Low Voltage Products

ABB Low Voltage Products
Electrical Contractor/Installer

Power and productivity
for a better world™

ABB

ABB Low Voltage Products
for the Contractor/Installer

Within this catalogue, you will find products for contractors/wholesalers available from stock from ABB Low Voltage Products in the UK and via our expanding distributor network which can be located in the links section of our website: http://www.abb.co.uk/lowvoltage

As well as our range of contractor/wholesaler products contained in this catalogue, we have a comprehensive range of industrial products too, with the same emphasis on providing items from stock, all of which are included in our catalogue **ABB Low Voltage Products for Industrial and Automation.**

ABB has a reputation for manufacturing and supplying quality low voltage components, the result of our on-going research and development programme. Our product ranges are supported by full and extensive technical documentation and page 6 shows some of the major supporting catalogues. In addition, a visit to our website at http://www.abb.co.uk/lowvoltage will provide you with a wealth of product information including catalogue downloads, cad drawings and product configurators.

Contractor Catalogue

http://view.digi-page.net/?id=1TXD000001P0229

Industrial Catalogue

To view these publications on line with our turning page technology type the URLs into your web browser, you do not have to download pdf files. Save the URLs in your favourites for future viewing.

http://view.digi-page.net/?id=1TXD 000001P0211

General Information

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Knowledge Base

General Enquiries:	LV.Enquiries@gb.abb.com
Customer Services:	LV.CustomerService@gb.abb.com
Technical:	LV.TechnicalSupport@gb.abb.com

Stockists

To find your nearest stockists, please visit:
http://www.abb.co.uk/lowvoltage

Sales Desk

Telephone:	02476 368676
Facsimile:	02476 368401
Credit Control:	01480 475321

If you already have an account you can place orders:

Online:	http://online.abb.com/bol
Email:	orders.lvp@gb.abb.com
Facsimile:	02476 368401

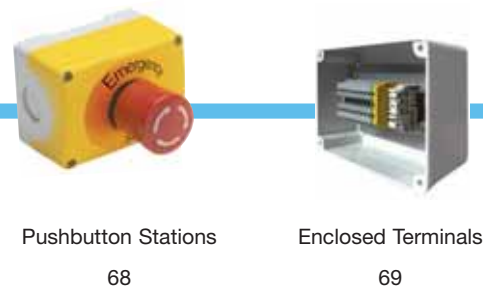# Main Index

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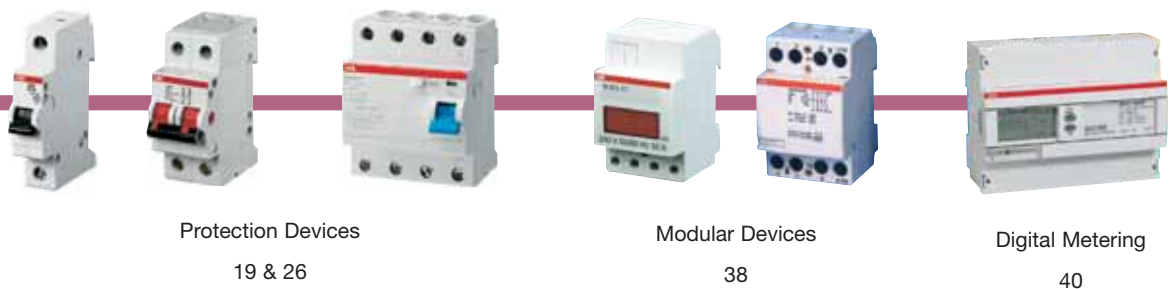
Protection Devices

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New

New Range of Isolators
and Switch Fuses
Metal Enclosures

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General Information
Wholesales and Stockists

We have created two dedicated publications focussing on our core products for industrial automation and contractor/installer markets.

You will find information on our stocked products including brief technical specification, short code, order code and product hierarchy. (Example below)

Polycarbonate Enclosure 9kW ... 37kW 4 pole

Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	Price £
32	25	9	125	100	107	S47K5N-B	25.80
40	40	11				S415KN-B	32.81
63	63	22	170	140	108	S418KN-B	51.95
80	80	37				S426KN-B	73.21

The Product Hierarchy has been included to assist in identifying discounts for particular product ranges when used in conjunction with the customer discount structure file.

By focusing on core products, we are confident that the majority of your requirements can be satisfied from stock by selecting products from the Low Voltage Essentials catalogues. Of course, our full range of products is still available to you, but on factory lead times.

We have also included complimentary items that support other products in our range. These products are not normally stocked.

As a customer, you can also take advantage of the services provided by our web based on-line solutions.

From this portal you can obtain price and availability, check order status, obtain copy documentation and place orders on-line 24/7/365. If you have not already registered, you can do this by talking to your local ABB sales engineer.

About Voltimum

ABB is a founder member of Voltimum which was launched in 2003.

Voltimum is an internet portal for the electrical industry and is active in 6 countries within Europe.

The portal is backed by 7 leading European manufacturers of electrical installation products who have invested over 20 million euros in the project.

Other manufacturers join the Voltimum online catalogue regularly as they see this unique initiative as an opportunity to increase the awareness of their products, being used on a daily basis by electrical contractors.

The initiative was first announced to the press in October 2000 and since then technical architecture of the portal has been designed and developed. Also in this period, 6 locally based teams were put in place to develop the portal in each country, adapting the portal to the needs of the local market and working with local providers of appropriate content.

Voltimum is headed by Bruno Hamon who is based in the Company's HQ in Geneva.
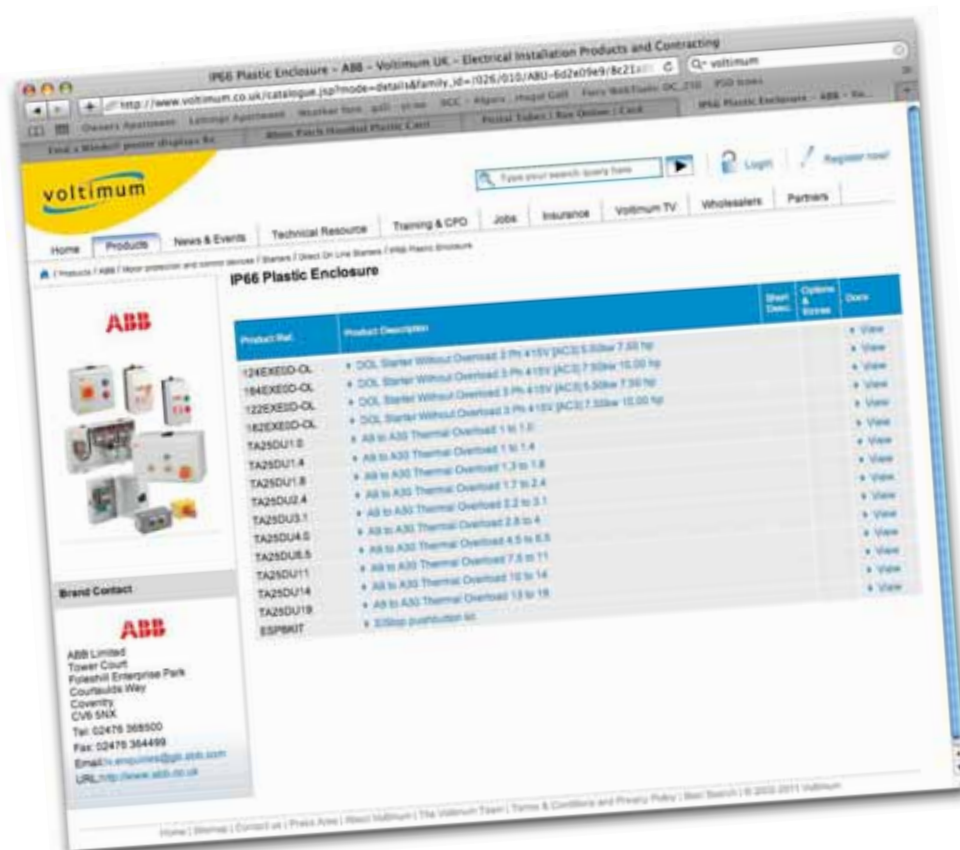
ABB Low Voltage
Technical Publications

Integrated Control Range

New

Industrial Products
1SBC100155C0201

Block Contactors

Industrial Products
1SBC100122C0202

Pilot Devices

Industrial Products
1SFC151003C0201

Edition 2011

Industrial Products

1TXD000001P0211

Soft Starters

Industrial Products
1SFC132005C0201

Relay & Timers

Industrial Products
2CDC110004C0206

Installation Equipment

Industrial Products
Contractor Products
2CSC400002D0208

KNX Equipment

New

Contractor Products
2CDC500007B0207

Wiring Accessories

Contractor Products
1SXF610007C0201

Watchdog PIRs

Contractor Products
9AKK104295D5667

Jokab Safety

Industrial Products
2TLC172001C0201

MCCBs

Industrial Products
Contractor Products
1SDC210015D0204

ACBs

Industrial Products
1SDC200006D0207

Our main technical catalogues are illustrated on this page.

Visit the ABB Library at:
http://www.abb.com/abblibrary/DownloadCenter/

or enter the catalogue part number into a search engine to download the catalogue(s) you require.

Switch Fuses

Industrial Products
Contractor Products
1SCC311013C0201

Switch Disconnectors

Industrial Products
Contractor Products
1SCC301001C0201

Changeover Switches

Industrial Products
1SCC303003C0201

XR SlimLine Switch Fuses

Industrial Products
1SEC311001C0201

Cam Switches

Industrial Products
Contractor Products
1SCC302003C0201

Cewe Plugs and Sockets

New

Contractor Products
2CMC700014C0008

5000 Series

Industrial Products
1SNC160001C0207

SNK Series

Industrial Products
1SNK161001C0204

Solar PV Products

New

Contractor Products
9AKK1051152A5119

Technology of Choice
Smart Home & Intelligent Building Control

1

KNX and ABB i-bus® KNX Intelligent Building Control.
In many areas of our private and working lifes, the increasing level of
automation is a trend that confronts us on a daily basis without actually being
noticed.

Blind Control

1 Presence detector
2 Blind
3 Manual blind control

Comfort Control

1 Multimedia servers
2 Hi-Fi
3 TV/DVD
4 Curtains/blinds
5 Heating/lighting

Energy Management

1 Visualisation
2 Energy consumption
  meter with meter
  interface
3 Binary input
4 Water meter

Climate Control

1 Fan Coil Unit
2 Window contact
3 Valve drive
4 Radiator
5 Room thermostat

Building Surveillance

1 Smoke detector
2 Motion detector
3 Window contacts
4 Touch display
5 Security lock

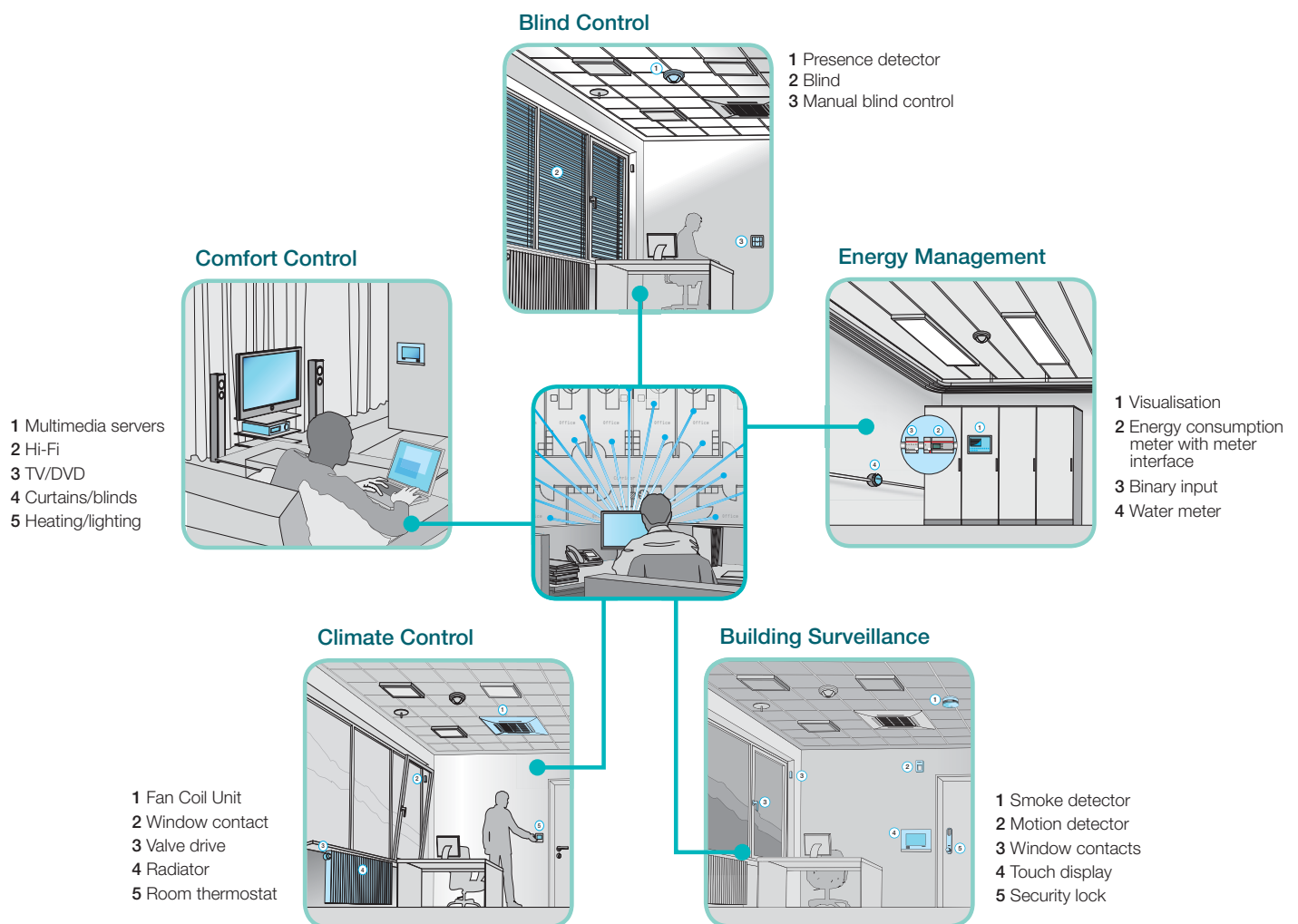# ABB Busch-iDock
recharging the soul with a position for sound

1 A fixed place for music in your life with the new Busch-iDock in the charger without a jumble of cables. For a wall with sound the Busch-iDock with its simple elegance blends with every environment discover it's additional functions.

Whether relaxing or stimulating.
Sound waves have a direct influence on body and mind. And therefore on one's well-being. That is why music as an integral part of life deserves a perma-nent place in the living environment, since it can have a decisive influence on the atmosphere in a room. To match one's personal style.

The Busch-iDock offers each iPod* or iPhone* a fixed place in the home.
The Busch-iDock with its simple elegance blends with every environment. With the Apple* remote control the iPod* or the iPhone* are easy to operate from a distance. Even MP3 players from other manufacturers can be connected to a 3.5 mm jack socket. The Busch-iDock offers excellent interplay with the Busch DigitalRadio or the integration with Busch AudioWorld®.

Industrial Plugs and Sockets
up to 125A - 690V to IEC Standards

1

ABB Cewe has produced Industrial Plugs and Sockets for over 60 years in Nyköping, Sweden. Long experience in development and production has resulted in a wide product range with high quality and a robust ergonomic design. Continuous development is made to meet the customer's requirements, and to take environmental aspects into consideration

Easy & Safe products for adequate functionality and ergonomic design

Tough & Safe products for best performance in demanding and heavy-duty applications.

Critical & Safe products for the highest safety

ABB Industrial Plugs and Sockets have the solution for products in industrial environments with high demands on safety, durability, reliability and cost saving for the end user.

- **Safety**
  Tested and approved by third party testing laboratories.

- **Durability**
  Materials used give a high durability in tough conditions and environments.

- **Reliability**
  High quality contacts ensure reliability.

- **Cost saving**
  Designed for quick and easy installation.

IP65 Plastic IP55 Metal
Enclosed Starters

1

DOL with or without isolator
DOL Reversing with or without isolator
Star Delta with or without isolator
Heating & Lighting Enclosed Contactors

- Smoothly styled modern IP66 enclosed DOL starter IEC947-4-1
- Generous cabling space for easy installation
- Combined contactor/overload assembly can be unclipped from DIN rail to ease installation
- Support for 400v 3ph or 230v single phase
- Overload supplied separately

IP65 Metal Enclosed
Switches & Switch Fuses

1

Load Break Switches 3 - 4 pole   20 ... 800A
Switch Fuses 3 - 4 pole   20 ... 800A

Load Break Switches

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom

Switch Fuses

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds not fitted to allow customer connections

Dedicated products for Solar Energy

1

The UK Government have introduced a new initiative aimed at encouraging the nationwide adoption of renewable energy technologies.

Always ready to meet any new demand from the market, ABB has developed a whole range of reliable products dedicated to photovoltaic applications.

The Feed Tariff

Called the Feed-in Tariff, this initiative will see owners of renewable energy equipment being paid not only for the energy they use but also the amount of surplus energy they supply to the UK National Grid.

Inspired by similar schemes already operating in continental Europe, the UK Feed-in Tariff initiative is aimed at residential, commercial and industrial users of renewable energy sources. A table of the technologies covered are listed below.

How does the Feed-in Tariff Work?

The Feed-in Tariff is based on the amount of energy produced by a renewable energy source, plus where surplus energy is produced, a bonus to cover energy exported to the National Grid. By effectively paying producers more for the energy they don't use, the system is also aimed at encouraging energy efficiency.

To cover periods when the renewable energy source may be not producing sufficient electricity to cover demand, additional energy may be imported from the National Grid, with the user paying their electricity supplier for the amount consumed.

Technology	Tariff amount (pence per kWh) for installation fitted periods:		
	April 2010 - March 2011	April 2011 - March 2012	April 2012 - March 2013
Solar photovoltaic <4 kW (new)	36.1	36.1	36.1
Solar photovoltaic <4 kW (retrofit)	41.3	41.3	41.3
Solar photovoltaic >4 - 10kW	36.1	36.1	33.0
Solar photovoltaic >10 - 100 kW	31.4	31.4	28.7
Solar photovoltaic >100 - 5MW	29.3	29.3	26.8

Solar generator

Enclosures

Miniature circuit breakers

Surge suppressors

Switch diconnectors

Inverter

DC Side

1

From the string on the direct current side through to the alternate currentgrid connection point. ABB's products include:

- String boxes
- Switch-disconnectors
- Interface relays
- Fuse disconnecting switches and fuses
- Surge arresters

- Miniature circuit breakers
- Residual current-operated circuit breakers
- Energy meters
- Consumer units and enclosures suitable for outdoor installation

AC Side
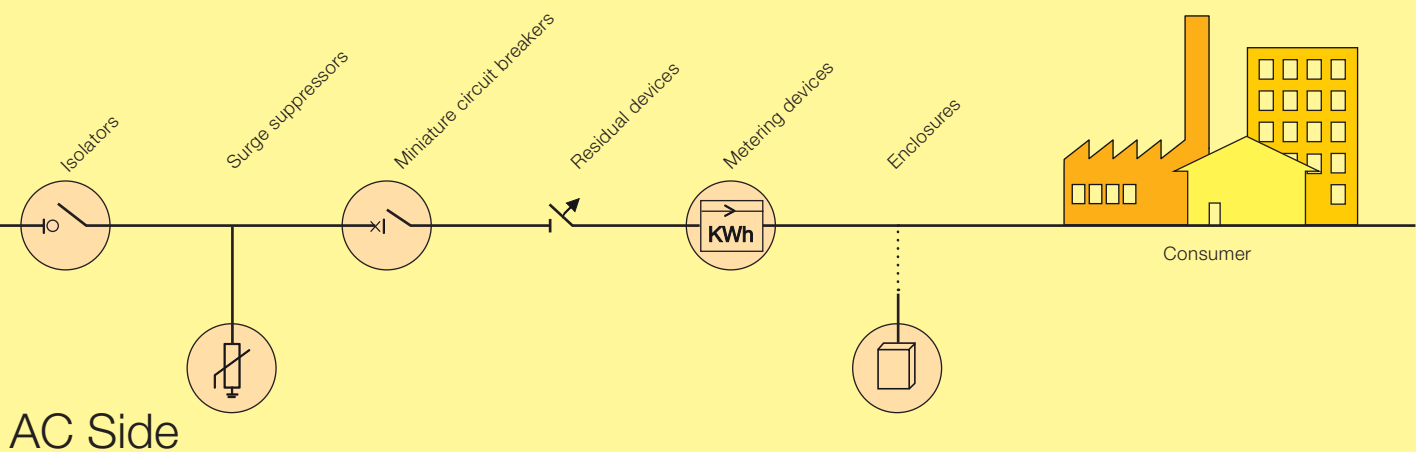
Production Friendly Safety Systems
from ABB Jokab

SEE INDUSTRIAL
CATALOGUE
ABB JOKAB

1

A complete range of safety products, which combine to build safety systems. Innovative systems and products which are continuously, developed in cooperation with our customers. Our extensive program of products, safety solutions and long experience in machine safety make ABB a safe partner.

Quick-Guard fencing system
prevents unauthorised access and offers noise reduction

Dalton process lock
to keep doors closed during a process

Magne magnetic lock
to keep doors closed during a process

Smile emergency stop
to stop machinery when there is a hazard

Eden sensor
monitors doors are closed

Sensitive edges
prevents against trapping injuries

Pluto Safety PLC, Vital and Safety Relays
for monitoring protection

Roller doors
for short protection distances and noise reduction

Safeball control device
for ergonomic and safe two handed control

Knox safety lock
ensures that doors are locked

Focus light beam
to provide protection when entering an area

Focus light curtain
with finger detection

Smart stopping timer
to assist in determining protection locations

Distribution

Contents

2

Housemaster - Consumer Units
Overview

Unique Space Saving
Sliding Door

TRUE FLEXIBLE
SPLIT LOAD - Less
stock, on site flexibility

FULLY SHROUDED BUSBAR
- Easier and quicker to fit

DIN RAIL MOUNTED
COMPONENTS
Bell Transformers, timers,
contactors etc.

Housemaster - Consumer Units
Moulded Enclosures

Moulded Enclosure to BS EN 60439-3

- Supplied factory fitted with switch disconnector and/or RCD, specification as table. Unit comes complete with 4 blanking plates, shrouded busbar, terminal bars and installation instructions.

- Colour RAL9010 Moulded

- Adaptable split load and 17th Edition Versions.

HMSL8+8C

Way Combinations		Incomer Isolator	RCD	Part No	Product Hierarchy 4300001 Order Code	
4		100A		HMMS4C	1SPE007712F0111	
6		100A		HMMS6C	1SPE007712F0211	
10		100A		HMMS10C	1SPE007712F0311	
14		100A		HMMS14C	1SPE007712F0411	
18		100A		HMMS18C	1SPE007712F0511	
4		-	80A/30mA	HMRC4C	1SPE007712F0112	
6		-	100A/30mA	HMRC6C	1SPE007712F0212	
10		-	100A/30mA	HMRC10C	1SPE007712F0312	
14		-	100A/30mA	HMRC14C	1SPE007712F0412	
18		-	100A/30mA	HMRC18C	1SPE007712F0512	
4+4	3+5, 2+6 5+3, 6+2	100A	80A/30mA	HMSL4+4C	1SPE007712F0313	
6+6	4+8, 5+7 8+4, 7+5	100A	80A/30mA	HMSL6+6C	1SPE007712F0413	
8+8	7+9, 9+7	100A	80A/30mA	HMSL8+8C	1SPE007712F0513	

17th Edition Moulded Enclosure to BS EN 60439-3

- Colour RAL9010 Moulded

Supplied un-populated

HMSL552C

| No of Ways | Split Load Dual RCD | | Part No | Product Hierarchy 4300001 | |
	Isolator	RCD x 2		Order Code	
5 + 5	100A	63A/30mA	HMSL552C	1SPE007712F0416	
7 + 7	100A	63A/30mA	HMSL772C	1SPE007712F0516	

Dimensions

Part No	Height mm	Width mm	Depth mm
HMMS4C - HMRC4C	226	190	123
HMMS6C - HMRC6C	226	230	123
HMMS10C - HMRC10C - HMSL4+4C	226	300	123
HMMS14C - HMRC14C - HMSL6+6C - HMSL552C	226	370	123
HMMS18C - HMRC18C - HMSL8+8C - HMSL772C	226	440	123

Housemaster - Consumer Units
Steel Enclosures

HSSL8+8C

Steel Enclosure to BS EN 60439-3

- Supplied factory fitted with switch disconnector and/or RCD, specification as table. Unit comes complete with shrouded busbar, earth and neutral bars and installation instructions.
- Colour RAL7035 Steel
- Adaptable split load versions.

Way		Incomer		Split Load			Product Hierarchy 4300001	
Combinations		Isolator	RCD	Isolator	RCD	Part No	Order Code	
4	-	100A	-	-	-	HSMS4C	1SKB106142C4001	
7	-	100A	-	-	-	HSMS7C	1SKB109142C4001	
11	-	100A	-	-	-	HSMS11C	1SKB113142C4001	
16	-	100A	-	-	-	HSMS16C	1SKB118142C4001	
20	-	100A	-	-	-	HSMS20C	1SKB122142C4001	
4	-	-	80A/30mA	-	-	HSRC4C	1SKB106142C6001	
7	-	-	100A/30mA	-	-	HSRC7C	1SKB109142C6001	
11	-	-	100A/30mA	-	-	HSRC11C	1SKB113142C6001	
16	-	-	100A/30mA	-	-	HSRC16C	1SKB118142C6001	
20	-	-	100A/30mA	-	-	HSRC20C	1SKB122142C6001	
4+4	3+5, 2+6	-	-	100A	80A/30mA	HSSL4+4C	1SKB113142C8001	
6+6	4+8, 5+7	-	-	100A	80A/30mA	HSSL6+6C	1SKB118142C8001	
8+8	7+9, 9+7	-	-	100A	80A/30mA	HSSL8+8C	1SKB122142C8001	

Dimensions

Part No	Height mm	Width mm	Depth mm
HSMS4C - HSRC4C	256	155	110
HSMS7C - HSRC7C	256	210	110
HSMS11C - HSRC11C - HSSL4+4C	256	282	110
HSMS16C - HSRC16C - HSSL6+6C	256	368	110
HSMS20C - HSRC20C - HSSL8+8C	256	440	110

Housemaster - Consumer Units
Outgoing MCBs & RCBOs

S200 Series Type B&C - MCBs - BS EN 60898 6kA

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400007		Product Hierarchy 2400007	
			Type B Order Code	Price £	Type C Order Code	Price £
6	6	S201•6	2CDS251001R0065		2CDS251001R0064	
10	6	S201•10	2CDS251001R0105		2CDS251001R0104	
16	6	S201•16	2CDS251001R1165		2CDS251001R0164	
20	6	S201•20	2CDS251001R0205		2CDS251001R0204	
25	6	S201•25	2CDS251001R0255		2CDS251001R0254	
32	6	S201•32	2CDS251001R0325		2CDS251001R0324	
40	6	S201•40	2CDS251001R0405		2CDS251001R0404	
50	6	S201•50	2CDS251001R0505		2CDS251001R0504	
63	6	S201•63	2CDS251001R0635		2CDS251001R0634	

• Add tripping curve for B or C eg: S201B6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting
Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

S201

DS271AC-C10/0.03

RCBO single pole, solid neutral to BS EN 61009

Type B

Rating Amps	kA	Sensitivity	Part No	Product Hierarchy 2500002	
				Order Code	
6	10	30mA	DS271AC-B6/0.03	2CSR175092R1065	
10	10	30mA	DS271AC-B10/0.03	2CSR175092R1105	
16	10	30mA	DS271AC-B16/0.03	2CSR175092R1165	
20	10	30mA	DS271AC-B20/0.03	2CSR175092R1205	
25	10	30mA	DS271AC-B25/0.03	2CSR175092R1255	
32	10	30mA	DS271AC-B32/0.03	2CSR175092R1325	

Type C

Rating Amps	kA	Sensitivity	Part No	Order Code	
6	10	30mA	DS271AC-C6/0.03	2CSR175092R1064	
10	10	30mA	DS271AC-C10/0.03	2CSR175092R1104	
16	10	30mA	DS271AC-C16/0.03	2CSR175092R1164	
20	10	30mA	DS271AC-C20/0.03	2CSR175092R1204	
25	10	30mA	DS271AC-C25/0.03	2CSR175092R1254	
32	10	30mA	DS271AC-C32/0.03	2CSR175092R1324	
40	10	30mA	DS271AC-C40/0.03	2CSR175092R1404	

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting
Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

Supplied with 800mm flying neutral and functional earth leads.

Housemaster - Consumer Units
Accessories

SA1

Accessories

Description	Part No.	Product Hierarchy 2400002	
		Order Code	
MCB padlock adaptor 3mm hasp	SA1	GJF1101903R0001	
MCB padlock adaptor 6mm hasp	SA1E	GJF1101903R0004	
Padlock with 2 keys	SA2	GJF1101903R0002	
Moulded Housemaster connection bridge	HMCB	1SPE007712F0001	
Moulded Housemaster spare 1 module blank	HMBS	1SPE007712F0002	
Spare Housemaster Label Sheet	110381	110381	
Spare 19 Module Busbar	PS 1/19/30	2CDL210001R3019	
Spare End Cap for 19 Module Busbar (LH & RH End Cap)	PS-END 0	2CDL200001R0004	
Busbar Cover for 5 unused ways or split into individuals	SZ-BSK	2CDL200001R0011	

For Steel Versions ONLY

12 module blank cover	SZ-BP1	GHL5301904R0001	
1 module blank cover	SZ-BP2	GHS2701913R0002	

ArtLine - Consumer Units
Overview

add your own picture or artwork

functional yet elegant

gives a splash of colour

ArtLine - Consumer Units
Enclosures & Doors

Flush Mounted Consumer Unit

UK510BE UK520BE

Description	Size	Part No	Product Hierarchy 3100004	
			Order Code	
Consumer Unit	1 - 12 Modules	UK510BE	2CPX077619R9999	
	2 - 24 Modules	UK520BE	2CPX077620R9999	
	3 - 36 Modules	UK530BE	2CPX077621R9999	
	4 - 48 Modules	UK540BE	2CPX077622R9999	

UK530BE UK540BE

Description	Size	Part No	Product Hierarchy 3100004	
			Order Code	
Door (Standard Door)	1	BL510	2CPX030853R9999	
	2	BL520	2CPX030854R9999	
	3	BL530	2CPX030855R9999	
	4	BL540	2CPX030856R9999	

Additional ranges of doors are available on request

ArtLine - Consumer Units
Incoming & Outgoing Devices

Incomers

Description	Size	Product Hierarchy 3100004	
		Order Code	
Isolator Incoming Kit	1	FMCU - 1ISO	
	2	FMCU - 2ISO	
63A Incomer	3	FMCU - 3ISO	
	4	FMCU - 4ISO	

Description	Size	Order Code	
RCD Incoming Kit	1	FMCU - 1RCD	
	2	FMCU - 2RCD	
63A / 30mA Incomer	3	FMCU - 3RCD	
	4	FMCU - 4RCD	

Description	Size	Order Code	
Isolator & Twin RCD Kit	2	FMCU - 2ISRCD	
	3	FMCU - 3ISRCD	
63A Incomer / 2 x 63A RCDs	4	FMCU - 4ISRCD	

All above kits are made to order.

S200 Series Type B&C - MCBs - BS EN 60898 6kA

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400007		Product Hierarchy 2400007	
			Type B Order Code		Type C Order Code	
6	6	S201•6	2CDS251001R0065		2CDS251001R0064	
10	6	S201•10	2CDS251001R0105		2CDS251001R0104	
16	6	S201•16	2CDS251001R1165		2CDS251001R0164	
20	6	S201•20	2CDS251001R0205		2CDS251001R0204	
25	6	S201•25	2CDS251001R0255		2CDS251001R0254	
32	6	S201•32	2CDS251001R0325		2CDS251001R0324	
40	6	S201•40	2CDS251001R0405		2CDS251001R0404	
50	6	S201•50	2CDS251001R0505		2CDS251001R0504	
63	6	S201•63	2CDS251001R0635		2CDS251001R0634	

S201

• Add tripping curve for B or C eg: S201B6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting
Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.
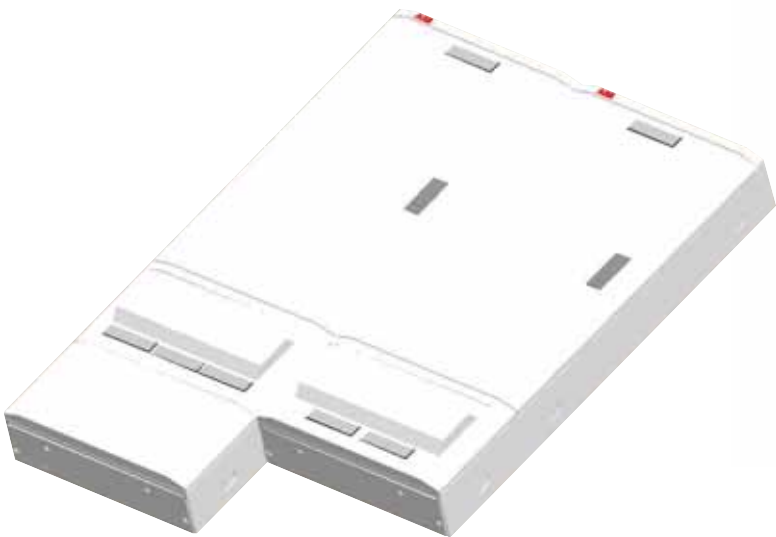
Accessories

Description	Product Hierarchy 3100004	
	Order Code	
Hollow Wall Set	2CPX062563R9999	
Safety Lock	2CPX030870R9999	

Protecta - Overview
Type A & B Distribution Boards

Utilising Europe's No.1 Selling MCB

Distrbution Boards	Incoming Devices	Connection Kit	Outgoing Devices
Type A page 25 Type B page 28-29	Type A page 25 Type B page 30	Type B page 30	Type A page 26 Type B page 31-37

For a complete distribution board you will need to select from the individual sections in the catalogue

Protecta
Type A Distribution Boards

Type A - SP&N Distribution Boards

- Constructed to BSEN60439 part 1 & 3. IP30 to BSEN60529. Finished in RAL7035
- Supplied without incomer, see incomer options page below
- Earth and neutral bars included
- Neutral link to incomer included
- Busbar rating 100A - 230v

Type A - SP&N Distribution Boards

ECS107C

Number of Outgoing Ways	Part No	Product Hierarchy 4200001	
		Order Code	
4 way SP&N	ECS104C	1SKB106142C2001	
7 way SP&N	ECS107C	1SKB109142C2001	
11 way SP&N	ECS111C	1SKB113142C2001	
16 way SP&N	ECS116C	1SKB118142C2001	
20 way SP&N	ECS120C	1SKB122142C2001	

Dimensions

E202/100r

Part No	Height mm	Width mm	Depth mm
ECS104C	255	155	110
ECS107C	255	210	110
ECS111C	255	282	110
ECS116C	255	368	110
ECS120C	255	440	110

Incomer Options

F202 AC-63/0.03

Description	Rating (A)	Sensitivity (mA)	Part No.	Product Hierarchy 2700001	
				Order Code	
Switch Disconnector 100A 2 pole (max cable 50mm²)			E202/100r	2CDE282001R0100	
RCCB	63A 2 pole	30	F202 AC-63/0.03	2CSF202001R1630	
RCCB	63A 2 pole	300	F202 AC-63/0.3	2CSF202001R3630	
RCCB	80A 2 pole	30	F202 AC-80/0.03	2CSF202001R1800	
RCCB	100A 2 pole	30	F202 AC-100/0.03	2CSF202001R1900	

Protecta - Type A Distribution Boards
Outgoing MCBs

S200M Series Type B&C - MCBs - BS EN 60898 10kA

S201M

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400007	Product Hierarchy 2400004
			Type B Order Code	Type C Order Code
6	10	S201M•6	2CDS271001R0065	2CDS271001R0064
8	10	S201M•8	-	2CDS271001R0084
10	10	S201M•10	2CDS271001R0105	2CDS271001R0104
13	10	S201M•13	2CDS271001R0135	2CDS271001R0134
16	10	S201M•16	2CDS271001R0165	2CDS271001R0164
20	10	S201M•20	2CDS271001R0205	2CDS271001R0204
25	10	S201M•25	2CDS271001R0255	2CDS271001R0254
32	10	S201M•32	2CDS271001R0325	2CDS271001R0324
40	10	S201M•40	2CDS271001R0405	2CDS271001R0404
50	10	S201M•50	2CDS271001R0505	2CDS271001R0504
63	10	S201M•63	2CDS271001R0635	2CDS271001R0634

• Add tripping curve for B or C eg: S201MB6

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting
Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Single Pole

Rating Amps	kA		Part No	Product Hierarchy 2400004	
				Type D Order Code	
6	6		S201D6	2CDS271001R0061	
10	6		S201D10	2CDS251001R0101	
16	6		S201D16	2CDS251001R0161	
20	6		S201D20	2CDS251001R0201	
25	6		S201D25	2CDS251001R0251	
32	6		S201D32	2CDS251001R0321	
40	6		S201D40	2CDS251001R0401	
50	6		S201D50	2CDS251001R0501	
63	6		S201D63	2CDS251001R0631	

Type D - Suitable for cable protection and high inrush applications such as transformers

Protecta - Type A Distribution Boards
Accessories

SA1

Accessories

Description	Part No.	Product Hierarchy 2400002	
		Order Code	
MCB padlock adaptor 3mm hasp	SA1	GJF1101903R0001	
MCB padlock adaptor 6mm hasp	SA1E	GJF1101903R0004	
Padlock with 2 keys	SA2	GJF1101903R0002	
Spare Housemaster Label Sheet	110381	110381	
Spare 19 Module Busbar	PS 1/19/30	2CDL210001R3019	
Spare End Cap for 19 Module Busbar (LH & RH End Cap)	PS-END 0	2CDL200001R0004	
Busbar Cover for 5 unused ways or split into individuals	SZ-BSK	2CDL200001R0011	

2

Protecta - Type B Distribution Boards
# TP & N Distribution Boards

General Description

- Constructed to BS EN60439 part 1 & 3
- Enclosure finished in RAL7035
- Busbar rated 250A
- Voltage rating at 230/400v 50Hz
- Integral door latch with key
- Security Lock is also available (please ask)
- Incoming devices up to 250A mounted in the board

- IP Ingress protection IP41BSEN60529
- 4 - 24 TP&N ways
- Fault level 35kA
- Earth and neutral terminals included
- Reversible door

EPB25-312C

TP&N Distribution Boards

| Outgoing Ways | Dimensions | | | Part No | Product Hierarchy 4200001 |
	H	W	D		Order Code
4 way TP&N	502	400	125	EPB25-304C	1SKP804142C0059
6 way TP&N	560	400	125	EPB25-306C	1SKP806142C0059
8 way TP&N	610	400	125	EPB25-308C	1SKP808142C0059
12 way TP&N	718	400	125	EPB25-312C	1SKP812142C0059
16 way TP&N	830	400	125	EPB25-316C	1SKP816142C0059
20 way TP&N	1001	400	125	EPB25-320C	1SKP820142C0059
24 way TP&N	1140	400	125	EPB25-324C	1SKP824142C0059
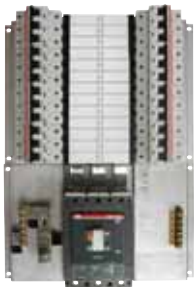
EPB25-PA308C

TP&N Pan Assemblies (for panel mounting)

| Outgoing Ways | Dimensions | | | Part No | Product Hierarchy 4200001 |
	H	W	D		Order Code
4 way TP&N	375	270	60	EPB25-PA304C	1SKP804100C0051
6 way TP&N	429	270	60	EPB25-PA306C	1SKP806100C0051
8 way TP&N	483	270	60	EPB25-PA308C	1SKP808100C0051
12 way TP&N	591	270	60	EPB25-PA312C	1SKP812100C0051
16 way TP&N	699	270	60	EPB25-PA316C	1SKP816100C0051
20 way TP&N	874	270	60	EPB25-PA320C	1SKP820100C0051
24 way TP&N	1014	270	60	EPB25-PA324C	1SKP824100C0051

Protecta - Type B Distribution Boards
Split Load Type B - TP & N Distribution Boards
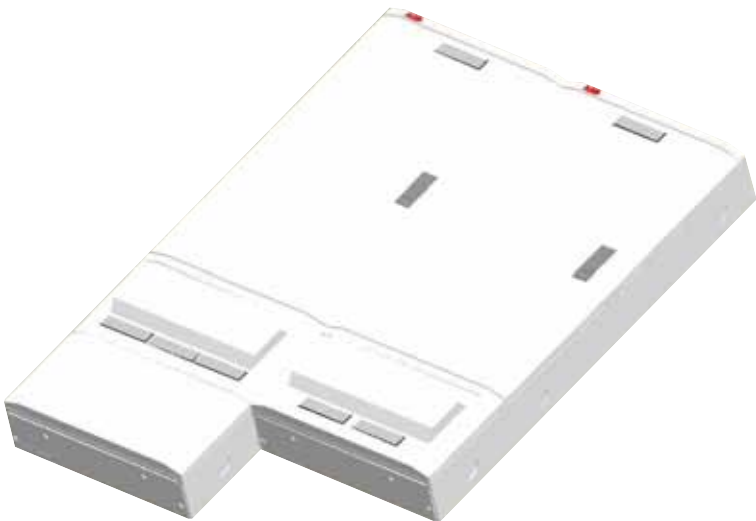
A range of three phase MCB distribution boards which allows the option of metering in each section. This makes these units suitable for individual monitoring of the power and lighting circuits within an installation.

EPB25-0808S125C

General Description

- Constructed to BS EN60439 part 1 & 3
- Enclosure finished in RAL7035
- Busbar rated 250A
- Voltage rating at 230/400v 50Hz
- Integral door latch with key
- Incoming devices 125A & 250A

- IP Ingress protection IP41 BSEN60529
- 4+4 - 24+24 TP&N ways
- Incoming devices are included
- Earth and neutral terminals included
- Reversible door
- Includes 2 meters DAB13000

Split Load Type B
TP&N Distribution Boards

| Outgoing Ways | Dimensions | | | Incomer | Product Hierarchy 4200001 | |
	H	W	D		Order Code	
4+4 way TP&N	902	800	125	125A	EPB25-0404S125C	
6+6 way TP&N	960	800	125	125A	EPB25-0606S125C	
8+8 way TP&N	1010	800	125	125A	EPB25-0808S125C	
12+12 way TP&N	1118	800	125	125A	EPB25-1212S125C	
16+16 way TP&N	1230	800	125	125A	EPB25-1616S125C	
20+20 way TP&N	1401	800	125	125A	EPB25-2020S125C	
24+24 way TP&N	1540	800	125	125A	EPB25-2424S125C	
4+4 way TP&N	902	800	125	250A	EPB25-0404S250C	
6+6 way TP&N	960	800	125	250A	EPB25-0606S250C	
8+6 way TP&N	1010	800	125	250A	EPB25-0808S250C	
12+12 way TP&N	1118	800	125	250A	EPB25-1212S250C	
16+16 way TP&N	1230	800	125	250A	EPB25-1616S250C	
20+20 way TP&N	1401	800	125	250A	EPB25-2020S250C	
24+24 way TP&N	1540	800	125	250A	EPB25-2424S250C	

For metering options see page 40

Please note: The above boards are built to order - Lead times available on request

Protecta
Type B Distribution Boards

Incomer Options

E203

Description	Rating (A)	(mA)	Part No	Product Hierarchy 2500001	
				Order Code	
Switch Disconnector (no kit required)	100A 3 pole		E203/100r	2CDE283001R0100	
Switch Disconnector (no kit required)	125A 3 pole		E203/125r	2CDE283001R0125	
Switch Disconnector MCCB●	250A 3 pole		1SDA051327R1	1SDA051327R1	

● Require Kit EPBKIT1-T3C1

F204AC

Description	Rating (A)	(mA)	Part No	Product Hierarchy 2500001 cont.	
RCCB (requires EPB Kit 2C)	63A 4 pole	30	F204AC-63/0.03	2CSF204001R1630	
RCCB (requires EPB Kit 2C)	63A 4 pole	100	F204AC-63/0.1	2CSF204001R2630	
RCCB (requires EPB Kit 2C)	63A 4 pole	300	F204AC-63/0.3	2CSF204001R3630	
RCCB (requires EPB Kit 2C)	80A 4 pole	30	F204AC-80/0.03	2CSF204001R1800	
RCCB (requires EPB Kit 2C)	100A 4 pole	30	F204AC-100/0.03	2CSF204001R1900	
RCCB (requires EPB Kit 2C)	100A 4 pole	100	F204AC-100/0.1	2CSF204001R2900	
RCCB time delayed (requires EPB Kit 2C)	100A 4 pole	300	F204AC-100/0.3	2CSF204001R3900	

250A MCCB

Description	Rating (A)	Part No	Product Hierarchy 3000004	
			Order Code	
MCCB T3 - 36kA Require Kit EPBKIT1-T3C1	100A 3 pole	1SDA051243R1	1SDA051243R1	
	125A 3 pole	1SDA051244R1	1SDA051244R1	
	160A 3 pole	1SDA051245R1	1SDA051245R1	
	200A 3 pole	1SDA051246R1	1SDA051246R1	
	250A 3 pole	1SDA051247R1	1SDA051247R1	

All the above require an EPBKIT1-T3C1

Connection Kits

Description	Part No	Product Hierarchy 4200001	
		Order Code	
F200 RCD Connection kit	EPBKIT2C	1SKA142000C1001	
Coupling kit side by side	EPBKIT5	1SKA145000C0001	
Spare 100A TP Isolator kit	EBKIT8C	1SKA148000C1001	
250A Single phase kit	EPBKIT6C1-25	1SKA146000C5001	
Single phase connection kit	EPBKIT6C1	1SKA146000C3001	
250A MCCB connection kit	EPBKIT1-T3C1	1SKA141000C3003	
70mm Cable connection kit	EPBKIT4C1	1SKA144000C3001	
120mm Cable connection kit	EPBKIT3C1	1SKA143000C3001	
Label kit for 24 way EPB board	EPBKIT0-7	1SKA140000C1008	
Blank spare flange plate	EPBGP1UK	1SKA130002C0001	

2

Protecta - Type B Distribution Boards
Outgoing MCBs

B

S200M Series Type B - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)
Suitable for cable protection and small inrush or switching surges, heating loads and tungsten lighting

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	
6	10kA	S201MB6	2CDS271001R0065	
10	10kA	S201MB10	2CDS271001R0105	
16	10kA	S201MB16	2CDS271001R0165	
20	10kA	S201MB20	2CDS271001R0205	
25	10kA	S201MB25	2CDS271001R0255	
32	10kA	S201MB32	2CDS271001R0325	
40	10kA	S201MB40	2CDS271001R0405	
50	10kA	S201MB50	2CDS271001R0505	
63	10kA	S201MB63	2CDS271001R0635	

S201M

Double Pole

Rating Amps	kA	Part No	Order Code	
6	10kA	S202MB6	2CDS272001R0065	
10	10kA	S202MB10	2CDS272001R0105	
13	10kA	S202MB13	2CDS272001R0135	
16	10kA	S202MB16	2CDS272001R0165	
20	10kA	S202MB20	2CDS272001R0205	
25	10kA	S202MB25	2CDS272001R0255	
32	10kA	S202MB32	2CDS272001R0325	
40	10kA	S202MB40	2CDS272001R0405	
50	10kA	S202MB50	2CDS272001R0505	
63	10kA	S202MB63	2CDS272001R0635	

S202M

Triple Pole

Rating Amps	kA	Part No	Order Code	
6	10kA	S203MB6	2CDS273001R0065	
10	10kA	S203MB10	2CDS273001R0105	
16	10kA	S203MB16	2CDS273001R0165	
20	10kA	S203MB20	2CDS273001R0205	
25	10kA	S203MB25	2CDS273001R0255	
32	10kA	S203MB32	2CDS273001R0325	
40	10kA	S203MB40	2CDS273001R0405	
50	10kA	S203MB50	2CDS273001R0505	
63	10kA	S203MB63	2CDS273001R0635	

S203M

2

Protecta - Type B Distribution Boards
Outgoing MCBs

C

S200M Series Type C - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)

Suitable for cable protection and moderate switching surges for short duration. eg. discharge lamps.

S201M

Single Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	
0.5	10kA	S201MC0.5	2CDS271001R0984	
1	10kA	S201MC1	2CDS271001R0014	
2	10kA	S201MC2	2CDS271001R0024	
3	10kA	S201MC3	2CDS271001R0034	
4	10kA	S201MC4	2CDS271001R0044	
6	10kA	S201MC6	2CDS271001R0064	
8	10kA	S201MC8	2CDS271001R0084	
10	10kA	S201MC10	2CDS271001R0104	
13	10kA	S201MC13	2CDS271001R0134	
16	10kA	S201MC16	2CDS271001R0164	
20	10kA	S201MC20	2CDS271001R0204	
25	10kA	S201MC25	2CDS271001R0254	
32	10kA	S201MC32	2CDS271001R0324	
40	10kA	S201MC40	2CDS271001R0404	
50	10kA	S201MC50	2CDS271001R0504	
63	10kA	S201MC63	2CDS271001R0634	

S202M

Double Pole

Rating Amps	kA	Part No	Order Code	
0.5	10kA	S202MC0.5	2CDS272001R0984	
1	10kA	S202MC1	2CDS272001R0014	
2	10kA	S202MC2	2CDS272001R0024	
3	10kA	S202MC3	2CDS272001R0034	
6	10kA	S202MC6	2CDS272001R0064	
8	10kA	S202MC8	2CDS272001R0084	
10	10kA	S202MC10	2CDS272001R0104	
16	10kA	S202MC16	2CDS272001R0164	
20	10kA	S202MC20	2CDS272001R0204	
25	10kA	S202MC25	2CDS272001R0254	
32	10kA	S202MC32	2CDS272001R0324	
40	10kA	S202MC40	2CDS272001R0404	
50	10kA	S202MC50	2CDS272001R0504	
63	10kA	S202MC63	2CDS272001R0634	

Protecta - Type B Distribution Boards
Outgoing MCBs

C

S203M

S200M Series Type C - MCBs - BS EN 60898 10kA (BS EN60947-2 15kA<50A)
Suitable for cable protection and moderate switching surges for short duration. eg. discharge lamps.

Triple Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	
1	10kA	S203MC1	2CDS273001R0014	
2	10kA	S203MC2	2CDS273001R0024	
3	10kA	S203MC3	2CDS273001R0034	
4	10kA	S203MC4	2CDS273001R0044	
6	10kA	S203MC6	2CDS273001R0064	
10	10kA	S203MC10	2CDS273001R0104	
13	10kA	S203MC13	2CDS273001R0134	
16	10kA	S203MC16	2CDS273001R0164	
20	10kA	S203MC20	2CDS273001R0204	
25	10kA	S203MC25	2CDS273001R0254	
32	10kA	S203MC32	2CDS273001R0324	
40	10kA	S203MC40	2CDS273001R0404	
50	10kA	S203MC50	2CDS273001R0504	
63	10kA	S203MC63	2CDS273001R0634	

2

D

S201M

S202M

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Suitable for cable protection and **high inrush applications such as transformers**

Single Pole

			Product Hierarchy 2400004	
Rating Amps	kA	Part No	Order Code	
1	6kA	S201D1	2CDS251001R0011	
2	6kA	S201D2	2CDS251001R0021	
3	6kA	S201D3	2CDS251001R0031	
4	6kA	S201D4	2CDS251001R0041	
6	6kA	S201D6	2CDS251001R0061	
10	6kA	S201D10	2CDS251001R0101	
16	6kA	S201D16	2CDS251001R0161	
20	6kA	S201D20	2CDS251001R0201	
25	6kA	S201D25	2CDS251001R0251	
32	6kA	S201D32	2CDS251001R0321	
40	6kA	S201D40	2CDS251001R0401	
50	6kA	S201D50	2CDS251001R0501	
63	6kA	S201D63	2CDS251001R0631	

Double Pole

0.5	6kA	S202D0.5	2CDS252001R0157	
1	6kA	S202D1	2CDS252001R0011	
2	6kA	S202D2	2CDS252001R0021	
3	6kA	S202D3	2CDS252001R0031	
4	6kA	S202D4	2CDS252001R0041	
6	6kA	S202D6	2CDS252001R0061	
10	6kA	S202D10	2CDS252001R0101	
16	6kA	S202D16	2CDS252001R0161	
20	6kA	S202D20	2CDS252001R0201	
25	6kA	S202D25	2CDS252001R0251	
32	6kA	S202D32	2CDS252001R0321	
40	6kA	S202D40	2CDS252001R0401	
50	6kA	S202D50	2CDS252001R0501	
63	6kA	S202D63	2CDS252001R0631	

Protecta - Type B Distribution Boards
Outgoing MCBs

D

S200 Series Type D - MCBs - single pole - BS EN 60898 6kA

Suitable for cable protection and **high inrush applications such as transformers**

Triple Pole

Rating Amps	kA	Part No	Product Hierarchy 2400004	
			Order Code	
1	6kA	S203D1	2CDS253001R0011	
2	6kA	S203D2	2CDS253001R0021	
3	6kA	S203D3	2CDS253001R0031	
4	6kA	S203D4	2CDS253001R0041	
6	6kA	S203D6	2CDS253001R0061	
10	6kA	S203D10	2CDS253001R0101	
16	6kA	S203D16	2CDS253001R0161	
20	6kA	S203D20	2CDS253001R0201	
25	6kA	S203D25	2CDS253001R0251	
32	6kA	S203D32	2CDS253001R0321	
40	6kA	S203D40	2CDS253001R0401	
50	6kA	S203D50	2CDS253001R0501	
63	6kA	S203D63	2CDS253001R0631	

S203M

RCBO single pole, solid neutral to BS EN 61009

Type B

Rating Amps	kA	Sensitivity	Part No	Product Hierarchy 2500002	
				Order Code	
6	10	30mA	DS271AC-B6/0.03	2CSR175092R1065	
10	10	30mA	DS271AC-B10/0.03	2CSR175092R1105	
16	10	30mA	DS271AC-B16/0.03	2CSR175092R1165	
20	10	30mA	DS271AC-B20/0.03	2CSR175092R1205	
25	10	30mA	DS271AC-B25/0.03	2CSR175092R1255	
32	10	30mA	DS271AC-B32/0.03	2CSR175092R1325	

Type C

6	10	30mA	DS271AC-C6/0.03	2CSR175092R1064	
10	10	30mA	DS271AC-C10/0.03	2CSR175092R1104	
16	10	30mA	DS271AC-C16/0.03	2CSR175092R1164	
20	10	30mA	DS271AC-C20/0.03	2CSR175092R1204	
25	10	30mA	DS271AC-C25/0.03	2CSR175092R1254	
32	10	30mA	DS271AC-C32/0.03	2CSR175092R1324	
40	10	30mA	DS271AC-C40/0.03	2CSR175092R1404	

DS271AC-C10/0.03

Type B - Suitable for small inrush or switching surges, heating loads and tungsten lighting
Type C - Suitable for moderate switching surges for sort duration. eg. discharge lamps.

Supplied with 800mm flying neutral and functional earth leads.

2

Protecta - Type B Distribution Boards
Outgoing MCBs

General Accessories/Spares		Product Hierarchy 2400004	
Description		Order Code	
12 module blank cover		GHL5301904R0001	
1 module blank cover		GHS2701913R0002	
Busbar cover for 5 unused ways		2CDL200001R0011	

2

Meter Modules

Distribution Board 3 phase kWh meter module fitted with Type DAB13000 Meter multi function with pulsed output

• Extension box with CT's, wiring loom and MCB to pick up voltage.
• Can be mounted top or bottom of board.
• Modbus, maximum demand and M-bus version available

CT size	Max Cable Diameter (Through CT)	Dimensions mm			Part No	Product Hierarchy 42000001	
		H	W	D		Order Code	
100A					DB100METMOD	1TVL151800S1017	
125A	27mm	400	400	125	DB125METMOD	1TVL151800S1018	
250A					DB250METMOD	1TVL151800S1019	

Please Note: The above modules are built to order, lead times available on request.

Extension Boxes

Top Extension Boxes

Description	Part No	Product Hierarchy 42000001	
		Order Code	
Extension Box Plain Cover No DIN Rail	EPBTEB200C	1SKA121142C0001	
Extension Box Plain Cover No DIN Rail	EPBTEB400C	1SKA123142C0001	
14 Module Extension Box Steel Flap (1 row)	EPBTEB200S	1SKA122142C0001	
28 Module Extension Box Steel Flap (2 row)	EPBTEB400S	1SKA124142C0001	

Extension Box Dimensions

Part No	Height mm	Width mm	Depth mm
EPBTEB200C	200	400	125
EPBTEB400C	400	400	125
EPBTEB200S	200	400	125
EPBTEB400S	400	400	125

Housemaster & Protecta
Modular Devices

F202 AC-63/0.03

F200 Series RCCBs Double Pole
AC - BS/EN 61008

Rated Current	Tripping mA	Part No	Order Code	
			Product Hierarchy 2500001	
16	10	F202 AC-16/0.01	2CSF202001R0160	
25	30	F202 AC-25/0.03	2CSF202001R1250	
40	30	F202 AC-40/0.03	2CSF202001R1400	
63	30	F202 AC-63/0.03	2CSF202001R1630	
80	30	F202 AC-80/0.03	2CSF202001R1800	
100	30	F202 AC-100/0.03	2CSF202001R1900	
25	300	F202 AC-25/0.3	2CSF202001R3250	
40	300	F202 AC-40/0.3	2CSF202001R3400	
63	300	F202 AC-63/0.3	2CSF202001R3630	

F200 Series RCCBs Four Pole AC - BS/EN 61008

25	30	F204 AC-25/0.03	2CSF204001R1250	
40	30	F204 AC-40/0.03	2CSF204001R1400	
63	30	F204 AC-63/0.03	2CSF204001R1630	
80	30	F204 AC-80/0.03	2CSF204001R1800	
100	30	F204 AC-100/0.03	2CSF204001R1900	
100	100	F204 AC-100/0.1	2CSF204001R2900	
25	300	F204 AC-25/0.3	2CSF204001R3250	
40	300	F204 AC-40/0.3	2CSF204001R3400	
63	300	F204 AC-63/0.3	2CSF204001R3630	

F204 AC-63/0.03

ESB24.40

Installation Contactors - BS EN 61095

Rated Current	230v kW		400v kW		Contacts		Part no	Order Code	
	AC1	AC3	AC1	AC3	n/o	n/c		**Product Hierarchy 2700001**	
20	4	1.3	-	-	-	2	ESB20.02	GHE3211202R0006	
					1	1	ESB20.11	GHE3211302R0006	
					4	-	ESB20.40	GHE3211102R0006	
24	9	2.2	16	4	4	-	ESB24.20	GHE3291102R0006	
					-	4	ESB24.04	GHE3291202R0006	
					2	2	ESB24.22	GHE3291302R0006	
40	16	5.5	26	11	4	-	ESB40.40	GHE3491102R0006	
63	24	8.5	40	16	4	-	ESB63.40	GHE3691102R0006	

All above contactors fitted with 230v 50Hz coils

Spacer				GHE3201902R0001	
Aux Contacts (not for ESB20)	2	-	EH04.20	GHE3401321R0001	

Housemaster & Protecta
Modular Devices

AT3

E203/63R

OVR1N15275

Analogue Timers

Description	Part No	Product Hierarchy 2700001	
		Order Code	
Daily programme with standby battery 200 hr	AT3-R	2CSM204235R0601	
Weekly programme with standby battery 200 hr	AT3-7R	2CSM204245R0601	

Twilight Switches

The twilight switch allows ON/OFF switching of lights according to pre-established light levels

Twilight switch + light sensor	TW1	2CSM204135R1341	

Digital Timers

1 Channel Weekly Time Switch	D1	2CSM258763R0621	

Isolators

E202/63R 2P 63A	E202/63R	2CDE282001R0063	
E202/100R 2P 100A	E202/100R	2CDE282001R0100	
E202/125R 2P 125A	E202/125R	2CDE282001R0125	
E203/63R 3P 63A	E203/63R	2CDE283001R0063	
E203/100R 3P 100A	E203/100R	2CDE283001R0100	
E203/125R 3P 125A	E203/125R	2CDE283001R0125	
E204/63R 4P 63A	E204/63R	2CDE284001R0063	
E204/125R 4P 125A	E204/125R	2CDE284001R0125	

Surge Arrestors

Type 1 - 3 pole + N	OVRT13N25525TS	2CTB815101R0700	
Type 2 - 3 pole + N	OVRT23N40275SPTS	2CTB803953R0200	
SP + N surge unit with integrated overload unit	OVRPLUSIN10275	2CTB813812R2600	
	OVRPLUSN140	2CTB803701R0100	
TP & N surge unit with integrated overload unit	OVRPLUS3N15275	2CTB803701R0400	
	OVRTPLUS3N40275	2CTB803701R0300	

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Housemaster & Protecta
Digital Energy Meters

Digital Meters

Description	Part No	Product Hierarchy 2700001	
		Order Code	
ODIN Single Phase, Direct Connected	OD1065	2CMA131040R1000	
ODIN Single Phase, Pulse Output, Direct Connected	OD1365	2CMA131041R1000	
DELTA Single Phase - 2 Tariff with Pulse Output	FBB11205	2CMA180894R1000	
DELTA Single Phase - 2 Tariff	FBU11205	2CMA180893R1000	
ODIN 3 Phase + N - 1 Pulse Output, Direct Connected	OD4165	2CMA131024R1000	
ODIN 3 Phase + N - 1 Pulse Output, CT Connected	OD4110	2CMA131025R1000	
DELTA Plus 3 phase + N - with Pulse Output	DAB13000	2CMA180806R1000	
DELTA Max 3 phase + N - 2 Tariff with Internal Clock and THD	DEB13005	2CMA139495R1000	
DELTA Max 3 phase + N with THD	DEB13007	2CMA139497R1000	

DCB13000

Communication Adaptors

Description	Part No	Product Hierarchy 2700001	
		Order Code	
LON PLC A-Band Adaptor	CAL 06000	2CMA137100R1000	
Ethernet Adaptor	CEM 05100	2CMA137121R1000	
M-bus (Meter Bus) Adaptor	CTM 04000	2CMA137090R1000	
RS232 Adaptor	CRM04000	2CMA137091R1000	
Mod Bus Adapter	CSO 05000	2CMA137124R1000	

Panel Mounted Meters

Description	Part No	Product Hierarchy 2700001	
		Order Code	
Multifunction kW hr meter	DELTAMTME-96	2CSG133030R4022	
Multifunction kW hr meter with Mod Bus	DMTME-I-485-96	2CSG163030R4022	

For other DIN rail mounted meters please consult us.

Panel Boards

Panel Boards

Panel Boards	Incomers	Connecting Kits	Inner Doors	Outgoers

Any 6, 12, 18 way board rated at 400A	no incomer required	400A Direct Connection Kit	P6X6DC	T1 or T3 (not mixed) Front connection terminals are required for all T3 devices
Any 6, 12, 18 way board rated at 800A		800A Direct Connection Kit		
Any 6, 12, 18 way board rated at 400A	250A TP Switch	250A MCCB/Switch Connection Kit	P6X6T3	
	250A TP MCCB 36kA			
	400A TP Switch	400A MCCB/Switch Connection Kit	P6X6T5	
	400A TP MCCB 36kA			
Any 6, 12, 18 way board rated at 630A	630A TP Switch	630A MCCB/Switch Connection Kit		
	630A TP MCCB 36kA			
	630A TP MCCB 50kA			
Any 6, 12, 18 way board rated at 800A	800A TP Switch	800A MCCB/Switch Connection Kit	P6X6T6	
	800A TP MCCB 36kA			
	800A TP MCCB 50kA			

For the Panelboard to be complete you need to order one item from the pages shown

Panel Boards
3 Pole and Custom Boards

Technical Details

- Colour Light Grey RAL 7035
- ASTA Certified Busbars
- Supplied with a plain door as standard
- Supplied without incomer, see options below
- 4 Pole Versions on request
- Rated current/Icw: up to 400A/35kA flat busbar
                        up to 800A/50kA profiled busbar

640T1PB3

3 Pole Panel Board

Ways	MCCB Type	Copper Rating	Dimensions mm			Product Hierarchy 4100001	
			H	W	D	Order Code	
6	T1	400A	1050	690	204	640T1PB3	
	T3	400A	1250	690	204	640T3PB3	
	T3	800A	1250	690	204	680T3PB3	
12	T1	400A	1450	690	240	124T1PB3	
	T3	400A	1650	690	240	124T3PB3	
	T1	800A	1450	690	240	128T1PB3	
	T3	800A	1650	690	240	128T3PB3	
18	T1	400A	1850	690	240	184T1PB3	
	T1	800A	1850	690	240	188T1PB3	
	T3	800A	2050	690	240	188T3PB3	

T1 and T3 breakers **cannot** be mixed in standard Panelboard

3 Pole Custom Panel Board (for use with 400, 630 and 800A incomers only)

Ways	MCCB Type	Copper Rating	Dimensions mm			Product Hierarchy 4100001	
			H	W	D	Order Code	
6			1250	690	204	CU640PB3	
12	T1/T2/T3	400A	1650	690	240	CU124PB3	
18			2050	690	240	CU184PB3	
6			1250	690	204	CU680PB3	
12	T1/T2/T3	800A	1650	690	240	CU128PB3	
18			2050	690	240	CU188PB3	

It is necessary to purchase plug-in bases for the MCCBs fitted in a Custom Panel Board see page 46

Panel Board
Incoming Devices & Accessories

Connection Kits

MCCB / Switch Disconnector

Incomer Options

Rating	Device	kA Rating	Product Hierarchy 4100001	
			Order Code	
400/800A	Direct Connection Kit 400A	-	400DC3/4P	
	Direct Connection Kit 800A	-	800DC3P	
	Inner Door to suit the above kits	-	P6X6DC	
250A	3 Pole Connection Kit 250A T3 MCCB/Switch	-	250T33P	
	Inner Door to suit the above kit	-	P6X6T3	
	250A 3P Switch Disconnector T3D250	-	1SDA051327R1	
	250A 3P MCCB T3N250	36kA	1SDA051247R1	
400A	3 Pole Connection Kit 400A T5 MCCB/Switch	-	400T53P	
	Inner Door to suit the above kit	-	P6X6T5	
	400A 3P Switch Disconnector T5D400	-	1SDA054599R1	
	400A 3P MCCB T5N400	36kA	1SDA054317R1	
630A	3 Pole Connection Kit 630A T5 MCCB/Switch	-	630T53P	
	Inner Door to suit the above kit	-	P6X6T5	
	630A 3P Switch Disconnector T5D630	-	1SDA054601R1	
	630A 3P MCCB T5N630	36kA	1SDA054396R1	
	630A 3P MCCB T5S630	50kA	1SDA054404R1	
800A	3 Pole Connection Kit 800A T6 MCCB/Switch	-	800T63P	
	Inner Door to suit the above kit	-	P6X6T6	
	800A 3P Switch Disconnector T6D800	-	1SDA060345R1	
	800A 3P MCCB T6N800	36kA	1SDA060214R1	
	800A 3P MCCB T6S800	50kA	1SDA060216R1	

1SDA052616R1

1SDA050870R1

1SDA050894R1

1SDA050894R1

Model	Current [A]	Product Hierarchy 3000003	
	Im	Order Code	
16kA	16A	1SDA052616R1	
	20A	1SDA052617R1	
T1B Single Pole 25kA	32A	1SDA052619R1	
	40A	1SDA052620R1	
	63A	1SDA052622R1	
	80A	1SDA052623R1	
	100A	1SDA052624R1	
	125A	1SDA052625R1	
	160A	1SDA052626R1	
T1B Triple Pole 16kA	16A	1SDA050870R1	
	20A	1SDA050871R1	
	32A	1SDA050873R1	
	40A	1SDA050874R1	
	50A	1SDA050875R1	
	63A	1SDA050876R1	
	80A	1SDA050877R1	
	100A	1SDA050878R1	
	125A	1SDA050879R1	
	160A	1SDA050880R1	
T1C Triple Pole 25kA	25A	1SDA050894R1	
	32A	1SDA050895R1	
	40A	1SDA050896R1	
	50A	1SDA050897R1	
	63A	1SDA050898R1	
	80A	1SDA050899R1	
	100A	1SDA050900R1	
	125A	1SDA050901R1	
	160A	1SDA050902R1	
T1N Triple Pole 36kA	32A	1SDA050917R1	
	40A	1SDA050918R1	
	50A	1SDA050919R1	
	63A	1SDA050920R1	
	80A	1SDA050921R1	
	100A	1SDA050922R1	
	125A	1SDA050923R1	
	160A	1SDA050924R1	
T3 Triple Pole 36kA	63A	1SDA051241R1	
	80A	1SDA051242R1	
	100A	1SDA051243R1	
	125A	1SDA051244R1	
	160A	1SDA051245R1	
	200A	1SDA051246R1	
	250A	1SDA051247R1	
T3 Triple Pole 50kA	63A	1SDA051263R1	
	80A	1SDA051264R1	
	100A	1SDA051265R1	
	125A	1SDA051266R1	
	160A	1SDA051267R1	
	200A	1SDA051268R1	
	250A	1SDA051269R1	

2

2

MCCB Accessories
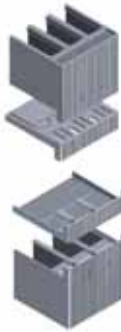
	Product Hierarchy 4100001 - 3000003 - 3400004	
Front Connection Terminal for Copper Cables - FC CU	Order Code	
T3 - 3 pieces	1SDA051482R1	
High Terminal Cover HTC		
T1 3P – 2 Pieces	1SDA051415R1	
T3 3P – 2 Pieces	1SDA051419R1	
T5 – 2 Pieces	1SDA054960R1	
T6 – 2 Pieces	1SDA014040R1	
T1 1P - 1 Piece	ED0001	

General Accessories

	Product Hierarchy 4100001	
Description	Order Code	
MCCB blanking module for inner door (210mm)	GHL5301904R0001	
T1 Busbar Shroud 10 pcs	MODT1	
T3 Busbar Shroud 10 pcs	MODT3	

Plug-in Bases

	Width mm		
T1 Single Pole L1 & L3 Plug In	25.4	PLT11L1/L3P	
T1 single pole L2 plug in base	25.4	PLT11L2P	
T1 three pole plug in base	76.2	PLT13P	
T3 3 Pole Plug In Base	105	PLT33P	
Additional kit for neutral & earth bars		AK1NE	
Extension kit for neutral & earth bars		EX1NE	
Busbar Shroud 630mm Long 3Pcs		SH630	

PLT33P

Meter Modules

Panel Board 3 phase kWh meter module

- Extension box with multi function meter (Deltaplus1300), CT's, wiring loom and MCB to pick up voltage.
- Extension box with CT's, wiring loom and MCB to pick up voltage.
- Modbus, maximum demand and M-Bus versions available
- Can be mounted top or bottom of board.

PB250METMOD

			Product Hierarchy 4200001	
Panel Board Depth	CT Size [A]	CT Hole Diameter	Order Code	
240mm	250A	37mm	1TVL151800S1013	
	400A		1TVL151800S1014	
	600A		1TVL151800S1015	
	800A		1TVL151800S1016	
204mm	250A	37mm	1TVL151800S1174	
	400A		1TVL151800S1175	
	600A		1TVL151800S1176	
	800A		1TVL151800S1177	

When fitting side extension modules together with a meter
module please order the required number or RC2000 extension modules

Please note: The above modules are built to order - Lead times available on request

Panel Boards
Accessories

640T1PB3

	Product Hierarchy 4100001	
Plinths	Order Code	
Four corner feet 100mm high for main structure	ZL1000	
Finish profile for above plinth	ZL1001	
Two Feet 100mm high for side extension box	ZL3000	
Finishing profile for side extension box	ZL2001	

Plinths cannot be used when meter modules are fitted/extension boxes

Top/Bottom Extension Modules

385H x 690W x 240D mm top/bottom structure extension box	RC1000	
385H x 390W x 240D mm top/bottom cable way extension box	RC2000	

Side Extension Modules

Uprights 1050mm	MI1000	
Cable Container 1050mm	VC1000	
Front Door 1050mm	PC1002	
Uprights 1250mm	MI1200	
Cable Container 1250mm	VC1200	
Front Door 1250mm	PC1202	
Uprights 1450mm	MI1400	
Cable Container 1450mm	VC1400	
Front Door 1450mm	PC1402	
Uprights 1650mm	MI1600	
Cable Container 1650mm	VC1600	
Front Door 1650mm	PC1602	
Uprights 1850mm	MI1800	
Cable Container 1850mm	VC1800	
Front Door 1850mm	PC1802	
Uprights 2050mm	MI2000	
Cable Container 2050mm	VC2000	
Front Door 2050mm	PC2002	

When fitting side extension modules together with a top or bottom extension
box please order the required number of RC2000 extension modules

Notes

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Switching

Contents

3

Switching - Loadbreak Switches
IP65 Polycarbonate Enclosure

• IP65 three and four-pole switch disconnectors suitable for load break switching or isolation.
• Polycarbonate enclosure. IEC 60947-3

Polycarbonate Enclosure 9kW ... 11kW   3 pole

Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	
32	25	9	125	100	107	S37K5N-B	
40	40	11				S315KN-B	

S37K5N

Polycarbonate Enclosure 9kW ... 37kW   4 pole

Rating@415v			Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	kW	H	W	D	Order Code	
32	25	9	125	100	107	S47K5N-B	
40	40	11				S415KN-B	
63	63	22	170	140	108	S418KN-B	
80	80	37				S426KN-B	

Auxiliary Contacts
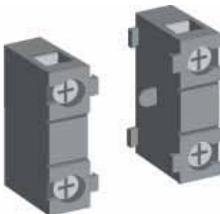
NO	NC		Product Hierarchy 4000002	
			Order Code	
1	-		OA1G10	
-	1		OA1G01	
1	1		OA2G11	

Switching - Loadbreak Switches
IP65 Plastic Enclosure

OTP16BA3M

OTP25BA3M

OTP45BA3M

Load Break Switches 3 - 4 - 6 pole   16...125 amps

- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom
- All OTP16 (excluding 3p) /25/32 all have 25/20mm reducers

Rating@415v				No. Poles	Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	AC23	kW		H	W	D	Order Code	
25	16	16	7.5	3 + solid neutral	150	130	60	OTP16BA3M	
				4	150	130	60	OTP16BA4M	
				6	150	130	60	OTP16BA6M	
32	25	20	9	3+ solid neutral	150	130	60	OTP25BA3M	
				4	150	130	60	OTP25BA4M	
				6	150	130	60	OTP25BA6M	
40	40	23	11	3+ neutral	150	130	60	OTP32BA3M	
				4	150	130	60	OTP32BA4M	
				6	150	130	60	OTP32BA6M	
63	63	45	22	3+ solid neutral	200	145	90	OTP45BA3M	
				4	200	145	90	OTP45BA4M	
				6	200	145	90	OTP45BA6M	
80	80	75	37	3+ solid neutral	200	145	90	OTP63BA3M	
				4	200	145	90	OTP63BA4M	
				6	200	145	90	OTP63BA6M	
125	125	90	45	3+ solid neutral	400	200	140	OTP125BA3U	
				4	400	200	140	OTP125BA4U	
				6	400	200	140	OTP125BA6U	

Safety Switches 3 pole   16...40 amps

Rating@415v				No. Poles	Dimensions mm			Product Hierarchy 4000002	
1th A	AC22	AC23	kW		H	W	D	Order Code	
25	16	16	7.5	3	150	130	60	OTP16B3M	
32	25	20	9	3	150	130	60	OTP25B3U	
40	40	23	11	3	150	130	60	OTP32B3U	

OTP80BA3U

Switching - Loadbreak Switches
IP65 Steel Enclosure

OT100TPN

Load Break Switches 3 - 4 pole   20 ... 400A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with 2 fastening screws (removable)
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Spreader boxes available see below

Rating@415v			Dimensions				Product Hierarchy 4000003	
1th A	AC22	AC23	H	W	D	No. Poles	Order Code	
32	25	20	160	160	120	3 + solid neutral	OT20TPN	
						4	OT20FP	
40	40	23	160	160	120	3+ solid neutral	OT32TPN	
						4	OT32FP	
80	80	75	300	240	120	3+ solid neutral	OT63TPN	
						4	OT63FP	
115	100	80	400	300	160	3+ solid neutral	OT100TPN	
						4	OT100FP	
125	125	90	400	300	160	3+ solid neutral	OT125TPN	
						4	OT125FP	
160	160	135	500	360	160	3 + solid neutral	OT160TPN	
						4	OT160FP	
200	200	200	500	360	160	3+ solid neutral	OT200TPN	
						4	OT200FP	
315	315	315	500	360	160	3+ solid neutral	OT315TPN	
						4	OT315FP	
500	500	500	500	360	160	3+ solid neutral	OT400TPN	
						4	OT400FP	

Please Note:
This range of switches are superseded by switches on the page opposite from October 2011

OT315TPN

Accesories

Spreader Boxes Suitable for Loadbreak Switches	Product Hierarchy 4000003	
	Order Code	
OT20, OT32, OT63	SB1G	
OT100, OT125, OT160, OT200, OT315, OT400	SB2G	

Auxiliary Contacts	Order Code	
1 N/O	OA1G10	
1 N/C	OA1G01	
1 N/O - 1 N/C	OA2G11	

Switching - Loadbreak Switches
IP65 Steel Enclosure

AVAILABLE OCTOBER 2011

New

Load Break Switches 3 - 4 pole   20 ... 800A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Spreader boxes available see below

Rating@415v [A]			Dimensions			No. Poles	Product Hierarchy 4000003	
1th A	AC22	AC23	H	W	D		Order Code	
32	25	20	300	200	150	3 + solid neutral	OT20TPN-B	
						4	OT20FP-B	
40	40	23	300	200	150	3+ solid neutral	OT32TPN-B	
						4	OT32FP-B	
80	80	75	300	300	150	3+ solid neutral	OT63TPN-B	
						4	OT63FP-B	
115	100	80	400	300	150	3+ solid neutral	OT100TPN-B	
						4	OT100FP-B	
125	125	90	400	300	150	3+ solid neutral	OT125TPN-B	
						4	OT125FP-B	
160	160	135	500	400	200	3 + solid neutral	OT160TPN-B	
						4	OT160FP-B	
200	200	200	500	400	200	3+ solid neutral	OT200TPN-B	
						4	OT200FP-B	
315	315	315	500	400	200	3+ solid neutral	OT315TPN-B	
						4	OT400FP-B	
500	500	500	500	400	200	3+ solid neutral	OT400TPN-B	
						4	OT400TPN-B	
630	630	630	600	400	250	3+ solid neutral	OT630TPN-B	
						4	OT630FP-B	
800	800	800	600	400	250	3+ solid neutral	OT800TPN-B	
						4	OT800FP-B	

Note: OT630 & OT800 TPN/FP products are made to order and are non-stock items

Accesories

Spreader Boxes	Product Hierarchy 4000002			
Suitable for Loadbreak Switches	Spreader Box Order Code		Spreader Box Gasket Order Code	
OT20, OT32, OT63, OT100, OT125	Not Required			
OT160, OT200, OT315, OT400	SRN5420K		GZ4020	
OT630, OT800	SRN6425K		GZ4025	
Wall Mounting Brackets (Pack of 4)			AA1206	

Auxiliary Contacts	Order Code
1 N/O	OA1G10
1 N/C	OA1G01
1 N/O - 1 N/C	OA2G11

Switching - Switch Fuses
IP65 Steel Enclosure

3 - 4 pole   20 ... 630A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches supplied with fuses
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with 2 fastening screws (removable)
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Switches internally are rated IP20 on incoming terminals upto 63A
- Switches 100A and above have a shroud fitted to the incoming terminals to increase protection when the door is open
- Spreader boxes available see below
- 2 gland plates included one blank (bottom), one configured as below (top)

OS20FP

OS63FP

	AC23[kW]			Dimensions					Product Hierarchy 4000004	
1thA	400v	500v	690v	H	W	D	No. Poles	Fuse Type	Order Code	
20	7.5	11	15	300	240	120	3+detach neutral	A1	OS20TPN	
32	15	18	25	300	240	120	3+detach neutral	A2	OS32TPN	
							4		OS32FP	
63	30	37	55	400	300	160	3+detach neutral	A2/A3	OS63TPN	
							4		OS63FP	
100	55	55	90	400	300	160	3+detach neutral	A2/A3	OS100TPN	
							4		OS100FP	
125	55	75	110	400	300	160	3+detach neutral	A2/A3	OS125TPN	
							4		OS125FP	
160	75	90	132	500	360	160	3+solid neutral	A3/A4	OS160TPN	
200	110	132	200	500	360	160	3+detach neutral	B1/B2	OS200TPN	
							4		OS200FP	
315	160	220	220	500	360	160	3+detach neutral	B1/B4	OS315TPN	
							4		OS315FP	
400	220	280	400	500	360	160	3+detach neutral	B1/B4	OS400TPN	
							4		OS400FP	
630	355	450	560	800	600	335	3+detach neutral	C1/C2	OS630TPN	
							4		OS630FP	

Please Note: This range of switches are superseded by switches on the page opposite from October 2011

Accesories

Spreader Boxes Suitable for Switchfuse	Product Hierarchy 4000003	
	Order Code	
OS20, OS32	SB1G	
OS63, OS100, OS125, OS160	SB2G	
OS200, OS315, OS400	SB3G	
OS630	SB4G	

Auxiliary Contacts	Order Code	
1 N/O	OA1G10	
1 N/C	OA1G01	
1 N/O - 1 N/C	OA2G11	
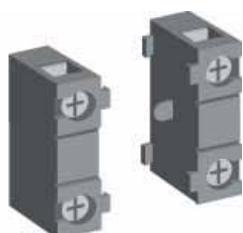
Switching - Switch Fuses
IP65 Steel Enclosure

AVAILABLE OCTOBER 2011

New

3 - 4 pole   20 ... 800A

- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock

- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds (NOT FITTED) to allow customer connections
- Spreader boxes available see below

3

1thA	AC23 [kW]			Dimensions			No. Poles	Fuse Type	Product Hierarchy 4000004	
	400V	500V	690V	H	W	D			Order Code	
20	7.5	11	15	300	300	150	3+detach neutral	A1	OS20TPN-B	
							4		OS20FP-B	
32	15	18	25	300	300	150	3+detach neutral	A2	OS32TPN-B	
							4		OS32FP-B	
63	30	37	55	400	300	150	3+detach neutral	A2/A3	OS63TPN-B	
							4		OS63FP-B	
100	55	55	90	400	300	150	3+detach neutral	A2/A3	OS100TPN-B	
							4		OS100FP-B	
125	55	75	110	400	300	150	3+detach neutral	A2/A3	OS125TPN-B	
							4		OS125FP-B	
160	75	90	132	500	400	200	3+solid neutral	A3/A4	OS160TPN-B	
							4		OS160FP-B	
200	110	132	200	600	400	250	3+detach neutral	B1/B2	OS200TPN-B	
							4		OS200FP-B	
315	160	220	220	600	400	250	3+detach neutral	B1/B4	OS315TPN-B	
							4		OS315FP-B	
400	220	280	400	600	400	250	3+detach neutral	B1/B4	OS400TPN-B	
							4		OS400FP-B	
630	355	450	560	600	600	300	3+detach neutral	C1/C2	OS630TPN-B	
							4		OS630FP-B	
800	450	560	710	800	600	300	3+detach neutral	C1/C2	OS800TPN-B	
							4		OS800FP-B	

Note: OS630 & OS800 TPN/FP products are made to order and are non-stock items

Accesories

Spreader Boxes Suitable for Switchfuse	Product Hierarchy 4000002		
	Spreader Box Order Code		Spreader Box Gasket Order Code
OS20, OS32, OS63, OS100, OS125	Not Required		
OS160	SRN5420K		GZ4020
OS200, OS315, OS400	SRN6425K		GZ4025
OS630, OS800	SRN8630K		GZ6030
Wall Mounting Brackets (Pack of 4)			AA1206

Auxiliary Contacts	Order Code	
1 N/O	OA1G10	
1 N/C	OA1G01	
1 N/O - 1 N/C	OA2G11	

Notes

3

Control

Contents

4

Direct-on-Line Starters
IP65 Plastic Enclosure

122EXE0D-OL

Direct on Line IP65 Plastic Enclosure
400v up to 7.5kW

- Smoothly styled modern IP65 enclosed DOL starter IEC947-4-1
- Generous cabling space for easy installation
- Combined contactor/overload assembly can be unclipped from DIN rail to ease installation
- Support for 400v 3ph or 230v single phase
- Overload supplied separately

230v coil - Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	230	106	127	122EXE0D-OL	1TVL300212E5099	
7.5	10.0	2.2	3.0				182EXE0D-OL	1TVL300216E5099	

400v coil - Select overload from page 64

Three Phase 400V [AC3]				Dimensions mm				Product Hierarchy 3600001	
5.5	7.5			230	106	127	124EXE0D-OL	1TVL300412E5099	
7.5	10.0						184EXE0D-OL	1TVL300416E5099	

DL23055P99

Direct on Line IP65 Plastic Enclosure
400v up to 7.5kW

AVAILABLE OCTOBER 2011

New

230v coil - Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	230	106	127	DL23055P99	1TVS230550P5099	
7.5	10.0	2.2	3.0				DL23075P99	1TVS230750P5099	

400v coil - Select overload from page 64

Three Phase 400V [AC3]				Dimensions mm				Product Hierarchy 3600001	
5.5	7.5			230	106	127	DL40055P99	1TVS400550P5099	
7.5	10.0						DL40075P99	1TVS400750P5099	

Accessories

Description	Part No	Product Hierarchy 3600001	
		Order Code	
E/Stop pushbutton kit	ESPBKIT	ESPBKIT	

Direct-on-Line Starters
IP55 Metal Enclosure

Direct on Line IP55 Metal Enclosure
400v up to 7.5kW

- Smoothly styled modern IP55 enclosed DOL starter IEC947-4-1
- Generous cabling space for easy installation
- Combined contactor/overload assembly can be unclipped from DIN rail to ease installation (not applicable to new versions).
- Support for 400v 3ph or 230v single phase
- Overload supplied separately

230v coil - Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	200	115	108	122EXE1D-OL	1TVL400212E5099	
7.5	10.0	2.2	3.0				182EXE1D-OL	1TVL400216E5099	

400v coil - Select overload from page 64

5.5	7.5			200	115	108	124EXE1D-OL	1TVL400412E5099	
7.5	10.0						184EXE1D-OL	1TVL400416E5099	

122EXE1D-OL

Direct on Line IP55 Metal Enclosure
400v up to 7.5kW

AVAILABLE OCTOBER 2011

New

230v coil - Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	184	184	165	DL23055S99	1TVS230550S5099	
7.5	10.0	2.2	3.0				DL23075S99	1TVS230750S5099	

400v coil - Select overload from page 64

5.5	7.5			184	184	165	DL40055S99	1TVS400550S5099	
7.5	10.0						DL40075S99	1TVS400750S5099	

Direct-on-Line Starters + Isolator
IP65 Plastic & IP55 Metal Enclosure

122EXEID-OL

Three Phase 400v up to 7.5kW with Isolator

- Direct-On-Line Starter with isolator in metal enclosure IEC 947-4-1
- Support for 400v 3ph or 230v single phase
- Overload supplied separately

IP55 Metal Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	200	200	138	122EXE2DI-OL	1TVL401212E5099	
7.5	10.0	2.2	3.0				182EXE2DI-OL	1TVL401216E5099	

400v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
5.5	7.5			200	200	138	124EXE2DI-OL	1TVL401412E5099	
7.5	10.0						184EXE2DI-OL	1TVL401416E5099	

Three Phase 400v up to 7.5kW with Isolator

- Direct-On-Line Starter with isolator in plastic & metal enclosure IEC 947-4-1
- Support for 400v 3ph or 230v single phase
- Overload supplied separately

AVAILABLE OCTOBER 2011

New

DI23055P99

IP65 Plastic Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	220	200	160	DI23055P99	1TVS230551P5099	
7.5	10.0	2.2	3.0				DI23075P99	1TVS230751P5099	

400v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
5.5	7.5			220	200	160	DI40055P99	1TVS400551P5099	
7.5	10.0						DI40075P99	1TVS400751P5099	

DI23055S99

IP55 Metal Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
5.5	7.5	1.5	2.0	184	184	180	DI23055S99	1TVS230551S5099	
7.5	10.0	2.2	3.0				DI23075S99	1TVS230751S5099	

400v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
5.5	7.5			184	184	180	DI40055S99	1TVS400551S5099	
7.5	10.0						DI40075S99	1TVS400751S5099	

Direct-on-Line Reversing Starters
IP65 Plastic & IP55 Metal Enclosure

182EXE2DI-OL

Three Phase 400v up to 7.5kW Reversing

- Direct-On-Line Reversing Starter in metal enclosure IEC 947-4-1.
- Mechanically and electrically interlocked contactors.
- Overload supplied separately

IP55 Metal Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
7.5	10.0	2.2	3.0	200	200	138	182EXE2DR-OL	1TVL403216E5099	

400v coil
Select overload from page 64

7.5	10.0			200	200	138	184EXE2DR-OL	1TVL403416E5099	

DR23075P99

DR23075S99

Three Phase 400v up to 7.5kW Reversing

- Direct-On-Line Reversing Starter in plastic & metal enclosure IEC 947-4-1.
- Mechanically and electrically interlocked contactors.
- Overload supplied separately

AVAILABLE OCTOBER 2011

New

IP65 Plastic Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
7.5	10.0	2.2	3.0	220	200	160	DR23075P99	1TVS230752P5099	

400v coil
Select overload from page 64

7.5	10.0			220	200	160	DR40075P99	1TVS400752P5099	

IP55 Metal Enclosure
230v coil
Select overload from page 64

Three Phase 400V [AC3]		Single Phase 230V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	KW	hp	H	W	D	Part No	Order Code	
7.5	10.0	2.2	3.0	184	184	165	DR23075S99	1TVS230752S5099	

400v coil
Select overload from page 64

7.5	10.0			184	184	165	DR40075S99	1TVS400752S5099	

4

Star Delta Starters
IP65 Plastic Enclosure & IP55 Metal Enclosure

Enclosed Star-Delta up to 22kW 400V
- Star-Delta Starters in metal enclosure IEC 947-4-1.
- All three phase star delta starters, are complete with pushbuttons, and 230v or 415v coils.
- Resetting of overload via stop button.
- Overload for standard motor duty is supplied separately.

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

IP55 Metal Enclosure
230v coil Select overload from page 64

Three Phase 400V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	H	W	D	Part No	Order Code	
15	20.0	195	308	138	312EXE2S-OL	1TVL404216E5099	
22.0	30.0				452EXE2S-OL	1TVL404226E5099	

400v coil Select overload from page 64

15	20.0	195	308	138	314EXE4S-OL	1TVL40416E5099	
22.0	30.0				454EXE4S-OL	1TVL40426E5099	

312EXE2S-OL

Enclosed Star-Delta up to 22kW 400V
- Star-Delta Starters in metal enclosure IEC 947-4-1.
- All three phase star delta starters, are complete with pushbuttons, and 230v or 415v coils.
- Resetting of overload via stop button.
- Overload for standard motor duty is supplied separately.

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

AVAILABLE OCTOBER 2011

New

IP65 Plastic Enclosure
230v coil Select overload from page 64

Three Phase 400V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	H	W	D	Part No	Order Code	
15	20.0	220	275	138	SD23015P99	1TVS230153P5099	

400v coil Select overload from page 56

15	20.0	220	275	138	SD40015P99	1TVS400153P5099	

SD23015P99

IP55 Metal Enclosure
230v coil Select overload from page 64

Three Phase 400V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	H	W	D	Part No	Order Code	
15	20.0	184	284	165	SD23015S99	1TVS230153S5099	
22.0	30.0	305	284	175	SD23022S99	1TVS230223S5099	

400v coil Select overload from page 64

15	20.0	184	284	165	SD40015S99	1TVS400153S5099	
22.0	30.0	305	284	175	SD40022S99	1TVS400223S5099	

SD23015S99

4

Star Delta Starters with Isolator
IP55 Metal Enclosure

314EXE2S-OL

Enclosed Star-Delta + Isolator up to 22kW 400V
- Star-Delta Starters with isolator in metal enclosure IEC 947-4-1.
- All three phase star delta starters, are complete with pushbuttons, no overload and 230v or 415v coils.

- Resetting of overload via stop button.
- Overload for standard motor duty is supplied separately.

IP55 Metal Enclosure
230v coil Select overload from page 64

Three Phase 400V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	H	W	D	Part No	Order Code	
15	20.0	195	308	138	312EXE2SI-OL	1TVL405216E5099	
22.0	30.0				452EXE2SI-OL	1TVL405226E5099	

400v coil Select overload from page 64

15	20.0	195	308	138	314EXE2SI-OL	1TVL405416E5099	
22.0	30.0				454EXE2SI-OL	1TVL405426E5099	

Enclosed Star-Delta + Isolator up to 22kW 400V
- Star-Delta Starters with isolator in metal enclosure IEC 947-4-1.
- All three phase star delta starters, are complete with pushbuttons, no overload and 230v or 415v coils.

- Resetting of overload via stop button.
- Overload for standard motor duty is supplied separately.

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

AVAILABLE OCTOBER 2011

New

SI23015S99

IP55 Metal Enclosure
230v coil Select overload from page 64

Three Phase 400V [AC3]		Dimensions mm				Product Hierarchy 3600001	
KW	hp	H	W	D	Part No	Order Code	
15	20.0	184	284	180	SI23015S99	1TVS230154S5099	
22.0	30.0	305	284	190	SI23022S99	1TVS230224S5099	

400v coil Select overload from page 64

15	20.0	184	284	180	SI40015S99	1TVS400154S5099	
22.0	30.0	305	284	190	SI40022S99	1TVS400224S5099	

4

Overload Protection
Selection

T25DU .....

Direct on Line Overload Selection

Three Phase 400V [AC3]		Single Phase		Overload Rating Amps			Product Hierarchy 1700006	
KW	hp	KW	hp	From	To	Part No	Order Code	
0.25	0.33	0.05	0.08	0.63	1.0	TA25DU1.0	1SAZ211201R1021	
0.37	0.55	0.07	0.09	1.0	1.4	TA25DU1.4	1SAZ211201R1023	
0.55	0.75	0.1	0.12	1.3	1.8	TA25DU1.8	1SAZ211201R1025	
0.75	1.0	0.18	0.25	1.7	2.4	TA25DU2.4	1SAZ211201R1028	
1.1	1.5	0.25	0.33	2.2	3.1	TA25DU3.1	1SAZ211201R1031	
1.5	2.0	0.37	0.50	2.8	4.0	TA25DU4.0	1SAZ211201R1033	
2.2	3.0	0.55	0.75	4.5	6.5	TA25DU6.5	1SAZ211201R1038	
3.7	5.0	0.75	1.15	6.0	8.5	TA25DU8.5	1SAZ211201R1040	
4.0	5.5	1.1	1.5	7.5	11.0	TA25DU11	1SAZ211201R1043	
5.5	7.5	1.5	2.0	10.0	14.0	TA25DU14	1SAZ211201R1045	
7.5	10.0	2.2	3.0	13.0	19.0	TA25DU19	1SAZ211201R1047	

Star Delta Overload Selection

Three Phase 400V [AC3]		Overload Rating Amps			Product Hierarchy 1700006	
KW	hp	From	To	Part No	Order Code	
3.7	5.0	6.0	8.5	TA25DU8.5	1SAZ211201R1040	
5.5	7.5	10.0	14.0	TA25DU14	1SAZ211201R1045	
7.5	10.0	13.0	19.0	TA25DU19	1SAZ211201R1047	
15	20	24.0	32.0	TA25DU32	1SAZ211201R1053	

Note: The overload should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

*Overload Calculation

Motor FLC	Delta Loop Setting		
5	2.9	18	10.4
6	3.5	20	11.6
7	4.0	25	14.5
8	4.6	30	17.4
9	5.2	35	20.3
10	5.8	40	23.2
12	7.0	45	26.1
14	8.1	50	29.0
16	9.3	55	32.0

4

HL25P-230

HL230-25/45

HL230-63/100

IP65 Plastic Enclosure
Four Pole Contactors
230v coil

(Including neutral terminal strip)

Heating AC1 Amps	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	
25	16	16	4	HL25P-230-4	1TVL346209E5000	
45	30	32	4	HL45P-230-4	1TVL346226E5000	

400v coil

(Including neutral terminal strip)

25	16	16	4	HL25P-400-4	1TVL346409E5000	
45	30	32	4	HL45P-400-4	1TVL346426E5000	

IP65 Plastic Enclosure
Three & Four Pole Contactors
230v coil

(Including neutral terminal strip)

AVAILABLE OCTOBER 2011

New

Heating AC1 Amps	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	
25	16	16	4	HL23025P4	1TVS230250P5000	
45	30	32	4	HL23045P4	1TVS230450P5000	
70	40	42	3	HL23063P3	1TVS230631P5000	
100	70	70	3	HL230100P3	1TVS230101P5000	

Dimensions

Enclosure	Part No	Height mm	Width mm	Depth mm
Plastic	HL•••25P4 - HL•••45P4	230	106	127
	HL•••63P3 - HL•••100P3	220	200	160

4

Heating & Lighting
IP55 Metal Enclosure

IP55 Metal Enclosure
Four Pole Contactor
230v coil

(Including neutral terminal strip)

HL25-230

HL63-230

Heating AC1	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	
25	16	16	4	HL25-230-4	1TVL446209E5000	
45	30	32	4	HL45-230-4	1TVL446226E5000	
70	40	42	3	HL63-230-4	1TVL446245E5000	
100	70	70	3	HL100-230-4	1TVL446250E5000	

400v coil

(Including neutral terminal strip)

Heating AC1	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	
25	16	16	4	HL25-400-4	1TVL446409E5000	
45	30	32	4	HL45-400-4	1TVL446426E5000	
70	40	42	3	HL63-400-4	1TVL446445E5000	
100	70	70	3	HL100-400-4	1TVL446450E5000	

IP55 Metal Enclosure
Three & Four Pole Contactor
230v coil

(Including neutral terminal strip)

AVAILABLE OCTOBER 2011

New

HL230-25/100

Heating AC1	Amps per pole Fluorescent Mercury	Amps per pole Tungsten	Main Poles	Part No	Product Hierarchy 3600004	
					Order Code	
25	16	16	4	HL23025S4	1TVS230250S5000	
45	30	32	4	HL23045S4	1TVS230450S5000	
70	40	42	3	HL23063S3	1TVS230631S5000	
100	70	70	3	HL230100S3	1TVS230101S5000	

Dimensions

Enclosure	Part No	Height mm	Width mm	Depth mm
Metal	HL●●●25S4 - HL●●●45S4	180	185	145
	HL●●●63S3 - HL●●●100S3			

DC Injection Brakes
Powerbrake

Modules

Solid state injection brakes provide frictionless fast, smooth braking of single and three phase AC induction motors by injecting a controlled DC current into the motor windings: this introduces a stationary magnetic field which exerts a braking torque on the rotor.

- Reduced stopping time
- Increased production
- Increased safety in hazardous machines
- Smooth controlled stopping
- No wear on moving mechanical parts
- Adjustable braking torque and stop time
- Easy installation
- Maintenance free

DCB5A

Three Phase Basic Brake

| | | | Max. Brake Current (A) 10s Opps. | Dimensions mm | | | | Product Hierarchy 3800001 | |
kW	HP	Voltage		H	W	D	Part No	Order Code	
4	5.5	380-415	20	90	45	115	DCB4	1TVL904499B3999	
5.5	7.5	380-415	30				DCB5A400	1TVL905499B3999	

4

Pushbutton Stations
Plastic IP65 Enclosures

Plastic Pushbutton Stations

1GO

1RSC-EN

1K2 O-I

- IP65 thermoplastic control station complete with actuator, contact blocks and legend plate. Supplied fully assembled. Other variations are available on request.

Description	Dimensions mm			Part No	Product Hierarchy 3600003	
	H	W	D		Order Code	
1 Way Start/Green	75	101	74	1GO	1TVL110000P3101	
1 Way Stop/Red				1RC	1TVL101000P3102	
Mushroom Head 30mm (twist release) 300V 5A Max - to IEC60947-5-5	75	101	92	1RSC	1TVL101000P3203	
Emergency Stop 40mm (twist release) - to IEC60947-5-5	75	101	107	1RSC-EN	1TVL101000P3204	
Mushroom Head 60mm (twist release) - to IEC60947-5-5	75	101	107	1RMSC50	1TVL101000P3205	
Emergency Stop 40mm (with key release) 300V 5A Max - to IEC60947-5-5	75	101	122	1RMSKC	1TVL101000P3206	
Two-position switch	75	101	74	1H2O-I	1TVL110000P3107	
Two-position key switch (key removable both positions)				1K2O-I	1TVL110000P3108	
Three position switch				1H3I-O-II	1TVL110100P3109	
Three position key switch (key removable in all positions)				1K3I-O-II	1TVL110100P3110	

Pushbutton Stations & Terminals

Plastic Pushbutton Stations

2GORC

1RSC-ENSS

- IP65 thermoplastic control station complete with actuator, contact blocks and legend plate. Supplied fully assembled. Other variations are available on request.

Description	Dimensions mm			Part No	Product Hierarchy 3600003	
	H	W	D		Order Code	
Start/Green and Stop/Red	75	141	79	2GORC	1TVL211000P3111	
Start/Green and Red/Emergency Stop 40mm (twist release) to IEC60947-5-5	75	141	107	2GORSC-EN	1TVL211000P3112	

Description	Dimensions mm			Part No	Product Hierarchy 3600003	
	H	W	D		Order Code	
Emergency Stop 40mm (stay-put) - to EN418	100	140	100	1RSC-ENSS	1TVL100000P5015	

Stainless Enclosures

Description	Part No	Product Hierarchy 3900004	
		Order Code	
1 Gang Empty Enclosure 55mm deep	01.001001.SS1	01.001001.SS1	
2 Gang Empty Enclosure 55mm deep	01.001002.SS2	01.001002.SS2	
3 Gang Empty Enclosure 55mm deep	01.001003.SS3	01.001003.SS3	

Terminals in Enclosures

5-JBOX2.5

10TERM 2.5

Description	No. Terms	[A] 1th	Dimensions mm			Part No	Product Hierarchy 3600005	
			H	W	D		Order Code	
Junction Box IP65 junction box with flexible knockouts	5	24				5JBOX2.5	5-JBOX2.5 (Pack of 3)	
Terminal Box 2.5mm IP55 plastic enclosure	5	24	118	163	72	5TERM2.5	5TERM2.5	
	10	24				10TERM2.5	10TERM2.5	
Terminal Box 4mm IP55 plastic enclosure	5	32				5TERM4	5TERM4	
	10	32				10TERM4	10TERM4	

4

Notes

Domestic Equipment

Contents

5

Domestic Equipment
Busch Watchdog PIRs

ENERGY SAVING

Busch Watchdog BasicLine - 240º

New

	Product Hierarchy 1100001	
	Order Code	

240º detection angle, IP55, 12m range frontal/lateral, 5sec-12min timer, 2000W ohmic/480W flourescent switching, 5-1000 Lux, 2 years warranty

6844 AGM-204-500 white	6800-0-2507	

ProfessionalLine 90

Busch Watchdog ProfessionalLine - 90º

90/220/280º detection angle, IP55, 90º=12m range frontal/6m lateral, 220/280º = 16m range frontal/lateral, 10sec-30min timer, 3,680W ohmic/16AX flourescent switching (cos.0.6), 0.5-300 Lux, 5 years warranty

6853 AGM-204-500 white	6800-0-2321	
6853 AGM-201 brown	6800-0-2318	
6853 AGM-35 anthracite	6800-0-2322	

Busch Watchdog ProfessionalLine - 220º

6845/11 AGM-204-500 white (no R/C)	6800-0-2334	
6845/11 AGM-201-500 brown (no R/C)	6800-0-2335	
6845/11 AGM-35-500 anthracite (no R/C)	6800-0-2336	
6845 AGM-204-500 white (with R/C)	6800-0-2300	
6845 AGM-201-500 brown (with R/C)	6800-0-2301	
6845 AGM-35-500 anthracite (with R/C)	6800-0-2302	
6846 AGM-204-500 white (with R/C)	6800-0-2307	
6846 AGM-201-500 brown (with R/C)	6800-0-2308	
6846 AGM-35-500 anthracite (with R/C)	6800-0-2309	

ProfessionalLine 280

AlarmLine 220

Busch Watchdog AlarmLine - 220º

220º detection angle, IP55, 16m range frontal/lateral and 6m security range, 10sec-30 min timer, 2,300W ohmic/10AX flourescent switching (cos.0.6), second relay output 120W (for security range) 0.5-300 Lux. Radio range between PIR and receiver is 100m line of sight. 5 years warranty

6849 AGM-204-500 white (with R/C)	6800-0-2314	
6849 AGM-201 brown (with R/C)	6800-0-2311	
6849 AGM-35 anthracite (with R/C)	6800-0-2312	

Wireless PIR

Busch Watchdog WaveLine - 220º

Wire-less, 220º detection angle, battery operated (5-10yrs lifespan), IP55, 16m range front/lat, 5 years warranty.

6745 AGM-204 white	6700-0-0018	
6745 AGM-201 brown	6700-0-0019	
6745 AGM-35 anthracite	6700-0-0020	
6701 Receiver	6700-0-0022	

Corner Mounting Bracket

Busch Watchdog Accessories

6887-204-500 Corner adapter (except BasicLine), white	6899-0-0292	
6887-201-500 Corner adapter (except BasicLine), brown	6899-0-0293	
6887-35-500 Corner adapter (except BasicLine), anthracite	6899-0-0294	
6841-500 Remote control (except BasicLine)	6899-0-0296	
6842 Service Remote control (except BasicLine)	6899-0-0299	
6899 RC Suppressor	6899-0-0231	

RC Suppressor

Domestic Equipment
PresenceTech 360º

Busch PresenceTech BasicLine - 360º

	Product Hierarchy 1100001	
Busch PresenceTech BasicLine - 360º	Order Code	

Basic 360º, detection range 7m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA flourescent, 5sec-20min timer, 10/40/100/400/1,000 Lux, 28mm mounting depth, 2 years warranty

6814 U-500 Busch PresenceTech BasicLine, white	6800-0-2518	

Mini 360º, detection range 5m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA flourescent, 1/5/10/15min timer, 10/40/100/400/1,000 Lux, 38mm ø, 40mm mounting depth, spring clamp flush mounted, 25 mm x 162 mm x 23 mm (power box) , 2 years warranty

6811 EB-500 Busch PresenceTech BasicLine mini, white	6800-0-2517	

Corridor 360º, detection range 24m ø, IP40, switching 2,000W incandescent, 1,000W halogen, 900VA flourescent, 1/5/15/30/60 min timer, 10/40/100/400/1,000 Lux + actual brightness, 19mm mounting depth, 2 years warranty

6818 U-500 Busch PresenceTech BasicLine corridor, white	6800-0-2519	
6888 Surface mounting box for BasicLine corridor	6899-0-2305	
6898 Protective cage	6899-0-2304	
6843 IR Remote control (only BasicLine corridor)	6800-0-2511	

5
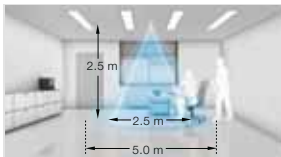
Mini
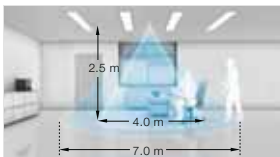
Basic
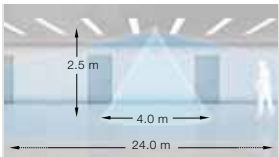
Corridor

Busch Watchdog PresenceTech - 360º

Presence 360º for special applications and Master/Slave function	
P 5401 WHI PresenceTech with relay insert 2,300W/VA (can be used as Master)	P 5401 WHI
P 5402/11 WHI PresenceTech with 2g/1w output for switching 2 different circuits at 2 different levels (can be used as Master)	P 5402/11 WHI
P 5450 WHI PresenceTech for flourescent light 0-10VDC, 700W for constant brightness control (can be used as Master)	P 5450 WHI
P 5405 WHI PresenceTech extension for P5401 WHI, P5402/11, P5450 WHI (will be used as a slave)	P 5405 WHI
6899-0-0282 surface mounting box for PresenceTech P5401 WHI, P5402/11 WHI, P5450 WHI	6899-0-0282

Watchdog Diagrams

New

Busch-Watchdog 90 ProfessionalLINE
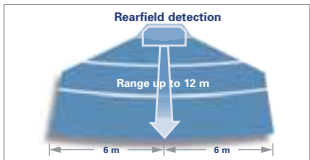
Busch-Watchdog 220 ProfessionalLINE

Busch-Watchdog 220 SelectLINE
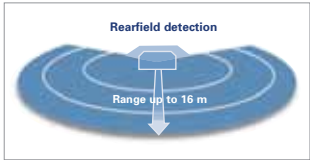
Busch-Watchdog 220 AlarmLINE
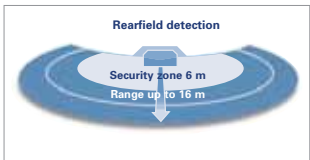
Busch-Watchdog 280 ProfessionalLINE

5

AC101

AC105

AC429

AC107

AC120WH

AC177

AC176

AC109
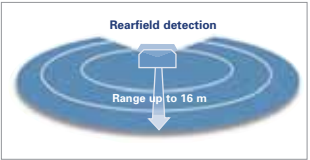
Concept BS

...concept in every detail

For over 125 years our products have mirrored the growth and development changes in electrical wiring technologies. Quality and reliability of our products have always been our first priority. Having a concept in every detail was, is and always will be our secret to success.

With its unique design - its square rocker combined with a slight curve on the top and bottom - concept bs is the best choice to meet your pursuit of EWA products with high quality and attractive design.

	Pack Qty	Product Hierarchy 9000002	
Switches		Order Code	
1 gang 1 way switch, 10AX		AC101	
1 gang 2 way switch, 10AX		AC105	
2 gang 2 way switch, 10AX		AC106	
3 gang 2 way switch, 10AX		AC107	
4 gang 2 way switch, 10AX	15	AC108	
Intermediate switch, 10AX		AC119	
Push switch with "bell" symbol , 10A		AC429	
1 gang 1 way push switch, 10A		AC430	
2 gang 1 way push switch, 10A		AC438	
1 gang 1 way double pole switch, with marking "on", 20AX		AC111	
1 gang 1 way double pole switch,with marking "On",with flex outlet, 20AX	10	AC120	
1 gang 1 way double pole switch, with marking "On", "water heater", with flex outlet, 20AX		AC120WH	
1 gang 1 way double pole switch with LED, 32A	8	AC176	
1 gang 1 way double pole switch with LED, 45A		AC177	
45A double pole switch with LED and 13A switched socket outlet with neon	5	AC118	
Pull cord switch, 10AX	10	AC109	
Fan isolator 3 pole, 10A	15	AC134	

AC208

AC238

AC401

AC210

AC506

Sockets & Outlets			
BS socket outlet, 13A		AC208	
BS double pole switched socket outlet, 13A	15	AC237	
BS double pole switched socket outlet with neon, 13A		AC238	
2 gang BS double pole switched socket outlet, 13A	8	AC239	
2 gang BS double pole switched socket outlet with neon, 13A		AC240	
BS round pin socket outlet, 5A	15	AC210	
BS double pole round pin switched socket outlet, 5A		AC221	
Shaver socket outlet	1	AC401	
Fused connection unit, 13A	10	AC506	
Switched Fused connection unit with neon, 13A		AC507	

Domestic Equipment
Concept BS Series Wiring Accessories

AC301

AC302

TV/Data/Communication	Pack Qty	**Product Hierarchy 9000002**	
		Order Code	
1 gang TV outlet, dead-end feader	10	AC301	
1 gang TV outlet, loop-through		AC304	
2 gang TV outlet, TV/TV, loop-through		AC302	
2 gang TV outlet, TV/FM, F-type, dead-end feader	1	AC312	
1 gang Satellite outlet, TV, F-type, dead-end feader	10	AC303	
1gang telephone outlet, BT master, RJ11,6-pole UPT		AC305	
1gang telephone outlet, BT second, RJ11,6-pole UPT		AC306	
1 gang computer outlet, RJ45, cat.5e, 8-pole UTP		AC331	
1 gang computer outlet, RJ45, cat.6, 8-pole UTP		AC333	
2 gang computer outlet, RJ45, cat.5e, 8-pole UTP		AC332	

AC303

AC305

AC333

AC332

Hotel Wiring Accessories

	Pack Qty	Order Code	
Shaver socket outlet	1	AC401	
20A Card switch with 30sec switch-off delay	8	AC402	
Bell push-switch "Do Not Disturb" & "Please Clean Room" marking and indicator, 10A	12	AC403-002	
Thermostat controller with display, 2 pipe system	1	AC417	

AC332

AC402

AC403-02

AC417

Frames

	Pack Qty	Order Code	
1 gang blank plate	20	AC504	
2 gang blank plate	10	AC505	
1 gang frame, white		AC5101-G	
1 gang frame, silver	60	AC5101-S	
1 gang frame, elegant grey	10	AC5101-G	
2 gang frame, white	30	AC5201	
2 gang frame, silver		AC5201-S	
2 gang frame, elegant grey	10	AC5201-G	
3 gang frame, white	30	AC5103	
3 gang frame, silver		AC5103-S	
3 gang frame, elegant grey	10	AC5103-G	
4 gang frame, white	30	AC5104	
4 gang frame, silver		AC5104-S	
4 gang frame, elegant grey	10	AC5104-G	
2 gang Horizontal frame for DSSO, silver	2	CBA0326601P1011	
2 gang Vertikel frame for Shaver socket, silver		CBA0146611P1001	
2 gang Horizontal frame for DSSO, elegant grey	1	CBA0326601P2211	
2 gang Vertikel frame for Shaver socket, elegant grey		CBA0146611P2211	
1 gang adapter plate for dimmer and other BJE items, white	20	AC503	
1 gang adapter plate for dimmer and other BJE items, silver		AC503-S	
1 gang adapter plate for dimmer and other BJE items, elegant grey	100	AC503-G	
Earthing kit (to be used when installing dimmer)	20	AC543	

AC5101-S

AC5103

5

Domestic Equipment
Busch iDock Future

Busch iDock Future

The Busch iDock offers each iPod* or iPhone* a fixed place in the home. The Busch iDock with its simple elegance blends with every environment. With the Apple* remote control the iPod* or the iPhone* are easy to operate from a distance. Even MP3 players from other manufacturers can be connected to a 3.5 mm jack socket. The Busch iDock offers excellent interplay with the Busch Digital Radio or integration with Busch AudioWorld®. It can also be used with the Concept bs series.

iDock	Product Hierarchy 9000002	
	Order Code	
8230-84 Busch iDock set, white (future) - iPhone not included	8200-0-0132	
8218 U Busch iDock single unit, insert only - iPhone not included	8200-0-0142	
8254-84 Busch iDock cover plate, white (future) - iPhone not included	8200-0-0135	

*Apple, the Apple logo, iPod classic, lpod nano and iPod touch are trademarks of Apple inc., which are registered in the USA and in other countries. iPhone is a trademark of Apple inc. Apple is not responsible for the function of the device or its conformity with safety standards and regulatory standards.

The ABB Busch AudioWorld (R) offers more functions and devices for various applications, like microphone consoles (i.e. For use in surgeries), DIN-rail amplifier for Busch iDock (i.e. Hotels) and much more. For more information please contact technical department.

5

Domestic Equipment
Dimmers

High Wattage Dimmers

- DIN Rail Mounted

The ideal component for public and commercial buildings to cope with higher loads. The MDRC Dimmer allows step by step increase in load capacities up to 27,000 watts. The unit can be installed in the distribution board and can be controlled by one push switch. Inter-changeable cover cap on the top of the module, which can be used for maintenance purposes. Choose from Rotary Control Cap, Push Button or Timer for central control. Each module (6584-500) comes with ready-made line jack (RJ12) for capacity expansion.

Universal Master Dimmer (MDRC)

For switching and dimming incandescent, 230V Halogen, LV Halogen with conv. or Electronic Transformer. Light level memory, capacity-expansion with 6584-500, low noise, short circuit protected, overload protected.
Rated: 230V
Rated Frequency: 50/60Hz.
Rated Power: 60-500W/VA

Product Hierarchy 9000002	
Order Code	
6590-0-0178	

Universal Central Module (MDRC)

To be used with
6583-500, combination of up to 6 modules (3,000W/VA)
Rated: 230V
Rated Frequency: 50/60Hz.
Rated Power: 60-500W/VA

Product Hierarchy 9000002	
Order Code	
6590-0-0179	

Control Unit (MDRC)

For controlling up to 2 x 9 groups, on site operation via control input 0-10VDC/0-20mA, special adjustable functions ie: cleaning light, vacation, group control.
Rated: 230V
Rated Frequency: 50Hz.
2 x Control Signal Outputs

Product Hierarchy 9000002	
Order Code	
6590-0-0155	

Push Button Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	
6590-0-0181	

Rotary Knob Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	
6590-0-0183	

Timer Control Cap

To be used with Master 6583-500 to replace original cover, resting on Master Dimmer

Product Hierarchy 9000002	
Order Code	
6590-0-0185	

5

KNX
Smart Homes and Intelligent Building Control

Blind Control

1 Presence detector
2 Blind
3 Manual blind control

Comfort Control

1 Multimedia servers
2 Hi-Fi
3 TV/DVD
4 Curtains/blinds
5 Heating/lighting

Energy Management

1 Visualisation
2 Energy consumption
  meter with meter
  interface
3 Binary input
4 Water meter

Climate Control

1 Fan Coil Unit
2 Window contact
3 Valve drive
4 Radiator
5 Room thermostat

Building Surveillance

1 Smoke detector
2 Motion detector
3 Window contacts
4 Touch display
5 Security lock

Technology of Choice
Smart Home and Intelligent Building Control

KNX
Overview

ABB i-bus® KNX Intelligent Building Control.
In many areas of our private and working lives, the increasing level of automation is a trend that confronts us on a daily basis without actually being noticed.

Automation in buildings aims to combine individual room functions with one another and to simplify the implementation of individual customer preferences. KNX is the logical development for implementing traditional and new requirements in electrical building installations and thus replacing conventional installation techniques. The intelligent installation bus system efficiently performs the conventional functions and offers an additional broad range of expanded features, which could not be realized without a bus system. ABB offers consultants, system integrators and electrical installers a comprehensive product range with ABB i-bus® KNX, in order to meet the challenges posed to electrical building installations both today and in the future.

The KNX system is the leading intelligent control system for buildings world-wide. KNX resulted from the merger of major bus systems, including the well-known EIB (European Installation Bus) that has been successfully on the market since 1992.
What does KNX stand for? KNX is the first globally standardized system for the automation of residential and commercial buildings in accordance with the international standard

(ISO/IEC 14543-3), the European standard (CENELEC EN 50090, CEN EN 13321-1 and 13321-2), the Chinese standard (GB/Z 20965) and the US standard (ANSI/ASHRAE 135).– KNX has established a clearly defined system platform where the KNX products of different manufacturers can be operated with one another. Both the data protocol and the devices are certified compliant to the KNX standard. KNX thus guarantees the net-workability, interoperability, is both upward and downward compatible and thus future-proof. Just one common software tool is required for planning, engineering and commissioning of all KNX installations. Both the manufacturers and the KNX Association support professionals during planning, commissioning and maintenance world-wide. Comprehensive training opportunities are available for beginners and experienced users in certified training centres. More than 200 internationally certified manufacturers are members of the KNX association. More than 22,000 qualified KNX partners plan, install and integrate KNX systems worldwide. Thousands of buildings, ranging from private houses to airport complexes around the world, are equipped with more than 10 million KNX products.

The conventional solution: Many separate cables, separate functionality, little flexibility
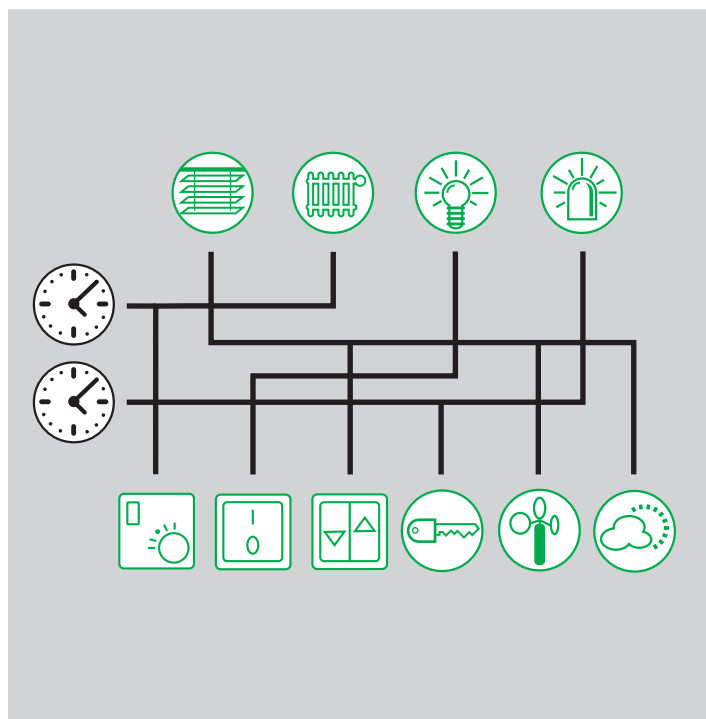
The intelligent solution: KNX – a system, a standard, many interoperable functions for maximum flexibility

Actuators (command recipients)

230 V

KNX bus

Sensors (issue commands)

KNX
Smart Homes and Intelligent Building Control
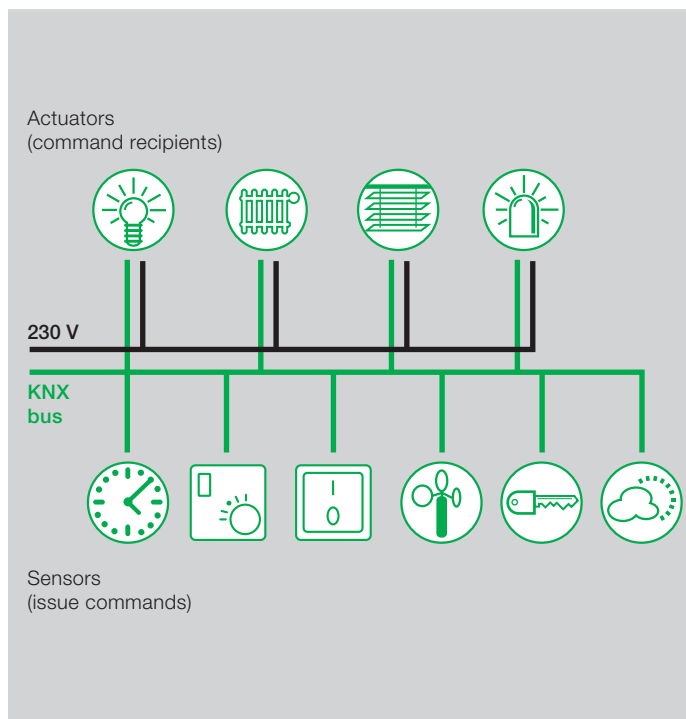
	Product Hierarchy 1100001	
Sensors	Order Code	
Smart Touch Control Panel	6136-0-0185	
Design Frame For Panel	6136-0-0141	
Flush mounting box for Controlpanel	6136-0-0124	
Busch-ComfortTouch	8136-0-0002	
Cover Frame - ComfortTouch, Black	8136-0-0004	
Design bar - ComfortTouch, Aluminium	8136-0-0018	
Flush mounting box for ComfortTouch	8136-0-0020	
Design strip for ComfortTouch	8136-0-0018	
System Products		
RM/S2.1 Room Master	2CDG110095R0011	
RM/S1.1 Room Master	2CDG110094R0011	
SV/S30.640.5 Power Supply 640MA	GHQ6310048R0111	
DG/S 8.1 Dali Gateway 8F	2CDG110025R0011	
Bus Coupler	6120-0-0065	
LK/S4.1 Line Coupler	2CDG110027R0011	
Connection Terminal-red/blk	GHQ6301901R0001	
US/U2.2 Universal Interface 2 Fold FM	GHQ6310074R0111	
Dimmers		
UD/S2.300.2 2-FOLD 300VA	2CDG110074R0011	
4-FOLD 210VA	6197-0-0025	
4-FOLD 315VA	6197-0-0026	
6-FOLD 315VA	6197-0-0027	
4-FOLD 600VA	6197-0-0028	
PIRs		
Watchdog 220 Silver	6132-0-0162	
Watchdog 220 White	6132-0-0160	
Corner Bracket	6899-0-0292	

Enclosures

Contents

6

Enclosures
IP65 Sheet Steel Enclosure (For external use please consult us)

Colour: RAL7035 (Orange Peel)

Solid Door Sheet Steel Enclosures IP65
Top & Bottom Gland Plates

Description H x W x D	Order Code	Product Hierarchy 3200003
300 x 200 x 150	SRN3215K	
300 x 300 x 150	SRN3315K	
300 x 400 x 150	SRN3415K	
400 x 300 x 150	SRN4315K	
400 x 300 x 200	SRN4320K	
400 x 400 x 200	SRN4420K	
400 x 600 x 200	SRN4620K	
500 x 300 x 200	SRN5320K	
500 x 400 x 200	SRN5420K	
500 x 400 x 250	SRN5425K	
600 x 400 x 200	SRN6420K	
600 x 400 x 250	SRN6425K	
600 x 500 x 200	SRN6520K	
600 x 600 x 300	SRN6630K	
800 x 600 x 250	SRN6625K	
600 x 600 x 250	SRN7520K	
700 x 500 x 200	SRN7525K	
700 x 500 x 250	SRN8625K	
800 x 600 x 300	SRN8630K	
800 x 800 x 300	SRN8830K	
1000 x 600 x 250	SRN10625K	
1000 x 600 x 300	SRN10630K	
1000 x 800 x 300	SRN10830K	
1200 x 600 x 300	SRN12630K	
1200 x 800 x 300	SRN12830K	
1200 x 800 x 400	SRN12840K	

6

Enclosures
IP65 Sheet Steel Enclosure

Glazed Door Sheet Steel Enclosures IP65
Mounting Plate Sold Separately

Description H x W x D	Order Code	Product Hierarchy 3200003
500 x 400 x 200	SRN5420VK	
500 x 400 x 250	SRN5425VK	
600 x 400 x 200	SRN6420VK	
600 x 400 x 250	SRN6425VK	
800 x 600 x 250	SRN8625VK	
700 x 500 x 200	SRN7520VK	
700 x 500 x 250	SRN7525VK	
800 x 600 x 250	SRN8625VK	
800 x 600 x 300	SRN8630VK	
1000 x 600 x 250	SRN10625VK	
1000 x 600 x 300	SRN10630VK	
1000 x 800 x 300	SRN10830VK	
1200 x 600 x 300	SRN12630VK	
1200 x 800 x 300	SRN12830VK	

Accessories

Description	Order Code	Product Hierarchy 3200003
Document pocket	AA5600	
N.4 wall mounting brackets	AA1206	
Lock with Yale insert & key	AA8002	

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Enclosures - Insulated IP40 - IP66
Overview

IP40	IP40/55	IP44/55	IP65	IP55
Modular Units	Panel Fronts	Thermoplastic Enclosures	Polycarbonate Enclosures	Modular Unit

IP40	IP40/55	IP44/55	IP65	IP55
Terminals	Lock with Key	Wall Mounting Brackets	Aluminium Mounting Plate	Neutral Terminals
Terminal Holders		Metal Base Plates	Insulating Mounting Plate	Wall Mounting Brackets
Wall Mounting Brackets			Wall Mounting Brackets	Lock with Key
			Terminals	
			Terminal Holders	

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Enclosures - Insulated IP40 - IP66
Overview

IP55
Modular Unit
Multiple Door

IP66
Gemini Range

Terminals

Mounting
Plates

Terminal
Holders

Full Height
Inner Door

Wall
Mounting
Brackets

Enclosure
Uprights

Screw Lead
Sealing
Accessory

Plain Rear
Plates

Lock with
Key

MCB Kits

Plain Inner
Door

T-Max
Mounting
Kit

6

Enclosures - IP44 & 55 Thermoplastic
Adaptable Boxes

IP44 Box

Size	Description	Product Hierarchy 3100007	
		Order Code	
ø65 - H35	round with glands & press on lid	00800	
ø80 - H40	round with glands & press on lid	00802	
65 x 65 x 32	with glands & screw on lid	00808	
80 x 80 x 40	with glands & screw on lid	00810	
100 x 100 x 50	with glands & screw on lid	00816	
105 x 70 x 50	with glands & screw on lid	00820	
100 x 100 x 80	with glands & screw on lid	00821	
153 x 110 x 66	with glands & low screw on lid	00822	
160 x 135 x 77	with glands & low screw on lid	1SL0824A00	
220 x 170 x 80	with glands & low screw on lid	1SL0826A00	
310 x 240 x 110	with glands & low screw on lid	1SL0828A00	
160 x 135 x 150	with glands & high screw on lid	1SL0830A00	
220 x 170 x 150	with glands & high screw on lid	1SL0832A00	
310 x 240 x 160	with glands & high screw on lid	1SL0834A00	

IP55 Box

Size	Description	Product Hierarchy 3100007	
		Order Code	
100 x 100 x 50	with smooth walls & low screw-on lid	00846	
105 x 70 x 50	with smooth walls & low screw-on lid	00850	
100 x 100 x 80	with smooth walls & low screw-on lid	00851	
153 x 110 x 66	with smooth walls & low screw-on lid	00852	
160 x 135 x 77	with smooth walls & low screw-on lid	1SL0854A00	
220 x 170 x 80	with smooth walls & low screw-on lid	1SL0856A00	
310 x 240 x 110	with smooth walls & low screw-on lid	1SL0858A00	
153 x 110 x 66	with smooth walls & transparent low screw-on lid	00872	
160 x 135 x 150	with smooth walls & transparent high screw-on lid	00880	
220 x 170 x 150	with smooth walls & transparent low screw-on lid	1SL0882A00	
310 x 240 x 160	with smooth walls & transparent high screw-on lid	1SL0884A00	
160 x 135 x 150	with smooth walls & high screw-on lid	1SL0860A00	
220 x 170 x 150	with smooth walls & high screw-on lid	1SL0862A00	
310 x 240 x 160	with smooth walls & high screw-on lid	1SL0864A00	
160 x 135 x 70	with smooth walls & transparent low screw-on lid	1SL0874A00	
220 x 170 x 80	with smooth walls & transparent low screw-on lid	1SL0876A00	
310 x 240 x 110	with smooth walls & transparent low screw-on lid	1SL0878A00	

Enclosures - IP65 in Polycarbonate
Adaptable Boxes

IP65 Polycarbonate Enclosure

Size HxWxD	Product Hierarchy 3100007	
	Order Code	
220 x 140 x 140	12804	
220 x 205 x 140	12808	
220 x 275 x 140	12812	
370 x 275 x 140	12814	
570 x 275 x 140	12816	
570 x 380 x 140	12818	

Aluminium Mounting Plate

For Enclosure Type	Product Hierarchy 3100007	
	Order Code	
12804	12842	
12808	12844	
12812	12845	
12814	12846	
12816	12847	
12818	12848	
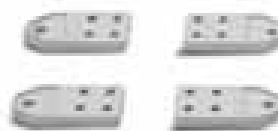
Wall Mounting Brackets

For Enclosure Type	Product Hierarchy 3100007	
	Order Code	
Fits All	12858	

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Enclosures
IP66 Gemini Weather Proof Range

Enclosure with Clear Door
Mounting Plate (300mm)
Blanking Plates (300mm)
Side mounting rails
MCB Kit (225mm)
Blanking Plates (75mm)
MCB Kit (150mm) x 2

Size 5
with clear door

Slotted
Trunking Page 6/40-6/43
Inner Door
Full Mounting Plate

Size 5
with clear door
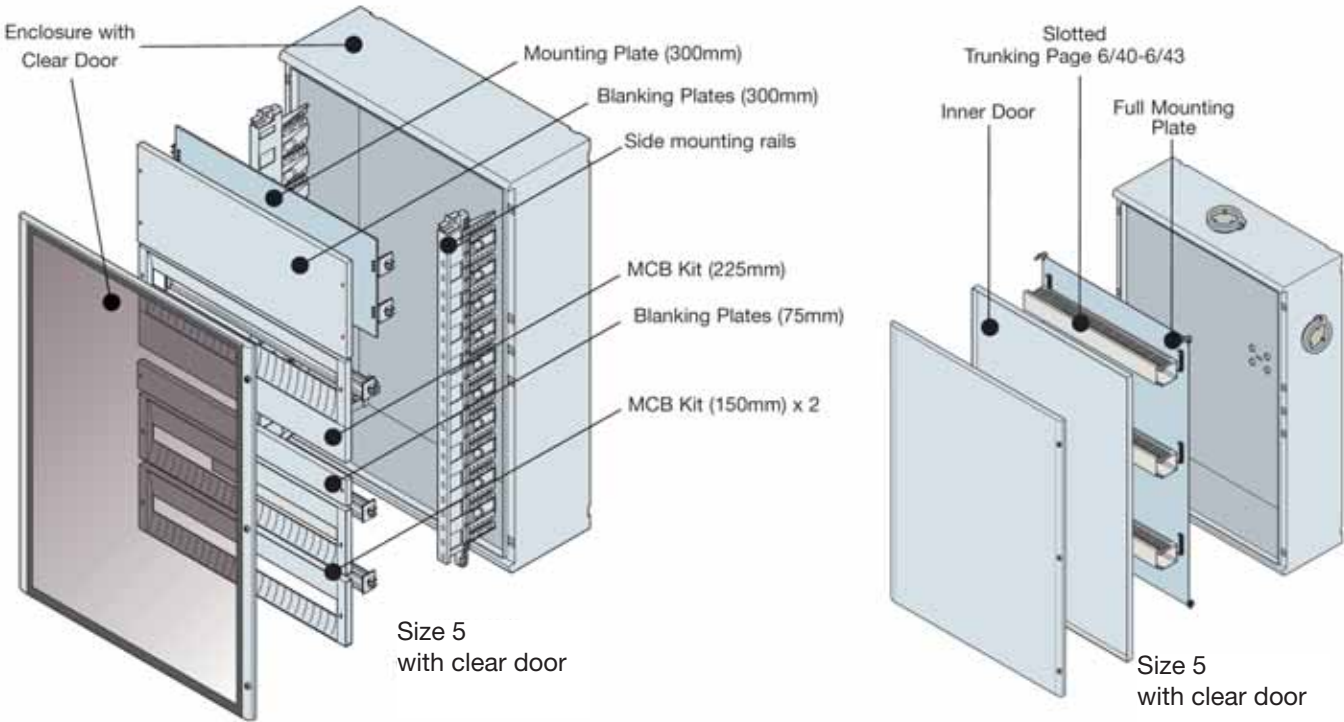
Gemini Enclosures

Components are suitable for any type and size of enclosure

Enclosure with Plain Door

Size HxWxD	Usable Height	Size	Product Hierarchy 3100007	
			Order Code	
400 x 335 x 210	300	1	1SL0201A00	
550 x 460 x 260	450	2	1SL0202A00	
700 x 460 x 260	600	3	1SL0203A00	
700 x 590 x 260	600	4	1SL0204A00	
855 x 590 x 360	750	5	1SL0205A00	

Enclosure with Clear Door

Size HxWxD	Usable Height	Size	Product Hierarchy 3100007	
			Order Code	
400 x 335 x 210	300	1	1SL0211A00	
550 x 460 x 260	450	2	1SL0212A00	
700 x 460 x 260	600	3	1SL0213A00	
700 x 590 x 260	600	4	1SL0214A00	
855 x 590 x 360	750	5	1SL0215A00	

6

Enclosures
IP66 Gemini Weather Proof Range

Size 1 Size 2 Size 3

Size 4 Size 5

6
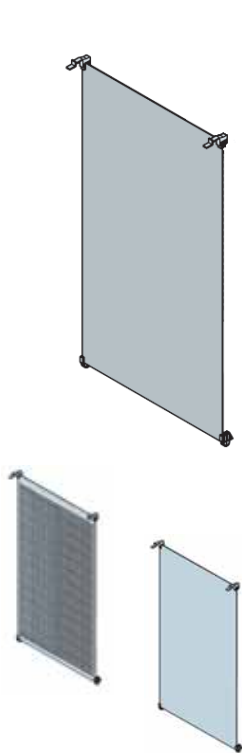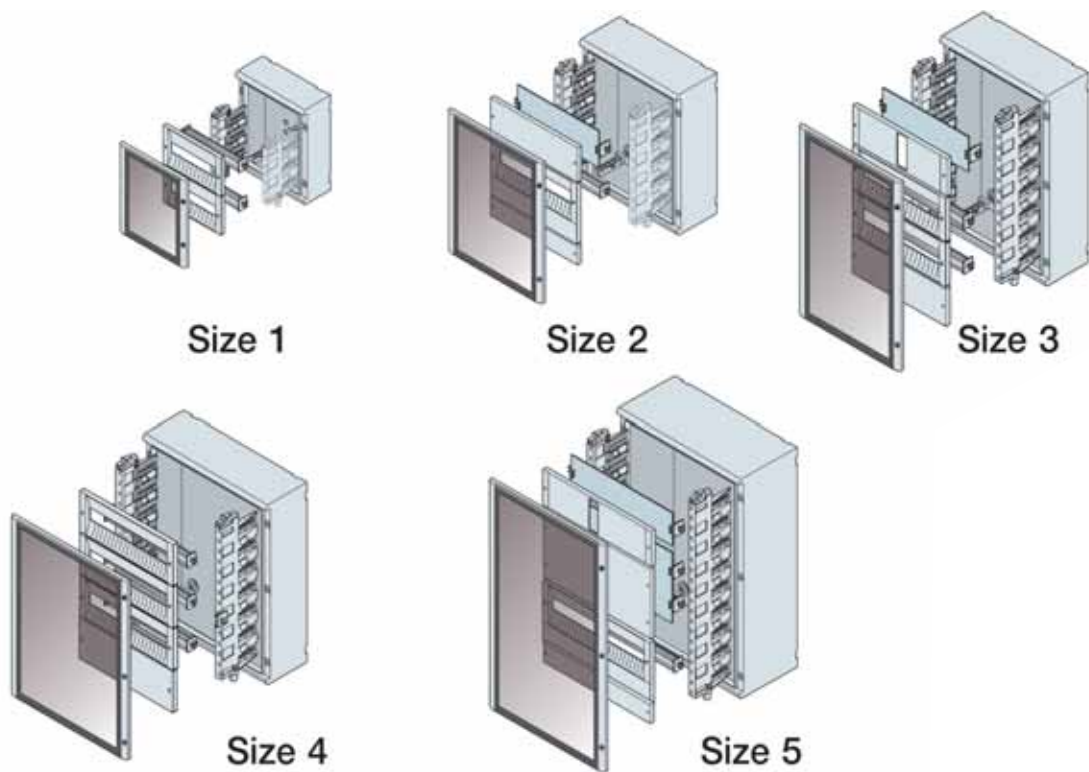
Full Mounting Plates

Size HxW	Size	Product Hierarchy 3100007	
		Order Code	
285 x 235	1	1SL0259A00	
435 x 360	2	1SL0260A00	
585 x 360	3	1SL0261A00	
585 x 485	4	1SL0262A00	
735 x 485	5	1SL0263A00	

Also available:

• Perforated Mounting Plates suitable for use with floating nuts.
• Insulated Mounting Plates.

Please consult us for availability

Enclosures
IP66 Gemini Weather Proof Range
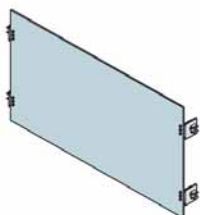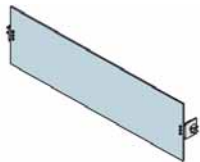
Mounting Plates

Size HxW	Nominal Size	Size	Order Code	Product Hierarchy 3100007
130 x 210	150	1	1SL0296A00	
130 x 318	150	2	1SL0297A00	
130 x 318	150	3	1SL0297A00	
130 x 443	150	4	1SL0298A00	
130 x 443	150	5	1SL0298A00	

Size HxW	Nominal Size	Size	Order Code	
280 x 318	300	2	1SL0302A00	
280 x 318	300	3	1SL0302A00	
280 x 443	300	4	1SL0303A00	
280 x 443	300	5	1SL0303A00	

Side Mounting Rails

Size H	Size	Order Code	Product Hierarchy 3100007
300	1	1SL0283A00	
450	2	1SL0284A00	
600	3	1SL0285A00	
600	4	1SL0285A00	
750	5	1SL0286A00	

MCB Kits

Size HxW	Modules	Size	Order Code	Product Hierarchy 3100007
150 x 250	12	1	1SL0307A00	
150 x 375	18	2	1SL0308A00	
150 x 375	18	3	1SL0308A00	
150 x 500	24	4	1SL0309A00	
150 x 500	24	5	1SL0309A00	

Size HxW	Modules	Size	Order Code	
225 x 375	2	18	1SL0313A00	
225 x 375	3	18	1SL0313A00	
225 x 500	4	24	1SL0314A00	
225 x 500	5	24	1SL0314A00	

Enclosures
IP66 Gemini Weather Proof Range
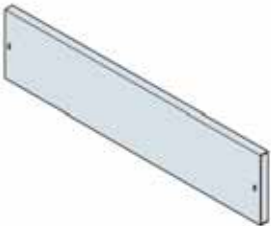
Blanking Plates

Size HxW	Size	Order Code	Product Hierarchy 3100007
150 x 250	1	1SL0324A00	
150 x 375	2	1SL0325A00	
150 x 375	3	1SL0325A00	
150 x 500	4	1SL0326A00	
150 x 500	5	1SL0326A00	

Accessories

Description	Size	Order Code	Product Hierarchy 3100007
Key lock and handle	Fits All	1SL0340A00	
Square lock	Fits All	1SL0339A00	
Wall mounting brackets (4off)	Fits All	1SL0342A00	

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Enclosures - IP40, IP55, IP65
Modular Units

IP40 Polycarbonate

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	
2	100 x 160 x 85	12702	
4	140 x 220 x 110	12704	
8	205 x 220 x 110	12708	
12	275 x 220 x 110	12712	
24	275 x 370 x 110	12714	
36	275 x 570 x 110	12716	

IP55 Thermoplastic

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	
4	125 x 180 x 105	12644	
6	160 x 180 x 105	12646	
10	230 x 180 x 105	12650	
20	230 x 320 x 135	12652	
10 - special	250 x 320 x 135	12654	

IP65 Polycarbonate Solid Door

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	
8	205 x 220 x 140	12728	
12	275 x 220 x 140	12732	
24	380 x 220 x 140	12733	
36	275 x 370 x 140	12734	

IP65 Polycarbonate Clear Door

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	
4	140 x 220 x 140	12744	
8	205 x 220 x 140	12748	
12	275 x 220 x 140	12752	
18	380 x 220 x 140	12753	
24	275 x 370 x 140	12754	
36	275 x 570 x 140	12756	
54	380 x 570 x 140	12756	

IP65 Polycarbonate Multiple Doors

No. Modules	Size W x H x D	Product Hierarchy 3100007	
		Order Code	
2/4	100 x 160 x 100	12742	
8	205 x 220 x 140	12743	
12	275 x 220 x 140	12745	
24	275 x 370 x 140	12746	
36	275 x 570 x 140	12747	

Enclosures - IP40, IP55, IP65
Modular Units Accessories

**Recommended Terminals
& Terminal Holders Quantities**

	Product Hierarchy 3100007				
	Terminal Holders			Terminals	
For Switchboard type	Order Code			Order Code	
12704	12538 (x2)			12531 (x2)	
12708	12539 (x2)			12531 (x2)	
12712	12540 (x1)			12531 (x1)	
				12532 (x1)	
12714	12540 (x2)			12533 (x2)	
12716	12540 (x2)			12534 (x2)	
12724 - 12744	12538 (x2)			12531 (x2)	
12728 - 12748	12539 (x2)			12531 (x2)	
12732 - 12752	12540 (x1)			12531 (x1)	
				12532 (x1)	
12733 - 12753	12543 (x1)			12531 (x1)	
				12535 (x1)	
12735 - 12755	12543 (x2)			12534 (x2)	
12736 - 12756	12540 (x2)			12534 (x2)	
12738 - 12758	12543 (x2)			12535 (x2)	
12743	12539 (x2)			12531 (x2)	
12745	12540 (x1)			12531 (x1)	
				12532 (x1)	
12746	12540 (x2)			12533 (x2)	
12747	12540 (x2)			12534 (x2)	

(x) Quantity Required

Terminal Blocks

For Switchboard type	Neutral terminals	Earth terminals	Product Hierarchy 3100007 Order Code	
12 644 – 12 684	2x4.5 + 3x5.6	2x4.5 + 3x5.6	12880	
12 646 – 12 686	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12882	
12 650 – 12 690	6x4.5 + 5x5.6	2x4.5 + 3x5.6	12884	
12 652 – 12 692 – 12 654	2 (6x4.5 + 5x5.6)	2 (2x4.5 + 3x5.6)	12886	
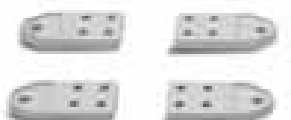
Accessories

Description	Product Hierarchy 3100007 Order Code	
Wall Mounting Brackets for Box	12858	

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Enclosures - Polycarbonate
IP65 Switchboards - IP40 & IP55 Panel Fronts

IP40 Front Panel

No. Modules	Size HxWxD	Product Hierarchy 3100007	
		Order Code	
2	9012362	12362	
3	9012362	12363	
4	9012362	12364	
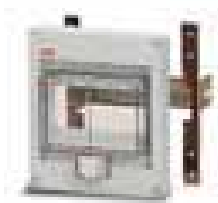
IP55 Front Panel

No. Modules	Size HxWxD	Product Hierarchy 3100007	
		Order Code	
4	180 x 125 x 34	12658	
6	180 x 160 x 34	12659	
10	180 x 230 x 34	12660	

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Enclosures
IP Ratings

IP ☐ ☐

Protection against solid objects

0	No protection	
1	Protected against solid objects up to 50mm eg. accidental touch by hands	
2	Protected against solid objects up to 12mm eg. fingers	
3	Protected against solid objects over 2.5mm (tools + wires)	
4	Protected against solid objects up to 1mm (tools wires + small wires)	
5	Protected against dust (no harmful deposit)	
6	Totally protected against dust	

Protection against liquids

0	No protection	
1	Protected against vertically falling drops of water eg. condensation	
2	Protected against direct sprays of water up to 15° from vertical	
3	Protected against direct sprays of water up to 60° from vertical	
4	Protected against sprays of water from all directions	
5	Protected against low pressure jets of water from all directions	
6	Protected against strong jets of water eg. for use on ship decks	
7	Protected against the effects of immersion between 15cm and 1m.	
8	Protected against long periods of immersion under pressure ... m	

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Notes

Cewe Plugs, Couplers and Sockets

Contents

7

Cewe Industrial Plugs & Sockets
Overview

The ABB Industrial Plugs and Sockets are a part of the comprehensive ABB program of high quality low voltages products for industries, buildings and OEM´s.

ABB Cewe-Control has manufactured Industrial Plugs and Sock-ets for over 60 years in the factory located in Nyköping, Sweden. Long experience of developing and manufacturing plugs and sockets within ABB has resulted in a wide product range of high quality and a robust ergonomic design. Covering products up to 125 A and 690 V, all tested and approved for IEC standards.

The design and material used have continuously been improved to meet the customer's requirements, and to take the environmental aspects into consideration.

ABB Industrial Plugs and Sockets have the solution for products in industrial environments with high demands on safety, durability, reliability and cost saving for the end user.
- Safety   - tested and approved by third party testing laboratories.
- Durability   - materials used give a high durability in tough conditions and environments.
- Reliability   - high quality contacts ensure reliability.
- Cost saving -   designed for quick and easy installation.

You will find all you need in the ABB Industrial Plugs and Sockets product range. One supplier for all your needs and worldwide availability.

Perfect performance
All Plugs and Sockets in our range comply with high standards of quality meeting different required tasks. Some are made of heavy-duty plastics (PBT), others of metal. Some have advanced features while others have a straight forward functionality. Perfect for demanding customers.

Perfect productivity
The result is that you can rely on all our Plugs and Sockets to help you maintain a high up-time in your operations. No unscheduled or unwanted interruptions, allowing you a high degree of flexibility.

Perfect safety
Safety is also very important. By choosing ABB Plugs and Sockets you minimize the risk of short circuits. You also ensure maximum personal safety for anyone nearby or around your equipment.

Perfect for the job
Different applications and environments require different products. To make your choice of products easier, we have categorized our range into three groups. All groups have however one feature in common - Safety!

- *Critical &Safe* • Select Critical & Safe products for the highest safety in fixed installations.

- *Tough &Safe* • Select Tough & Safe products for best performance in demanding and heavy-duty applications.

- *Easy &Safe* • Select Easy & Safe products for adequate functionality and ergonomic design.

The structure of our main catalog is based on these three groups. Look for the three different symbols to make your choice.

ABB Industrial Plugs and Sockets – a complete offer
- Approved according to IEC 60 309-1, -2, -4
- Range from 16 A up to 125 A.
- IP 44 (splashproof) and IP67 (watertight).
- All contacts are self cleaning and calibrated, to maintain the accurate contact pressure, quality and performance over time.
- Plugs and Sockets for 63 and 125 A have pins and sleeves carriers in glass fiber reinforced polyamide.
- For devices in the Critical & Safe and Tough & Safe range, all external screws are made of stainless steel.
- Clear terminal markings inside and at the front of the devices.
- Switched interlocked socket-outlets for vertical or horizontal mounting.

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Cewe Industrial Plugs & Sockets
Easy & Safe

Easy &Safe

Without saving on the quality the Easy & Safe is the range that has an ergonomic design and full of small practical features. The device has a natural designed grip that makes it easy to work with during connection. The combined cable clamp / cable gland, where the strain relief is created by tightening of the gland nut, has a locking mechanism that will continuously apply pres - sure to the cable.

The installation is easy done due to the clear terminal marking. After connecting the cables the housing is easily closed by a twist. The plastic material PA is used to provide a device that meets requirements of quality and safety.

For the user, small features are included such as a sealing / lock - ing feature to avoid accidental disconnection of for example a PA system. A suspension function that enables the user to hang the connector/plug that is not used on the wall or connect to a flexible wire in the ceiling (drop feed).

Features
- IP44 Splashproof
- 16 - 32 A
- PA6 plastic material
- IEC 60 309-1, -2
- Superior grip
- Compact design

Applications
- Light industry
- Construction sites
- Farms
- General equipment

Two earth terminal screws

Cable strip length

Prolonged earth connection

Clearly marked terminals

Suspension loop

Connection seal

Prolonged earth connection

Two earth terminal screws

Cable strip length

Clearly marked terminals
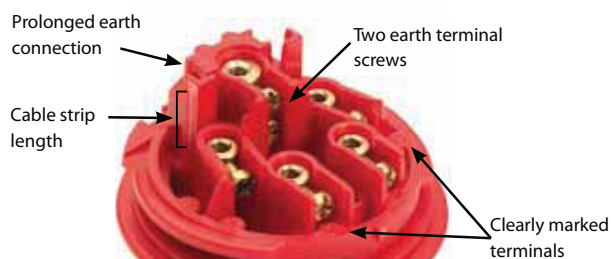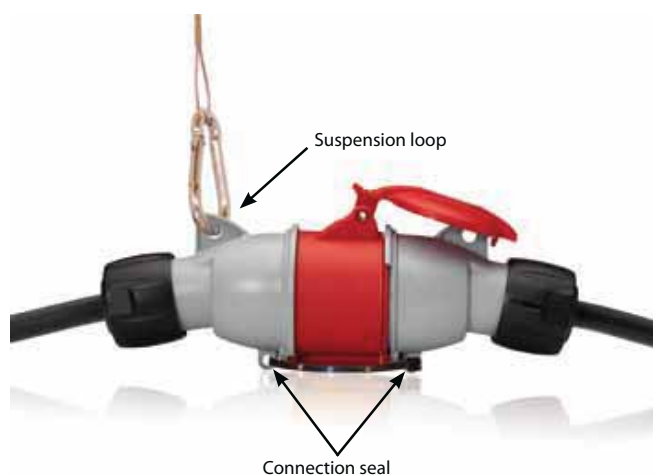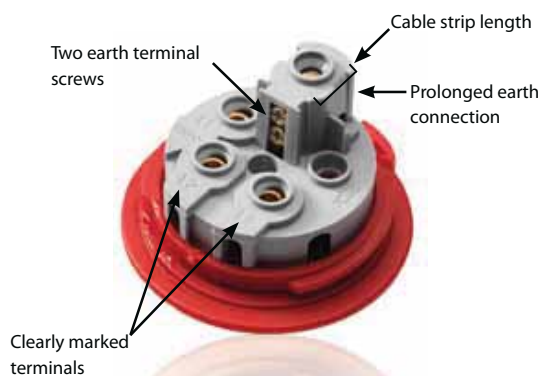
Combination of hard and soft plastic **material - both flexible and hard**

Cable gland tightening torque

Tool grip

Cewe Industrial Plugs & Sockets
Tough & Safe

Tough &Safe

Tough & Safe is the range for applications in environments that have high demand of functionality and safety. The robust housing is made of PBT plastic. The range Tough & Safe is available as watertight (IP67, 16 - 125A) and splashproof (IP44, 63A). The devices are equipped with internal and external cable clamps. The 125A devices are equipped with two screws on each terminal.

Features
• IP67 Watertight or IP44 Splashproof
• 16 - 125 A, 50 - 690 VAC
• IEC 60 309-1, -2
• All external screws are made of stainless steel.

Applications
• Industry / workshops
• Harbours / shipyards
• Mines
• Food & beverage

Clear marking, at the front and the rear of the terminals
Ground
Neutral N
Phase L1, L2, L3

Internal and external cable clamp

Clean brass pins

External screws made of stainless steel

Type: 463P6W

Robust plastic housing that with-stands most chemicals found in industrial environments

Two screws at each terminal to assure safe and reliable cable connection
Stainless steel (125 A)
Brass (16 - 63 A)

Rear terminals, raised lettering, identification contacts

Watertight chloroprene onion skin grommet

Type:. 463C6W

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Cewe Industrial Plugs & Sockets
Critical & Safe

Critical & Safe is the range for applications with high demands on safety, durability and performance. Perfect for applications with frequent connection / disconnection, and to use in public areas.

The housing is made of PBT or aluminum. PBT is a tough plastic material that withstands heavy-duty usage and most chemicals found in industrial environments. The aluminum housing is a mix of aluminium and silicon called Silumin, which gives an excellent protection against corrosion while being robust and tough against impact and sun light.

Features
- IP67 Watertight or IP44 Splashproof
- 16 - 125 A, 50 - 690 VAC
- IEC 60 309-2, -4
- All external screws are made of stainless steel

Applications
- Heavy / chemical industry
- Sawmills
- Airports
- Hospitals

Type: 4125MVS6WH

Brass threaded inserts

Padlockable handle

Space for wiring and easy access for cables

Material that withstands heavy-duty usage and most chemicals found in industrial environments

Mechanically interlocked to prevent making and breaking under load

Clear terminal marking, inside and outside the box
Ground ⏚
Neutral N
Phase L1, L2, L3

Cover and mounting screws made of stainless steel

Rugged hinge mechanism pivots 180° for easy access during installation and maintenance

Pre-wired IEC receptacle accepts all manufacturer's IEC 60 309-2 plugs

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Cewe Industrial Plugs & Sockets
Included in this catalogue

Plugs

16A   32A

Connectors

16A   32A

Surface socket-outlets

16A   32A

Surface inlets

16A   32A

Panel mounted socket outlets

16 - 32A   16 - 32A

Panel mounted socket inlets

16A   16 - 32A

Standard voltages

Color codes according to IEC60309-1, -2

Position of earthing sleve according to IEC 60309-2 (clock)		2P+earth		3P+earth		3P+N+earth
1	All operating voltages and/or currents not stated below		Optional voltage (not stated below)		Optional voltage (not stated below)		Optional voltage (not stated below)
2	Aeronautics/airports, military		>50 V >300-500 Hz 16, 32A		>50 V >300-500 Hz 16, 32A		>50 V >300-500 Hz 16, 32A
3	3-phase only for cooling containers (standardized by ISO)		50-250 V DC		380 V 50 Hz, 440 V 60 Hz 16, 32 A		220/380 V 50 Hz, 250/440 V 60 Hz 16, 32 A
4	For example in U.K.		100-130 V 50/60 Hz		100-130 V 50/60 Hz		57/100-75/130 V 50/60 Hz
5	Wind power		277 V 60 Hz		600-690 V 50/60 Hz		647/600-400/690 V 50/60 Hz
6	Most common voltages in Western Europe		200-250 V 50/60 Hz		380-415 V 50/60 Hz		200/346-240/415 V 50/60 Hz
7	Paper mills, steel plants, ship building industry		480-500 V 50/60 Hz		480-500 V 50/60 Hz		480-500 V 50/60 Hz
8			>250 V DC		Not used		Not used
9	For example in Norway		380-415 V 50/60 Hz		200-250 V 50/60 Hz		
10			Not used		>50 V >100-300 Hz		Not used
11	Mainly for marine installations		Not used		440-460 V 60 Hz		
12	Supply from isolating transformer		Supply from isolating transformer		125/250 V Single phase		Not used

I_n = 16-125 A
U_n = 50-690V

3P + N + E
3P + E
2P + E
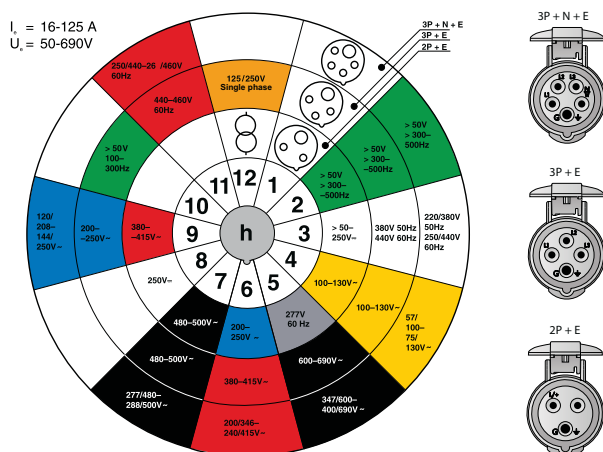
Cewe Industrial Plugs & Sockets
Plugs

16A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 1 - 2.5mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	216-P4	2CMA193500R1000	
3P+E	4	Yellow	100-130	316-P4	2CMA193504R1000	
		Black	600-690	316-P5	2CMA193505R1000	
		Black	480-500	316-P7	2CMA193507R1000	
		Blue	200-250	316-P9	2CMA193508R1000	
		Red	440-460	316-P11	2CMA193509R1000	

32A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 2.5 - 6mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	232-P4	2CMA193512R1000	
		Blue	200-250	232-P6	2CMA193513R1000	
3P+E	4	Black	600-690	332-P5	2CMA193514R1000	
		Red	380-415	332-P6	2CMA193515R1000	
		Black	480-500	332-P7	2CMA193516R1000	
		Blue	200-250	332-P9	2CMA193517R1000	
		Red	440-460	332-P11	2CMA193518R1000	

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63A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 4 - 16mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	263-P4	2CMA166740R1000	
		Blue	200-250	263-P6	2CMA166742R1000	
3P+E	4	Black	600-690	363-P5	2CMA166750R1000	
		Red	380-415	363-P6	2CMA166752R1000	
		Black	480-500	363-P7	2CMA166754R1000	
		Blue	200-250	363-P9	2CMA166756R1000	
3P+N+E	5	Red	346-415	463-P6	2CMA166764R1000	

Cewe Industrial Plugs & Sockets
Connectors

16A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 1 - 2.5mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
3P+E	4	Yellow	100-130	316-C4	2CMA193522R1000	
		Red	380-415	316-C6	2CMA193523R1000	
		Black	480-500	316-C7	2CMA193524R1000	
		Blue	200-250	316-C9	2CMA193525R1000	
3P+N+E	5	Red	346-415	416-C6	2CMA193526R1000	

32A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 2.5 - 6mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	232-C4	2CMA193527R1000	
		Blue	200-250	232-C6	2CMA193528R1000	
3P+E	4	Black	600-690	332-C5	2CMA193533R1000	
		Red	380-415	332-C6	2CMA193529R1000	
		Black	480-500	332-C7	2CMA193534R1000	
		Blue	200-250	332-C9	2CMA193530R1000	

63A, IP44 Splashproof
Thermoplastic

Cable entry with compression gland. Cable area 4 - 16mm²

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	263-C4	2CMA166838R1000	
		Blue	200-250	263-C6	2CMA166840R1000	
3P+E	4	Black	600-690	363-C5	2CMA166848R1000	
		Red	380-415	363-C6	2CMA166850R1000	
		Black	480-500	363-C7	2CMA166852R1000	
		Blue	200-250	363-C9	2CMA166854R1000	
3P+N+E	5	Red	346-415	463-C6	2CMA166862R1000	

Cewe Industrial Plugs & Sockets
Surface Sockets

16A, IP44 Splashproof
Thermoplastic

Flexible membrane and M20 insert for top cable entry.
Rear knockout cable entry. Cable area 1.5 - 4mm^2

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
3P+E	4	Yellow	100-130	316-RS4	2CMA193104R1000	
		Black	600-690	316-RS5	2CMA193105R1000	
		Red	380-415	316-RS6	2CMA193106R1000	
		Black	480-500	316-RS7	2CMA193107R1000	
		Blue	200-250	316-RS9	2CMA193108R1000	
		Red	440-460	316-RS11	2CMA193110R1000	

32A, IP44 Splashproof
Thermoplastic

Flexible membrane and M25 insert for top cable entry.
Rear knockout cable entry. Cable area 2.5 - 10mm^2

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	232-RS4	2CMA193121R1000	
		Blue	200-250	232-RS6	2CMA193122R1000	
3P+E	4	Black	600-690	332-RS5	2CMA193129R1000	
		Red	380-415	332-RS6	2CMA193130R1000	
		Black	480-500	332-RS7	2CMA193131R1000	
		Blue	200-250	332-RS9	2CMA193132R1000	

63A, IP44 Splashproof
Thermoplastic Polyester (PBT)

Cable entry M32. Alternative rear knockout cable entry. Cable area 6 - 25mm^2

Type	Terminals/ Poles	Colour Code	Voltage V	Part No	Product Hierarchy 3600004	
					Order Code	
2P+E	3	Yellow	100-130	263-RS4	2CMA167474R1000	
		Blue	200-250	263-RS6	2CMA167476R1000	
3P+E	4	Black	600-690	363-RS5	2CMA167496R1000	
		Red	380-415	363-RS6	2CMA167498R1000	
		Black	480-500	363-RS7	2CMA167500R1000	
		Blue	200-250	363-RS9	2CMA167502R1000	
3P+N+E	5	Red	346-415	463-RS6	2CMA167484R1000	

7

Notes

7

Solar PV

Contents

8

The photovoltaic (PV) is seeing steady growth in the UK and is set to expand further.

ABB offers a wide range of products to the installer specifically for PV application.

The following pages offer an overview of these products.
For further information or assistance with PV, please consult us.

Full range of product and technical information place this part number in a search engine and download
9AKK105152A5119

Solar PV
products for renewable energy

The UK Government have introduced a new initiative aimed at encouraging the nationwide adoption of renewable energy technologies.

Called the Feed-in Tariff, this initiative will see owners of renewable energy equipment being paid not only for the energy they use but also the amount of surplus energy they supply to the UK National Grid.

Inspired by similar schemes already operating in continental Europe, the UK Feed-in Tariff initiative is aimed at residential, commercial and industrial users of renewable energy sources. A table of the technologies covered are listed below.

How does the Feed-in Tariff Work?

The Feed-in Tariff is based on the amount of energy produced by a renewable energy source, plus where surplus energy is produced, a bonus to cover energy exported to the National Grid. By effectively paying producers more for the energy they don't use, the system is also aimed at encouraging energy efficiency.

To cover periods when the renewable energy source may be not producing sufficient electricity to cover demand, additional energy may be imported from the National Grid, with the user paying their electricity supplier for the amount consumed.

Technology	Tariff amount (pence per kWh) for installation fitted periods:		
	April 2010 - March 2011	April 2011 - March 2012	April 2012 - March 2013
Solar photovoltaic <4 kW (new)	36.1	36.1	36.1
Solar photovoltaic <4 kW (retrofit)	41.3	41.3	41.3
Solar photovoltaic >4 - 10kW	36.1	36.1	33.0
Solar photovoltaic >10 - 100 kW	31.4	31.4	28.7
Solar photovoltaic >100 - 5MW	29.3	29.3	26.8

8

Solar generator Enclosures Miniature circuit breakers Surge suppressors Switch diconnectors Inverter

DC Side

Solar PV
products for renewable energy

The components of photovoltaic systems
The efficiency and quality of a system are measured
by the efficiency and quality of each individual component

An accurate choice of components, especially the modules and inverters, is of fundamental importance if a photovoltaic system is to be a success. Before it can be considered a good investment, a photovoltaic system must be able to function efficiently for at least 20 years in all weathers and under the blazing sun.

What is commonly called the "BOS" (Balance of System), i.e. the "rest of the system" (electromechanical equipment for protection, control and isolation purposes, cables), undoubtedly plays an important role in ensuring that people and the buildings connected to the system are properly protected, and that there is an adequate production of energy over the years. From an economic viewpoint, it is even more important for each individual component of a photovoltaic system to be chosen on the basis of the warranties provided by the product and by its manufacturer than it is for a normal electric system. This is because the operating specifications of each device must remain unchanged throughout the entire life cycle of the system and the relative investment.

Always ready to meet any new demand from the market, ABB has developed a whole range of reliable products dedicated to photovoltaic applications and able to meet all installation requirements, from the string on the direct current side through to the alternate current grid connection point. ABB's products include string boxes, miniature circuit breakers, switch-disconnectors, residual current-operated circuit breakers, interface relays, energy meters, fuse disconnecting switches and fuses, surge arresters, consumer units and enclosures suitable for outdoor installation, all specially designed for these applications. ABB can also provide a series of "plug & operate" solutions, i.e. finished, wired and certified switchgear able to suit the requirements of a vast range of installations: from the individual string for domestic use to the large solar park.

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Consumer
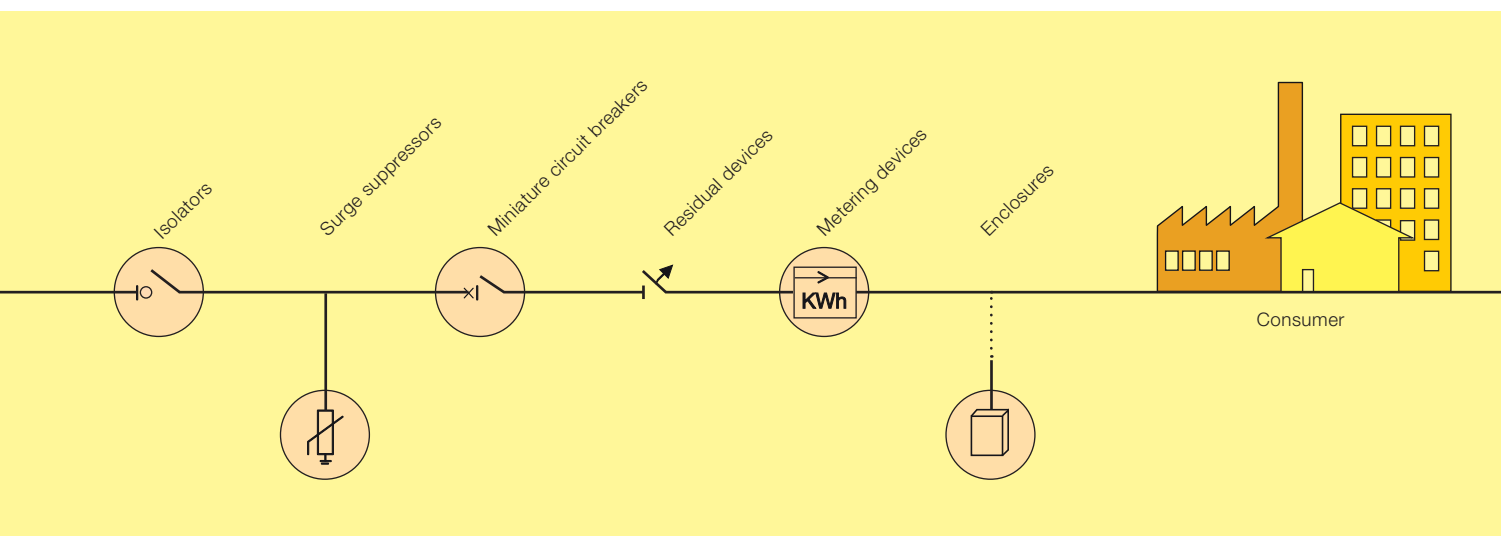
AC Side
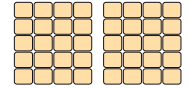
S800 PV MCBs

S800 PV-S miniature circuit-breakers and S800 PV-M switch disconnectors can be used in networks up to 1200 V d.c. (four-pole version). These products and their vast range of accessories (auxiliary contacts, release coils) can be used to create countless system configurations. The main features of S800 PV-S circuit-breakers are:

- interchangeable terminals
- fault signalling lever in the central position
- contact status displayed for each individual pole
- no restrictions as to polarity or power direction in the wiring
- use of the rotary door operating handle

Connection
Photovoltaic panel network in earth-insulated systems
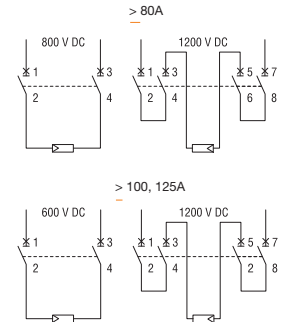
OT Isolators

OT series disconnectors are available with 16 A to 125 A rated current values in 3, 4, 6 and 8 pole versions, depending on the direct current voltage used.

The main features of OT disconnectors are:

- quick make-break mechanism with independent tripping function (in the OT 45...125 versions).
- accessories that are snap-fitted on the circuit-breakers
- OT 45 ... 125 switch-disconnector mechanism for installation on DIN channel.
- can be locked with a locking adapter
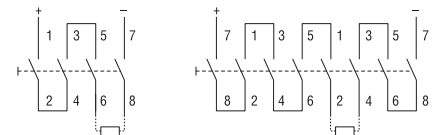
Tmax PV Disconnector

Tmax PV series disconnectors are available with up to 1600 A class DC-22B rated operating current values, for 1100 V d.c. maximum rated operating voltage. The switching devices of the Tmax PV series are the first box disconnectors for direct current high voltage available on the market. They are certainly of interest for use in any type of photovoltaic installation since they are ideal for all disconnecting requirements.

The main features of Tmax PV disconnectors are:

- Comprehensive range. There are 6 different sizes, from the compact T1 (which can be fixed to DIN channel) to T7, available in the two versions with operating lever and motor control
- Excellent performance-dimensions ratio
- Wide choice of accessories to suit every requirement

Full range of product and technical information place this part number in a search engine and download
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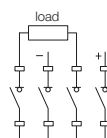
Circuit Diagram
Valid for T1D PV, T3D PV, T6D PV, T7D PV,
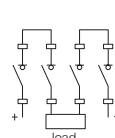
Circuit Diagram
Valid for T4D PV, T5D PV
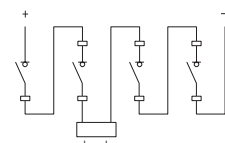
Circuit Diagram
Valid for all Tmax series

Solar PV
DC Side - Switching & Protection
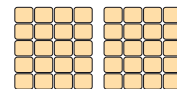
E90 Fuse Disconnectors

The E 90 PV series fuse disconnectors has been designed for up to 1000 V direct current voltage with DC-20B class of use. The E 90 PV series is specifically used for protecting photovoltaic systems against overcurrents and provides a reliable, compact and inexpensive solution since it uses 10.3 x 38 mm cylindrical fuses. The main features of E 90 PV fuses connectors are:

- Handle opening through 90° that allows the horizontal fuse to be easily inserted even when wearing gloves or using the thumb
- Only an additional 17 mm larger in the open position than in the closed position
- 25 mm2 terminals with knurled terminal cage to allow the cable to be clamped in a better way
- Fully compatible with electric screwdrivers
- Pozidrive screws for flat-head and cross-point screwdrivers
- Lockable in the open position using the padlocks commonly available on the market, so as to ensure safe maintenance work
- Can be sealed in the closed position to prevent improper use
- Cooling chambers and ventilation slits to facilitate heat dispersion
- Versions with indicator light are available

OVR PV Surge Arresters

ABB provides a wide range of surge protection devices that have been specifically designed for photovoltaic systems.

The main features of the OVR PV surge arresters are:

- built-in thermal protection with 25 A d.c. breaking capacity*
- removable cartridges for easy maintenance with no need to isolate the line
- remote signalling contact for monitoring the operating status (TS versions)
- no subsequent short-circuit current
- no risk if the polarity is reversed

*Note:
For surge protection device installed at points of the network where short circuit current exceeds 25A DC suitable protection must be provided
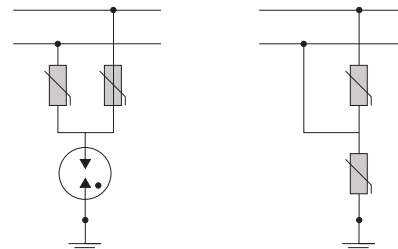
OTP Enclosed Disconnectors

- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom
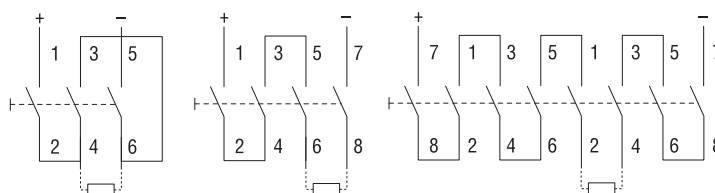
Full range of product and technical information place this part number in a search engine and download
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Solar PV
AC Side - Switching & Protection

S200M MCBs

The S200 M protect installations against overload and short circuit, ensuring reliability and safety for operations. They are selectively switchable, even under load, in the event of a fault or for maintenance purposes. The standstill times are minimised thanks to the devices' reclosing capability. These devices offer users confidence thanks to their 100% factory testing. The devices, with their wide range of accessories, are suitable for international use.

The S200 M are known for their ease of maintenance – thanks to a special type of fastening for easy removal of the device from its present installation. Supply is possible from above or below, also for busbars. Without busbars, two terminal sections can be used. The tripping behaviour caters to customer requirements (B, C, D, K, Z characteristics)

E200 Isolators

The isolator is used as a master switch on the AC side. It offers reliable and safe switching under load. Ease of maintenance is guaranteed by the special fastening for easy removal of the device from its present installation. The wide range of accessories facilitates use of all applications.

F200 PV-B RCCBs

Residual current devices ensure protection of people and installations against fault current to earth and fire risks. An RCD B type is required on the AC side in case of lack of electrical separation between the AC and the DC side. The devices save money and improve global efficiency by using PV connectors without an internal insulation transformer. The devices, with their wide range of accessories are suitable for international use.
The RCCBs F202 PV B and F204 B are intended for installation of single and three phase PV converters. they protect against fire risks and leakage currents.

8

CM-UFS Interface relay for connection to the power grid

Even small distributed generating systems need to be connected to the power grid with guarantees as to completely safe operation, especially when the energy flow towards the network must be shut off for maintenance or if a fault occurs in the network itself.
Rapid disconnection is essential if hazardous situations for the people who must work on the lines are to be avoided. This sort of protection can be achieved with an automatic monitoring device able to immediately detect faults in the network. The CM-UFS interface, which conforms to both the Italian ENEL Distribuzione Directive for connections to the electricity main and to German DIN V VDE 0126-1-1, answers to the
need for safety for both the installations and the operators in the case of faults and malfunctions in the public power grid during parallel operation.

The main features of the CM-UFS interface relay are:
- Undervoltage protection
- Overvoltage protection
- Minimum frequency protection
- Maximum frequency protection
- Installation on DIN channel, dimension 22 mm
- Configurable connection for the neutral conductor
- 3 LED to indicate the operating status
- Power supply from the circuit under control
- Measurement of the true RMS value
- Can also be used for monitoring single-phase systems
- 2 switch contacts (SPDT)
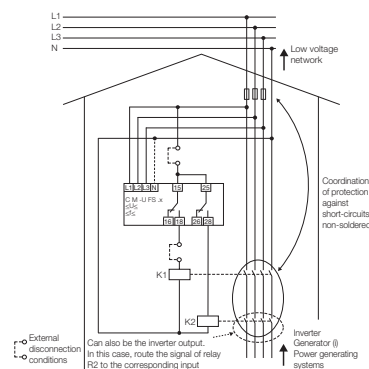
Full range of product and technical information place this part number in a search engine and download
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Solar PV
## AC Side - Switching & Protection
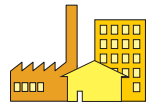
ODINsingle DELTAplus Modular Energy Meters

Modular energy meters are ideal for metering and monitoring the energy produced by a photovoltaic system. All the meters are tested and comply with the European MID directive, which allows the meters to be used whenever the energy readings must be used for payment quantification purposes. The terminal boards can be sealed so as to prevent the meter's programming functions from being accessed and to safeguard the inputs of the measuring signals.

ODINsingle:
- Accuracy class B (1)
- MID certified for sub-billing purposes
- Direct connection in single-phase systems of up to 65 A
- OD1365 with pulse output
- OD1365 with re-setable register
- LCD display, excellent visibility in all lighting conditions
- Front LED for checking load
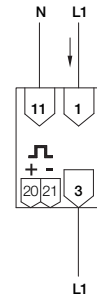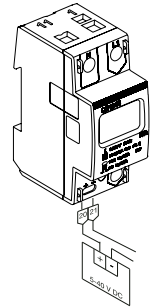
Direct connection **Pulse output**

DELTAplus:
- Accuracy class B (1)
- MID certified for sub-billing purposes
- Connection by current and voltage transformers
- Active energy metering in three phase systems
- With programmable pulse output
- Electric parameters, voltage, current, power and frequency displayed
- Installation assessment: phase presence and sequence
- Front LED for checking load
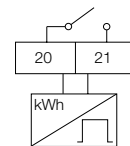
Pulse output of active energy meters
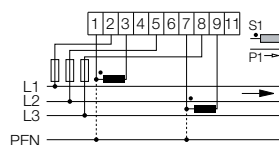
Threephase system with neutral
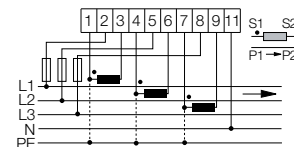
Threephase system without neutral

String Boxes

Fuse Disconnectors E90 PV
E90 PV have been designed for up to 1000 V d.c. voltage values (class DC-20B) and are ideally used in photovoltaic systems to isolate the individual strings and protect them against short circuits.
All ABB string boxes are supplied with fuses as part of the standard equipment.

Surge Arresters OVR PV
All ABB string boxes are equipped with OVR PV series surge arresters specifically designed for photovoltaic applications. Only a specifically designed product can ensure that the cartridge functions properly until the end of its useful life, without the risk of short-circuits or dangerous polarity reversals.

Disconnectors OT
High-performance, readily available OT disconnectors stand out for their high voltage values and compliance with the most advanced international standards. They are an excellent choice for small systems both cost-wise and as to performance.
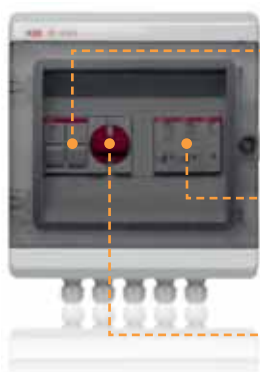
Full range of product and technical information place this part number in a search engine and download

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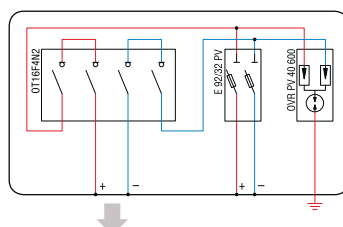
Note:
The following string boxes show options for 1, 2, 3 and 4 string.
Please consult us for other variations.

8

Terms and Conditions

1. GENERAL

1.1. Whenever ABB Limited ("ABB") has referred to Orgalime S 2000 in an offer or order acknowledgement, Orgalime S 2000 and this Addendum shall apply to the resulting contract. If the Purchaser refers to other conditions, such conditions shall apply only to the extent ABB agrees to them in writing.

1.2. The Purchaser represents that it has access to the Orgalime S 2000 general conditions.

1.3. In the event of any contradictions between this Addendum and Orgalime S 2000, this Addendum shall prevail.

2. DEFINITIONS

2.1. In Orgalime S 2000 and this Addendum,

(a) "Article" shall refer to an article in this Addendum;

(b) "Clause" shall refer to a clause in Orgalime S 2000;

(c) "Orgalime S 2000" shall mean Orgalime's General Conditions for the Supply of Mechanical, Electrical and Electronic Products, August 2000 edition;

(d) "Product" shall mean all goods and services to be provided by ABB under this contract as described in ABB's offer;

(e) "Purchaser" shall mean the other party to this contract; and

(f) "Supplier" shall mean ABB.

3. STANDARD PRODUCTS

3.1. Unless agreed otherwise in writing, all Products are to factory standard, including in respect of documentation, manuals, reports, finish and packing.

3.2. The Product is not warranted to be fit for any particular purpose, unless specified and warranted by ABB in writing.

4. DRAWINGS AND DESCRIPTIONS

4.1. Where ABB is to submit drawings for approval, the Purchaser approves or otherwise within the time given in the contract, or, if no time limit is specified, within fourteen (14) days of receipt, failing which they shall be deemed to have been approved.

4.2. The contract language shall be in English. All contract communications and documentation shall be in English.

5. VARIATIONS

5.1. Either party may request variations to the contract in writing. Where the parties agree to vary the contract, the parties shall also agree any revised scope, purchase price and/or delivery date prior to ABB undertaking the variation work.

5.2 No such variations shall be effective unless agreed in writing and signed by both parties.

5.2. If during the contract there are changes in laws, orders, regulations, standards or by-laws, which affect the cost or time of performance of this contract, then an equitable adjustment shall be made to the date(s) and price(s) resulting therefrom.

6. DELIVERY, PASSING OF RISK

6.1. The Purchaser shall inspect the Products and notify ABB in writing of any loss, shortage, excess, or transit damage within forty-eight (48) hours of delivery and permit ABB immediate rights of inspection and investigation. Failing which, any remedial costs shall be the responsibility of the Purchaser.

6.2. The Purchaser shall only be entitled to request proof of delivery within five (5) days of receipt of ABB's invoice, failing which, delivery is deemed to have taken place. ABB shall provide such proof within five (5) days of receipt.

6.3. For the avoidance of doubt, risk in the Product shall pass to the Purchaser at the time specified in the applicable INCOTERMS. From the time when risk in the Products passes until the time when title passes to the Purchaser in accordance with Article 8.3, the Purchaser shall insure the Products for their full value with a reputable insurer and hold the proceeds of any sale or claim on such insurance policy on trust for ABB, remitting to ABB the proceeds upon demand.

7. PAYMENT & VAT

7.1. Payment shall be made by the Purchaser no later than thirty (30) days from the date of the invoice. Time of payment is of the essence of the contract and ABB reserves the right to suspend the provision of Products to the Purchaser where any amounts are overdue under the contract or under any other contract until all such amounts have been paid. No queries concerning an invoice will be considered later than fourteen (14) days from the date of its issue. Payment may be made via BACS.

7.2. Payment shall be made in the currency quoted by ABB.

7.3. Without prejudice to any other right or remedy, ABB will be entitled to set-off any amount otherwise due to the Purchaser under this contract or any other contract against any sum or sums which the Purchaser is or may be liable to pay ABB or recover any such amount as a debt.

7.4. Where ABB has entered into a "Credit Agreement" with the Purchaser, the Credit Agreement with its credit limit shall form part of the contract. To the extent permitted by applicable law, if in ABB's reasonable opinion there are grounds for doubting the creditworthiness of the Purchaser at any time, such as but not limited to, the Purchaser's failure to pay ABB's invoice on this contract or any other contract when due and/or the Purchaser exceeding its agreed credit limit with ABB, then ABB may refuse to proceed with orders or suspend delivery of Products to the Purchaser, under this contract and any other contract, agreement or arrangement entered into with the Purchaser whether independent of or connected to this contract without being in breach of contract and without incurring any liability to the Purchaser.

7.5. The purchase price is strictly net and exclusive of VAT.

8. RETENTION OF TITLE

8.1. Until title in the Product has passed to the Purchaser, the Purchaser shall keep the Product clearly marked as being ABB's and store it separately from the Purchaser's own equipment. ABB shall be entitled during normal business hours to enter the Purchaser's premises in order to inspect the Product.

8.2. Should the contract be terminated by ABB for any reason before title in the Product has passed to the Purchaser, or ABB has grounds for doubting the creditworthiness of the Purchaser (cf. Article 7.4), ABB shall be entitled during normal business hours to enter the Purchaser's premises and recover the Product. ABB reserves the right to dispose of any Product so recovered.

8.3. To the extent permitted by law, title to the Product shall remain with ABB until it has received payment in full due under the contract and any other sums due (together with any interest which may have accrued) in respect of any other goods or services previously or subsequently supplied by ABB to the Purchaser under any other agreement. When such payments have been received by ABB title shall pass to the Purchaser.

8.4. Notwithstanding any appropriation by the Purchaser to the contrary, all payments made by the Purchaser to ABB shall be appropriated first to the Products which have been resold by the Purchaser and then to the Products which remain in the Purchaser's possession or control.

8.5. If the Purchaser resells any Products in which title has not passed to the Purchaser, the proceeds of such resale shall (as between ABB and the Purchaser only) be made by the Purchaser as agent for ABB

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9. LIABILITY FOR DEFECTS

9.1. Except as expressly set out in Orgalime S2000 and this Addendum, all conditions, warranties and representations, implied by statute, common law or otherwise, in relation to the supply, non supply or delay in supplying the Products are excluded to the fullest extent permitted by law and the warranties, as stipulated in Clauses 22-36 and Article 9.2, are exclusive and in lieu of all other warranties, conditions, terms, representations, statements, undertakings and obligations whether expressed or implied by statute, common law, custom, usage or otherwise, all of which are excluded to the fullest extent permitted by law.

9.2. Save as stipulated in Clauses 22-36, the necessary repair, replacement or re-performance shall constitute ABB's total liability to the Purchaser for defects in design, material or workmanship.

10. FORCE MAJEURE

10.1. Should a Force Majeure event occur, the delivery date(s) shall be extended by a period equal to the duration of the Force Majeure event plus a reasonable time to overcome the consequences and all additional costs and expenses incurred by ABB shall be paid by the Purchaser in addition to the purchase price.

10.2. For the elimination of any doubt, "circumstances beyond the control of the parties", (cf. Clause 39), shall be deemed to include, without limitation, any acts of God, act of terrorism, sanction, blockage, import restriction or any other act or failure to act of any state or national government authority.

11. EXPORT RESTRICTIONS AND NON-AUTHORISED USE

11.1. Unless expressly agreed otherwise in writing by ABB, the Product is provided on strict condition that:

a) the Product is solely for civil use;

b) the Product is not to be supplied to any country whether directly or indirectly or for any application where such supply or application is prohibited by any law or regulation binding or effective in that country, in the UK, the US or the country of manufacture;

c) the Product will not in any way be installed, used or applied in or in connection with the operation of any nuclear facilities such as but not limited to nuclear power plants, nuclear fuel manufacturing plants, uranium enrichment plants, spent nuclear fuel stores or research reactors; and

d) whenever ABB so requests, the Purchaser shall provide ABB with an end-user certificate, which shall be on such terms and in such form as ABB may require and signed by the end-user confirming that it shall comply with Article 11.1 (a) to (c) . Until such time as ABB has received such end-user certificate, ABB shall be entitled to suspend the performance under this contract. The end-user certificate shall form part of this contract. The Purchaser agrees and accepts that it shall be liable for any acts or omissions in relation to the use of the Products (including (without limit) the acts or omissions of its employees, agents, subcontractors, customers, any end user of the Products and/or any third party) in breach any of the provisions set out in Article 11.1 (a) to (c) and further agrees that such a breach shall be deemed a fundamental breach of contract by the Purchaser, and shall entitle ABB to terminate the contract forthwith by giving notice to the Purchaser.

11.2 The Purchaser shall comply with all laws and other restrictions on the export, re-export or import of any Product or technology licensed under the contract as may be imposed from time to time by the UK or US Governments or their agencies, and shall procure such export licence or other Government approval as may be required. The Purchaser shall require that all third parties receiving such Product or technology from the Purchaser comply with this requirement. ABB shall assist the Purchaser in every reasonable way in obtaining of such licences at the Purchaser's cost.

11.3 The performance by either of the parties of an obligation under this contract, which performance requires an export or import licence or other government approval, and any other obligation affected shall, to the extent it is necessary, automatically be suspended until such licence or approval as mentioned in Article 11.2 is given. If such licence is not granted within a reasonable time or is revoked by the appropriate authorities, ABB shall be entitled to terminate this contract, and the Purchaser shall indemnify ABB on demand for any loss or damage which ABB may suffer or incur as a result of such termination.

11.4 ABB may at its reasonable discretion, without breaching the contract, delay, withhold or refuse the provision of services to be undertaken in any territory or upon any site deemed by ABB to be unsafe or unfit for ABB's personnel, upon notice of which the parties may agree to reschedule or remove said portion of services from scope.

11.5 The Purchaser shall keep ABB, its officers, directors, employees, agents and advisers indemnified against any and all claims and liabilities arising out of any breach by the Purchaser or any for whom the Purchaser is liable (which shall, without limitation, include the end-user) of any of the provisions set out in this Article 11.

12. CONFIDENTIALITY

12.1. The Purchaser shall keep all information communicated to the Purchaser in connection with this contract, or otherwise concerning ABB's business, secret and confidential, and will not use the same except for the purposes of performing this contract.

13. INSURANCE

13.1. ABB shall maintain Employer's Liability insurance as required by law and Public/Products Liability insurance in respect of its obligations and liabilities under the contract for an amount of two million pounds (£2,000,000) per one event and in the aggregate. ABB shall upon request produce to the Purchaser evidence of satisfactory policies of insurance in the form of its Brokers letter.

14. INDEMNIFICATION

14.1. If Products are to be manufactured or any process is to be applied to Products by ABB in accordance with a specification submitted by the Purchaser, the Purchaser shall indemnify ABB against all losses, damages, costs (including legal costs), expenses, liabilities and claims suffered or incurred by ABB in connection with infringement of any intellectual property rights of any third party resulting from ABB's use of the Purchaser's specification.

15. LIMITATION OF LIABILITY

15.1. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, other than the express provisions for liquidated damages, in no event shall ABB be liable to the Purchaser, whether as a result of breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, for any of the following damages or losses, in each case whether direct or indirect, such as, but not limited to:

(a) loss of revenue,   (b) loss of profit,

(c) loss of contract,   (d) loss of business,

(e) loss of use,   (f) loss of production,

(g) interruption of business, (h) loss of operation time,

(i) costs of capital,   (j) economic loss,

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(k) costs in connection with interruption of operation, or

(l) any special, incidental or consequential loss or damage,

howsoever caused even if ABB was advised of the possibility of them in advance.

15.2. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, ABB's total liability in respect of any and all claims for damages or losses, caused by breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, which may arise in connection with its performance or non-performance under this contract shall not exceed in the aggregate the total purchase price.

15.3. The Purchaser acknowledges that the contents of this Article 15 have been especially brought to the Purchaser's attention, and agree the exclusions and limitations on liability are reasonable in the circumstances.

16. LIMITATION PERIOD

16.1. Subject to law as regards personal injury and death, the Purchaser shall have no claim against ABB, in contract or in tort, in relation to anything performed or delivered under this contract (including claims for defective Products, services or goods), unless ABB has been notified in writing of such claim within twenty-four (24) months of delivery of the Product.

17. TERMINATION

17.1. Should

(a) the Purchaser's payments be overdue by more than fourteen (14) days;

(b) a breach of the contract occurs in the circumstances set out in Article 11.1(d) or in Article 19.1;

(c) proceedings be commenced to wind up the Purchaser (except for the purpose of solvent amalgamation or reconstruction);

(d) any composition or arrangement with the Purchaser's creditors be made;

(e) the Purchaser be put into administration, or if a receiver is appointed;

(f) the Purchaser stops or suspend payment of its debts or is unable to, or has no real prospect of being able to, or admits an inability to, pay its debts as they fall due or fails to satisfy any judgment debt in whole or in part within fourteen (14) days; or

(g) the Purchaser ceases or threatens to cease to carry on the whole or a substantial part of its business or is dissolved;

ABB shall be entitled (without incurring any liability to the Purchaser) to terminate the contract immediately by notice in writing to the Purchaser, and thereupon to recover any loss or damage ABB has suffered or incurred as a result of such termination.

18. EXCLUSION OF THIRD PARTY RIGHTS

18.1. The parties do not intend that a person who is not a party to this contract shall have any rights to enforce any term of this contract.

19. MISCELLANEOUS

19.1. The Purchaser shall acquaint itself and comply with ABB's Code of Conduct as displayed on ABB's website (http://www.abb.com) as may be updated or modified from time to time.

19.2. This contract constitutes the complete understanding between the parties and save in respect of fraud supersedes all previous representations, negotiations and agreements in respect thereof. Neither party shall be bound by any terms other than as expressly provided in this contract or as subsequently agreed between the parties in writing.

19.3. The Purchaser shall not use the name or logo of ABB or product designations on any letter heading, publication, advertisement or other literature without prior written approval of ABB, such approval shall be at ABB's sole discretion.

19.4. The Purchaser may not subcontract, transfer or assign any of its rights or obligations in connection with this contract.

19.5. The invalidity, illegality or unenforceability of any provision of this contract shall not affect the validity of the remaining provisions. If any provision proves to be invalid, illegal or unenforceable, the parties shall replace such provision by a valid new one having an effect as close as possible to the original provision.

20. GOVERNING LAW

20.1. This contract shall in all respects be governed by and construed in accordance with the laws of England and Wales. The parties agree that the United Nations Convention On Contracts For The International Sale Of Goods 1980 shall not apply to this contract (even if the UK or any part thereof should accede to the said convention).

Contact us

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for a better world™

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