18i5 Pastel blue
Dimensions							
• Height incl. TH 35-7.5 mounting rail	mm	120	120	120	120	120	120
• Width (connected in series)	mm	80	80	80	80	80	80
• Depth	mm	62	41 (31)	41 (31)	41 (31)	41 (31)	41 (31)
Bus connection							
Integrated bus coupling unit		✓	--	--	--	--	--
Bus connection over plug system		✓	--	--	--	--	--
Max. possible expansion modules		6	--	--	--	--	--
Inputs							
Max. cable length, unshielded, untwisted	m	--	100	100	--	--	--
Pushbutton inputs							
For voltage input (with common ground (N) or (-))		--	✓	✓	--	--	--
230 V AC		--	4	--	--	--	--
24 V DC		--	--	4	--	--	--
Outputs							
Control output							
1 ... 10 V DC		--	--	--	--	--	✓
Control current	mA	--	--	--	--	--	50
Load output							
Floating relay contact		--	--	--	2		1
Number of channels (one UP and one DOWN each)		--	--	--	--	1	--
Integrated isolating relay function for connection of 2 drives per channel		--	--	--	--	✓	--
Load types							
Rated contact voltage, AC	V	--	--	--	230	230	230
Rated contact current	A	--	--	--	16	8	16

Devices for Special Applications

Quick-Assembly Systems

Modular quick-assembly systems

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
Unit(s)	Unit(s)						
	AP 611 basic modules, gesis EIB M2-BAS	B	5WG1 611-3AL01	1	1	030	0.320
5WG1 611-3AL01							
	AP 611/11 input modules, gesis EIB M2, 4 inputs for 230 V AC	B	5WG1 611-3AL11	1	1	030	0.238
5WG1 611-3AL11							
	AP 611/21 input modules, gesis EIB M2, 4 inputs for 24 V DC	B	5WG1 611-3AL21	1	1	030	0.255
5WG1 611-3AL21							
	AP 611/31 load switches, gesis EIB M2-0/2, 16 A, 2 x 230 V AC	B	5WG1 611-3AL31	1	1	030	0.258
5WG1 611-3AL31							
	AP 611/51 shutter/blind actuators, gesis EIB M, 8 A, 2 x 230 V, running parallel	B	5WG1 611-3AL51	1	1	030	0.234
5WG1 611-3AL51							
	AP 611/61 switch/dimming actuators, gesis EIB M2, 16 A, 1 x 230 V AC	B	5WG1 611-3AL61	1	1	030	0.276
5WG1 611-3AL61							

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* You can order this quantity or a multiple thereof.

Devices for Special Applications

Quick-Assembly Systems

SMS controls, flat

Technical specifications

The "flat quick-assembly system" are actuators for distributed mounting in false floors or suspended ceilings.

Mains connection is over plug-in connector "gesis GST 18i5 black".

Bus connection is over plug-in connector "gesis BST 14i2 green".

Mains and bus connection can also be implemented using the combination connector "gesis EST 2i5 green/black".

For plug types for outputs, see "Technical specifications".

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Type	Shutter/blind actuators AP 631	Shutter/blind actuators AP 631/02	Shutter/blind actuators AP 631/51	Shutter/blind actuators AP 631/52	Switch and shutter actuators AP 631/11	Switch and shutter actuators AP 631/12	Switch/dimming actuators AP 631/21	Switch/dimming actuators AP 631/22	Switch actuators AP 631/43	Switch actuators AP 631/44	Switch actuators AP 631/32	Switch actuators, Gateway EnOcean AP 631/62
Enclosure data												
Plug-in connectors for outputs												
• gesis GST 18i3 black	--	--	--	--	Switching Shutter/blind	Switching Shutter/blind	--	--	✓	✓	--	✓
• gesis GST 18i4 black	✓	✓	✓	✓	--	--	--	--	--	--	--	--
• gesis GST 18i5 pastel blue	--	--	--	--	--	✓	✓	--	--	--	--	--
• gesis GST 18i5 black	--	--	--	--	--	--	--	--	--	--	✓	--
Dimensions												
• Height (incl. combination distributor block)	mm	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)	32 (71)
• Width	mm	112	112	112	112	112	112	112	112	112	112	112
• Length	mm	254	254	254	254	254	254	254	254	254	254	254
Power supply												
Mains voltage connection												
• 1-phase	✓	--	✓	--	✓	--	✓	--	✓	--	--	--
• 3-phase	--	✓	--	✓	--	✓	--	✓	--	✓	✓	✓
Bus connection												
Integrated bus coupling unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bus connection over plug system	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outputs												
Control output												
1 ... 10 V DC	--	--	--	--	--	--	2	2	--	--	--	--
Control current	mA	--	--	--	--	--	50	50	--	--	--	--
Load output												
Floating relay contact	--	--	--	--	2	2	2	2	4	4	6	4
Number of channels (one UP and one DOWN each)	2	2	2	2	1	1	--	--	--	--	--	--
Load types												
Rated contact voltage, AC	V	230	230/400	230	230/400	230	230/400	230	230/400	230	230/400	230/400
Rated contact current	A	8	8	8	8	8/16	8/16	16	16	16	16	16
Inputs												
EnOcean radio receiver	--	--	--	--	--	--	--	--	--	--	--	✓

Devices for Special Applications

Quick-Assembly Systems

SMS controls, flat

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	AP 631 shutter/blind actuators, 1-phase, gesis EIB V-0/2W SI 1PH	B	5WG1 631-3AL01		1	1	030	0.320
	AP 631/02 shutter/blind actuators, 3-phase, gesis EIB V-0/2W SI	B	5WG1 631-3AL02		1	1	030	0.320
	AP 631/51 shutter/blind actuators, 1-phase, gesis EIB V-0/2W 1PH	B	5WG1 631-3AL51		1	1	030	0.408
	AP 631/52 shutter/blind actuators, 3-phase, gesis EIB V-0/2W	B	5WG1 631-3AL52		1	1	030	0.408
	AP 631/11 combination actuators, 1-phase, gesis EIB, V-0/2+1W 1PH,	B	5WG1 631-3AL11		1	1	030	0.408
	AP 631/12 combination actuators, 3-phase, gesis EIB, V-0/2+1W,	B	5WG1 631-3AL12		1	1	030	0.408
	AP 631/21 switch/dimming actuators, 1-phase, gesis EIB V-0/2SD 1PH	B	5WG1 631-3AL21		1	1	030	0.408
	AP 631/22 switch/dimming actuators, 3-phase, gesis EIB V-0/2SD	B	5WG1 631-3AL22		1	1	030	0.408
	AP 631/43 switch actuators, 1-phase, gesis EIB V-0/4b 1PH	B	5WG1 631-3AL43		1	1	030	0.420
	AP 631/44 switch actuators, 3-phase, gesis EIB V-0/4b	B	5WG1 631-3AL44		1	1	030	0.420
	AP 631/32 switch actuators, 3-phase, gesis EIB V-0/6	B	5WG1 631-3AL32		1	1	030	0.408
	Gateway EnOcean/EIB, AP 631/62 switch actuators, 3-phase, gesis EIB V-56/4		5WG1 631-3AL62					

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Devices for Special Applications

Quick-Assembly Systems

Notes

5



6

Gateways, Interface Converters

6/2	Introduction
6/4	KNX EIB/RS232
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Note: Only the chapters indicated in black on this page contain selection and ordering data.

Gateways, Interface Converters

Introduction

Overview

KNX EIB/RS232



The PC interface over installed plug-and-socket devices in different DELTA designs.

KNX EIB/USB



The PC interface over installed USB sockets.

KNX EIB/Infrared



Remote control over hand-held and wall-mounted transmitters. In various DELTA designs or independent of design.

KNX EIB/DALI

For the control of ECGs over DALI interface



For the control of ECGs over DALI interface

KNX EIB/Ethernet



Communication over fast Ethernet data network, whether internally or for remote control.

KNX EIB/KNX radio



Wireless remote control and expansion made easy. For i-system, DELTA profil and DELTA style.

KNX EIB/telephone



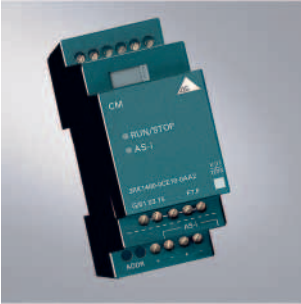
Connection to telephone.

KNX EIB/PROFIBUS DP



The key to the world of automation.

KNX EIB/LOGO!



More functions with modern small control systems.

EnOcean/KNX EIB



Gateways, Interface Converters

KNX EIB/RS232

Overview

For connection of a PC over RS232 interface for parameter assignment, visualization, logging and diagnosis of bus devices.

Technical specifications

Design		DELTA profil/ style/ ambiente		
Type		UP 146 UP 142	N 148/02	N 148/04
Enclosure data				
Design		UP	N	N
Modular installation device for mounting on TH35 EN 60715 mounting rail		--	✓	✓
Dimensions				
• Height	mm	65		
• Width (1 MW = 18 mm)	mm	65	3 MW	3 MW
• Depth	mm	42		
Power supply				
Bus-powered electronics or over RS232 through a connected PC		✓	✓	✓
Bus connection				
Integrated bus coupling unit		--	✓	✓
Plugs onto UP 110 bus coupling unit		✓	--	--
Plugs onto UP 114 bus coupling unit		✓	--	--
Bus connection over contact system to data rail		--	✓	✓
Gateway				
Transmission rate PC – RS232	bit/s	9600	9600	9600, 19200 (for FT1.2)
Can be switched between standard protocol and FT1.2		--	--	on the device
Electrically isolated access to the bus line over integrated socket		SUB-D, 9-pole	SUB-D, 9-pole	SUB-D, 9-pole
Access to all bus devices in the system		✓	✓	✓

Gateways, Interface Converters

KNX EIB/RS232

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 <p>UP 146 RS232 interfaces</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>							
	B	5WG1 146-2AB01		1	1	030	0.088
	A	5WG1 146-2AB11		1	1	030	0.088
	B	5WG1 146-2AB21		1	1	030	0.088
	B	5WG1 146-2AB71		1	1	030	0.088
5WG1 146-2AB11							
DELTA style							
 <p>UP 146 RS232 interfaces</p> <ul style="list-style-type: none"> • Titanium white <p><u>Note:</u> The bus coupling unit, the matching frames and intermediate frames must be ordered separately.</p>	A	5WG1 146-2AB11		1	1	030	0.088
5WG1 146-2AB11							
DELTA ambiente							
 <p>UP 142 RS232 interfaces</p> <ul style="list-style-type: none"> • Arctic white <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 142-2AB01		1	1	030	0.088
5WG1 142-2AB01							
Design-independent							
 <p>N 148/02 RS232 interfaces</p>	A	5WG1 148-1AB02		1	1	030	0.172
5WG1 148-1AB02							
 <p>N 148/04 RS232 interfaces, can be switched to FT 1.2 protocol</p>	A	5WG1 148-1AB04		1	1	030	0.178
5WG1 148-1AB04							

Gateways, Interface Converters

KNX EIB/USB

Overview

For connection of a PC over USB interface for parameter assignment, visualization, logging and diagnosis of bus devices.

Technical specifications

Design	DELTA profil/style/ ambiente	
Type	UP 146E UP 142E	N 148/11
Enclosure data		
Design	UP	N
Modular installation device for mounting on TH35 EN 60715 mounting rail	--	✓
Dimensions		
• Height	mm	65
• Width (1 MW = 18 mm)	mm	65
• Depth	mm	42
		1 MW
Power supply		
Bus-powered electronics or over USB through a connected PC	✓	✓
Bus connection		
Integrated bus coupling unit	--	✓
Plugs onto UP 110 bus coupling unit	✓	--
Plugs onto UP 114 bus coupling unit	✓	--
Bus connection over contact system to data rail	--	✓
Bus connection via bus terminal	✓	--
Gateway		
Transmission PC – USB	USB 1.1 or higher	USB 1.1 or higher
Electrically isolated access to the bus line over integrated socket	USB (type B)	USB (type B)
Access to all bus devices in the system	✓	✓

Gateways, Interface Converters

KNX EIB/USB

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 <p>UP 146E USB interfaces</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>							
	B	5WG1 146-2EB01		1	1	030	0.092
	A	5WG1 146-2EB11		1	1	030	0.091
	B	5WG1 146-2EB21		1	1	030	0.092
	B	5WG1 146-2EB71		1	1	030	0.091
5WG1 146-2EB11							
DELTA style							
 <p>UP 146E USB interfaces</p> <ul style="list-style-type: none"> • Titanium white <p><u>Note:</u> The bus coupling unit, the matching frames and intermediate frames must be ordered separately.</p>	A	5WG1 146-2EB11		1	1	030	0.091
5WG1 146-2EB11							
DELTA ambiente							
 <p>UP 142E USB interfaces</p> <ul style="list-style-type: none"> • Arctic white <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 142-2EB01		1	1	030	0.091
5WG1 142-2EB01							
Design-independent							
 <p>N 148/11 USB interfaces</p>	A	5WG1 148-1AB11		1	1	030	0.840
5WG1 148-1AB11							

Gateways, Interface Converters

KNX EIB/infrared

Technical specifications

N 450 IR decoders

- Parallel connection of up to four S 440 IR receivers
- Conversion of IR telegrams incoming from an IR receiver into bus telegrams
- Control of up to 22 functions (switching ON/OFF/over, dimming, value transmission, shutter/blind control or call up/store scenes)
- Electronics powered over bus voltage
- Integrated bus coupling unit
- Bus connection over contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 2 MW (1 MW = 18 mm).

S 440 IR receivers for N 450 IR decoders

- For reception and amplification of IR signals transmitted from IR wall-mounted transmitters or IR hand-held transmitters, for conversion into electrical signals
- For connection to an N 450 IR decoder via a 1 m cable (extendable up to 50 m), including clamping springs and rosette for installation in ceilings, walls or luminaires
- Powered over the IR decoder
- Dimensions (H x W x D): 25 x 26 x 65 mm.

6

Design	DELTA profil			DELTA style			DELTA ambiente	N 450
Type	UP 233	UP 234	UP 235	UP 285E	UP 286E	UP 287E	UP 284E	
Application program	900B02	900B02	900B02	900B02	900B02	900B02	900B02	7F0301
Display/control elements								
Individual pushbuttons	2	4	8	2	4	8	8	--
Pushbutton pairs	1	2	4	1	2	4	4	--
Operation (v: vertical, h: horizontal)	v	v	v	v	v	v	v	--
LED per pushbutton pair for status indication or configurable as orientation light	✓	✓	✓	✓	✓	✓	✓	--
Separate LED for orientation light (ON/OFF configurable)	--	--	--	--	--	--	✓	--
Labeling field	✓	✓	✓	✓	✓	✓	--	--
Pictographs supplied	--	--	--	--	--	--	✓	--
Bus connection								
Plugs onto UP 114 bus coupling unit	✓	✓	✓	✓	✓	✓	✓	--
Inputs								
IR receiver/decoder	✓	✓	✓	✓	✓	✓	✓	✓ (with S 440)
Integration of 14 further pushbutton pairs of IR hand-held/wall-mounted transmitters	✓	✓	✓	✓	✓	✓	✓	✓
Functions								
Maximum number of group addresses	39	39	39	39	39	39	39	22
Maximum number of assignments	40	40	40	40	40	40	40	22
Switching								
Switching ON/OFF	✓	✓	✓	✓	✓	✓	✓	✓
Switching over	✓	✓	✓	✓	✓	✓	✓	✓
Pushbutton function (bell function)	✓	✓	✓	✓	✓	✓	✓	--
Value transmission								
Value transmission, 8-bit	✓	✓	✓	✓	✓	✓	✓	✓
Dimming								
Dimming with stop telegram (4 bit)	✓	✓	✓	✓	✓	✓	✓	✓
Dimming with cyclic transmission (4 bit)	✓	✓	✓	✓	✓	✓	✓	✓
Short or long button press (ON/OFF or Brighter/darker), configurable	✓	✓	✓	✓	✓	✓	✓	✓
Shutter/blind								
Shutter/blind control	✓	✓	✓	✓	✓	✓	✓	✓
Short or long button press (slat adjustment/STOP or UP/DOWN), configurable	✓	✓	✓	✓	✓	✓	✓	✓
Scene								
Store and call up scene, 1-bit in conjunction with scene module	2	4	8	2	4	8	8	4
Short or long button press (store/call up scene), configurable	✓	✓	✓	✓	✓	✓	✓	✓
Status								
Status indication of any status objects (1-bit)	✓	✓	✓	✓	✓	✓	✓	--
Status indication of pushbutton objects	✓	✓	✓	✓	✓	✓	✓	--




Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 <p>UP 233 pushbuttons, single, IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 233-2AB01		1	1	030	0.038
	A	5WG1 233-2AB11		1	1	030	0.038
	B	5WG1 233-2AB21		1	1	030	0.038
	B	5WG1 233-2AB71		1	1	030	0.038
5WG1 233-2AB11							
 <p>UP 234 pushbuttons, double, IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 234-2AB01		1	1	030	0.038
	A	5WG1 234-2AB11		1	1	030	0.038
	B	5WG1 234-2AB21		1	1	030	0.038
	B	5WG1 234-2AB71		1	1	030	0.038
5WG1 234-2AB11							
 <p>UP 235 pushbuttons, quadruple, IR receiver, neutral</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.</p>	B	5WG1 235-2AB01		1	1	030	0.038
	A	5WG1 235-2AB11		1	1	030	0.038
	B	5WG1 235-2AB21		1	1	030	0.038
	B	5WG1 235-2AB71		1	1	030	0.038
5WG1 235-2AB11							
DELTA style							
 <p>UP 285E pushbuttons, single, IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 285-2EB01		1	1	030	0.038
	A	5WG1 285-2EB11		1	1	030	0.038
	B	5WG1 285-2EB21		1	1	030	0.055
	B	5WG1 285-2EB81		1	1	030	0.038
5WG1 285-2EB11							
 <p>UP 286E pushbuttons, double, IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 286-2EB01		1	1	030	0.038
	A	5WG1 286-2EB11		1	1	030	0.038
	B	5WG1 286-2EB21		1	1	030	0.036
	B	5WG1 286-2EB81		1	1	030	0.038
5WG1 286-2EB11							
 <p>UP 287E pushbuttons, quadruple, IR receiver, neutral</p> <ul style="list-style-type: none"> • Basalt black/metallic silver • Titanium white • Basalt black • Titanium white/metallic silver <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>	B	5WG1 287-2EB01		1	1	030	0.038
	A	5WG1 287-2EB11		1	1	030	0.038
	B	5WG1 287-2EB21		1	1	030	0.036
	B	5WG1 287-2EB81		1	1	030	0.038
5WG1 287-2EB11							

* You can order this quantity or a multiple thereof.

Gateways, Interface Converters

KNX EIB/infrared

Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
DELTA ambiente								
 <p>UP 284E pushbuttons, quadruple, IR receiver</p> <ul style="list-style-type: none"> • Arctic white/arctic white • Arctic white/steel <p><u>Note:</u> The bus coupling units and matching frames must be ordered separately.</p>								
	B		5WG1 284-2EB01		1	1	030	0.084
	B		5WG1 284-2EB03		1	1	030	0.084
Design-independent								
 <p>N 450 IR decoders</p>		A	5WG1 450-1AB02		1	1	030	0.105
 <p>S 440 IR receivers for N 450 IR decoders</p>								
		A	5WG1 440-7AB01		1	1	030	0.072

6

Technical specifications

	N 525E	N 141	GE 141		
Type					
Enclosure data					
Design	N	N	GE		
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓			
Enclosures for device installation	--	--	✓		
Dimensions					
• Height	mm			42	
• Width (1 MW = 18 mm)	mm	4 MW	4 MW	274.5	
• Depth	mm			28	
Display/control elements					
LED per DALI output for status indication (fault, lighting failure, ON, OFF)	✓	✓	--		
Power supply					
Electronics powered over bus voltage			✓		
With electronics powered by an integrated power supply unit	✓	✓	--		
DALI line powered over an integrated power supply unit	✓	✓	✓		
Bus connection					
Integrated bus coupling unit	✓	✓	✓		
Bus connection over contact system to data rail	✓	✓	--		
Bus connection via bus terminal	✓	✓	✓		
Outputs					
Control outputs					
DALI outputs (lines)	8	1	1		
DALI output acc. to IEC 60929 for DALI ECG (16 V, floating, short-circuit resistant)	✓	✓	✓		
Connection of DALI ECG per output	8	64	64		
Application program	980801	802701	801805 (ETS2)	802003 (ETS3)	801808 (ETS3)
Functions					
Direct operation	✓	✓	--	--	--
Configurable behavior in the event of a bus power failure/recovery	✓	✓	✓	✓	✓
Support of CIN	--	✓	--	--	--
Scene control					
Integrated 8-bit scene control	✓	✓	✓	✓	✓
Scenes to be integrated per DALI output	16	16	16	16	16
Effect control					
Integrated effect control (one-off or cyclic chaselight operation, color control)	--	✓	--	--	--
Test function over ETS					
Testing individual ECGs	--	✓	--	✓	--
Testing group assignment	--	✓	✓	✓	✓
Testing scenes	--	✓	✓	✓	✓
Testing effects	--	✓	--	--	--
Group control					
Up to 16 groups per DALI output	--	✓	✓	✓	✓
• Switching					
• Brighter/darker dimming					
• Set value					
Individual ECG control					
Operation of individual ECG with	--	✓	--	✓	--
• Switching					
• Set value					
Time functions					
Timer mode, 1-step (automatic stairwell switch)	--	✓	✓	✓	✓
Timer mode, 2-step	--	✓	✓	✓	✓
Night mode (lighting for cleaning)	--	✓	✓	✓	✓
Warning of impending OFF	✓	✓	✓	✓	✓

Gateways, Interface Converters




KNX EIB/DALI

Type	N 525E	N 141	GE 141		
Application program	980801	802701	801805 (ETS2)	802003 (ETS3)	801808 (ETS3)
Dimming					
Minimum dimming value, adjustable	✓	✓	✓	✓	✓
Maximum dimming value, adjustable	✓	✓	✓	✓	✓
Switching					
Adjustable starting value	--	✓	✓	✓	✓
Status					
DALI short circuit	✓ ¹⁾	✓	✓	✓	✓
DALI power supply		✓	✓	✓	✓
Status channel (ON/OFF, value, lamp fault, ECG fault)	✓	--	--	--	--
Status group (ON/OFF, value, lamp fault, ECG fault)	--	✓	✓	✓ ²⁾	✓
Status ECG (ON/OFF, value, lamp fault, ECG fault)	--	✓	--	✓	--

1) Per channel.

2) Status ON/OFF, value.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
Unit(s)	Unit(s)	kg					
 5WG1 525-1EB01 N 525E switch/dimming actuators, 8 x DALI outputs, 8 DALI ECGs per output	A	5WG1 525-1EB01		1	1	030	0.300
 5WG1 141-1AB01 instabus/N 141 DALI gateways	C	5WG1 141-1AB01		1	1	030	0.200
 5WG1 141-4AB01 KNX EIB/GE 141 DALI interfaces	A	5WG1 141-4AB01		1	1	030	0.220




Technical specifications

	N 146	N 148/21	N 350E
Type			
Enclosure data			
Design	N	N	N
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓	✓
Width (1 MW = 18 mm)	2 MW	2 MW	4 MW
Display/control elements			
LEDs for indicating that the device is ready-to-run, EIB communication, IP communication	✓	✓	✓
LCD	--	--	✓
Power supply			
Electronics powered over an external AC/DC power supply unit	V 12 ... 30	V 12 ... 30	V 12 ... 30
Bus connection			
Integrated bus coupling unit	✓	✓	✓
Bus connection via bus terminal	✓	✓	✓
Mains connection			
Ethernet connection over RJ45 socket	✓	✓	✓
Plug-in terminal block for the connection of an external power supply unit	✓	✓	✓
Gateway			
Supports EIBnet/IP	✓	✓	✓
Line coupler function	✓	--	--
Interface functions	✓	✓	✓ ²⁾
Integrated realtime clock weekly scheduling program for 100 scheduled entries/Astro function	--	--	✓
Yearly time switching functions	--	--	✓
Event entries	--	--	200
Logic gate	--	--	30

1) On request.

2) ETS3 and visualization.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 N 146 IP routers	A	5WG1 146-1AB01		1	1	030	0.126
 N 148/21 IP interfaces	A	5WG1 148-1AB21		1	1	030	0.126
 N 350E IP controllers, 30 logic gates, 200 event entries, weekly scheduling program, integrated IP interface	A	5WG1 350-1EB01		1	1	030	0.184

* You can order this quantity or a multiple thereof.

Gateways, Interface Converters

KNX EIB/KNX radio

Technical specifications




UP 140 wave/*instabus* couplers

- For coupling GAMMA wave with GAMMA *instabus*
- Coupling of a total of up to 50 GAMMA wave sensor channels with GAMMA *instabus* actuator channels or GAMMA *instabus* sensor channels with GAMMA wave actuator channels
- Pushbutton rocker, single with intermediate position
- Vertical operation
- From ETS3 upwards, can be configured with the functions: switching, switching and dimming, shutter/blind control or scene control

- Short and long button press for ON/OFF, brighter/darker for dimming or UP/DOWN and adjustment of slats for shutter/blind control
- Storage and call up of up to two scenes
- 1 LED for the indication of telegram transmissions
- KNX radio transmitter/receiver for 868 MHz
- 10-pole plug for plugging onto a UP 114 bus coupling unit, version BCU 2.1.

		i-system	DELTA profil	DELTA style
		Single	Single	Single
Dimensions				
• Length	mm	55	65	68
• Width	mm	55	65	68
• Depth	mm	13	14	16.5

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
i-system							
 UP 140 wave/<i>instabus</i> couplers <ul style="list-style-type: none"> • Titanium white • Carbon metallic • Aluminum metallic Note The bus coupling units and matching frames must be ordered separately.	A	5WG3 140-2HB11		1	1	030	0.050
	B	5WG3 140-2HB21		1	1	030	0.050
	B	5WG3 140-2HB31		1	1	030	0.050
DELTA profil							
 UP 140 wave/<i>instabus</i> couplers <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver Note The bus coupling units and matching cut-out frames must be ordered separately.	B	5WG3 140-2AB01		1	1	030	0.050
	A	5WG3 140-2AB11		1	1	030	0.050
	B	5WG3 140-2AB21		1	1	030	0.050
	B	5WG3 140-2AB71		1	1	030	0.050
DELTA style							
 UP 140 wave/<i>instabus</i> couplers <ul style="list-style-type: none"> • Titanium white • Basalt black Note The bus coupling units and matching frames must be ordered separately.	A	5WG3 140-2GB11		1	1	030	0.050
	B	5WG3 140-2GB21		1	1	030	0.050

Technical specifications

Telecontrol device TC Plus EIB


- For connection of KNX EIB with the telephone system
- 6 signal inputs for floating contacts
- 6 switching outputs 12 V DC, 100 mA for the control of relays
- Additional 12 V DC switching output, 100 mA for the control of a local acoustic alarm signal generator, if a transmitted alarm indication is not acknowledged
- Additional 10 EIB switching functions and 10 EIB alarm functions
- 4-line LCD for the indication of device states
- Monitoring of telephone cable
- Adjustable 4-digit code number for protection against unauthorized switching
- Operation with MFV-capable telephone or MFV hand-held transmitter

- Recordable announcement and voice-supported user prompting
- 6 x 4 freely programmable destination numbers in the event of alarm,
- 4 dial attempts per destination number
- Connection to the telephone network over an N-coded TAE connecting cable
- Electronics powered by a plug-in power supply unit for connection to 230 V AC, with alternative power supply over an external power supply unit for 12 V DC.
- Surface mounting enclosure, RAL 9010, degree of protection IP30
- Dimensions (H x W x D): 251 x 204 x 49 mm.

S 190 headphone/speaker sets for AP 140 TC Plus

The headphone/speaker set for recording announcements must be ordered separately.

Selection and ordering data

Version	DT	Order No.	Price € per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
	A	5WG1 140-7AU22		1	1	030	1.520
	A	5WG1 140-7AU02		1	1	030	1.500
	A	5WG1 190-7AU01		1	1	030	0.220
Accessories							
	A	5WG1 190-7AU01		1	1	030	0.220

5WG1 140-7AU22

Technical specifications


- For connection of both open standard systems for industrial automation; PROFIBUS DP and KNX EIB building management systems
- Function as PROFIBUS DP slave and KNX EIB device
- For mapping data objects of the event-controlled EIB in the process images of the DP master
- For controlling the EIB through the transmission of EIB telegrams
- Connection to the PROFIBUS DP cable over a 9-pole sub-D socket
- Coding switch for the PROFIBUS address
- Can be configured using standard tools STEP 7 or COM PROFIBUS as DP slave and the EIB configuring software ETS

- Transmission rate to PROFIBUS DP of max. 12 Mbit/s
- Electronics powered by an external power supply unit for 24 V DC (20.4 ... 30 V DC), with plug for the connection of external power supply
- Integrated bus coupling unit
- Bus connection via bus terminal
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 4 MW (1 MW = 18 mm).

Note:

The manual is supplied with the GSD file and ETS database entry.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
	A	6GK1 415-0AA01		1	1	548	0.300
	D	6GK1 971-3DA00-0AA0		1	1	5D1	0.305
	D	6GK1 971-3DA00-0AA1		1	1	5D1	0.295
Accessories							
	D	6GK1 971-3DA00-0AA0		1	1	5D1	0.305
	D	6GK1 971-3DA00-0AA1		1	1	5D1	0.295

6GK1 415-0AA01

* You can order this quantity or a multiple thereof.

Gateways, Interface Converters

KNX EIB/LOGO!

Technical specifications

- For connection of LOGO! to KNX EIB, as slave module for the LOGO! logic module. (12 V/24 V or 115 V/240 V) and as bus devices on EIB
- For linking transmitted EIB data points and LOGO! inputs and outputs over logic and timer functions through LOGO!
- For the linking and transmitting over EIB of up to 8 binary inputs and 4 binary outputs of LOGO! and up to 16 virtual EIB binary inputs, 12 virtual EIB binary outputs, 8 virtual EIB analog inputs and 2 virtual EIB analog outputs
- Transmission of date and time of the LOGO! realtime clock over EIB
- Two LEDs for display of the communication status of LOGO! and EIB
- Electronics powered over an external power supply unit for 24 V AC/DC, 25 mA
- Integrated bus coupling unit
- Bus connection over screw terminals
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 2 MW (1 MW = 18 mm).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
LOGO KNX EIB/LOGO! communication modules		6BK1700-0BA00-0AA1					



6BK1700-0BA00-0AA1

EnOcean/KNX EIB

Technical specifications

- Plug-in connector outputs gesis GST 18i3 black
- Mains voltage connection 3-phase
- Integrated bus coupling unit
- Bus connection over plug system
- 4 channels
- Rated contact voltage, 230/400 230/400 V AC
- Rated contact current 16 A
- EnOcean radio receiver
- Dimensions (H x W x D): 32 x 254 x 112 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
Gateway EnOcean/EIB, AP 631/62 switch actuators, 3-phase, gesis EIB V-56/4		5WG1 631-3AL62					



5WG1 631-3AL62

Physical Sensors

7/2 Introduction

7/3 General data

7/4 **Motion/presence**

7/6 **Brightness**

7/6 **Temperature**

7/7 **Leakage**

7/7 **Fire**

7/8 **Dual sensors**

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Note: Only the chapters indicated in black on this page contain selection and ordering data.

Physical Sensors

Introduction

Overview

Motion/presence



Recording of motion and presence in a range of different designs.

Brightness



Brightness sensors measure the brightness value - both indoors and outdoors

Temperature



The temperature sensors measure the current temperature.

Leakage



The water sensors indicate unexpected water. In DELTA profil or DELTA style design.

Fire



The fire combination alarm with integrated bus coupling unit for the early detection of fires.

Dual sensors



Several functions in a single device: such as brightness and temperature measurement.

Technical specifications

Type	UP 255 211D01 UP 256 211E01 UP 257 211F01 UP 258H 212201 UP 258/11 212202	UP 258/21 804212	GE 252 210201 210301 210401	GE 254 210201 210301 210401	GE 253 210D02	AP 254 221C01	N 258/02 981401	AP 256 900204	UP 272 211701
Application program									
Enclosure data									
Modular installation device for mounting on TH35 EN 60715 mounting rail	--	--	--	--	--	--	✓	--	--
Modular installation device in oblong design, for installation in luminaires for fluorescent lamps	--	--	✓	✓	✓	--	--	--	--
Surface mounting	--	--	✓	✓	✓	✓	--	✓	--
Mounting on a flush-mounting box using a mounting plate	--	✓	✓	--	--	--	--	--	--
Mounting in intermediate ceilings	--	--	✓	✓	✓	--	--	--	--
Degree of protection	IP20	IP20	IP20	IP20	IP20	IP54	IP20	IP20	IP20
Dimensions									
• Height	mm	1) ¹	87	102	42	42	42	110	64
• Width (1 MW = 18 mm)/Ø	mm	1) ¹	87	102	274.5	274.5	274.5	72	166
• Depth	mm	23	60	33	28	28	28	54	42
Power supply									
Electronics powered over bus voltage	✓	✓	✓	✓	✓	✓	✓	--	✓
Electronics powered over an integrated power supply unit for supply voltage 230 V AC	--	--	--	--	--	--	✓	--	--
Bus connection									
Integrated bus coupling unit	--	--	✓	✓	✓	✓	✓	✓	--
Plugs onto UP 110 bus coupling unit	✓	✓	--	--	--	--	--	--	✓
Plugs onto UP 114 bus coupling unit	✓	✓	--	--	--	--	--	--	✓
Bus connection via bus terminal	--	--	✓	✓	✓	✓	✓	✓	--
Bus connection over contact system to data rail	--	--	--	--	--	--	✓	--	--
Sensor technology									
Motion/presence									
Motion	✓	✓	✓	--	--	--	--	--	--
Presence	--	✓	✓	--	--	--	--	--	--
Horizontal sensing angle	180°	360°	360°	--	--	--	--	--	--
Vertical sensing angle	--	120°	120°	--	--	--	--	--	--
Range to the front	m	10	--	--	--	--	--	--	--
Range to each side	m	6	11	8	--	--	--	--	--
Adjustable range	✓	--	--	--	--	--	--	--	--
Brightness									
Measuring range	Lux	1 ... 1000	100 ... 1600 (standard) 25 ... 200 (expanded)	10 ... 1500	200 ... 1900	0 ... 2000	0 ... 16000	1 ... 100000	--
For measuring outdoor brightness	--	--	--	--	--	✓	✓	--	--
For measuring indoor brightness	✓	✓	✓	✓	--	--	--	--	--
For measuring indoor brightness, taking into account indirect lighting	--	--	--	--	✓	--	--	--	--
2 m connecting lead of sensorelement (cannot be extended)	--	--	--	✓	✓	✓	--	--	--
Transmission of sensor values over bus	--	✓	✓	--	--	--	--	--	--
Temperature									
Measuring range	°C	--	--	--	--	--	-25 ... +55	-40 ... +150	2) ²
PT1000 temperature sensor input	--	--	--	--	--	--	--	4	--
Max. cable length, unshielded, untwisted	m	--	--	--	--	--	--	50	--
Leakage									
Water indication	--	--	--	--	--	--	--	--	✓
Automatic indication in the event of a defective sensor	--	--	--	--	--	--	--	✓	✓
Fire									
Smoke indication	--	--	--	--	--	--	--	✓	--
Heat indication	--	--	--	--	--	--	--	✓	--
Automatic indication in the event of a defective sensor	--	--	--	--	--	--	--	✓	--

1) Design-dependent.

2) On request.




Physical Sensors

Motion/presence

Selection and ordering data

Version		DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg	
					Unit(s)	Unit(s)			
i-system									
	UP 258H motion detectors								
	• Mounting height 1.10 m - titanium white - carbon metallic - aluminum metallic	A	5WG1 258-2HB11	1	1	030	0.059		
		B	5WG1 258-2HB21	1	1	030	0.059		
		C	5WG1 258-2HB31	1	1	030	0.059		
	• Mounting height 2.20 m - titanium white - carbon metallic - aluminum metallic	A	5WG1 258-2HB12	1	1	030	0.059		
		B	5WG1 258-2HB22	1	1	030	0.059		
		B	5WG1 258-2HB32	1	1	030	0.059		
	Note: The bus coupling units and matching frames must be ordered separately.								
	DELTA profil								
		UP 255 motion detectors							
• Mounting height 1.10 m - pearl gray - titanium white - anthracite - silver		B	5WG1 255-2AB01	1	1	030	0.062		
		A	5WG1 255-2AB11	1	1	030	0.062		
		B	5WG1 255-2AB21	1	1	030	0.062		
		B	5WG1 255-2AB71	1	1	030	0.062		
• Mounting height 2.20 m - pearl gray - titanium white - anthracite - silver		B	5WG1 255-2AB02	1	1	030	0.062		
		A	5WG1 255-2AB12	1	1	030	0.062		
		B	5WG1 255-2AB22	1	1	030	0.062		
		B	5WG1 255-2AB72	1	1	030	0.062		
Note: The bus coupling units and matching cut-out frames must be ordered separately.									
DELTA style									
	UP 255, UP 257 motion detectors								
	• Mounting height 1.10 m - titanium white - basalt black	A	5WG1 255-2AB11	1	1	030	0.062		
		B	5WG1 257-2AB21	1	1	030	0.062		
	• Mounting height 2.20 m - titanium white - basalt black	A	5WG1 255-2AB12	1	1	030	0.062		
		B	5WG1 257-2AB22	1	1	030	0.062		
Note: The bus coupling unit, the matching frames and intermediate frames must be ordered separately.									
DELTA ambiente									
	UP 256 motion detectors								
	• Mounting height 1.10 m - arctic white	B	5WG1 256-2AB01	1	1	030	0.062		
		B	5WG1 256-2AB02	1	1	030	0.062		
Note: The bus coupling units and matching frames must be ordered separately.									
5WG1 256-2AB01									

Motion/presence




Version		DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
Design-independent								
	UP 258/11 presence detectors with brightness sensor	A	5WG1 258-2AB11		1	1	030	0.221
	<u>Note:</u> The bus coupling unit must be ordered separately.							
	5WG1 258-2AB11							
	UP 258/21 presence detectors with brightness sensor and constant light level control	B	5WG1 258-2AB21		1	1	030	0.085
5WG1 258-2AB21								
Accessories								
	AP 258 surface-mounting enclosures for UP 258/21 presence detectors	B	5WG1 258-3EB21		1	5	030	0.220
5WG1 258-3EB21	For fixing the presence detector as a surface-mounting device Dimensions (H x W x D): 102 x 102 x 46 mm							

* You can order this quantity or a multiple thereof.

Physical Sensors



Brightness

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	GE 252 indoor brightness sensors	A	5WG1 252-4AB02		1	1	030	0.345
	GE 254 indoor brightness sensors for indirect lighting	B	5WG1 254-4AB01		1	1	030	0.345
5WG1 252-4AB02, 5WG1 254-4AB01								
	GE 253 outdoor brightness sensors for indoor mounting	B	5WG1 253-4AB01		1	1	030	0.345
5WG1 253-4AB01								
	AP 254 dual sensors for brightness and temperature measurement	A	5WG1 254-3EY01		1	1	030	0.174
5WG1 254-3EY01								


Temperature

Selection and ordering data


	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N258/02 temperature sensors for four Pt1000 sensors	B	5WG1 258-1AB02		1	1	030	0.242
5WG1 258-1AB02								
	AP 254 dual sensors for brightness and temperature measurements	A	5WG1 254-3EY01		1	1	030	0.174
5WG1 254-3EY01								

Leakage

Selection and ordering data


Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
DELTA profil							
 5WG1 272-2AB11	UP 272 water sensors						
	<ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver 						
	Note: The bus coupling units and matching cut-out frames must be ordered separately.						
	B	5WG1 272-2AB01		1	1	030	0.090
	A	5WG1 272-2AB11		1	1	030	0.090
	B	5WG1 272-2AB21		1	1	030	0.090
	B	5WG1 272-2AB71		1	1	030	0.090

DELTA style

 5WG1 272-2AB11	UP 272 water sensors						
	<ul style="list-style-type: none"> • Titanium white 						
	Note: The bus coupling unit, the matching frames and intermediate frames must be ordered separately.						
	A	5WG1 272-2AB11		1	1	030	0.090

Fire

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG1 256-3AB01	AP 256 fire combination alarms						
	A	5WG1 256-3AB01		1	1	030	0.240

Physical Sensors

Dual sensors

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	AP 254 dual sensors for brightness and temperature measurement	A	5WG1 254-3EY01		1	1	030	0.174
5WG1 254-3EY01								
	AP 256 fire combination alarms	A	5WG1 256-3AB01		1	1	030	0.240
5WG1 254-3EY01								
	UP 258/A11 presence detectors with brightness sensor <u>Note:</u> The bus coupling unit must be ordered separately.	A	5WG1 258-2AB11		1	1	030	0.221
5WG1 258-2AB11								
	UP 258/A21 presence detectors with brightness sensor and constant light level control	B	5WG1 258-2AB21		1	1	030	0.085
5WG1 258-2AB21								
	Accessories AP 258 surface-mounting enclosures for UP 258/21 presence detectors For fixing the presence detector as a surface-mounting device Dimensions (H x W x D): 102 x 102 x 46 mm	B	5WG1 258-3EB21		1	5	030	0.220
5WG1 258-3EB21								

8

Control and Automation Devices

8/2	Introduction
8/3	Programmable logic controllers
8/7	Logic modules, scene modules, time/event modules
8/9	Time switches and accessories

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Control and Automation Devices

Introduction

Overview

Programmable logic controllers



Time switches and accessories



Logic modules, scene modules, time/event modules



Everything you need to know about time-controlled switching – for maximum safety, convenience and energy saving.

8

Linking received binary signals and transmission of result over GAMMA instabus.

Place a room into a predefined state at the touch of a button – it's easy with the scene module.

For the timed control of sequences or the control of devices dependent on specific events in GAMMA instabus.

Technical specifications**KNX EIB/LOGO! communication modules**

- For connection of LOGO! to KNX EIB, as slave module for the LOGO! logic module. (12 V/24 V or 115 V/240 V) and as bus device on EIB
- For linking transmitted EIB data points and LOGO! inputs and outputs over logic and timer functions through LOGO!
- For the linking and transmitting over EIB of up to
 - 8 binary inputs and 4 binary outputs of LOGO!
 - 16 virtual EIB binary inputs
 - 12 virtual EIB binary outputs
 - 8 virtual EIB analog inputs
 - 2 virtual EIB analog outputs
- Transmission of date and time of the LOGO! realtime clock over EIB
- Two LEDs for display of the communication status of LOGO! and EIB
- Electronics powered over an external power supply unit for 24 V AC/DC, 25 mA
- Integrated bus coupling unit
- Bus connection over screw terminals
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 2 MW (1 MW = 18 mm).

**LOGO! 230RC, LOGO! 12/24RC, LOGO!DM8 230R,
LOGO! DM8 12/24R, LOGO! AM2, LOGO! AM2 Pt100,
LOGO! AM2 AQ**

- Degree of protection IP20
- Interference suppression to limit class B
- Certified to UL, CSA, FM, C-Tick
- Standards: VDE 0631, IEC1131
- Approvals: CE, ABS, BV, DNV, GL, LRS, PRS
- Ambient temperature 0 ... +55 °C.

LOGO! Power 12 V/1.9 A

- Controlled power supply 12 V DC/1.9 A
- Designed for use on single-phase AC systems
- Nominal input voltage 100-240 V AC, long-range
- Input voltage range 85 ... 264 V AC
- Efficiency during operation at rated value typ. 80 %
- Nominal output voltage 12 V DC, setting range 10.5 ... 16.1 V
- Tolerance +/- 3 %, residual ripple < 200 mVss
- Nominal output current 1.9 A
- Ambient temperature -20 ... 55 °C
- Safety class II, degree of protection IP20,
- Electrical isolation SELV acc. to EN 60950 and EN 50178
- Interference suppression class B acc. to EN 55022
- Certified to CE, UL/cUL, FM
- Ship building approval GL, ABS
- Width: 3 MW (1 MW = 18 mm).

LOGO! Power 24 V/1.3 A

- Controlled power supply 24 V DC/1.3 A
- Designed for use on single-phase AC systems
- Nominal input voltage 100 ... 240 V AC, long-range
- Input voltage range 85 ... 264 V AC
- Efficiency during operation at rated value typ. 82 %
- Nominal output voltage 24 V DC
- Tolerance +/- 3 %, residual ripple < 200 mVss
- Nominal output current 1.3 A
- Ambient temperature -20 ... 55 °C
- Safety class II, degree of protection IP20,
- Electrical isolation SELV acc. to EN 60950 and EN 50178
- Interference suppression class B acc. to EN 55022
- Certified to CE, UL/cUL, FM
- Ship building approval GL, ABS.
- Width: 3 MW (1 MW = 18 mm).

LOGO! Power PC cables

For the transmission of programs from PC to LOGO! and vice versa, PC connection over serial interface (RS232 socket).

LOGO! Soft Comfort 5.0

Convenient programming software available in several languages, drag & drop program creation, simulation, comprehensive program documentation, Windows 98SE or higher, Linux, MAC OSX.

LOGO! memory cards

For archiving, duplication, sending of switching programs and transfer of a new or modified program to LOGO!, with copy and password protection.

LOGO! English manual

Detailed information on operation and application.

LOGO! German manual



Detailed information on operation and application.

Control and Automation Devices

Programmable logic controllers

Type	Basic modules		Expansion modules				
	LOGO! 230RC	LOGO! 12/24RC	LOGO!DM8 230R	LOGO! DM8 12/24R	LOGO! AM2	LOGO! AM2 Pt100	LOGO! AM2 AQ
Enclosure data							
Can be used for LOGO! 230RC	--	--	✓	--	✓	✓	✓
Can be used for LOGO! 12/24RC	--	--	--	✓	✓	✓	✓
Modular installation device for mounting on TH 35 EN 60715 mounting rail	✓	✓	✓	✓	✓	✓	✓
Dimensions							
• Height	mm	4 MW	4 MW	2 MW	2 MW	2 MW	36
• Width	mm						2 MW
• Depth	mm						55
Power supply							
Power supply 115 ... 230 V AC/DC	✓	--	✓	--	--	--	--
Power supply 12 ... 24 V DC	--	✓	--	✓	✓	✓	✓
Inputs							
Pushbutton inputs							
For voltage input (with common ground (N) or (-))							
• 230 V	8	--	4	--	--	--	--
• 12/24 V	--	8	--	4	--	--	--
Control inputs							
Analog inputs (1 ... 10 V or 0 ... 20 mA)	--	--	--	--	2	--	--
Sensor inputs							
PT100 temperature sensor input	--	--	--	--	--	2	--
Measuring range	°C	--	--	--	--	-50 ... +200	--
Outputs							
Control outputs							
Analog output (1 ... 10 V)	--	--	--	--	--	--	2
Load output							
Floating relay contact	4	4	4	4	--	--	--
Rated contact voltage, AC	V	230	230	230	--	--	--
Rated contact current	A	10	10	5	5	--	--

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 6ED1 052-1FB00-0BA5	LOGO! 230RC	A	6ED1 052-1FB00-0BA5		1	1	200	0.232
 6ED1 052-1MD00-0BA5	LOGO! 12/24RC	A	6ED1 052-1MD00-0BA5		1	1	200	0.228




Control and Automation Devices

Programmable logic controllers

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	LOGO! DM8 230R	A	6ED1 055-1FB00-0BA1		1	1	200	0.159
6ED1 055-1FB00-0BA1								
	LOGO! DM8 12/24R	A	6ED1 055-1MB00-0BA1		1	1	200	0.157
6ED1 055-1MB00-0BA1								
	LOGO! AM2	A	6ED1 055-1MA00-0BA0		1	1	200	0.119
6ED1 055-1MA00-0BA0								
	LOGO! AM2 Pt100	A	6ED1 055-1MD00-0BA0		1	1	200	0.120
6ED1 055-1MD00-0BA0								
	LOGO! AM2 AQ	A	6ED1 055-1MM00-0BA0		1	1	200	0.120
6ED1 055-1MM00-0BA0								
	LOGO! Power 12 V/1.9 A	▶	6EP1 321-1SH02		1	1	400	0.170
	LOGO! Power 24 V/1.3 A	▶	6EP1 331-1SH02		1	1	400	0.170
6EP1 321-1SH02								

Control and Automation Devices

Programmable logic controllers

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	KNX EIB/LOGO! communication modules		6BK1700-0BA00-0AA1					
6BK1700-0BA00-0AA1								
	LOGO! PC cables		A 6ED1 057-1AA00-0BA0		1	1	200	0.159
6ED1 057-1AA00-0BA0								
	LOGO! German manuals		A 6ED1 050-1AA00-0BE6		1	1	200	0.401
	LOGO! English manuals		A 6ED1 050-1AA00-0AE6		1	1	200	0.450
6ED1 050-1AA00-0BE6								
LOGO! Soft Comfort 5.0		A	6ED1 058-0BA01-0YA0		1	1	200	0.101
LOGO! memory cards		A	6ED1 056-5CA00-0BA0		1	1	200	0.004

Technical specifications

Type	N 301						N 347/02 (ETS2 800C09 (ETS3)	N 350	N 350E	N 300					N 302	N 341 (ETS2 800A06 (ETS3)	
	720101	740301	740A01	740B01	740C01	740D01		801701	908701	740401	740501	740601	740701	740801	740202		
Enclosure data																	
Design	N						N	N	N	N					N	N	
Modular installation device for mounting on TH 35 EN 60715 mounting rail	✓						✓	✓	✓	✓					✓	✓	
Ethernet connection over RJ45 socket	--						--	--	✓	--					--	--	
Dimensions																	
• Width (1 MW = 18 mm).	1 MW						1 MW	1 MW	4 MW	1 MW					1 MW	1 MW	
Power supply																	
Electronics powered over bus voltage	✓						✓	✓		✓					✓	✓	
Electronics powered over an external power supply unit for AC/DC	--						--	--	12 ... 30	--					--	--	
Bus connection																	
Integrated bus coupling unit	✓						✓	✓	✓	✓					✓	✓	
Bus connection via bus terminal	--						--	--	✓	--					--	--	
Bus connection over contact system to data rail	✓						✓	✓	--	✓					✓	✓	
Functions																	
Logic functions																	
Inputs (virtual)	8	4	--	--	--	--	255	60	80	--					4	--	
Configurable inverting of inputs	✓	✓	--	--	--	--	✓	--	✓	--					✓	--	
Outputs	2	4	--	--	--	--	255	10	30	--					4	--	
Configurable inverting of outputs	✓	✓	--	--	--	--	✓	✓	--	--					✓	--	
User-definable logic gate	2	--	--	--	--	--	127	10	30	--					--	--	
Configurable transmission conditions	--	--	--	--	--	--	✓	✓ ¹⁾	✓	--					✓	--	
Up to 30 internal flags	--	--	--	--	--	--	--	--	✓	--					--	--	
Positively driven ON/OFF switching of loads (4 channels)	--	--	--	--	--	✓	--	--	--	--					--	--	
Partition control																	
Partition inputs	--	--	4	4	4	--	--	--	--	--					--	--	
Controllable rooms	--	--	4	4	4	--	--	--	--	--					--	--	
Switch commands (2 x 1 bit)	--	--	✓	--	--	--	--	--	--	--					--	--	
Brightness values (1 byte)	--	--	--	✓	--	--	--	--	--	--					--	--	
Switch/dimming commands (1 bit, 4 bit)	--	--	--	--	✓	--	--	--	--	--					--	--	
Time functions																	
OFF delay	--	--	--	--	--	--	✓	--	✓ ²⁾	--					✓	✓ ²⁾	
ON delay	--	--	--	--	--	--	✓	--	✓ ²⁾	--					✓	✓ ²⁾	
Timer mode	--	--	--	--	--	--	✓	--	✓ ²⁾	--					✓	✓ ²⁾	
Scheduled entries	--	--	--	--	--	--	--	100	100	--					--	400	
Weekly program	--	--	--	--	--	--	--	✓	✓	--					--	✓	
Day, week, month, year program	--	--	--	--	--	--	--	--	✓	--					--	✓	
Master clock (time source)	--	--	--	--	--	--	--	--	✓	--					--	--	
Slave clock	--	--	--	--	--	--	--	✓	--	--					--	--	
Astro function	--	--	--	--	--	--	--	--	✓	--					--	--	
Internal clock, can be synchronized over master clock	--	--	--	--	--	--	--	✓ (KNX)	✓ (LAN) ³⁾	--					--	✓ (KNX)	
Event functions																	
Event entries	--	--	--	--	--	--	--	100	200	--					--	200	
Event trigger	--	--	--	--	--	--	--	10	30	--					--	4)	
Sequence control	--	--	--	--	--	--	--	✓	✓	--					--	✓	
Scene control																	
Store and call up 1-bit scenes	--	--	--	--	--	--	--	--	--	4	4	4	4	4	--	--	
Scenes can be modified by end users using <i>instabus</i> pushbuttons	--	--	--	--	--	--	--	--	--	✓	✓	✓	✓	✓	--	--	
Groups can be managed with 1-byte commands (brightness values)	--	--	--	--	--	--	--	--	--	8	--	4	6	--	--	--	
Groups can be managed with 1-byte commands (ON/OFF, shutter/blind)	--	--	--	--	--	--	--	--	--	--	8	2	--	6	--	--	

1) Transmission filter.

2) Over event entries.








3) Time synchronization over time server in the data network.

4) On request.

Control and Automation Devices

Logic modules, scene modules, time/event modules

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	N 301 logic modules, 1 x AND, 1 x OR, linking of 8 inputs, partition control, positively driven operation	A	5WG1 301-1AB01		1	1	030	0.092
5WG1 301-1AB01								
	N 347/02 logic operation modules, 127 logic gates	A	5WG1 347-1AB02		1	1	030	0.092
5WG1 347-1AB02								
	N 350 event, time and logic modules, 10 logic gates, 10 event entries, weekly scheduling program <u>Note</u> The following devices can be used as a master clock or time source for synchronizing the module-internal real-time clock: a time switch (e.g. 5WG1 372-5EY01), a N 350E IP controller (5WG1 350-1EB01) or a wave Touch Manager (5WG3 583-2AB71).	A	5WG1 350-1AB01		1	1	030	0.092
5WG1 350-1AB01								
	N 350E IP controllers, 30 logic gates, 200 event entries, weekly scheduling program, integrated IP interface <u>Note</u> The software required for parameter assignment over the Ethernet interface is available on CD-ROM and is included in delivery.	A	5WG1 350-1EB01		1	1	030	0.184
5WG1 350-1EB01								
	N 300 scene modules	A	5WG1 300-1AB01		1	1	030	0.092
5WG1 300-1AB01								
	N 302 time modules	A	5WG1 302-1AB01		1	1	030	0.092
5WG1 302-1AB01								
	N 341 event and time modules <u>Note</u> The following devices can be used as a master clock or time source for synchronizing the module-internal real-time clock: a time switch (e.g. 5WG1 372-5EY01), a N 350E IP controller (5WG1 350-1EB01) or a wave Touch Manager (5WG3 583-2AB71).	A	5WG1 341-1AB01		1	1	030	0.092
5WG1 341-1AB01								

Technical specifications

	REG 371	REG 372			REG 372/02			REG 373	N 350E
Type	221D01	7F0401	7F0501	7F0601	7F0401	7F0501	7F0601	7F0803	908701
Enclosure data									
Modular installation device for mounting on TH 35 EN 60715 mounting rail	✓	✓			✓			✓	✓
Dimensions									
• Width (1 MW = 18 mm).	MW 2	6			6			6	4
Display/control elements									
LCD for time, day of the week, daylight saving times, switching state of channels	✓	✓			✓			✓	✓
Jog pushbuttons for setting the time, day and program entries	✓	✓			✓			✓	✓
Programming over PC	--	✓ (Obelisk)			✓ (Obelisk)			✓ (Obelisk)	✓ (N 350E configurator)
Power supply									
Electronics powered over bus voltage	✓	✓			✓			✓	--
Additional 230 V power supply for integrated DCF77 power supply unit	--	--			✓			✓	--
Electronics powered over an external power supply unit for AC/DC	V --	--			--			--	12 ... 30
Bus connection									
Integrated bus coupling unit	✓	✓			✓			✓	✓
Bus connection via bus terminal	✓	✓			✓			✓	✓
Connection for DCF77 receiver	--	--			✓			✓	✓
Software									
Logic functions									
Channels	2	4			4			16	80 ¹⁾
Memory locations	36	324			324			500	2)
Standard day/week program	✓	✓			✓			✓	✓
No. of week progs. that can be prioritized	--	9			9			9	1
Vacation switching (duration 1 ... 99 days, preselection 0 ... 99 days)	✓	✓			✓			✓	2)
Random program	--	✓			✓			✓	--
Astro program with sunrise and sunset times	--	--			--			✓	✓
Supported telegrams									
Switching (1 bit)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Set value (1 byte)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Floating decimal point (2 byte), for temperature, etc.	--	--	✓	--	--	✓	--	--	✓
Positively driven operation (2 bit)	✓	✓	✓	✓	✓	✓	✓	✓	--
Scenes	2	--	--	4	--	--	4	8	--
Adjustable cyclic transmission	✓	✓	✓	✓	✓	✓	✓	✓	--
Internal clock, can be synchronized over master clock by KNX	--	--	✓	--	--	✓	--	✓	--
Transmission of date and time over KNX bus	--	✓	--	--	✓	--	--	✓	✓
Synchronization with DCF77 signal	--	--	--	--	--	✓	--	✓	--
Time synchronization over time server in the data network	--	--	--	--	--	--	--	--	✓

1) Communication objects.

2) On request.

PC programming sets with OBELISK memory card

- For fast and easy creation of switching programs for the REG 372 4-channel time switch, the DCF-77 REG 372/02 4-channel time switch and the DCF-77 REG 373 16-channel time switch
- Comprising software CD, OBELISK memory module, programming adapter and software manual
- Readout and description of the memory module over the programming adapter of the PC programming set, which is connected to the serial interface of the PC
- Transmission of the time switch program from PC to time switch using an OBELISK memory module programmed by the PC and then inserted in the time switch, and vice versa for transmitting a program from one time switch to another time switch using the memory module or to the PC software for fast copying of a switching program or parts of a switching program for insertion in a new or existing program, for archiving switching programs on the hard disk of a PC, for printing out switching programs in table form
- For filtering switching programs acc. to specific search criteria, with display and printout of filtered switching programs.

OBELISK 4K, EEPROM memory modules

EEPROM memory module with 4 KB memory for programming the REG 372 4-channel time switch and the DCF-77 REG 372/02 4-channel time switch.

OBELISK 64K, EEPROM memory modules

EEPROM memory module with 64 KB memory for programming the REG 373 16-channel time switch.










AP 390 DCF-77 aerials

- For connection to up to 10 REG 372/02 annual time switches, 4-channel, or REG 373 annual time switches, 16-channel
- Red LED lights up to indicate receipt of signal
- Electronics powered with 29 V DC over 4-channel or 16-channel time switch

Control and Automation Devices

Time switches and accessories

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
	REG 371 weekly time switches, 2-channel <u>Note:</u> During configuration of the 2-channel weekly time switch, the installation engineer should carry out all the necessary settings.	A	5WG1 371-5EY01		1	1	030	0.148
5WG1 371-5EY01								
	REG 372 year time switches, 4-channel <u>Note:</u> During configuration of the 4-channel year time switch, the installation engineer should carry out all the necessary settings.	A	5WG1 372-5EY01		1	1	030	0.360
5WG1 372-5EY01								
	REG 372/02 year time switches, 4-channel, with DCF77 connection <u>Note:</u> During configuration of the 4-channel year time switch, the installation engineer should carry out all the necessary settings. The AP 390 DCF-77 aerial must be ordered separately.	A	5WG1 372-5EY02		1	1	030	0.464
5WG1 372-5EY01								
	REG 373 year time switches, 16-channel, with DCF77 connection <u>Note:</u> During configuration of the 16-channel year time switch, the installation engineer should carry out all the necessary settings.	A	5WG1 373-5EY01		1	1	030	0.481
5WG1 373-5EY01								
Accessories								
	PC programming sets with OBELISK memory card	A	5WG1 810-0EY01		1	1	030	0.431
5WG1 810-0EY01								
	OBELISK 4K, EEPROM memory modules	A	5WG1 810-8EY01		1	1	030	0.023
5WG1 810-8EY01								
	OBELISK 64K, EEPROM memory modules	A	5WG1 810-8EY02		1	1	030	0.021
5WG1 810-8EY01								
	AP 390 DCF-77 aerials	A	5WG1 390-3EY01		1	1	030	0.169
5WG1 390-3EY01								
	N 350E IP controllers, 30 logic gates, 200 event entries, weekly scheduling program, integrated IP interface <u>Note:</u> The software required for parameter assignment over the Ethernet interface is available on CD-ROM and is included in delivery.	A	5WG1 350-1EB01		1	1	030	0.184
5WG1 350-1EB01								

9

System Products

9/2	Introduction
9/3	Bus coupling units and accessories
9/8	Power supply units
9/9	Reactors
9/10	Line couplers
9/12	Network gateways

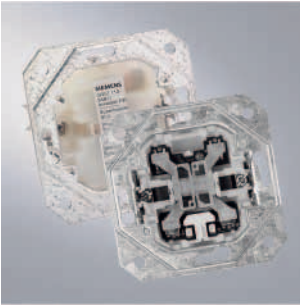
Note: Only the chapters indicated in black on this page contain selection and ordering data.

System Products

Introduction

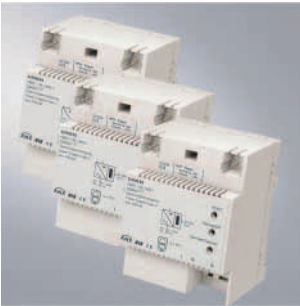
Overview

Bus coupling units and accessories



The bus coupling unit connects the operator interfaces to the GAMMA instabus.

Power supply units



The extra-low voltage required for the GAMMA instabus is provided over an integrated reactor.

Reactors



For using the voltage without reactor of an EIB power supply unit for a further bus line.

Line couplers



Ensuring fault-free communication between two bus lines.

Network gateways



For connecting bus lines to other devices and PCs over fast data networks.

Technical specifications

		UP 110/03	UP 110/11	UP 114/02	UP 117/11	UP 116/01	UP 116/11	UP 116/21	UP 116/31
Enclosure data									
For installation in flush-mounting switch and socket boxes with Ø = 60 mm and depth = 60 mm		✓	✓	✓	✓	✓	✓	✓	✓
For mounting rockers from the DELTA product ranges		--	--	--	--	✓	✓	✓	✓
10-pole user interface (UI) for plugging onto a bus terminal		✓	✓	✓	--	--	--	--	--
10-pole BTI socket connector (BTI - Bus Transceiver Interface) for plugging on a bus terminal		--	--	--	✓	--	--	--	--
Dimensions									
• Height	mm	71	71	71	71	71	71	71	71
• Width	mm	71	71	71	71	71	71	71	71
• Depth	mm	27	19/32	16	16	32	32	32	32
Mounting type									
Claw fixing		--	✓	--	--	✓	✓	✓	✓
Screw fixing		✓	✓	✓	✓	✓	✓	✓	✓
Display/control elements									
LED for status indication		--	--	--	--	✓	✓	✓	✓
LED for orientation light		--	--	--	--	✓	✓	✓	✓
Bus connection									
Integrated bus coupling unit		✓	✓	✓	✓	✓	✓	✓	✓
Bus connection via bus terminal		✓	✓	✓	✓	✓	✓	✓	✓

Mounting brackets for UP 110/11

In order to use antitheft screws with bus terminals, such as push-buttons, room temperature controllers etc., on UP 110/11 bus coupling units, 2 mounting brackets per bus coupling unit are required.

UP 196 paint covers

For the protection of already installed flush mounting bus coupling units, DELTA bus coupling units or flush mounting actuators with user interface (UI) through to the mounting of bus terminals.

System Products

Bus coupling units and accessories

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
					Unit(s)	Unit(s)		
		B	5WG1 110-2AB03		1	1	030	0.060
5WG1 110-2AB03								
		B	5WG1 110-2AB11		1	1	030	0.066
5WG1 110-2AB11								

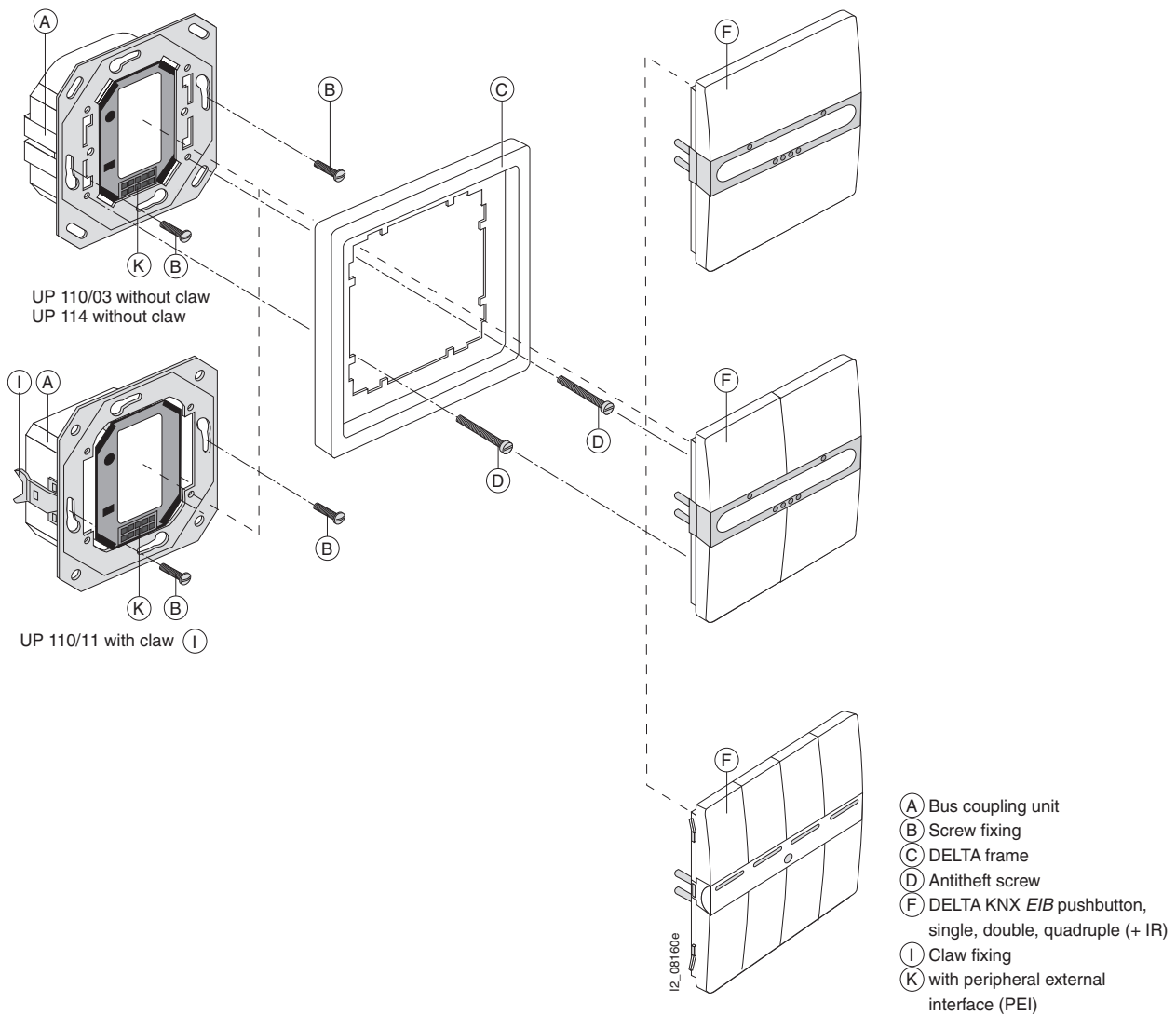
* You can order this quantity or a multiple thereof.

Bus coupling units and accessories

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
UP 196 paint covers	B	5WG1 196-2AB01		1	10	030	0.003



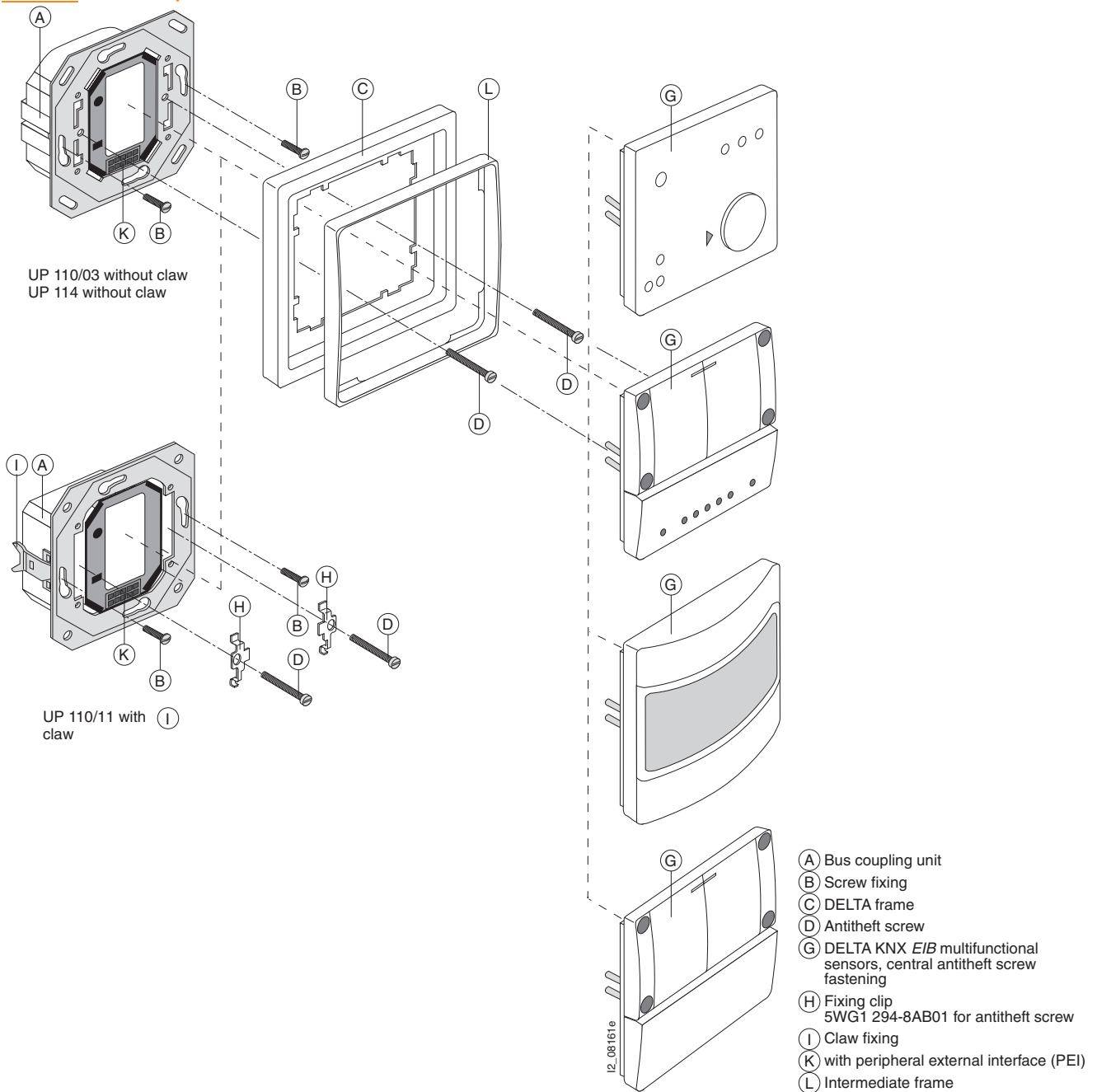
5WG1 196-2AB01

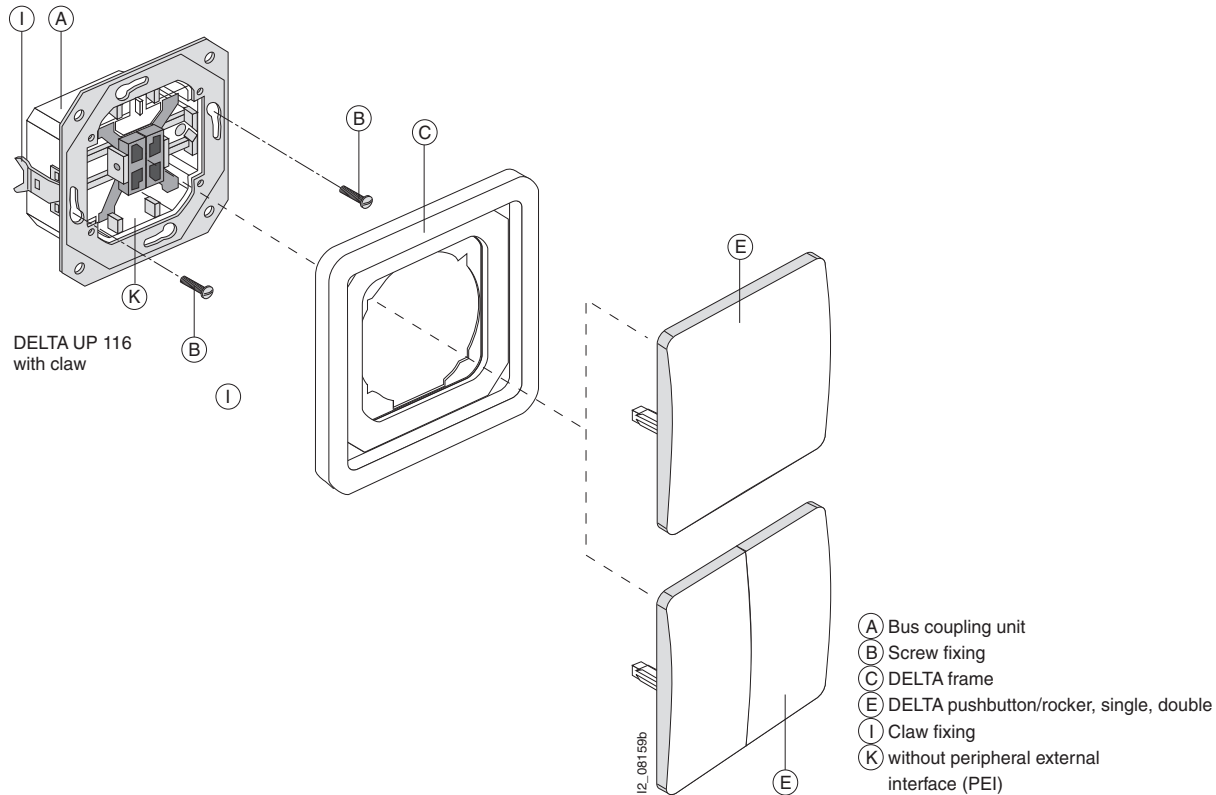
instabus KNX EIB operator interfaces without intermediate frame

System Products

Bus coupling units and accessories

instabus KNX EIB operator interfaces with intermediate frame



Operator interfaces with DELTA bus coupling unit




System Products

Power supply units

Technical specifications

		N 125	N 125/11	N 125/21
Enclosure data				
Modular installation device for mounting on TH35 EN 60715 mounting rail		✓	✓	✓
Dimensions				
• Height	mm			
• Width (1 MW = 18 mm)	mm	4 MW	4 MW	4 MW
• Depth	mm			
Bus connection				
Integrated reactors		✓	✓	✓
Bus connection over contact system to data rail		✓	✓	✓
Bus connection via bus terminal		✓	✓	✓
Outputs				
Rated operational voltage, AC	V	120 ... 230	120 ... 230	120 ... 230
Output voltage, DC	V	29	29	29
Output current	mA	160	320	640
Additional output without reactor for 29 V DC, for powering a second bus line over an external reactor		--	--	✓

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 125-1AB01	B	5WG1 125-1AB01		1	1	030	0.240
 5WG1 125-1AB11	B	5WG1 125-1AB11		1	1	030	0.230
 5WG1 125-1AB21	B	5WG1 125-1AB21		1	1	030	0.240

Reactors

Technical specifications

- For operation with an EIB power supply unit without integrated reactor (e.g. N 123) or for connection to the output without reactor of the EIB N 125/21 power supply unit, 640 mA
- Contact system for data rail
- Low-voltage terminal for voltage without reactor and bus
- Modular installation device for mounting on TH35 EN 60715 mounting rail

- Width: 2 MW (1 MW = 18 mm).

Note

The reactor prevents the data telegrams from short-circuiting through a bus power supply without integrated reactor.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
N 120/02 reactors, 640 mA	B	5WG1 120-1AB02		1	1	030	0.105



5WG1 120-1AB02

* You can order this quantity or a multiple thereof.

Line couplers

Technical specifications

N 140/03, N140/13 line/backbone couplers

- For data exchange between two EIB bus lines with telegrams of up to 64 byte
- For use as line coupler for connecting a line to the main line or as backbone coupler for connecting a main line to the backbone line or as repeater for connecting two segments of the same line, with electrical isolation of the two bus lines
- Loadable filter table for control of the data exchange between the two bus lines
- Additional loadable filter table for telegrams with LTE addressing
- Detection of a communication fault on the lower-level line and signaling to the higher-level line
- 3 LEDs for display of availability and receipt of a telegram per line
- Power supply from the main line
- Modular installation device for mounting on TH35 EN 60715 mounting rail.

N 140/03 line/backbone couplers

- With bus connection to the line via contact system for data rail and to the main line via bus terminal
- Width: 1 MW (1 MW = 18 mm).

N 140/13 line/backbone couplers

- Bus connection to the line and to the main line via bus terminal
- Width: 2 MW (1 MW = 18 mm).

Note:

As far as the hardware is concerned, there is no difference between line coupler, backbone coupler or repeater. They therefore have the same order number. The function of the coupler is set to line or backbone coupler automatically when the physical address is set using the ETS.

N 146 IP routers




- For data exchange between two EIB bus lines with telegrams of up to 64 byte
- For interconnection of bus lines or bus areas over a fast data network (Ethernet 10BaseT) with Internet protocol (IP)
- Can be used as line, area or network gateway (worlds gateway)
- Loadable filter table for control of the data exchange between the two bus lines
- Additional loadable filter table for telegrams with LTE addressing
- Detection of a communication fault on the lower-level line and signaling to the higher-level line
- For communication between KNX EIB devices and PCs and in conjunction with a LAN modem for remote access to an EIB installation
- Uses the EIBnet/IP protocol
- Assignment of the network parameters by the installation engineer using ETS or automatically by a DHCP service in the network
- 5 LEDs for indicating that the device is ready-to-run, EIB communication, IP communication
- Electronics powered over an external power supply unit for 12 ... 30 V AC/DC
- Plug-in terminal block for the connection of an external power supply unit
- Integrated bus coupling unit
- Bus connection via bus terminal
- Ethernet connection over RJ45 socket
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 2 MW (1 MW = 18 mm).

Note:

During configuration of the IP interface, the installation engineer should carry out all the necessary settings; assignment of the network parameters by the installation engineer using ETS or automatically by a DHCP service in the network.

The N 146 IP router can only function smoothly as a line coupler (EIBnet/IP routing) if it is equipped with network components that support IP multicasting. In particular, network/LAN routers must support or be configured so that they can relay IP multicast datagrams. The IP multicast address 224.0.23.12 is reserved internationally for EIBnet/IP routing.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 140-1AB03	B	5WG1 140-1AB03		1	1	030	0.060
 5WG1 140-1AB13	B	5WG1 140-1AB13		1	1	030	0.085
 5WG1 146-1AB01	A	5WG1 146-1AB01		1	1	030	0.126




System Products

Network gateways

Technical specifications

	N 146	N 148/21	N 350E
Type			
Enclosure data			
Design	N	N	N
Modular installation device for mounting on TH35 EN 60715 mounting rail	✓	✓	✓
Width (1 MW = 18 mm)	2 MW	2 MW	4 MW
Display/control elements			
LEDs for indicating that the device is ready-to-run, EIB communication, IP communication	✓	✓	✓
LCD	--	--	✓
Power supply			
Electronics powered over an external AC/DC power supply unit	V 12 ... 30	12 ... 30	12 ... 30
Bus connection via bus terminal	✓	✓	✓
Bus connection			
Integrated bus coupling unit	✓	✓	✓
Bus connection via bus terminal	✓	✓	✓
Mains connection			
Ethernet connection over RJ45 socket	✓	✓	✓
Plug-in terminal block for the connection of an external power supply unit	✓	✓	✓
Gateway			
Uses the EIBnet/IP protocol	✓	✓	✓
Line coupler function	✓	--	--
Interface for visualization	✓	✓	✓

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
 5WG1 148-1AB21	N 148/21 IP interfaces	A	5WG1 148-1AB21		1	1	030	0.126
 5WG1 146-1AB01	N 146 IP routers	A	5WG1 146-1AB01		1	1	030	0.126
 5WG1 350-1EB01	N 350E IP controllers, 30 logic gates, 200 event entries, weekly scheduling program, integrated IP interface	A	5WG1 350-1EB01		1	1	030	0.184
	Note The software required for parameter assignment over the Ethernet interface is available on CD-ROM and is included in delivery.							

10

System Accessories

10/2	Introduction
10/3	Cover strips
10/3	Bus terminals
10/4	Connectors
10/5	Data rails
10/6	Overvoltage protection

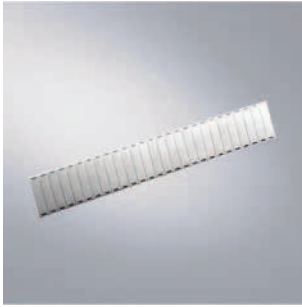
Note: Only the chapters indicated in black on this page contain selection and ordering data.

System Accessories

Introduction

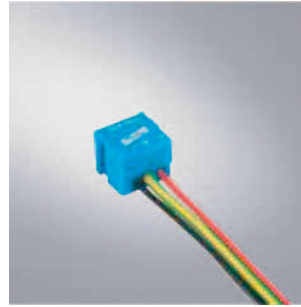
Overview

Cover strips



For snapping onto free data rail segments - for enhanced safety.

Overvoltage protection



For the overvoltage fine protection of bus devices.

Bus terminals



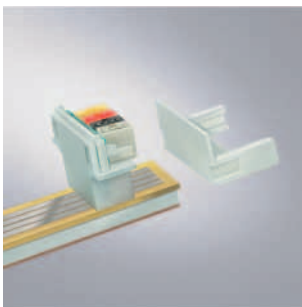
The bus terminal connects bus devices to the bus cable and enables the looping through of cables.

Connectors



Connects data rail and bus cable.

Data rails



For connecting modular installation devices over their contact system.

Cover strips


Technical specifications

192 cover strips for standard mounting rails

- For covering free data rail segments (in accordance with the SELV regulations for safety extra-low voltage)

- For snapping onto standard mounting rails, separable, RAL 7035
- Length: 13.5 MW (1 MW = 18 mm).

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
	192 cover strips for standard mounting rails, length 242 mm	D	5WG1 192-8AA01		1	5	030	0.014
5WG1 192-8AA01								

Bus terminals


Technical specifications

193 bus terminals

- For connection of bus devices to the bus cable
- For connecting up to 4 bus cables

- Comprising two engaged clamp parts + (red) and - (dark gray), each with 4 screwless plug-in terminals per clamp part for solid conductors, $\varnothing 0.6 \text{ mm} \dots 0.8 \text{ mm}$
- Dimensions (H x W x D): 12.4 x 10 x 10 mm.

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
	193 bus terminals, 2-pole, 4 plug-in connections, red/dark gray	A	5WG1 193-8AB01		1	25	030	0.002
5WG1 193-8AB01								

System Accessories

Connectors

Technical specifications

REG 191/01 connectors, double


Flat connectors for fitting beneath distribution board covers. Connects data rail and bus cable. Up to eight bus cables can be connected over two 193 bus terminals (must be ordered separately).

Width: 1 MW (1 MW = 18 mm).

REG 191/11 connectors, 2 x double

Same as REG 191/01 connector, but with two additional connections for two low-voltage terminals (must be ordered separately). This allows the voltage without reactor to be taken from the data rail.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
	A	5WG1 191-5AB01		1	1	030	0.045
	A	5WG1 191-5AB11		1	1	030	0.045

5WG1 191-5AB01

Technical specifications

190/ 1 data rails without connector for TH 35-7.5 flat standard mounting rails

- For sticking (self-adhesive) in an EN 60715, TH35-7,5 flat standard mounting rail
- For interconnecting DIN rail mounted devices over their contact system.

190/ 2 data rails with connector for TH 35-7.5 flat standard mounting rails

- For sticking (self-adhesive) in an EN 60715, TH35-7,5 flat standard mounting rail
- 2 bus terminals (red/dark gray) for bus voltage
- 2 low-voltage terminals (white/yellow) for voltage without reactor
- For interconnecting DIN rail mounted devices over their contact system
- For connecting data rails to each other and to a bus cable.





190/ 3 data rails without connector for TH 35-15 deep standard mounting rails

- For sticking (self-adhesive) in an EN 60715, TH35-15 standard mounting rail, deep, mounting rail size 24 mm
- For interconnecting DIN rail mounted devices over their contact system.

190/ 4 data rails with connector for TH 35-15 deep standard mounting rails

- For sticking (self-adhesive) in an EN 60715, TH35-15 standard mounting rail, deep, mounting rail size 24 mm
- 2 bus terminals (red/dark gray) for bus voltage
- 2 low-voltage terminals (white/yellow) for voltage without reactor
- For interconnecting DIN rail mounted devices over their contact system
- For connecting data rails to each other and to a bus cable.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
Data rails for TH35-7,5 standard mounting rails							
 5WG1 190-8AB01		190/ 1 data rails without connector for TH 35-7.5 flat standard mounting rails					
		• Length: 214 mm (for max. 12 MW)					
		• Length: 243 mm (for max. 14 MW)					
		• Length: 277 mm (for max. 16 MW)					
		• Length: 324 mm (for max. 18 MW)					
		• Length: 428 mm (for max. 24 MW)					
 5WG1 190-8AB02		190/ 2 data rails with connector for TH 35-7.5 flat standard mounting rails					
		• Length: 214 mm (for max. 12 MW)					
		• Length: 243 mm (for max. 14 MW)					
		• Length: 277 mm (for max. 16 MW)					
		• Length: 324 mm (for max. 18 MW)					
		• Length: 428 mm (for max. 24 MW)					
 5WG1 190-8AB03		190/ 3 data rails without connector for TH 35-15 deep standard mounting rails					
		• Length: 214 mm (for max. 12 MW)					
		• Length: 243 mm (for max. 14 MW)					
		• Length: 277 mm (for max. 16 MW)					
		• Length: 324 mm (for max. 18 MW)					
		• Length: 428 mm (for max. 24 MW)					
 5WG1 190-8AB04		190/ 4 data rails with connector for TH 35-15 deep standard mounting rails					
		• Length: 214 mm (for max. 12 MW)					
		• Length: 243 mm (for max. 14 MW)					
		• Length: 277 mm (for max. 16 MW)					
		• Length: 324 mm (for max. 18 MW)					
		• Length: 428 mm (for max. 24 MW)					

System Accessories

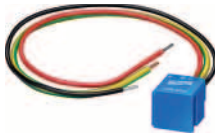
Overvoltage protection

Technical specifications

190 overvoltage protection, fine protection for bus devices

- For the overvoltage fine protection of bus devices
- For inserting in a bus device instead of a 193 bus terminal or for direct connection to a bus terminal
- For surge protection through connection of the green ground conductor to the next grounding point
- 2 socket contacts (1 mm Ø) for insertion in bus devices
- 2 solid wires (0.8 mm Ø) for connection to the bus terminal
- 1 solid wire (0.75 mm²) for surge protection
- Rated voltage 24 V DC
- Rated current 6 A
- Rated discharge surge current 5 kA
- Protection level 350 V
- Dimensions (H x W x D): 10.5 x 11.6 x 11.1 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 190-8AD01	A	5WG1 190-8AD01		1	1	030	0.010

5WG1 190-8AD01

Counters

11/2	Introduction
11/3	Operating hours/pulse counters
11/3	Counters for electrical energy

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Counters

Introduction

Overview

Operating hours/pulse counters



This counter can be used to measure binary switching information and monitor limit values.

Counters for electrical energy



Overview of electrical energy consumption at a glance.

Operating hours/pulse counters


Technical specifications

N 343 operating hours and switching operations counters

- Recording of operating hours and counting of switching operations for up to 36 sensor/actuator channels with 1-bit switching objects
- Limit values for all count values
- Indication output over the bus if the current value exceeds or falls below these limits, with option for monitoring the switching telegrams for all configured channels or cyclic interrogation of the states
- To-the-second precision recording of operating hours of a channel through evaluation of the ON period
- Incrementation of the switching operation counter when switching from OFF to ON

- Option for querying all counting and limit values during runtime and setting each to a new user-definable value
- Recording of operating hours with a maximum runtime of approx. 136 years
- Counts a maximum of 4.3 billion switching operations per channel
- Electronics powered over bus voltage
- Integrated bus coupling unit
- Bus connection over contact system to data rail
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 1 MW (1 MW = 18 mm).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG1 343-1AB01	A	5WG1 343-1AB01		1	1	030	0.092
N 343 operating hours and switching operations counters, 36 channels							

Counters for electrical energy


Technical specifications

N 162, N 165 E-counters

- For measuring the import of electrical energy in kWh in 1 and 3-phase systems
- PTB calibrated
- Accuracy class 2
- Short-circuit resistant S0 pulse output
- 3-/4 conductor connection
- LCD for display of active energy, price per kWh, total costs, reactive energy, current active power (total per phase), device number
- Manual readout over the built-in LCD

- Readout of data via IR data interface
- Reading/sending of data over the bus
- Screw terminals for connection of L1, L2, L3, N and S0 pulse output
- Electronics powered over an integrated power supply unit for 230/400 V AC
- Integrated bus coupling unit
- Bus connection via bus terminal
- Modular installation device for mounting on TH35 EN 60715 mounting rail
- Width: 6 MW (1 MW = 18 mm).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 7KT1 162	B	7KT1 162		1	1	027	0.450
N 162 E-counters With direct connection to 230 V AC up to 63 A							
	B	7KT1 165		1	1	027	0.390
N 165 E-counters With transformer connection 5(6) A							

Counters

Notes

11



12/2	Introduction
	Display, Operation
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12/8	Pushbutton accessories
12/9	Touch panels
12/10	Remote controls
	Output Devices
12/11	Introduction
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	Input Devices
12/15	Binary input devices
	Devices for Special Applications
12/16	Introduction
12/17	Lighting
12/18	Sun protection, anti-glare protection, utilization of daylight
12/19	Safety
	Gateways, Interface Converters
12/21	Introduction
12/22	KNX EIB/KNX radio
12/23	EnOcean/KNX radio
	System Products
12/24	Introduction
12/26	Transmitters, receivers
12/27	Repeaters

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Introduction

Overview

Display, operation



Here you can find all you need to know about the display and operator devices of GAMMA wave.

Output devices



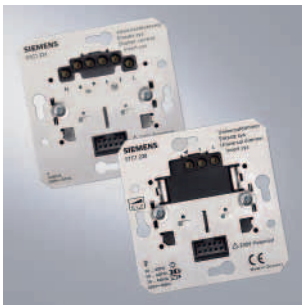
Whether binary output devices or socket outlet switches, this section covers every aspect of output devices.

Input devices



Electrical operating states are recorded and any changes transmitted over bus.

Devices for special applications



Whether for lighting, safety or sun/anti-glare protection, here you will find everything you need.

Gateways, interface converters



Gateways ensure communication within the system, as well as with other systems.

System products



Transmitters, receivers and repeaters round off the GAMMA wave system.

Introduction

GAMMA wave – the multifunctional system

Enjoy all the advantages of a modern building management system without the need for additional cable installation – the new GAMMA wave radio system makes it possible.

Sensors, actuators, etc. do not require any additional cable installation. This means that this type of radio transmission is particularly suitable for renovation work, the expansion of existing systems and all types of new installations. And all complete with absolutely failsafe and problem-free transmission.

Furthermore:

GAMMA wave is a unique bi-directional radio system – this

means that the products and components can be both transmitter and receiver.

And:

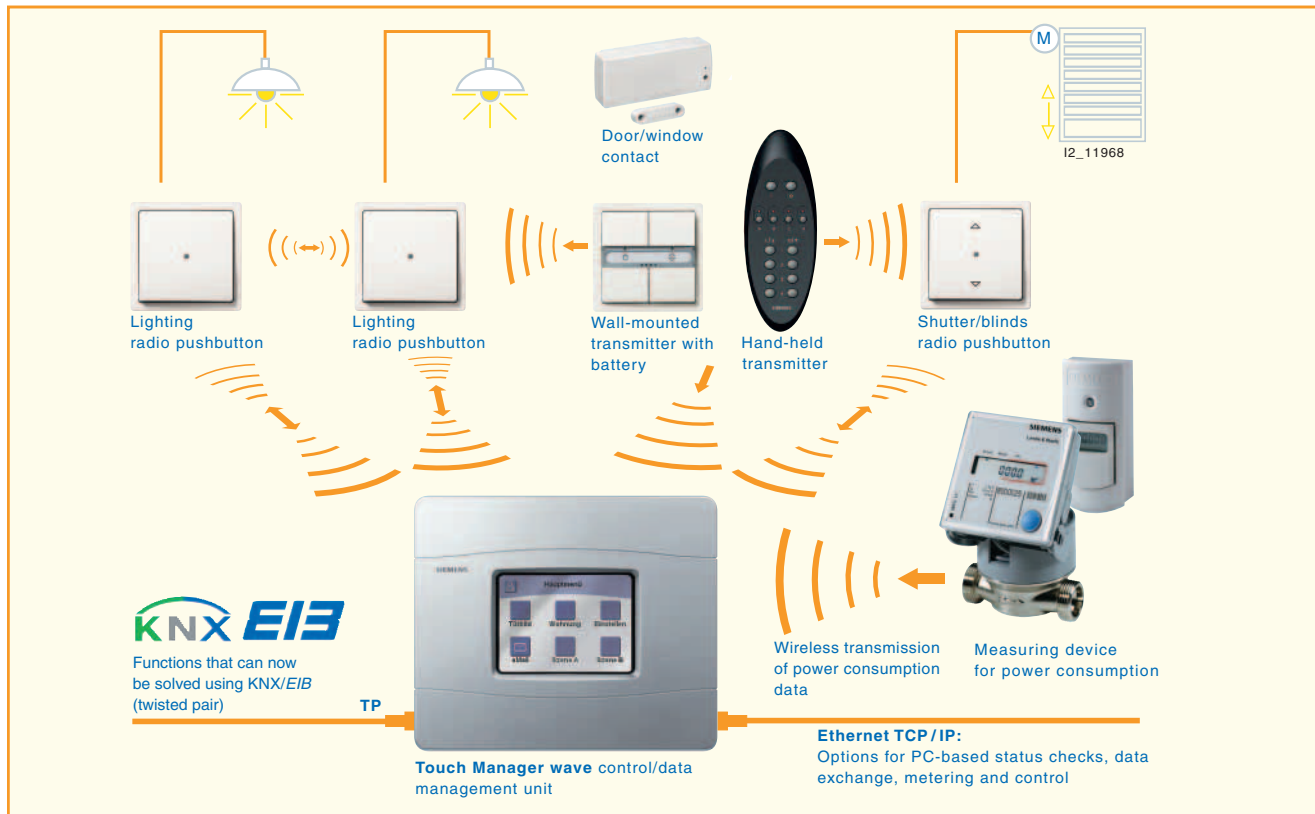
GAMMA wave is based on the new, uniform standard for building management systems; KNX in the 868 MHz range.

Services

Services offered through third parties.

Consumption data acquisition and emergency call systems

Products of other Siemens ranges or other manufacturers on the basis of KNX standards.



Due to its implementation of future-pointing technology, the "wave" device range is ideally suited for the retrofitting and modification of room control functions in existing buildings.

These products offer simple installation and commissioning, thus enabling the wireless remote control of switching, dimming and shutter/blind/scene functions.

The system operates in the 868 MHz fail-safe frequency band that is reserved for safety and system applications. A sensor can control an unlimited number of actuators within its range (e.g. closed residential unit).

As well as the wave pushbutton for lighting control, the product range includes the wave shutter/blind pushbuttons for shutter/blind control as well as a range of wall-mounted transmitters, hand-held transmitters, door/window contacts and smoke detectors.

The wave pushbuttons and wave shutter/blind pushbuttons must be used in combination with universal dimmer sys inserts, sys switching inserts or shutter/blind control sys inserts. This enables the local operation and remote control of the inserts located beneath the pushbuttons, as well as the remote control of additional universal dimmer, switch dimmer or shutter/blind control inserts linked over KNX radio.

Single or double *instabus* pushbuttons are snapped onto wave wall-mounted transmitters as operator interfaces. In accordance with their intended purpose, pushbutton rockers enable the remote control of universal dimmer sys inserts, sys switching inserts or shutter/blind control sys inserts, which are equipped with wave pushbuttons or wave shutter/blind pushbuttons.

The device contact units are fitted with fixing claws and have a maximum mounting depth of 32 mm. This greatly facilitates mounting standard flush-mounting switch boxes.

GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	<i>instabus</i> pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-m. transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-m. transmitter "Aktor" 230 V wave	--	--	--	--	✓

¹⁾ see Catalog ET D1.

Introduction

Previously

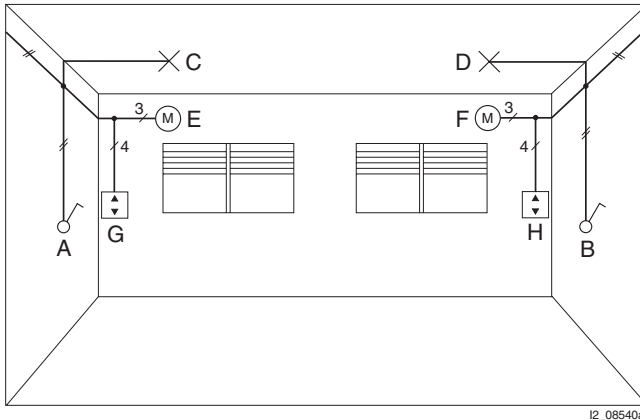
Lighting and shutter/blind control of a conventional installation

Example of a conventional installation with lighting and electrically operated shutters/blinds.

- Light (C) can only be switched with switch (A)
- Light (D) can only be switched with switch (B)
- Shutter/blind (E) can only be moved with switch (G)
- Shutter/blind (F) can only be moved with switch (H)

Disadvantages

- Inflexible
- No convenience (each light must be switched individually).



After

Lighting and shutter/blind control with GAMMA wave ("bi-directional" radio system)

Modification of the installation for shared operation of lighting and shutters/blinds from various operating points.

Replacement of conventional switch inserts (A, B) with

- Universal dimmer sys insert
- DELTA UP 210 wave pushbuttons.

Replacement of conventional shutter/blind switches (G, H) with

- Shutter/blind control sys insert
- DELTA UP 211 wave shutter/blind pushbutton.

With this switch you can:

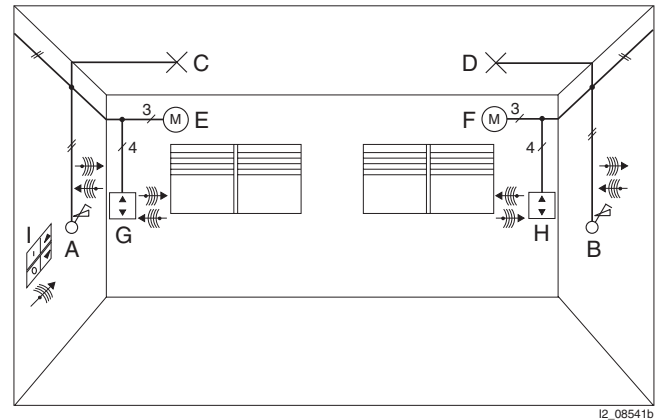
- Dim lights C and D from A and/or B
- Operate shutters/blinds E and F from G and/or H.

For additional operation of the lights and shutters/blinds,

- A UP 110 wall-mounted transmitter "Batterie" wave (I) with mounted double *instabus* pushbutton must be installed.

Advantages

- Flexible
- Greater operational ease
- Supports group formation
- Few devices required/lower costs
- Simple and clean retrofitting - no structural alterations required.



Overview

Pushbuttons



Radio control of lighting and shutters/blinds using the radio pushbuttons from the DELTA product ranges.

Pushbutton accessories



Surface mounting enclosure or blanking cover plate - you choose.

Touch panels



wave Touch Manager – combines the components of GAMMA wave with GAMMA instabus.

Remote controls



The wave hand-held transmitter supports wireless operation of up to 17 different room functions.

wave

Display, Operation

Pushbuttons

Technical specifications

UP 210 wave pushbuttons

- For local and remote operation of a sys switching insert or universal dimmer sys insert over KNX radio
- Pushbutton rocker, single with intermediate position
- Vertical operation
- With switch over, switch over and dimming, with short and long button press for switching over and brighter/darker when dimming, with adjustable timer function with an overrun time of 1 ... 60 min
- 1 LED for indication of different operating modes
- KNX radio transmitter/receiver for 868 MHz
- Commissioning by pressing the pushbutton surface
- 10-pole plug for clipping onto a sys switching insert or universal dimmer sys insert.

UP 211 wave shutter/blind pushbuttons

- For local and remote operation of a shutter/blind control sys insert over KNX radio
- Pushbutton rocker, single with intermediate position
- Vertical operation
- With short and long button press for shutter/blind control function for UP/DOWN and adjustment of slats
- 24-hour automatic operation for raising and lowering of shutters/blinds
- 1 LED for indication of different operating states
- KNX radio transmitter/receiver for 868 MHz
- Commissioning by pressing the pushbutton surface
- 10-pole plug for clipping onto a shutter/blind control sys insert

EnOcean AP 221 / AP 222 wall-mounted transmitters

- Flat pushbutton rocker, single or double with intermediate position and vertical operation
- For direct remote control of EnOcean radio actuators and remote control of wave radio actuators and *instabus* actuators over gateways
- Switch ON/OFF and over, with short and long button press for switching ON/OFF and brighter/darker when dimming
- Short and long button press for UP/DOWN and adjustment of slats with the shutter/blind control function
- Commissioning by pressing the pushbutton surface
- Radio transmitter for 868 MHz, with battery-free EnOcean radio technology, with energy generation through maintenance-free, electrodynamic energy generator
- Floor plate for easy sticking or screwing to surfaces

Note:

The gateway EnOcean/EIB, AP 631/62 switch actuators (5WG1 631-3AL62) or GE 561/11 switch actuators (5WG3 561-4AB11) must be ordered separately.

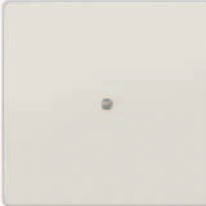

		i-system	DELTA profil	DELTA style	Design-independent
Dimensions					
• Height	mm	55	65	68	83
• Width	mm	55	65	68	83
• Depth	mm	13	14	16.5	15







GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	<i>instabus</i> pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-m. transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-m. transmitter "Aktor" 230 V wave	--	--	--	--	✓

¹⁾ see Catalog ET D1.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
i-system							
UP 210 wave pushbuttons							
	• Titanium white	A	5WG3 210-2HB11	1	1	030	0.030
	• Carbon metallic	B	5WG3 210-2HB21	1	1	030	0.030
	• Aluminum metallic	B	5WG3 210-2HB31	1	1	030	0.030
Note: The sys switching inserts or universal dimmer sys inserts and matching frames must be ordered separately.							
5WG3 210-2HB11							
UP 211 wave shutter/blind pushbuttons							
	• Titanium white	A	5WG3 211-2HB11	1	1	030	0.035
	• Carbon metallic	B	5WG3 211-2HB21	1	1	030	0.030
	• Aluminum metallic	B	5WG3 211-2HB31	1	1	030	0.030
Note: The shutter/blind control sys inserts and matching frames must be ordered separately.							
5WG3 211-2HB11							

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
DELTA profil							
 <p>UP 210 wave pushbuttons</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The sys switching inserts or universal dimmer sys inserts and matching cutout frames must be ordered separately.</p> <p>5WG3 210-2AB11</p>	B	5WG3 210-2AB01		1	1	030	0.035
	A	5WG3 210-2AB11		1	1	030	0.035
	B	5WG3 210-2AB21		1	1	030	0.035
	B	5WG3 210-2AB71		1	1	030	0.035
 <p>UP 211 wave shutter/blind pushbuttons</p> <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver <p><u>Note:</u> The shutter/blind control sys inserts and matching cutout frames must be ordered separately.</p> <p>5WG3 211-2AB11</p>	B	5WG3 211-2AB01		1	1	030	0.035
	A	5WG3 211-2AB11		1	1	030	0.035
	B	5WG3 211-2AB21		1	1	030	0.035
	B	5WG3 211-2AB71		1	1	030	0.035
DELTA style							
 <p>UP 210 wave pushbuttons</p> <ul style="list-style-type: none"> • Titanium white • Basalt black <p><u>Note:</u> The sys switching inserts or universal dimmer sys inserts and matching frames must be ordered separately.</p> <p>5WG3 210-2GB11</p>	A	5WG3 210-2GB11		1	1	030	0.036
	B	5WG3 210-2GB21		1	1	030	0.036
 <p>UP 211 wave shutter/blind pushbuttons</p> <ul style="list-style-type: none"> • Titanium white • Basalt black <p><u>Note:</u> The shutter/blind control sys inserts and matching frames must be ordered separately.</p> <p>5WG3 211-2GB11</p>	A	5WG3 211-2GB11		1	1	030	0.035
	B	5WG3 211-2GB21		1	1	030	0.035
Design-independent							
 <p>EnOcean AP 221 wall-mounted transmitters, single, battery-free, flat, white</p> <p>5WG3 221-3HB11</p>	A	5WG3 221-3HB11		1	1	030	0.112
 <p>EnOcean AP 222 wall-mounted transmitters, double, battery-free, flat, white</p> <p>5WG3 222-3HB11</p>	A	5WG3 222-3HB11		1	1	030	0.112

wave

Display, Operation

Pushbutton accessories

Technical specifications

M 110 surface-mounting enclosures, single

For surface mounting of UP 110 wall-mounted transmitters "Batterie" wave .

Note:

The matching cut-out frame must be ordered separately.

		Blanking cover plates				Surface-mounting enclosures
		i-system	DELTA profil	DELTA style	DELTA ambiente	DELTA profil
Dimensions	• Height	mm 55	65	68	65	80
	• Width	mm 55	65	68	65	80
	• Depth	mm --	--	--	--	30

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
i-system							
 Blanking cover plates <ul style="list-style-type: none"> • Titanium white • Carbon metallic • Aluminum metallic 		▶ 5TG2 558		1	1/10	021	0.007
		▶ 5TG1 220		1	1/10	021	0.049
		▶ 5TG1 250		1	1/10	021	0.049
DELTA profil							
 M 110 surface-mounting enclosures, single <ul style="list-style-type: none"> • Pearl gray • Titanium white • Anthracite • Silver 	C	5WG3 110-8AB01		1	1	030	0.048
	A	5WG3 110-8AB11		1	1	030	0.048
	C	5WG3 110-8AB21		1	1	030	0.048
	C	5WG3 110-8AB71		1	1	030	0.048
 Blanking cover plates <ul style="list-style-type: none"> • Titanium white • Pearl gray • Anthracite • Silver 		▶ 5TG1 810		1	1/10	021	0.041
		▶ 5TG1 870		1	1/10	021	0.041
		▶ 5TG1 840		1	1/10	021	0.041
		▶ 5TG1 770		1	1/10	021	0.041
DELTA style							
 Blanking cover plates <ul style="list-style-type: none"> • Titanium white • Basalt black 		▶ 5TG1 330		1	1/10	021	0.054
		▶ 5TG1 370		1	1/10	021	0.054
DELTA ambiente							
 Blanking cover plates <ul style="list-style-type: none"> • Arctic white 		▶ 5TG1 510		1	1/5	021	0.056

* You can order this quantity or a multiple thereof.

Technical specifications


- Touch-sensitive 5.7" display, with a resolution of 320 x 240 pixels
- With touch-activated and automatically deactivated background lighting
- For monitoring and control of up to 70 actuator and 40 sensor channels
- Display of smoke detector alarms, of connected WebCam images, of the switching status of switchable devices, of the status of door/window contacts, of the battery status and the quality of the radio transmission of battery powered devices with KNX RF communication
- Relaying of alarms and other indications by email
- Scene control for 16 scenes with a total of approx. 200 actuator channels and scene tripping operations (over pushbuttons of the wave Touch Manager, external sensors or times)
- Option for remote operation, monitoring and configuration from any terminal device connected to the same local network with HTML4-capable browser or over the Internet if the network is correctly configured, for use as browser for HTML pages on an external server

- Integrated realtime clock, with synchronization of date and time over Ethernet
- Long-range power supply unit for 110 V/60 Hz, 230 V/50 Hz, connection of power supply over screw terminals for 2.5 mm²
- Ethernet connection over RJ45 socket
- Integrated transmitter/receiver for KNX RF (868 MHz)
- For flush mounting
- Silver
- Dimensions (H x W x D): 257 x 222 x 56 mm (mounting depth: 45 mm).

Note:

The wave Touch Manager has to be installed in either a flush mounting junction box from Kaiser, Item No. 1097-92 or in a hollow-wall junction box from Kaiser, Item No. 9197-91. The junction box must be ordered separately (<http://www.kaiser-elektro.de>).

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 <p>UP 583 wave Touch Manager, flush mounting, silver (to be discontinued)</p> <ul style="list-style-type: none"> • Touch-sensitive 5.7" color display • Communication over Ethernet, KNX RF and KNX EIB 	A	5WG3 583-2AB71		1	1	030	1.500

5WG3 583-2AB71

wave

Display, Operation

Remote controls

Technical specifications


- 4 pre-selection pushbuttons and 4 pushbutton pairs for wireless operation of 16 different room functions
- Separate pushbutton pair for a central function (e.g. central ON/OFF),
- Configurable function per pushbutton pair: switch, switch and dim, shutter/blind control, store and call up scenes
- Radio transmitter: 868 MHz

- Dimensions (H x W x D): 154 x 55 x 24 mm.

Note:

The 2 batteries of type LR03/AAA (1.5 V) required for operation are not included in delivery.

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	S 425 wave hand-held radio transmitters, 17 channels							
	• Black	A	5WG3 425-7AB21		1	1	030	0.124
	• Silver	A	5WG3 425-7AB71		1	1	030	0.125

5WG3 425-7AB21

5WG3 425-7AB21

Overview***Binary output devices***

For switching actuators ON/OFF over GAMMA wave.

Socket outlet switches

For the wireless switching of devices that are plugged into a socket outlet.

wave

Output Devices

Binary output devices

Technical specifications

sys switching inserts, flush mounting

- For the switching of incandescent lamps, HV and LV halogen lamps with electronic or conventional transformers, rated operational voltage 230 V AC
- 2-wire connection method
- Short-circuit protection through miniature fuse with spare fuse
- Secondary input for auxiliary operation over conventional pushbuttons
- 10-pole socket for plugging in a UP 210 wave pushbutton for the local and remote control over KNX radio
- For mounting in an installation box (ø 60 mm, depth: 40 mm) with screw or claw fixing
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The UP 210 wave pushbutton with KNX radio communication and matching frame must be ordered separately.

UP 560 wall-mounted transmitters "Aktor" 230 V wave, flush mounting

- For the wireless operation of up to 2 different room functions and for the control of actuators over KNX radio
- 10-pole plug-in connector for plugging in an *instabus* pushbutton, single or double, as operator interface
- Adjustable function; switching, switching and dimming, shutter/blind control and scene control
- Short and long button press for ON/OFF, brighter/darker for dimming or UP/DOWN and adjustment of slats for shutter/blind control
- Storage and call up of up to four scenes
- With integrated switch actuator with relay contact, rated for 230 V AC, 6 A (resistive load), with option for setting whether load should be permanently switched on or off (normal mode) or whether actuator should operate in timer mode with an adjustable ON period of 1, 5 or 15 minutes
- KNX radio transmitter/receiver for 868 MHz
- Electronics powered over 230 V AC
- Commissioning over six DIL switches located on the front panel - no additional aids required
- For mounting in an installation box (ø 60 mm, depth: 40 mm) with screw or claw fixing
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The *instabus* pushbuttons and matching frames must be ordered separately.

GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	<i>instabus</i> pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-mounted transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-mounted transmitter "Aktor" 230 V wave	--	--	--	--	✓

¹⁾ see Catalog ET D1.

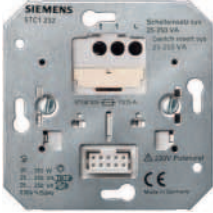



GE 561/01 wave switch actuators, 2 x 16 A

- KNX radio transmitter/receiver for 868 MHz
- One relay contact per output
- Contact rated operational voltage, 230 V AC
- Rated current 16 A at p.f. = 1
- With option for setting whether load should be permanently switched ON or OFF (normal mode) or whether actuator should operate in timer mode with an adjustable ON period of 1 ... 60 minutes
- Electronics powered over 230 V AC
- Commissioning over a pushbutton located on the top - no additional aids required
- Modular installation device
- Dimensions (W x H x L): 42 x 32 x 274.5 mm.

GE 561/11 wave switch actuators, 2 x 16 A with EnOcean receiver

- KNX radio transmitter/receiver for 868 MHz
- EnOcean radio receiver for 868 MHz
- Converter of EnOcean radio to KNX radio for the control of KNX radio actuators over EnOcean radio pushbuttons
- Control of internal actuator channels over KNX and/or EnOcean radio pushbuttons
- One relay contact per output
- Contact rated operational voltage, 230 V AC
- Rated current 16 A at p.f. = 1
- With option for setting whether load should be permanently switched ON or OFF (normal mode) or whether actuator should operate in timer mode with an adjustable ON period of 1 ... 60 minutes
- Electronics powered over 230 V AC
- Commissioning over a pushbutton located on the top - no additional aids required
- Modular installation device
- Dimensions (W x H x L): 42 x 32 x 274.5 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 <p>sys switching inserts, flush mounting</p> <ul style="list-style-type: none"> Rated operational power 25 ... 250 VA Rated operational power 15 ... 500 VA (for toroidal core transformers 15 ... 250 VA) 	▶	5TC1 232		1	1	024	0.100
		5TC1 233		1	1	024	0.110
5TC1 232							
 <p>UP 560 wall-mounted transmitters "Aktor" 230 V wave, flush mounting</p>	A	5WG3 560-2AB01		1	1	030	0.074
5WG3 560-2AB01							
 <p>GE 561/01 wave switch actuators, 2 x 16 A</p>	A	5WG3 561-4AB01		1	1	030	0.220
5WG3 561-4AB01							
 <p>GE 561/11 wave switch actuators, 2 x 16 A with EnOcean receiver</p>	A	5WG3 561-4AB11		1	1	030	0.220
5WG3 561-4AB11							

wave

Output Devices


Socket outlet switches

Technical specifications

S 564 wave socket outlet switches, intermediate connector

- For plugging into a protective contact socket outlet
- Switchable SCHUKO socket outlet integrated in the intermediate connector
- Integrated actuator for ON/OFF switching of SCHUKO socket outlet, relay contact rated for 230 V AC, 16 A (resistive load)
- Can also be controlled over up to 10 KNX sensors and can be integrated into up to 16 KNX scenes
- Pushbutton for local operation and commissioning - no additional aids required
- LED to indicate the operation/switching state
- KNX radio transmitter/receiver, 868 MHz
- Powered over socket outlet
- Titanium white
- Dimensions (H x W x D): 128 x 72 x 74 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 5WG3 564-7AB11	A	5WG3 564-7AB11		1	1	030	0.245

5WG3 564-7AB11

Technical specifications

AP 261 wave binary inputs with battery

- For detecting the state of an external contact connected to the sensor and transmission of the state as ON/OFF information to an actuator with KNX radio communication or to the wave Touch Manager
- Additional reed contact integrated in the device, activated through the magnet included in delivery, and electrically connected in series to the external contact
- 4 plug-type terminals for wire cross-sections of 0.14 ... 0.5 mm² (solid or finely stranded) for connection of the external contact and for setting through a wire jumper, whether only the internal or only the external or both contacts are to be monitored
- KNX radio transmitter for 868 MHz

- Electronics powered over a lithium battery (1/2 AA 3.6 V), with a battery service life of approx. 5 years, with signaling of battery status every 24 hours, with LED that flashes every 10 seconds to indicate that the battery needs replacing
- Commissioning over a pushbutton located on the front of the sensor - no additional aids required
- Surface mounting
- Comprising one mounting plate for screw or adhesive fastening, clip-on radio sensor with integrated reed contact and trigger magnet
- Titanium white
- Dimensions (H x W x D):
Sensor 87 x 36 x 27 mm, Magnet 40 x 10 x 10 mm.

Note:

Battery included in delivery.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
AP 261 wave binary inputs with battery	A	5WG3 261-3AB11		1	1	030	0.096



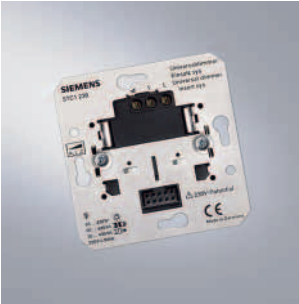
5WG3 261-3AB11

Devices for Special Applications

Introduction

Overview

Lighting



The universal dimmer sys insert is a flush-mounting device for switching and dimming.

Sun protection, anti-glare protection, utilization of daylight



Sun and anti-glare protection is provided by the appropriate actuators and sensors.

Safety



The following components for GAMMA wave offer protection against intrusion and fire.

Technical specifications

Universal dimmer sys inserts, flush mounting

- For switching and dimming of incandescent lamps, HV and LV halogen lamps with electronic or conventional transformers, rated operational voltage 230 V AC, rated operational power 50 ... 420 VA for incandescent lamp rating and LV halogen lamps with conventional transformer and 70 ... 420 VA for LV halogen lamps with electronic transformers
- 2-wire connection method
- Automatic load detection
- Lamp friendly soft start
- Storing and ON switching to a specified brightness value
- Electronic short-circuit and over temperature protection

- 10-pole socket for plugging in a UP 210 wave pushbutton for the local and remote control over KNX radio
- Secondary input for auxiliary operation over conventional pushbuttons
- For mounting in an installation box (ø 60 mm, depth: 40 mm) with screw or claw fixing
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

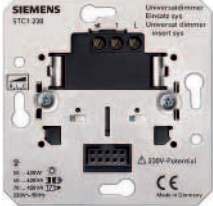
The UP 210 wave pushbutton and matching frame must be ordered separately. Battery included in delivery.

GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	<i>instabus</i> pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-mounted transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-mounted transmitter "Aktor" 230 V wave	--	--	--	--	✓

¹⁾ see Catalog ET D1.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 <p>STC1 230</p>	►	5TC1 230		1	1	024	0.089

STC1 230

Devices for Special Applications

Sun protection, anti-glare protection,
utilization of daylight

Technical specifications

GE 520 wave shutter/blind actuators, 6 A

- KNX radio transmitter/receiver for 868 MHz
- For control of a solar protection drive with AC motor for 230 V AC and electromechanical limit switches
- Electrically interlocked relays for reversing direction of rotation
- Relay contacts for rated voltage 230 V AC, 6 A
- Electronics powered over 230 V AC
- Commissioning over a pushbutton located on the top - no additional aids required
- Dimensions (H x W x L): 42 x 32 x 274.5 mm.

Shutter/blind control sys inserts, flush mounting

- For control of sun/anti-glare protection drive for 230 V AC with mechanical or electronic limit switches, rated operational voltage 230 V AC, rated operational capacity 1 motor with max. 1000 VA, with 2 relays which are interlocked against each other with a minimum switchover time of approx. 1 s
- Secondary input for additional operation over conventional UP/DOWN pushbuttons, with safety function "wind alarm", which can be implemented through the secondary input "UP"
- 10-pole socket for plugging in a UP 211 wave shutter/blind pushbutton for local and remote control over KNX radio
- For mounting in an installation box (Ø 60 mm, depth: 40 mm) with screw or claw fixing
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The UP 211 wave shutter/blind pushbutton and matching frame must be ordered separately.

AP 260 wave door/window contacts with battery surface mounting

- For detecting the state (closed/open) of a door or window over the reed contact integrated in the device, with actuation of the reed contact through the supplied magnet for attachment to the moving part of the door or window
- Connection for an external floating contact
- Transmission of the switching state to a shutter/blind sys insert with clipped on wave shutter/blind pushbutton or a wave Touch Manager
- 4 plug-type terminals for wire cross-sections of 0.14 ... 0.5 mm² (solid or finely stranded) for connection of the external contact and for setting through a wire jumper, whether only the internal or only the external or both contacts are to be monitored
- KNX radio transmitter for 868 MHz
- Electronics powered over a lithium battery (1/2 AA 3.6 V), with a battery service life of approx. 5 years, with signaling of battery status every 24 hours, with LED that flashes every 10 seconds to indicate that the battery needs replacing
- Commissioning over a pushbutton located on the front of the sensor - no additional aids required
- Surface mounting
- Comprising one mounting plate for screw or adhesive fastening, clip-on radio sensor with integrated reed contact and trigger magnet
- Dimensions (H x W x D):
Sensor 87 x 36 x 27 mm, magnet 40 x 10 x 10 mm.

Note:




Battery included in delivery.

GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	instabus pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-m. transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-m. transmitter "Aktor" 230 V wave	--	--	--	--	✓

¹⁾ see Catalog ET D1.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 GE 520 wave switch actuators, 6 A, 1 x 230 V AC	A	5WG3 520-4AB01		1	1	030	0.220
 Shutter/blind control sys inserts, flush mounting	▶	5TC1 231		1	1	024	0.112
 AP 260 wave door/window contacts with battery surface mounting	A	5WG3 260-3AB11		1	1	030	0.096
• Titanium white	A	5WG3 260-3AB81		1	1	030	0.096
• Brown							

Technical specifications**DELTA reflex smoke detectors "Batterie", surface mounting**

- For early detection of fires in buildings, with optical measuring method for smoke detection
- VdS approval
- Integrated acoustic alarm signal generator
- Alarm/acknowledge pushbutton and integrated LED for display of normal mode, smoke alarm and weak battery
- Base for surface mounting and a screw-on sensor head
- Interface and plug-in terminals for networking up to 40 detectors over a 2-wire cable with an overall length of up to 400 m
- Module slot for insertion of a smoke detector module "Relais" or a wave smoke detector module
- Electronics powered by three Mignon batteries (AA 1.5 V), with a battery service life of 5 years
- Dimensions in mm: \varnothing 120, height 44.

Note:

Battery included in delivery.

Smoke detector module "Relais"

- For insertion in the DELTA reflex smoke detector "Batterie"
- For connection of external alarm sensors, such as horns, sirens and signal generators
- Floating changeover contact, with switching voltage up to 30 V DC/42 V AC, switching current up to DC 1 A/AC 0.5 A,
- Terminals for cables with \varnothing 0.4 ... 0.8 mm
- Power supply over smoke detector
- Dimensions (H x W): 43 x 38 mm.

Note:

For insertion in the DELTA reflex smoke detector, titanium white (5TC1 290), aluminum metallic (5TC1 293) or tobacco (5TC1 294).

DELTA reflex wave UNI M 255 smoke detector modules

- Radio module with KNX radio transmitter for 868 MHz
- For insertion in the DELTA reflex smoke detector "Batterie"
- Alarm transmission over KNX radio when a smoke alarm is triggered at the smoke detector
- Transmission of the battery status of the smoke detector over KNX radio
- Commissioning over a pushbutton - no additional aids required
- Power supply over smoke detector
- Dimensions (H x W x D): 63 x 38 x 15 mm.

Note:

For insertion in the DELTA reflex smoke detector, titanium white (5TC1 290), aluminum metallic (5TC1 293) or tobacco (5TC1 294).

AP 260 wave door/window contacts with battery surface mounting

- For detecting the state (closed/open) of a door or window over the reed contact integrated in the device, with actuation of the reed contact through the supplied magnet for attachment to the moving part of the door or window
- Connection for an external floating contact
- Transmission of the switching state to a shutter/blind sys insert with clipped on wave shutter/blind pushbutton or a wave Touch Manager
- 4 plug-type terminals for wire cross-sections of 0.14 ... 0.5 mm² (solid or finely stranded) for connection of the external contact and for setting through a wire jumper, whether only the internal or only the external or both contacts are to be monitored
- KNX radio transmitter for 868 MHz
- Electronics powered over a lithium battery (1/2 AA 3.6 V), with a battery service life of approx. 5 years, with signaling of battery status every 24 hours, with LED that flashes every 10 seconds to indicate that the battery needs replacing
- Commissioning over a pushbutton located on the front of the sensor - no additional aids required
- Surface mounting
- Comprising one mounting plate for screw or adhesive fastening, clip-on radio sensor with integrated reed contact and trigger magnet
- Dimensions (H x W x D):
Sensor 87 x 36 x 27 mm, magnet 40 x 10 x 10 mm.

Note:





Battery included in delivery.

wave

Devices for Special Applications

Safety

Selection and ordering data

	Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
	DELTA reflex smoke detectors "Batterie", surface mounting <ul style="list-style-type: none">• Titanium white• Aluminum metallic• Tobacco	▶	5TC1 290		1	1	024	0.375
			5TC1 293		1	1	024	0.352
			5TC1 294		1	1	024	0.352
5TC1 290								
	Accessories Smoke detector module "Relais"	▶	5TC1 291		1	1	024	0.045
5TC1 291								
	DELTA reflex wave UNI M 255 smoke detector modules	A	5WG3 255-8AB01		1	1	030	0.420
5WG3 255-8AB01								
	AP 260 wave door/window contacts with battery surface mounting <ul style="list-style-type: none">• Titanium white• Brown	A	5WG3 260-3AB11		1	1	030	0.096
		A	5WG3 260-3AB81		1	1	030	0.096
5WG3 260-3AB11								

* You can order this quantity or a multiple thereof.

Overview***KNX EIB/KNX radio***

The wave/instabus coupler makes wireless operation easy.

EnOcean/KNX radio

EnOcean /KNX radio gateways allow integration of battery-free pushbuttons in the GAMMA wave system.

wave

Gateways, Interface Converters

KNX EIB/KNX radio

Technical specifications

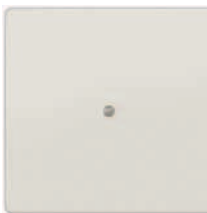


UP 140 wave/*instabus* couplers

- For coupling GAMMA wave with GAMMA *instabus*
- Coupling of a total of up to 50 GAMMA wave sensor channels with GAMMA *instabus* actuator channels or GAMMA *instabus* sensor channels with GAMMA wave actuator channels
- Pushbutton rocker, single with intermediate position
- Vertical operation
- From ETS3 upwards, can be configured with the functions: switching, switching and dimming, shutter/blind control or scene control

- Short and long button press for ON/OFF, brighter/darker for dimming or UP/DOWN and adjustment of slats for shutter/blind control
- Storage and call up of up to two scenes
- 1 LED for the indication of telegram transmissions
- KNX radio transmitter/receiver for 868 MHz
- 10-pole plug for plugging onto a UP 114 bus coupling unit, version BCU 2.1.

		i-system Single	DELTA profil Single	DELTA style Single
Dimensions				
• Length	mm	55	65	68
• Width	mm	55	65	68
• Depth	mm	13	14	16.5

Selection and ordering data


Version		DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
					Unit(s)	Unit(s)		kg
i-system								
	UP 140 wave/instabus couplers							
		• Titanium white	A	5WG3 140-2HB11	1	1	030	0.050
		• Carbon metallic	B	5WG3 140-2HB21	1	1	030	0.050
		• Aluminum metallic	B	5WG3 140-2HB31	1	1	030	0.050
	<u>Note:</u> The bus coupling units and matching frames must be ordered separately.							
5WG3 140-2HB11								
DELTA profil								
	UP 140 wave/instabus couplers							
		• Pearl gray	B	5WG3 140-2AB01	1	1	030	0.050
		• Titanium white	A	5WG3 140-2AB11	1	1	030	0.050
		• Anthracite	B	5WG3 140-2AB21	1	1	030	0.050
		• Silver	B	5WG3 140-2AB71	1	1	030	0.050
<u>Note:</u> The bus coupling units and matching cut-out frames must be ordered separately.								
5WG3 140-2AB11								
DELTA style								
	UP 140 wave/instabus couplers							
		• Titanium white	A	5WG3 140-2GB11	1	1	030	0.050
		• Basalt black	B	5WG3 140-2GB21	1	1	030	0.050
<u>Note:</u> The bus coupling units and matching frames must be ordered separately.								
5WG3 140-2GB11								

Technical specifications**GE 561/11 wave switch actuators,
with EnOcean/wave interface converters**

- KNX radio transmitter/receiver for 868 MHz
- EnOcean radio receiver for 868 MHz
- Converter of EnOcean radio to KNX radio for the control of KNX radio actuators over EnOcean radio pushbuttons
- Control of internal actuator channels over KNX and/or EnOcean radio pushbuttons
- One relay contact per output
- Contact rated operational voltage, 230 V AC
- Rated current 16 A at p.f. = 1

- With option for setting whether load should be permanently switched ON or OFF (normal mode) or whether actuator should operate in timer mode with an adjustable ON period of 1 ... 60 minutes
- Electronics powered over 230 V AC
- Commissioning over a pushbutton located on the top - no additional aids required
- Modular installation device
- Dimensions (W x H x L): 42 x 32 x 274.5 mm.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx. kg
				Unit(s)	Unit(s)		
 5WG3 561-4AB11	A	5WG3 561-4AB11		1	1	030	0.220
GE 561/11 wave switch actuators, 2 x 16 A with EnOcean/wave interface converters							

wave

System Products

Introduction

Overview

Transmitters, receivers



This includes a selection of wall-mounted transmitters for wireless operation.

Repeaters



Improves KNX radio communication when greater distances are required.

Technical specifications

UP 110 wall-mounted transmitters wave

- For the wireless operation of up to 2 different room functions and for the control of actuators over KNX radio
- 10-pole plug-in connector for plugging in an *instabus* pushbutton, single or double, as operator interface
- Adjustable function; switching, switching and dimming, shutter/blind control and scene control
- Short and long button press for ON/OFF, brighter/darker for dimming or UP/DOWN and adjustment of slats for shutter/blind control
- Storage and call up of up to four scenes
- KNX radio transmitter/receiver for 868 MHz
- Commissioning over four DIL switches located on the front panel - no additional aids required
- For mounting in an installation box (Ø 60 mm, depth: 40 mm) with screw or claw fixing.

UP 110 wall-mounted transmitters "Batterie" wave

- Electronics powered over a lithium battery (1/2 AA 3.6 V, wall-mounted transmitter "Batterie")
- Dimensions (H x W x D): 71 x 71 x 24 mm.

UP 110/11 wall-mounted transmitters 230 V wave

- Electronics powered over 230 V AC
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The *instabus* pushbuttons, matching frames and surface mounting enclosure (where applicable) must be ordered separately. Battery included in delivery.

UP 560 wall-mounted transmitters "Aktor" 230 V wave

- For the wireless operation of up to 2 different room functions and for the control of actuators over KNX radio
- 10-pole plug-in connector for plugging in an *instabus* pushbutton, single or double, as operator interface
- Adjustable function; switching, switching and dimming, shutter/blind control and scene control
- Short and long button press for ON/OFF, brighter/darker for dimming or UP/DOWN and adjustment of slats for shutter/blind control
- Storage and call up of up to four scenes
- With integrated switch actuator with relay contact, rated for 230 V AC, 6 A (resistive load), with option for setting whether load should be permanently switched on or off (normal mode) or whether actuator should operate in timer mode with an adjustable ON period of 1, 5 or 15 minutes
- KNX radio transmitter/receiver for 868 MHz
- Electronics powered over 230 V AC
- Commissioning over six DIL switches located on the front panel - no additional aids required
- For mounting in an installation box (Ø 60 mm, depth: 40 mm) with screw or claw fixing
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The *instabus* pushbuttons and matching frames must be ordered separately.

GAMMA wave flush mounting combinations

Operator interfaces	sys pushbuttons ¹⁾	UP 210 wave pushbuttons	sys shutter/blind pushbuttons ¹⁾	UP 211 wave shutter/blind pushbuttons	<i>instabus</i> pushbuttons, single, double
Device inserts					
Universal dimmer sys insert	✓	✓	--	--	--
sys switching insert	--	✓	--	--	--
Shutter/blind control sys insert	--	--	✓	✓	--
UP 110 wall-mounted transmitter "Batterie" wave	--	--	--	--	✓
UP 110 wall-mounted transmitter 230 V wave	--	--	--	--	✓
UP 560 wall-mounted transmitter "Aktor" 230 V wave	--	--	--	--	✓

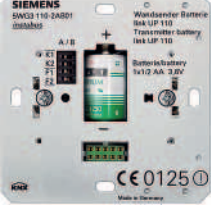


1) See Catalog ET D1.

wave

System Products

Transmitters, receivers

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/ P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
 <p>5WG3 110-2AB01</p>	A	5WG3 110-2AB01		1	1	030	0.050
 <p>5WG3 110-2AB11</p>	A	5WG3 110-2AB11		1	1	030	0.068
 <p>5WG3 560-2AB01</p>	A	5WG3 560-2AB01		1	1	030	0.074

Technical specifications

UP 141 wave repeaters

- For improving the KNX radio communication through the single repetition of each correctly received KNX radio telegram, if KNX radio telegrams are so dampened by several walls, ceilings or fixtures that an assigned receiver can no longer properly receive the KNX radio telegrams
- No teach-in to other KNX radio devices required
- KNX radio transmitter/receiver for 868 MHz
- Electronics powered over 230 V AC

- For mounting in an installation box (ø 60 mm, depth: 40 mm) with screw or claw fixing
- Central threaded hole for screwing onto a blanking cover plate
- Dimensions (H x W x D): 71 x 71 x 32 mm.

Note:

The blanking cover plate and matching frames must be ordered separately.

Selection and ordering data

Version	DT	Order No.	Price per PU	PU	PS*/P. unit	PG	Weight per PU approx.
				Unit(s)	Unit(s)		kg
UP 141 wave repeaters	A	5WG3 141-2AB01		1	1	030	0.065



5WG3 141-2AB01

wave
System Products

Notes

12



13/2	Switch actuators
13/3	Switch/dimming actuators
13/4	Shutter/blind actuators

Note: Only the chapters indicated in black on this page contain selection and ordering data.

Technical Information

Switch actuators

Technical specifications

Load data for switch actuators per channel

		N 670 universal I/O modules	N 562 binary outputs	N 510/03 load switches	N 510/04 load switches	N 512/01 load switches	N 567 switch actuators	N 567/11 switch actuators	N 567/12 switch actuators	N 567/21 switch actuators	GE 561/02 binary outputs	GE 526/01 switch/dimming actuators	UP 511/10 switch actuators	UP 562 binary outputs	Switchable UP 563 socket outlets	S 564 socket outlet switches
Contact current																
Rated current, AC	A	10	10	16	16	16	8	8	2	10	10	10	16	10	10	16
AC3 operation (p.f. = 0.45)	VA	500	500	2500	3680	3680	500	500	¹⁾	500	500	500	¹⁾	500	500	800
Maximum switch-on peak current A/ms (if more than one, specification of the highest current value)	A/ms	110/50	¹⁾	400/0.15	600/0.15	600/0.15	¹⁾	110/50	¹⁾	80/20	¹⁾	¹⁾	400/20	110/50	110/50	¹⁾
Contact voltage																
Rated voltage, AC	V	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Service life																
Mechanical service life Switching operations in millions		10	50	1	¹⁾	¹⁾	2	10	20	30	50	50	¹⁾	10	10	30
Electrical service life, resistive, switching operations in millions		0.1	0.1	¹⁾	¹⁾	¹⁾	0.1	0.1	0.1	0.1	0.1	0.1	¹⁾	0.1	0.1	0.1
Power loss																
Maximum power loss per device	W	9	3.3	26.4	20.4	41.5	.77.3	12.7	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾
Switching capacities/ load types, loads																
Resistive load	W	2300	2300	3680	3680	3680	1840	1840	460	2300	2300	2300	3680	2300	2300	3680
Minimum switching capacity	V/mA	24/10	24/10	12/100	12/100	12/100	5/100	24/10	5/10	¹⁾	24/10	24/10	¹⁾	24/10	24/10	¹⁾
DC switching capacity	V/A	30/10	30/10	24/10	24/10	24/10	24/8	30/10	24/8	24/16	30/10	30/10	¹⁾	30/10	30/10	24/16
Maximum capacitive load	μF	35	35	140	200	200	35	35	12	35	35	35	105	35	35	35
Incandescent lamps																
Incandescent lamps	W	1000	1000	2500	3680	3680	1000	1000	500	1000	1000	1000	2500	1000	1000	1000
Halogen lamp, 230 V	W	1000	1000	2500	3680	3680	1000	1000	500	1000	1000	1000	2200	1000	1000	1000
LV halogen lamp with conventional transformer (inductive)	VA	200 ... 500	500	500	2000	2000	200 ... 500	200 ... 500	200	500	500	500	1000	200 ... 500	200 ... 500	500
T5/T8 fluorescent lamps																
Uncorrected	VA	500	500	2500	3680	3680	500	500	200	500	500	500	¹⁾	500	500	500
Parallel corrected (at max. possible C)	W	2 x 58	2 x 58	1300	2500	2500	2 x 58	2 x 58	200	2 x 58	2 x 58	2 x 58	¹⁾	2 x 58	2 x 58	2 x 58
DUO circuit	VA	1000	1000	2500	3680	3680	1000	1000	200	1000	1000	1000	¹⁾	1000	1000	1000
ECG Osram QT1 1 x 28/54 W	Unit(s)	37	37	59	59	59	22	22	11	59	37	37	¹⁾	37	37	59
ECG Osram QTP 1 x 18/24/36 W	Unit(s)	14	14	31	31	31	14	14	7	14	14	14	¹⁾	14	14	14
ECG Osram QTP 1 x 58 W	Unit(s)	10	10	21	21	21	10	10	5	10	10	10	¹⁾	10	10	10
ECG Osram QTP 2 x 18/24/58 W; 3 x 18 W; 4 x 18 W	Unit(s)	5	5	9	9	9	5	5	2	5	5	5	¹⁾	5	5	5
Compact lamps																
Uncorrected	VA	500	500	1600	3680	3680	500	500	200	500	500	500	¹⁾	500	500	500
Parallel corrected (at max. possible C)	W	300	300	1100	3000	3000	300	300	200	300	300	300	¹⁾	300	300	300
ECG Osram Duluxtronics DT	Unit(s)	15	15	25	25	25	15	15	7	15	15	15	¹⁾	15	15	15
Mercury-vapor lamp																
ECG Osram PTI 35/220-240S	Unit(s)	7	7	14	14	14	7	7	3	7	7	7	¹⁾	7	7	7
ECG Osram PTI 70/220-240S	Unit(s)	4	4	8	8	8	4	4	2	4	4	4	¹⁾	4	4	4

¹⁾ On request.

For complete technical specifications, see:

<http://www.siemens.com/gamma-td>.

Technical specifications**Load data for switch/dimming actuators per channel**

		GE 525/02 switch/dimming actuators	N 525/02 switch/dimming actuators	N 526/02 switch/dimming actuators	N 526E02 switch/dimming actuators
Contact current					
Rated current, AC	A	10	16	6	16
Maximum switch-on peak current (if more than one, specification of the highest current value)	A/ms	¹⁾	¹⁾	120/20	400/0.15
Contact voltage					
Rated voltage, AC	V	230	230	230	230
Service life					
Mechanical service life Switching operations in millions		¹⁾	¹⁾	10	1
Electrical service life, resistive, switching operations in millions		0,05	0,05	0.4	¹⁾
Power loss					
Maximum power loss per device	W	¹⁾	4.3	¹⁾	¹⁾
Switching capacities/ load types, loads					
Resistive load	W	2300	3680	1380	3680
Minimum switching capacity	V/mA	12/500	12/500	¹⁾	12/100
DC switching capacity	V/A	30/16	30/16	30/8	24/10
Maximum capacitive load	µF	48	48	163	140
Incandescent lamps					
Incandescent lamps	W	2000	2000	1380	2500
Halogen lamp, 230 V	W	2000	2000	1380	2500
LV halogen lamp with conven- tional transformer (inductive)	VA	¹⁾	¹⁾	500	500
T5/T8 fluorescent lamps					
Uncorrected	VA	2000	2000	1380	2500
Parallel corrected (at max. possible C)	W	25 x 58	25 x 58	1380	1300
DUO circuit	VA	2000	2000	1380	2500
ECG Osram QTI 1 x 28/54 W	Unit(s)	37	59	22	59
ECG Osram QTP 1 x 18/24/36 W	Unit(s)	13	13	9	31
ECG Osram QTP 1 x 58 W	Unit(s)	10	10	6	21
ECG Osram QTP 2 x 18/24/58 W; 3 x 18 W; 4 x 18 W	Unit(s)	5	5	2	9
Compact lamps					
Uncorrected	VA	¹⁾	2000	1380	1600
Parallel corrected (at max. possible C)	W	¹⁾	920	1380	1100
ECG Osram Duluxtronics DT	Unit(s)	13	13	9	25
Mercury-vapor lamp					
ECG Osram PTI 35/220-240S	Unit(s)	7	8	4	14
ECG Osram PTI 70/220-240S	Unit(s)	4	5	2	8

¹⁾ On request.

For complete technical specifications, see:

<http://www.siemens.de/gamma-td>

Technical Information

Shutter/blind actuators

Technical specifications

Load data for shutter/blind actuators per channel

		UP 520 shutter/blind switches	GE 521/02 shutter/blind switches	N 521 shutter/blind switches	N 523/_ shutter/blind switches	N 522/03 shutter/blind actuators	N 524/01 shutter/blind actuators
Contact current							
Rated current	A	6 (AC)	6 (AC)	6 (AC)	6 (AC)	8 (AC)	1 (DC)
AC3 operation (p.f. = 0.45)	VA	500	500	500	200	200	200
Contact voltage							
Rated voltage	V	230 AC	230 AC	230 AC	230 AC	230 AC	24 DC
Service life							
Mechanical service life Switching operations in millions		10	50	50	20	20	20
Electrical service life, resistive, switching operations in millions		0.1	0.1	0.1	0.1	0.1	0.1
Power loss							
Max. power loss per device	W	1) ¹⁾	1) ¹⁾	1.3	10.5	1) ¹⁾	1) ¹⁾
Switching capacities/load types, loads:							
Resistive load	W	1380	1380	1380	1380	1840	24
Minimum switching capacity	V/mA	24/10	24/10	24/10	5/10	5/10	5/10
DC switching capacity	V/A	30/10	30/10	30/10	24/8	24/8	24/8

¹⁾ On request.

For complete technical specifications, see:

<http://www.siemens.de/gamma-td>.

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Appendix

Order information

Trademarks

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.

Ordering special designs

When ordering products that differ from the standard designs, the Order No. in the catalog must be supplemented by a "-Z"; the required characteristics must then be specified either by means of brief alphanumeric data or in plain text.

Ordering very small quantities

When ordering very small quantities, the cost of order processing often exceeds the order value. We therefore recommend that you combine several small orders. Where this is not possible, please note that we are obliged to make a small processing charge: For orders with a net goods value of less than € 100.– we charge a € 15.– supplement to cover our order processing and invoicing costs.

Internet

You can also visit our Automation & Drives site on the Internet at the following addresses:

- For the sector *Automation and Drives*:
<http://www.siemens.com/automation>
- For *Installation Technology*:
<http://www.siemens.com/e-installation>
- For the A&D Mall (CA 01):
<http://www.siemens.com/automation/ca01>

Notes

All technical data, dimensions and weights are subject to change without notice unless otherwise specified on the pages of this catalog.

All dimensions are specified in mm, the illustrations are for reference purposes only.

The technical data are for general information. The instruction manuals and the instructions on the products must be observed during assembly, operation and maintenance.

Siemens Contacts Worldwide

At

<http://www.siemens.com/automation/partner>

you can find details of Siemens contact partners worldwide responsible for particular technologies.

You can obtain in most cases a contact partner for

- Technical Support,
- Spare parts/repairs,
- Service,
- Training,
- Sales or
- Consultation/engineering.

You start by selecting a

- Country,
- Product or
- Sector.

By further specifying the remaining criteria you will find exactly the right contact partner with his/her respective expertise.

Appendix

A&D Online Services

Information and Ordering in the Internet and on CD-ROM

A&D in the WWW



A detailed knowledge of the range of products and services available is essential when planning and configuring automation systems. It goes without saying that this information must always be fully up-to-date.

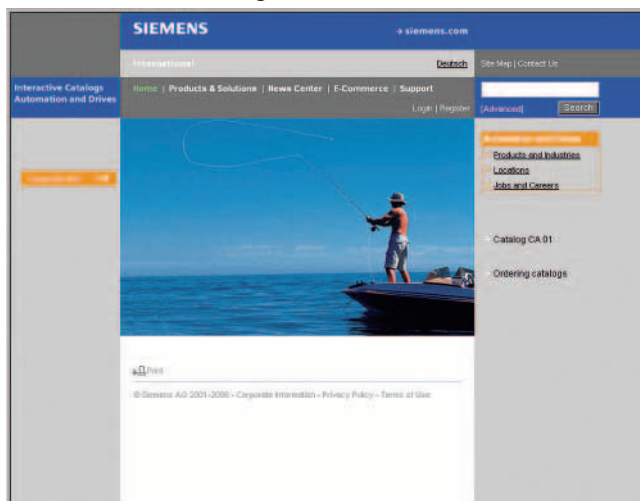
The Siemens Automation and Drives Group (A&D) has therefore built up a comprehensive range of information in the World Wide Web, which offers quick and easy access to all data required.

Under the address

<http://www.siemens.com/automation>

you will find everything you need to know about products, systems and services.

Product Selection Using the Offline Mall of Automation and Drives



Detailed information together with convenient interactive functions:

The Offline Mall CA 01 covers more than 80,000 products and thus provides a full summary of the Siemens Automation and Drives product base.

Here you will find everything that you need to solve tasks in the fields of automation, switchgear, installation and drives. All information is linked into a user interface which is easy to work with and intuitive.

After selecting the product of your choice you can order at the press of a button, by fax or by online link.

Information on the Offline Mall CA 01 can be found in the Internet under

<http://www.siemens.com/automation/ca01>

or on CD-ROM or DVD.

Easy Shopping with the A&D Mall



The A&D Mall is the virtual department store of Siemens AG in the Internet. Here you have access to a huge range of products presented in electronic catalogs in an informative and attractive way.

Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking of the order to be carried out online via the Internet.

Numerous functions are available to support you.

For example, powerful search functions make it easy to find the required products, which can be immediately checked for availability. Customer-specific discounts and preparation of quotes can be carried out online as well as order tracking and tracing.

Please visit the A&D Mall on the Internet under:

<http://www.siemens.com/automation/mall>

Our Services for Every Phase of Your Project



In the face of harsh competition you need optimum conditions to keep ahead all the time:

A strong starting position. A sophisticated strategy and team for the necessary support - in every phase.

Service & Support from Siemens provides this support with a complete range of different services for automation and drives.

In every phase: from planning and startup to maintenance and upgrading.

Our specialists know when and where to act to keep the productivity and cost-effectiveness of your system running in top form.

Online Support



The comprehensive information system available round the clock via Internet ranging from Product Support and Service & Support services to Support Tools in the Shop.

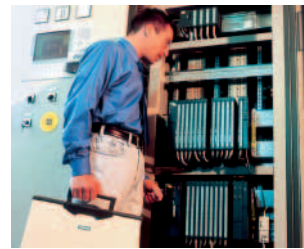
<http://www.siemens.com/automation/service&support>

Configuration and Software Engineering



Support in configuring and developing with customer-oriented services from actual configuration to implementation of the automation project. ¹⁾

Service On Site



With Service On Site we offer services for startup and maintenance, essential for ensuring system availability.

In Germany
0180 50 50 444 ¹⁾
(0,14 €/min from the German fixed network)

Repairs and Spare Parts



In the operating phase of a machine or automation system we provide a comprehensive repair and spare parts service ensuring the highest degree of operating safety and reliability.

In Germany
0180 50 50 446 ¹⁾
(0,14 €/min from the German fixed network)

Technical Support



Competent consulting in technical questions covering a wide range of customer-oriented services for all our products and systems.

Tel.: +49 (0)911 895 5900 ¹⁾
Fax: +49 (0)911 895 5907 ¹⁾

E-Mail: technical-assistance@siemens.com

Optimization and Upgrading



To enhance productivity and save costs in your project we offer high-quality services in optimization and upgrading. ¹⁾

Technical Consulting



Support in the planning and designing of your project from detailed actual-state analysis, target definition and consulting on product and system questions right to the creation of the automation solution. ¹⁾

¹⁾ Länderspezifische Telefonnummern finden Sie auf unserer Internet-seite <http://www.siemens.com/automation/service&support>

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5TC1 231	12/18	▶		1	1	024
5TC1 232	12/13	▶		1	1	024
5TC1 233	12/13	▶		1	1	024
5TC1 290	12/20	▶		1	1	024
5TC1 291	12/20	▶		1	1	024
5TC1 293	12/20	▶		1	1	024
5TC1 294	12/20	▶		1	1	024
5TG1 1						
5TG1 101-0	1/23	▶		1	1	021
5TG1 101-1	1/23	▶		1	1	021
5TG1 101-2	1/23	▶		1	1	021
5TG1 101-3	1/23	▶		1	1	021
5TG1 101-4	1/23	▶		1	1	021
5TG1 102-0	1/23	▶		1	1	021
5TG1 102-1	1/23	▶		1	1	021
5TG1 102-2	1/23	▶		1	1	021
5TG1 102-3	1/23	▶		1	1	021
5TG1 102-4	1/23	▶		1	1	021
5TG1 103-0	1/23	▶		1	1	021
5TG1 103-1	1/23	▶		1	1	021
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5TG1 103-4	1/23	▶		1	1	021
5TG1 104-0	1/23	▶		1	1	021
5TG1 104-1	1/23	▶		1	1	021
5TG1 104-2	1/23	▶		1	1	021
5TG1 104-3	1/23	▶		1	1	021
5TG1 104-4	1/23	▶		1	1	021
5TG1 111-0	1/23	▶		1	1/10	021
5TG1 111-1	1/23	▶		1	1/10	021
5TG1 111-2	1/23	▶		1	1/10	021
5TG1 112-0	1/23	▶		1	1/10	021
5TG1 112-1	1/23	▶		1	1/10	021
5TG1 112-2	1/23	▶		1	1/10	021
5TG1 113-0	1/23	▶		1	1/10	021
5TG1 113-1	1/23	▶		1	1/10	021
5TG1 113-2	1/23	▶		1	1/10	021
5TG1 114-0	1/23	▶		1	1/10	021
5TG1 114-1	1/23	▶		1	1/10	021

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5TG1 114-2	1/23	▶		1	1/10	021
5TG1 115-0	1/23	▶		1	1/3	021
5TG1 115-1	1/23	▶		1	1/3	021
5TG1 115-2	1/23	▶		1	1/3	021
5TG1 141	1/22	▶		1	1/10	021
5TG1 142	1/22	▶		1	1/10	021
5TG1 143	1/22	▶		1	1/10	021
5TG1 144	1/22	▶		1	1/10	021
5TG1 145	1/22	▶		1	1/5	021
5TG1 151	1/22	▶		1	1/10	021
5TG1 152	1/22	▶		1	1/10	021
5TG1 153	1/22	▶		1	1/10	021
5TG1 154	1/22	▶		1	1/10	021
5TG1 155	1/22	▶		1	1/5	021
5TG1 161	1/22	▶		1	1/10	021
5TG1 162	1/22	▶		1	1/10	021
5TG1 163	1/22	▶		1	1/10	021
5TG1 164	1/22	▶		1	1/10	021
5TG1 165	1/22	▶		1	1/5	021
5TG1 171	1/22	▶		1	1/10	021
5TG1 172	1/22	▶		1	1/10	021
5TG1 173	1/22	▶		1	1/10	021
5TG1 174	1/22	▶		1	1/10	021
5TG1 175	1/22	▶		1	1/5	021
5TG1 177	1/22	▶		1	1/10	021
5TG1 178	1/22	▶		1	1/10	021
5TG1 180	1/22	▶		1	1/10	021
5TG1 181	1/22	▶		1	1/10	021
5TG1 182	1/22	▶		1	1/10	021
5TG1 183	1/22	▶		1	1/10	021
5TG1 184	1/22	▶		1	1/10	021
5TG1 185	1/22	▶		1	1/10	021
5TG1 186	1/22	▶		1	1/10	021
5TG1 187	1/22	▶		1	1/10	021
5TG1 188-1	1/22	▶		1	1/10	021
5TG1 2						
5TG1 201	1/23	▶		1	1	021
5TG1 202	1/23	▶		1	1	021
5TG1 203	1/23	▶		1	1	021
5TG1 204	1/23	▶		1	1	021
5TG1 205	1/23	▶		1	1	021
5TG1 220	12/8	▶		1	1/10	021
5TG1 250	12/8	▶		1	1/10	021

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5TG1 3						
5TG1 321	1/25	▶		1	1/10	021
5TG1 322	1/25	▶		1	1/10	021
5TG1 323	1/25	▶		1	1/10	021
5TG1 324	1/25	▶		1	1/10	021
5TG1 325	1/25	▶		1	1/5	021
5TG1 328	1/25	▶		1	1/10	021
5TG1 330	12/8	▶		1	1/10	021
5TG1 361	1/25	▶		1	1/10	021
5TG1 362	1/25	▶		1	1/10	021
5TG1 363	1/25	▶		1	1/10	021
5TG1 364	1/25	▶		1	1/10	021
5TG1 365	1/25	▶		1	1/5	021
5TG1 368	1/25	▶		1	1/10	021
5TG1 370	12/8	▶		1	1/10	021
5TG1 5						
5TG1 510	12/8	▶		1	1/5	021
5TG1 511	1/26	▶		1	1/5	021
5TG1 512	1/26	▶		1	1/5	021
5TG1 513	1/26	▶		1	1/5	021
5TG1 514	1/26	▶		1	1/5	021
5TG1 515	1/26	▶		1	1/5	021
5TG1 7						
5TG1 701-1	1/24	▶		1	1/10	021
5TG1 741-1	1/24	▶		1	1/10	021
5TG1 761	1/24	▶		1	1/10	021
5TG1 763	1/24	▶		1	1/10	021
5TG1 764	1/24	▶		1	1/10	021
5TG1 770	12/8	▶		1	1/10	021
5TG1 8						
5TG1 801	1/24	▶		1	1/10	021
5TG1 802	1/24	▶		1	1/10	021
5TG1 803	1/24	▶		1	1/10	021
5TG1 804	1/24	▶		1	1/10	021
5TG1 810	12/8	▶		1	1/10	021
5TG1 825	1/20	▶		1	1/5	021
5TG1 826	1/20	▶		1	1/5	021
5TG1 831	1/24	▶		1	1/10	021
5TG1 832	1/24	▶		1	1/10	021
5TG1 833	1/24	▶		1	1/10	021
5TG1 834	1/24	▶		1	1/10	021
5TG1 840	12/8	▶		1	1/10	021
5TG1 861	1/24	▶		1	1/10	021

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5TG1 862	1/24	▶		1	1/10	021
5TG1 863	1/24	▶		1	1/10	021
5TG1 864	1/24	▶		1	1/10	021
5TG1 870	12/8	▶		1	1/10	021
5TG2 5						
5TG2 551-0	1/21	▶		1	1/10	021
5TG2 551-1	1/21	▶		1	1/10	021
5TG2 551-3	1/21	▶		1	1/10	021
5TG2 551-4	1/21	▶		1	1/10	021
5TG2 551-6	1/21	▶		1	1/10	021
5TG2 551-7	1/21	▶		1	1/10	021
5TG2 552-0	1/21	▶		1	1/10	021
5TG2 552-1	1/21	▶		1	1/10	021
5TG2 552-2	1/21	▶		1	1/10	021
5TG2 552-3	1/21	▶		1	1/10	021
5TG2 552-4	1/21	▶		1	1/10	021
5TG2 552-5	1/21	▶		1	1/10	021
5TG2 552-6	1/21	▶		1	1/10	021
5TG2 552-7	1/21	▶		1	1/10	021
5TG2 552-8	1/21	▶		1	1/10	021
5TG2 553-0	1/21	▶		1	1/10	021
5TG2 553-1	1/21	▶		1	1/10	021
5TG2 553-2	1/21	▶		1	1/10	021
5TG2 553-3	1/21	▶		1	1/10	021
5TG2 553-6	1/21	▶		1	1/10	021
5TG2 554-0	1/21	▶		1	1/10	021
5TG2 554-1	1/21	▶		1	1/10	021
5TG2 554-2	1/21	▶		1	1/10	021
5TG2 554-3	1/21	▶		1	1/10	021
5TG2 554-6	1/21	▶		1	1/10	021
5TG2 555-0	1/21	▶		1	1/5	021
5TG2 555-3	1/21	▶		1	1/5	021
5TG2 555-6	1/21	▶		1	1/5	021
5TG2 558	12/8	▶		1	1/10	021
5TG2 581-0	1/21	▶		1	1/10	021
5TG2 581-1	1/21	▶		1	1/10	021
5TG2 582-0	1/21	▶		1	1/10	021
5TG2 582-1	1/21	▶		1	1/10	021
5TG2 582-2	1/21	▶		1	1/10	021
5TG2 583-0	1/21	▶		1	1/10	021
5TG2 583-1	1/21	▶		1	1/10	021
5TG2 583-2	1/21	▶		1	1/10	021
5TG2 584-0	1/21	▶		1	1/10	021

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5TG2 584-1	1/21	▶		1	1/10	021
5TG2 584-2	1/21	▶		1	1/10	021
5TG2 585-0	1/21	▶		1	1/5	021
5TG2 8						
5TG2 861	1/20	▶		1	1/5	021
5TG2 862	1/20	▶		1	1/3	021
5TG2 863	1/20	▶		1	1/2	021
5TG2 9						
5TG2 901	1/20	▶		1	1/5	021
5TG2 902	1/20	▶		1	1/3	021
5TG2 903	1/20	▶		1	1/2	021
5WG1 11						
5WG1 110-2AB03	9/4	B		1	1	030
5WG1 110-2AB11	9/4	B		1	1	030
5WG1 114-2AB02	9/4	B		1	1	030
5WG1 115-3AB01	1/11	B		1	1	030
5WG1 115-3AB11	1/11	B		1	1	030
5WG1 115-3AB21	1/11	B		1	1	030
5WG1 115-3AB31	1/11	B		1	1	030
5WG1 116-2AB01	1/9 ¹⁾ 9/4	B		1	1	030
5WG1 116-2AB11	1/9, 9/4	B		1	1	030
5WG1 116-2AB21	1/9, 9/4	B		1	1	030
5WG1 116-2AB31	1/9, 9/4	B		1	1	030
5WG1 117-2AB11	9/4	B		1	1	030
5WG1 12						
5WG1 120-1AB02	9/9	B		1	1	030
5WG1 125-1AB01	9/8	B		1	1	030
5WG1 125-1AB11	9/8	B		1	1	030
5WG1 125-1AB21	9/8	B		1	1	030
5WG1 14						
5WG1 140-1AB03	9/11	B		1	1	030
5WG1 140-1AB13	9/11	B		1	1	030
5WG1 140-7AU02	6/17	A		1	1	030
5WG1 140-7AU22	6/17	A		1	1	030
5WG1 141-1AB01	6/13	C		1	1	030
5WG1 141-4AB01	6/13	A		1	1	030
5WG1 142-2AB01	6/5	B		1	1	030
5WG1 142-2EB01	6/7	B		1	1	030
5WG1 146-1AB01	6/15, 9/11, 9/12	A		1	1	030
5WG1 146-2AB01	6/5	B		1	1	030
5WG1 146-2AB11	6/5	A		1	1	030
5WG1 146-2AB21	6/5	B		1	1	030
5WG1 146-2AB71	6/5	B		1	1	030

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 146-2EB01	6/7	B		1	1	030
5WG1 146-2EB11	6/7	A		1	1	030
5WG1 146-2EB21	6/7	B		1	1	030
5WG1 146-2EB71	6/7	B		1	1	030
5WG1 148-1AB02	6/5	A		1	1	030
5WG1 148-1AB04	6/5	A		1	1	030
5WG1 148-1AB11	6/7	A		1	1	030
5WG1 148-1AB21	6/15, 9/12	A		1	1	030
5WG1 19						
5WG1 190-7AU01	6/17	A		1	1	030
5WG1 190-8AB01	10/5	B		1	5	030
5WG1 190-8AB02	10/5	A		1	5	030
5WG1 190-8AB03	10/5	B		1	5	030
5WG1 190-8AB04	10/5	B		1	5	030
5WG1 190-8AB11	10/5	B		1	5	030
5WG1 190-8AB12	10/5	B		1	5	030
5WG1 190-8AB13	10/5	B		1	5	030
5WG1 190-8AB14	10/5	B		1	5	030
5WG1 190-8AB21	10/5	B		1	5	030
5WG1 190-8AB22	10/5	B		1	5	030
5WG1 190-8AB23	10/5	B		1	5	030
5WG1 190-8AB24	10/5	B		1	5	030
5WG1 190-8AB31	10/5	B		1	5	030
5WG1 190-8AB32	10/5	B		1	5	030
5WG1 190-8AB33	10/5	B		1	5	030
5WG1 190-8AB34	10/5	B		1	5	030
5WG1 190-8AB41	10/5	B		1	5	030
5WG1 190-8AB42	10/5	B		1	5	030
5WG1 190-8AB43	10/5	B		1	5	030
5WG1 190-8AB44	10/5	B		1	5	030
5WG1 190-8AB51	10/5	B		1	5	030
5WG1 190-8AB52	10/5	B		1	5	030
5WG1 190-8AB53	10/5	B		1	5	030
5WG1 190-8AB54	10/5	B		1	5	030
5WG1 190-8AD01	10/6	A		1	1	030
5WG1 191-5AB01	10/4	A		1	1	030
5WG1 191-5AB11	10/4	A		1	1	030
5WG1 192-8AA01	10/3	D		1	5	030
5WG1 193-8AB01	10/3	A		1	25	030
5WG1 195-3AB01	1/29	C		1 m	1 m/2 m	030
5WG1 195-8AB01	1/29	C		1	1	030
5WG1 195-8AB11	1/29	C		1	1	030
5WG1 195-8AB21	1/29	C		1	1	030

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 195-8AB31	1/29	C		1	1	030
5WG1 195-8AB41	1/29	C		1	1	030
5WG1 195-8AB51	1/29	C		1	1	030
5WG1 196-2AB01	9/5	B		1	10	030
5WG1 197-8AB01	1/29	C		1 m	1 m/2 m	030
5WG1 198-8AB01	1/29	C		1	1	030
5WG1 22						
5WG1 220-2AB02	3/6	A		1	1	030
5WG1 220-2AB03	3/6	A		1	1	030
5WG1 220-2AB13	3/6	A		1	1	030
5WG1 221-2AB01	1/4	B		1	1	030
5WG1 221-2AB11	1/4	A		1	1	030
5WG1 221-2AB21	1/4	B		1	1	030
5WG1 221-2AB31	1/4	B		1	1	030
5WG1 221-2EB01	1/4	B		1	1	030
5WG1 221-2EB11	1/4	A		1	1	030
5WG1 221-2EB21	1/4	B		1	1	030
5WG1 221-2EB31	1/4	B		1	1	030
5WG1 222-2AB01	1/4	B		1	1	030
5WG1 222-2AB11	1/4	A		1	1	030
5WG1 222-2AB21	1/4	B		1	1	030
5WG1 222-2AB31	1/4	B		1	1	030
5WG1 222-2EB01	1/4	B		1	1	030
5WG1 222-2EB11	1/4	A		1	1	030
5WG1 222-2EB21	1/4	B		1	1	030
5WG1 222-2EB31	1/4	B		1	1	030
5WG1 223-2AB01	1/4	B		1	1	030
5WG1 223-2AB11	1/4	A		1	1	030
5WG1 223-2AB21	1/4	B		1	1	030
5WG1 223-2AB31	1/4	B		1	1	030
5WG1 23						
5WG1 230-2AB02	1/17	B		1	1	030
5WG1 230-2AB12	1/17	A		1	1	030
5WG1 230-2AB22	1/17	B		1	1	030
5WG1 230-2AB72	1/17	B		1	1	030
5WG1 230-2EB11	1/17	A		1	1	030
5WG1 230-2EB21	1/17	B		1	1	030
5WG1 231-2AB03	1/16, 5/29	B		1	1	030
5WG1 231-2AB13	1/16, 5/29	A		1	1	030
5WG1 231-2AB23	1/16, 5/29	B		1	1	030
5WG1 231-2AB73	1/16, 5/29	B		1	1	030
5WG1 231-2EB13	1/16, 5/29	A		1	1	030
5WG1 231-2EB23	1/16, 5/29	B		1	1	030

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 233-2AB01	1/14, 6/9	B		1	1	030
5WG1 233-2AB11	1/14, 6/9	A		1	1	030
5WG1 233-2AB21	1/14, 6/9	B		1	1	030
5WG1 233-2AB71	1/14, 6/9	B		1	1	030
5WG1 234-2AB01	1/14, 6/9	B		1	1	030
5WG1 234-2AB11	1/14, 6/9	A		1	1	030
5WG1 234-2AB21	1/14, 6/9	B		1	1	030
5WG1 234-2AB71	1/14, 6/9	B		1	1	030
5WG1 235-2AB01	1/14, 6/9	B		1	1	030
5WG1 235-2AB11	1/14, 6/9	A		1	1	030
5WG1 235-2AB21	1/14, 6/9	B		1	1	030
5WG1 235-2AB71	1/14, 6/9	B		1	1	030
5WG1 237-2AB11	5/27	A		1	1	030
5WG1 237-2AB21	5/27	B		1	1	030
5WG1 237-2AB31	5/27	B		1	1	030
5WG1 237-2EB11	5/25	A		1	1	030
5WG1 237-2EB21	5/25	B		1	1	030
5WG1 237-2EB31	5/25	B		1	1	030
5WG1 237-2FB11	5/25	A		1	1	030
5WG1 237-2FB21	5/25	B		1	1	030
5WG1 237-2FB31	5/25	B		1	1	030
5WG1 24						
5WG1 241-2AB01	1/5	B		1	1	030
5WG1 241-2AB11	1/5	A		1	1	030
5WG1 241-2AB21	1/5	B		1	1	030
5WG1 241-2AB71	1/5	B		1	1	030
5WG1 242-2AB01	1/5	B		1	1	030
5WG1 242-2AB11	1/5	A		1	1	030
5WG1 242-2AB21	1/5	B		1	1	030
5WG1 242-2AB71	1/5	B		1	1	030
5WG1 243-2AB01	1/5	B		1	1	030
5WG1 243-2AB11	1/5	A		1	1	030
5WG1 243-2AB21	1/5	B		1	1	030
5WG1 243-2AB71	1/5	B		1	1	030
5WG1 244-2AB01	1/5	B		1	1	030
5WG1 244-2AB11	1/5	A		1	1	030
5WG1 244-2AB21	1/5	B		1	1	030
5WG1 244-2AB71	1/5	B		1	1	030
5WG1 245-2AB01	1/5	B		1	1	030
5WG1 245-2AB11	1/5	A		1	1	030
5WG1 245-2AB21	1/5	B		1	1	030
5WG1 245-2AB71	1/5	B		1	1	030
5WG1 246-2AB01	1/5	B		1	1	030

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 246-2AB11	1/5	A		1	1	030
5WG1 246-2AB21	1/5	B		1	1	030
5WG1 246-2AB71	1/5	B		1	1	030
5WG1 25						
5WG1 250-8AB01	5/28	C		1	1	030
5WG1 252-2AB03	5/27	B		1	1	030
5WG1 252-2AB13	5/27	A		1	1	030
5WG1 252-2AB23	5/27	B		1	1	030
5WG1 252-2AB73	5/27	B		1	1	030
5WG1 252-2EB01	5/26	B		1	1	030
5WG1 252-2EB11	5/26	C		1	1	030
5WG1 252-2EB21	5/26	B		1	1	030
5WG1 252-2EB71	5/26	B		1	1	030
5WG1 252-2FB01	5/26	B		1	1	030
5WG1 252-2FB11	5/26	C		1	1	030
5WG1 252-2FB21	5/26	B		1	1	030
5WG1 252-2FB71	5/26	B		1	1	030
5WG1 252-4AB02	5/12, 7/6	A		1	1	030
5WG1 253-2AB03	5/28	B		1	1	030
5WG1 253-4AB01	5/12, 7/6	B		1	1	030
5WG1 254-2AB13	5/28	A		1	1	030
5WG1 254-2AB23	5/28	B		1	1	030
5WG1 254-2EB11	5/26	B		1	1	030
5WG1 254-2EB21	5/26	B		1	1	030
5WG1 254-2FB11	5/26	A		1	1	030
5WG1 254-2FB21	5/26	B		1	1	030
5WG1 254-3EY01	5/12, 5/24, 7/6, 7/8	A		1	1	030
5WG1 254-4AB01	5/12, 7/6	B		1	1	030
5WG1 255-2AB01	7/4	B		1	1	030
5WG1 255-2AB02	7/4	B		1	1	030
5WG1 255-2AB11	7/4	A		1	1	030
5WG1 255-2AB12	7/4	A		1	1	030
5WG1 255-2AB21	7/4	B		1	1	030
5WG1 255-2AB22	7/4	B		1	1	030
5WG1 255-2AB71	7/4	B		1	1	030
5WG1 255-2AB72	7/4	B		1	1	030
5WG1 255-4AB01	4/5, 5/8, 5/11	A		1	1	030
5WG1 255-4AB02	4/5, 5/8, 5/11	C		1	1	030
5WG1 256-2AB01	7/4	B		1	1	030
5WG1 256-2AB02	7/4	B		1	1	030
5WG1 256-3AB01	5/38, 7/7, 7/8	A		1	1	030
5WG1 257-2AB21	7/4	B		1	1	030

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 257-2AB22	7/4	B		1	1	030
5WG1 257-3AB01	5/20	A		1	1	030
5WG1 257-3AB11	5/20	A		1	1	030
5WG1 257-3AB21	5/20					
5WG1 258-1AB02	5/23, 7/6	B		1	1	030
5WG1 258-2AB11	5/11, 7/5, 7/8	A		1	1	030
5WG1 258-2AB21	5/11, 7/5, 7/8	B		1	1	030
5WG1 258-2HB11	7/4	A		1	1	030
5WG1 258-2HB12	7/4	A		1	1	030
5WG1 258-2HB21	7/4	B		1	1	030
5WG1 258-2HB22	7/4	B		1	1	030
5WG1 258-2HB31	7/4	C		1	1	030
5WG1 258-2HB32	7/4	B		1	1	030
5WG1 258-3AB11	5/21	A		1	1	030
5WG1 258-3AB21	5/21	A		1	1	030
5WG1 258-3AB31	5/21	A		1	1	030
5WG1 258-3AB41	5/21	A		1	1	030
5WG1 258-3EB21	5/11, 7/5, 7/8	B		1	5	030
5WG1 258-7AB02	5/20	A		1	1	030
5WG1 258-7AB03	5/20	A		1	1	030
5WG1 258-7AB13	5/20	A		1	1	030
5WG1 258-8AB01	5/20	A		1	1	030
5WG1 258-8AB21	5/21	A		1	1	030
5WG1 26						
5WG1 260-1AB01	3/6	C		1	1	030
5WG1 261-1AB01	3/6	A		1	1	030
5WG1 262-1EB01	3/6	A		1	1	030
5WG1 262-1EB11	3/6	A		1	1	030
5WG1 262-4AB02	3/6	A		1	1	030
5WG1 263-1EB01	3/6	A		1	1	030
5WG1 263-1EB11	3/6	A		1	1	030
5WG1 264-1EB11	3/6	A		1	1	030
5WG1 266-1AB01	4/6, 5/37	A		1	1	030
5WG1 27						
5WG1 272-2AB01	5/38, 7/7	B		1	1	030
5WG1 272-2AB11	5/38, 7/7	A		1	1	030
5WG1 272-2AB21	5/38, 7/7	B		1	1	030
5WG1 272-2AB71	5/38, 7/7	B		1	1	030
5WG1 28						
5WG1 281-8AB01	1/7	C		1	1	030
5WG1 282-8AB01	1/7	C		1	1	030
5WG1 283-8AB01	1/7	C		1	1	030

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 284-2AB01	1/6	B		1	1	030
5WG1 284-2AB03	1/6	B		1	1	030
5WG1 284-2EB01	1/15, 6/10	B		1	1	030
5WG1 284-2EB03	1/15, 6/10	B		1	1	030
5WG1 285-2AB01	1/6	B		1	1	030
5WG1 285-2AB11	1/6	A		1	1	030
5WG1 285-2AB21	1/6	B		1	1	030
5WG1 285-2AB81	1/6	B		1	1	030
5WG1 285-2EB01	1/14, 6/9	B		1	1	030
5WG1 285-2EB11	1/14, 6/9	A		1	1	030
5WG1 285-2EB21	1/14, 6/9	B		1	1	030
5WG1 285-2EB81	1/14, 6/9	B		1	1	030
5WG1 286-2AB01	1/6	B		1	1	030
5WG1 286-2AB11	1/6	A		1	1	030
5WG1 286-2AB21	1/6	B		1	1	030
5WG1 286-2AB81	1/6	B		1	1	030
5WG1 286-2EB01	1/14, 6/9	B		1	1	030
5WG1 286-2EB11	1/14, 6/9	A		1	1	030
5WG1 286-2EB21	1/14, 6/9	B		1	1	030
5WG1 286-2EB81	1/14, 6/9	B		1	1	030
5WG1 287-2AB01	1/6	B		1	1	030
5WG1 287-2AB11	1/6	A		1	1	030
5WG1 287-2AB21	1/6	B		1	1	030
5WG1 287-2AB81	1/6	B		1	1	030
5WG1 287-2EB01	1/15, 6/9	B		1	1	030
5WG1 287-2EB11	1/15, 6/9	A		1	1	030
5WG1 287-2EB21	1/15, 6/9	B		1	1	030
5WG1 287-2EB81	1/15, 6/9	B		1	1	030
5WG1 29						
5WG1 293-8AB00	1/19	A		100	10	030
5WG1 293-8AB01	1/19	A		100	10	030
5WG1 293-8AB02	1/19	A		100	10	030
5WG1 293-8AB03	1/19	A		100	10	030
5WG1 293-8AB04	1/19	A		100	10	030
5WG1 293-8AB05	1/19	A		100	10	030
5WG1 293-8AB06	1/19	A		100	10	030
5WG1 293-8AB07	1/19	A		100	10	030
5WG1 293-8AB08	1/19	A		100	10	030
5WG1 293-8AB10	1/19	A		100	10	030
5WG1 294-8AB01	9/4	A		1	10	030
5WG1 3						
5WG1 300-1AB01	8/8	A		1	1	030
5WG1 301-1AB01	8/8	A		1	1	030

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 302-1AB01	8/8	A		1	1	030
5WG1 341-1AB01	8/8	A		1	1	030
5WG1 342-1AB01	5/12	A		1	1	030
5WG1 343-1AB01	11/3	A		1	1	030
5WG1 345-1AB01	5/37	A		1	1	030
5WG1 347-1AB02	8/8	A		1	1	030
5WG1 350-1AB01	8/8	A		1	1	030
5WG1 350-1EB01	6/15, 8/8, 8/10, 9/12	A		1	1	030
5WG1 360-1AB01	5/35	A		1	1	030
5WG1 371-5EY01	8/10	A		1	1	030
5WG1 372-5EY01	8/10	A		1	1	030
5WG1 372-5EY02	8/10	A		1	1	030
5WG1 373-5EY01	8/10	A		1	1	030
5WG1 390-3EY01	8/10	A		1	1	030
5WG1 4						
5WG1 425-7AB21	1/33	A		1	1	030
5WG1 440-7AB01	6/10	A		1	1	030
5WG1 450-1AB02	6/10	A		1	1	030
5WG1 51						
5WG1 510-1AB03	2/6	A		1	1	030
5WG1 510-1AB04	2/6	A		1	1	030
5WG1 511-2AB10	2/7, 4/6	A		1	1	030
5WG1 512-1AB01	2/6	A		1	1	030
5WG1 52						
5WG1 520-2AB01	5/17	A		1	1	030
5WG1 520-2AB11	5/17	A		1	1	030
5WG1 521-1AB01	5/16	A		1	1	030
5WG1 521-4AB02	5/17	A		1	1	030
5WG1 522-1AB03	5/16	A		1	1	030
5WG1 523-1AB02	5/16	A		1	1	030
5WG1 523-1AB03	5/16	A		1	1	030
5WG1 523-1AB04	5/16	A		1	1	030
5WG1 523-1AB11	5/16					
5WG1 524-1AB01	5/16	A		1	1	030
5WG1 525-1AB02	5/8	A		1	1	030
5WG1 525-1EB01	5/8, 6/13	A		1	1	030
5WG1 525-2AB01	5/5	A		1	1	030
5WG1 525-2AB11	5/5	A		1	1	030
5WG1 525-4AB02	5/8	A		1	1	030
5WG1 526-1AB02	4/5, 5/8, 5/11	A		1	1	030
5WG1 526-1EB02	5/8	A		1	1	030
5WG1 526-4AB01	5/8	A		1	1/5	030

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5WG1 527-1AB02	5/5	A		1	1	030
5WG1 528-1AB02	5/5	A		1	1	030
5WG1 54						
5WG1 540-5AS01	5/32	A		1	1	030
5WG1 540-5AS11	5/32	A		1	1	030
5WG1 540-8AS01	5/32	A		1	1	030
5WG1 56						
5WG1 560-7AH01	5/34	A		1	1	030
5WG1 560-7AH02	5/34	A		1	1	030
5WG1 560-7AR01	5/34	A		1	1	030
5WG1 561-4AB02	2/6	A		1	1	030
5WG1 562-2AB01	2/7	A		1	1	030
5WG1 562-2AB11	2/7	A		1	1	030
5WG1 562-7EY01	5/34	A		1	1	030
5WG1 563-2AB11	2/8	A		1	1	030
5WG1 567-1AB01	2/6	A		1	1	030
5WG1 567-1AB11	2/6	A		1	1	030
5WG1 567-1AB12	2/6	A		1	1	030
5WG1 567-1AB21	2/6	A		1	1	030
5WG1 58						
5WG1 584-2AB21	1/31	B		1	1	030
5WG1 585-2AB01	1/30	B		1	1	030
5WG1 585-2AB11	1/30, 1/31	A		1	1	030
5WG1 585-2AB21	1/30	B		1	1	030
5WG1 585-2AB71	1/30	B		1	1	030
5WG1 586-2AB01	1/31	B		1	1	030
5WG1 587-2AB01	1/30	A		1	1	030
5WG1 587-2AB02	1/30	A		1	1	030
5WG1 587-2AB11	1/30	A		1	1	030
5WG1 587-2AB12	1/30	A		1	1	030
5WG1 587-2AB21	1/30	A		1	1	030
5WG1 587-2AB22	1/30	A		1	1	030
5WG1 587-2AB31	1/30	A		1	1	030
5WG1 587-2AB32	1/30	A		1	1	030
5WG1 588-2AB01	1/32	A		1	1	030
5WG1 588-2AB11	1/32	A		1	1	030
5WG1 588-2AB21	1/32	B		1	1	030
5WG1 588-8AB01	1/32	A		1	1	030
5WG1 59						
5WG1 590-7AR01	5/34	D		1	1	030
5WG1 590-7AR02	5/34	A		1	1	030
5WG1 590-8AH01	5/34	A		1	1	030
5WG1 6						

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG1 605-1AB01	4/5, 5/32	A		1	1	030
5WG1 605-1AB11	4/5, 5/32	A		1	1	030
5WG1 611-3AL01	5/41	B		1	1	030
5WG1 611-3AL11	5/41	B		1	1	030
5WG1 611-3AL21	5/41	B		1	1	030
5WG1 611-3AL31	5/41	B		1	1	030
5WG1 611-3AL51	5/41	B		1	1	030
5WG1 611-3AL61	5/41	B		1	1	030
5WG1 631-3AL01	5/43	B		1	1	030
5WG1 631-3AL02	5/43	B		1	1	030
5WG1 631-3AL11	5/43	B		1	1	030
5WG1 631-3AL12	5/43	B		1	1	030
5WG1 631-3AL21	5/43	B		1	1	030
5WG1 631-3AL22	5/43	B		1	1	030
5WG1 631-3AL32	5/43	B		1	1	030
5WG1 631-3AL43	5/43	B		1	1	030
5WG1 631-3AL44	5/43	B		1	1	030
5WG1 631-3AL51	5/43	B		1	1	030
5WG1 631-3AL52	5/43	B		1	1	030
5WG1 631-3AL62	5/43, 6/18					
5WG1 670-1AB03	2/3, 3/3, 4/5, 5/23, 5/32	A		1	1	030
5WG1 8						
5WG1 810-0EY01	8/10	A		1	1	030
5WG1 810-8EY01	8/10	A		1	1	030
5WG1 810-8EY02	8/10	A		1	1	030
5WG3 11						
5WG3 110-2AB01	12/26	A		1	1	030
5WG3 110-2AB11	12/26	A		1	1	030
5WG3 110-8AB01	1/20, 12/8	C		1	1	030
5WG3 110-8AB11	1/20, 12/8	A		1	1	030
5WG3 110-8AB21	1/20, 12/8	C		1	1	030
5WG3 110-8AB71	1/20, 12/8	C		1	1	030
5WG3 1						
5WG3 140-2AB01	6/16, 12/22	B		1	1	030
5WG3 140-2AB11	6/16, 12/22	A		1	1	030
5WG3 140-2AB21	6/16, 12/22	B		1	1	030
5WG3 140-2AB71	6/16, 12/22	B		1	1	030
5WG3 140-2GB11	6/16, 12/22	A		1	1	030
5WG3 140-2GB21	6/16, 12/22	B		1	1	030
5WG3 140-2HB11	6/16, 12/22	A		1	1	030
5WG3 140-2HB21	6/16, 12/22	B		1	1	030
5WG3 140-2HB31	6/16, 12/22	B		1	1	030

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Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
5WG3 141-2AB01	12/27	A		1	1	030
5WG3 2						
5WG3 210-2AB01	12/7	B		1	1	030
5WG3 210-2AB11	12/7	A		1	1	030
5WG3 210-2AB21	12/7	B		1	1	030
5WG3 210-2AB71	12/7	B		1	1	030
5WG3 210-2GB11	12/7	A		1	1	030
5WG3 210-2GB21	12/7	B		1	1	030
5WG3 210-2HB11	12/6	A		1	1	030
5WG3 210-2HB21	12/6	B		1	1	030
5WG3 210-2HB31	12/6	B		1	1	030
5WG3 211-2AB01	12/7	B		1	1	030
5WG3 211-2AB11	12/7	A		1	1	030
5WG3 211-2AB21	12/7	B		1	1	030
5WG3 211-2AB71	12/7	B		1	1	030
5WG3 211-2GB11	12/7	A		1	1	030
5WG3 211-2GB21	12/7	B		1	1	030
5WG3 211-2HB11	12/6	A		1	1	030
5WG3 211-2HB21	12/6	B		1	1	030
5WG3 211-2HB31	12/6	B		1	1	030
5WG3 221-3HB11	12/7	A		1	1	030
5WG3 222-3HB11	12/7	A		1	1	030
5WG3 255-8AB01	12/20	A		1	1	030
5WG3 260-3AB11	12/18, 12/20	A		1	1	030
5WG3 260-3AB81	12/18, 12/20	A		1	1	030
5WG3 261-3AB11	12/15	A		1	1	030
5WG3 4						
5WG3 425-7AB21	1/33, 12/10	A		1	1	030
5WG3 425-7AB71	1/33, 12/10	A		1	1	030
5WG3 5						
5WG3 560-2AB01	12/13, 12/26	A		1	1	030
5WG3 561-4AB01	12/13	A		1	1	030
5WG3 561-4AB11	12/13, 12/23	A		1	1	030
5WG3 564-7AB11	12/14	A		1	1	030
5WG3 583-2AB71	1/32, 12/9	A		1	1	030
6BK1						
6BK1700-0BA00-0AA1	6/18, 8/6					
6ED1						
6ED1 050-1AA00-0AE6	8/6	A		1	1	200
6ED1 050-1AA00-0BE6	8/6	A		1	1	200

Order No.	Page	DT	Price per PU	PU Unit(s)	PS*/ P.unit Unit(s)	PG
6ED1 052-1FB00-0BA5	8/4	A		1	1	200
6ED1 052-1MD00-0BA5	8/4	A		1	1	200
6ED1 055-1FB00-0BA1	8/5	A		1	1	200
6ED1 055-1MA00-0BA0	8/5	A		1	1	200
6ED1 055-1MB00-0BA1	8/5	A		1	1	200
6ED1 055-1MD00-0BA0	8/5	A		1	1	200
6ED1 055-1MM00-0BA0	8/5	A		1	1	200
6ED1 056-5CA00-0BA0	8/6	A		1	1	200
6ED1 057-1AA00-0BA0	8/6	A		1	1	200
6ED1 058-0BA01-0YA0	8/6	A		1	1	200
6EP1						
6EP1 321-1SH02	8/5	▶		1	1	400
6EP1 331-1SH02	8/5	▶		1	1	400
6GK1						
6GK1 415-0AA01	6/17	A		1	1	548
6GK1 971-3DA00-0AA0	6/17	D		1	1	5D1
6GK1 971-3DA00-0AA1	6/17	D		1	1	5D1
7KT1						
7KT1 162	11/3	B		1	1	027
7KT1 165	11/3	B		1	1	027
G						
GWR 63101-32-50	1/37					
GWR 63101-32-51	1/37					
GWR 63101-32-52	1/37					
GWR 63101-32-53	1/37					
GWR 63101-32-54	1/37					
GWR 63101-32-55	1/37					
GWR 63101-32-56	1/37					
GWR 63101-32-57	1/37					

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The deciding factors are the AL or ECCN export authorization indicated on order confirmations, delivery notes and invoices.

Errors excepted and subject to change without prior notice.

A&D/VuL_ohne MZ/En 05.09.06

Appendix

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Appendix

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Catalogs of the Automation and Drives Group (A&D)

Further information can be obtained from our branch offices listed in the appendix or at www.siemens.com/automation/partner

Automation and Drives		<i>Catalog</i>	
Interactive catalog on CD-ROM and on DVD			
• The Offline Mall of Automation and Drives		CA 01	
Automation Systems for Machine Tools			
SINUMERIK & SIMODRIVE		NC 60	
SINUMERIK & SINAMICS		NC 61	
Drive Systems			
<u>Variable-Speed Drives</u>			
SINAMICS G110/SINAMICS G120		D 11.1	
Inverter Chassis Units			
SINAMICS G120D			
Distributed Frequency Inverters			
SINAMICS G130 Drive Converter Chassis Units,		D 11	
SINAMICS G150 Drive Converter Cabinet Units			
SINAMICS GM150/SINAMICS SM150		D 12	
Medium-Voltage Converters			
SINAMICS S120 Drive Converter Systems		D 21.1	
SINAMICS S150 Drive Converter Cabinet Units		D 21.3	
Asynchronous Motors Standardline		D 86.1	
Synchronous Motors with Permanent-Magnet Technology, HT-direct		D 86.2	
DC Motors		DA 12	
SIMOREG DC MASTER 6RA70 Digital Chassis Converters		DA 21.1	
SIMOREG K 6RA22 Analog Chassis Converters		DA 21.2	
SIMOREG DC MASTER 6RM70 Digital Converter Cabinet Units		DA 22	
SIMOVERT PM Modular Converter Systems		DA 45	
SIEMOSYN Motors		DA 48	
MICROMASTER 410/420/430/440 Inverters		DA 51.2	
MICROMASTER 411/COMBIMASTER 411		DA 51.3	
SIMOVERT MASTERDRIVES Vector Control		DA 65.10	
SIMOVERT MASTERDRIVES Motion Control		DA 65.11	
Synchronous and asynchronous servomotors for SIMOVERT MASTERDRIVES		DA 65.3	
SIMODRIVE 611 universal and POSMO		DA 65.4	
<u>Low-Voltage Three-Phase-Motors</u>			
IEC Squirrel-Cage Motors		D 81.1	
IEC Squirrel-Cage Motors · New Generation 1LE1		D 81.1 N	
<i>PDF: Geared Motors</i>		M 15	
<u>Automation Systems for Machine Tools SIMODRIVE</u>		NC 60	
• Main Spindle/Feed Motors			
• Converter Systems SIMODRIVE 611/POSMO			
<u>Automation Systems for Machine Tools SINAMICS</u>		NC 61	
• Main Spindle/Feed Motors			
• Drive System SINAMICS S120			
<u>Drive and Control Components for Hoisting Equipment</u>		HE 1	
Electrical Installation Technology			
<i>PDF: ALPHA Small Distribution Boards and Distribution Boards, Terminal Blocks</i>		ETA 1	
<i>PDF: ALPHA 8HP Molded-Plastic Distribution System</i>		ETA 3	
<i>PDF: BETA Low-Voltage Circuit Protection</i>		ET B1	
<i>PDF: DELTA Switches and Socket Outlets</i>		ET D1	
GAMMA Building Controls		ET G1	
Human Machine Interface Systems SIMATIC HMI		ST 80	
Industrial Communication for Automation and Drives			<i>Catalog</i> IK PI
Low-Voltage			
Controls and Distribution – SIRIUS, SENTRON, SIVACON		LV 1	
Controls and Distribution – Technical Information SIRIUS, SENTRON, SIVACON		LV 1 T	
SIDAC Reactors and Filters		LV 60	
SIVENT Fans		LV 65	
<i>PDF: SIVACON 8PS Busbar Trunking Systems</i>		LV 70	
Motion Control System SIMOTION		PM 10	
Process Instrumentation and Analytics			
Field Instruments for Process Automation		FI 01	
Measuring Instruments for Pressure, Differential Pressure, Flow, Level and Temperature, Positioners and Liquid Meters			
<i>PDF: Indicators for panel mounting</i>		MP 12	
SIREC Recorders and Accessories		MP 20	
SIPART, Controllers and Software		MP 31	
SIWAREX Weighing Systems		WT 01	
Continuous Weighing and Process Protection		WT 02	
Process Analytical Instruments		PA 01	
<i>PDF: Process Analytics, Components for the System Integration</i>		PA 11	
SIMATIC Industrial Automation Systems			
SIMATIC PCS Process Control System		ST 45	
Products for Totally Integrated Automation and Micro Automation		ST 70	
SIMATIC PCS 7 Process Control System		ST PCS 7	
Add-ons for the SIMATIC PCS 7 Process Control System		ST PCS 7.1	
Migration solutions with the SIMATIC PCS 7 Process Control System		ST PCS 7.2	
pc-based Automation		ST PC	
SIMATIC Control Systems		ST DA	
SIMATIC Sensors			
Sensors for Factory Automation		FS 10	
Systems Engineering			
Power supplies SITOP power		KT 10.1	
System cabling SIMATIC TOP connect		KT 10.2	
System Solutions			
Applications and Products for Industry are part of the interactive catalog CA 01			
TELEPERM M Process Control system			
<i>PDF: AS 488/TM automation systems</i>		PLT 112	

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