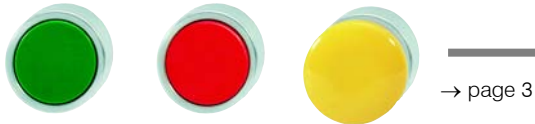


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Actuators and Lens Caps 22mm IP65, Type12

Push Buttons



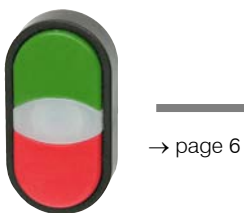
EMERGENCY STOP Buttons



Illuminated Operators



Double Push Buttons with Indicator Lamp

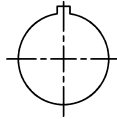


Lens Caps

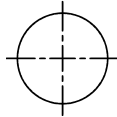


Mounting hole
Ø 22,5mm

with key way



without key way



→ page 4



→ page 14

Connectors



→ page 12

or

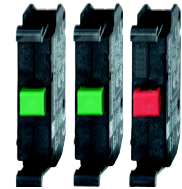


→ page 12

Wrench
for Actuators
Lens Caps and
Mono Block Multi Chip LED
J7049



Connectors Lamp Holders



→ page 12












→ page 12











Mono Block Multi Chip LED IP65, IEC 60947, EN 60947




Actuators 22mm IP65, Type12

	Colour	Symbol	 Alu	 Black	 Chrome	Pack pcs.	Weight kg/pc.
Push Buttons, Actuator Caps markable							
	red	0	B3D RT	BS3D RT	BC3D RT	10	0,014
	red		B3D RT-0	BS3D RT-0	BC3D RT-0	10	0,014
	green		B3D GN	BS3D GN	BC3D GN	10	0,014
	green	I	B3D GN-I	BS3D GN-I	BC3D GN-I	10	0,014
green	II	B3D GN-II	BS3D GN-II	BC3D GN-II	10	0,014	
green	→	B3D GN-PF	BS3D GN-PF	BC3D GN-PF	10	0,014	
yellow		B3D GE	BS3D GE	BC3D GE	10	0,014	
blue		B3D BL	BS3D BL	BC3D BL	10	0,014	
white		B3D WS	BS3D WS	BC3D WS	10	0,014	
black		B3D SW	BS3D SW	BC3D SW	10	0,014	
black	→	B3D SW-PF	BS3D SW-PF	BC3D SW-PF	10	0,014	
Push Buttons, Maintained, Actuator Caps markable							
	red		B3DR RT	BS3DR RT	BC3DR RT	10	0,014
	green		B3DR GN	BS3DR GN	BC3DR GN	10	0,014
	yellow		B3DR GE	BS3DR GE	BC3DR GE	10	0,014
blue		B3DR BL	BS3DR BL	BC3DR BL	10	0,014	
white		B3DR WS	BS3DR WS	BC3DR WS	10	0,014	
black		B3DR SW	BS3DR SW	BC3DR SW	10	0,014	
Mushroom Head Ø28mm							
	black		B3P1 RT	BS3P1 RT	BC3P1 RT	10	0,017
	red		B3P1 RT-0	BS3P1 RT-0	BC3P1 RT-0	10	0,017
green		B3P1 GN	BS3P1 GN	BC3P1 GN	10	0,017	
yellow		B3P1 GE	BS3P1 GE	BC3P1 GE	10	0,017	
blue		B3P1 BL	BS3P1 BL	BC3P1 BL	10	0,017	
black		B3P1 SW	BS3P1 SW	BC3P1 SW	10	0,017	
Mushroom Head Ø40mm							
	red	0	B3P14 RT-0	BS3P14 RT-0	BC3P14 RT-0	10	0,020
Mushroom Head Ø40mm							
	red	0	BS3P44T RT	BS3P44T RT	BS3P44T RT	10	0,020
Foot and Palm switch Ø70mm							
	red		BS3P14P RT	BS3P14P RT	BS3P14P RT	1	0,062
grey			BS3P14P GR	BS3P14P GR	BS3P14P GR	1	0,062

Actuators 22mm IP65, Type12

	Colour	Symbol / high	 Alu	 Black	 Chrome	Pack pcs.	Weight kg/pc.
EMERGENCY STOP Push Buttons, according to EN418, push to trip, pull to release Ø40mm							
	red	26mm	BS3P44 RT	BS3P44 RT	BS3P44 RT	10	0,028
	red	38mm	BS3P45 RT	BS3P45 RT	BS3P45 RT	10	0,028
EMERGENCY STOP Push Buttons, according to EN418, release by key, Ø40mm							
	red	38mm	BS3P44S3	BS3P44S3	BS3P44S3	1	0,050
	Spare Key lock Ronis R455					B4-R455	1
EMERGENCY STOP Push Buttons, release by turning, Ø28mm							
	red	0	B3P3 RT	BS3P3 RT	BC3P3 RT	10	0,017
	red		B3P3 RT-0	BS3P3 RT-0	BC3P3 RT-0	10	0,017
EMERGENCY STOP Push Buttons, release by turning, Ø40mm							
	red	0	B3P34 RT-0	BS3P34 RT-0	BC3P34 RT-0	10	0,020
	red illuminated		B3P34L RT	BS3P34L RT	BC3P34L RT	10	0,020
EMERGENCY STOP Push Buttons, release by turning, Ø70mm							
	red		BS3P34P RT	BS3P34P RT	BS3P34P RT	1	0,062

Accessories for EMERGENCY STOP Push Buttons

		Type	Pack pcs.	Weight kg/pc.
Yellow Disk Ø70mm, Thickness 1mm				
	neutral	B3-7603	1	0,004
	with marking NOT-AUS	B3-7603-1	1	0,004
	with marking EMERGENCY STOP	B3-7603-2	1	0,004
	2-side markings: NOT-AUS / EMERGENCY STOP	B3-7603-12	1	0,004
	2-side markings: ARRET D`URGENCE / NØDSTOP	B3-7603-34	1	0,004
	2-side markings: ARRET D`URGENCE / NOODSTOP	B3-7603-35	1	0,004
Protection cover against unintentional manipulation, Thickness 1mm				
	for Push Buttons Ø28mm and Ø40mm	yellow	B3-SK GE	1 0,04

Actuators 22mm IP65,  Type12

Knob	 Alu	 Black	 Chrome	Pack pcs.	Weight kg/pc.
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
Rotary Knobs and Swing Knobs, black



Rotary



Swing

maintained 60° 	Rotary Swing	B3KN2 B3KRN2	BS3KN2 BS3KRN2	BC3KN2 BC3KRN2	10 10	0,020 0,020
spring return 60° 	Rotary Swing	B3KN8 B3KRN8	BS3KN8 BS3KRN8	BC3KN8 BC3KRN8	10 10	0,020 0,020
spring return 60° 	Rotary Swing	B3KN1 B3KRN1	BS3KN1 BS3KRN1	BC3KN1 BC3KRN1	10 10	0,020 0,020
maintained 60° 	Rotary Swing	B3KN3 B3KRN3	BS3KN3 BS3KRN3	BC3KN3 BC3KRN3	10 10	0,020 0,020
	Rotary	B3KN6	BS3KN6	BC3KN6	10	0,020
	Rotary	B3KN7	BS3KN7	BC3KN7	10	0,020
maintained 120° 	Rotary	B3KN9	BS3KN9	BC3KN9	10	0,020
maintained 90° acc. to EN81 	Rotary	B3KN10	BS3KN10	BC3KN10	10	0,020





Illuminated Rotary Knobs and Swing Knobs, clear, lamp max. 1,2W, lamps see page 13



Rotary



Swing










maintained 90° 	Rotary	B3KL2	BS3KL2	BC3KL2	10	0,016
spring return 60° 	Rotary Swing	B3KL1 B3KRL1	BS3KL1 BS3KRL1	BC3KL1 BC3KRL1	10 10	0,016 0,016
maintained 60° 	Rotary Swing	B3KL3 B3KRL3	BS3KL3 BS3KRL3	BC3KL3 BC3KRL3	10 10	0,016 0,016
	Rotary	B3KL6	BS3KL6	BC3KL6	10	0,016


Toggle



O - I		B3E	BS3E	BC3E	10	0,017
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Actuators 22mm IP65,  Type12


					Pack Weight pcs. kg/pc.
	key removeable in	Alu	Black	Chrome	
Key Operated Rotary Switch with lock Ronis 455					
	maintained 60°	B3SAR 0	BS3SAR 0	BC3SAR 0	1 0,044
		B3SAR 1	BS3SAR 1	BC3SAR 1	1 0,044
		B3SAR 01	BS3SAR 01	BC3SAR 01	1 0,044
	spring return 60°	B3SAT 0	BS3SAT 0	BC3SAT 0	1 0,044
	maintained 60°	B3SARR 0	BS3SARR 0	BC3SARR 0	1 0,044
		B3SARR 102	BS3SARR 102	BC3SARR 102	1 0,044
		B3SATR 02	BS3SATR 02	BC3SATR 02	1 0,044
	spring return 60°	B3SATT 0	BS3SATT 0	BC3SATT 0	1 0,044
	Spare Key lock Ronis R455			B4-R455	1 0,007

	Colour	Symbol				pcs. kg/pc.
	red	B3DL RT	BS3DL RT	BC3DL RT	10	0,014
	green	B3DL GN	BS3DL GN	BC3DL GN	10	0,014
	yellow	B3DL GE	BS3DL GE	BC3DL GE	10	0,014
	blue	B3DL BL	BS3DL BL	BC3DL BL	10	0,014
	white	B3DL WS	BS3DL WS	BC3DL WS	10	0,014

Illuminated Push Buttons, Maintained, lamp max. 1,9W, lamps see page 13

	red	B3DLR RT	BS3DLR RT	BC3DLR RT	10	0,014
	green	B3DLR GN	BS3DLR GN	BC3DLR GN	10	0,014
	yellow	B3DLR GE	BS3DLR GE	BC3DLR GE	10	0,014
	blue	B3DLR BL	BS3DLR BL	BC3DLR BL	10	0,014
	white	B3DLR WS	BS3DLR WS	BC3DLR WS	10	0,014


Double Push Buttons, with indicator lamp white, lamp max. 1,9W, lamps see page 13

	green	B3DT G/R ¹⁾	BS3DT G/R	BC3DT G/R	10	0,016
	red					
	white	B3DT W/S ¹⁾	BS3DT W/S	BC3DT W/S	10	0,016
	black					
	green	B3DT GI/RO ¹⁾	BS3DT GI/RO	BC3DT GI/RO	10	0,016
	red	0				
	white	B3DT WI/SO ¹⁾	BS3DT WI/SO	BC3DT WI/SO	10	0,016
	black	0				

with non-standard marking on request

1) Plastic ring in alu design


suitable for Alu, Black and Chrome

Colour		Type	Pack Weight pcs. kg/pc.	
	red	B3R RT	10	0,015
	green	B3R GN	10	0,015
	yellow	B3R GE	10	0,015
	blue	B3R BL	10	0,015
	clear	B3R KL	10	0,015
	white	B3R WS	10	0,015

Lens Caps IP66, lamp max. 1,9W, lamps see page 13

	red	B3RF RT	10	0,013
	green	B3RF GN	10	0,013
	yellow	B3RF GE	10	0,013
	blue	B3RF BL	10	0,013
	white	B3RF WS	10	0,013

suitable for Alu, Black and Chrome

Colour	voltage	power VA	W	Type	Pack Weight pcs. kg/pc.	
	red	20-30V AC/DC	1,6	1,5	B3-MB24 RTB	10 0,022
	green	20-30V AC/DC	0,4	0,4	B3-MB24 GNB	10 0,022
	yellow	20-30V AC/DC	1,6	1,5	B3-MB24 GEB	10 0,022
	blue	20-30V AC/DC	0,4	0,4	B3-MB24 BLB	10 0,022
	white	20-30V AC/DC	1,6	1,5	B3-MB24 WSB	10 0,022
	red	110-130V AC 110V DC	1,7	1,6	B3-MB110 RTB	10 0,022
	green	110-130V AC 110V DC	1,7	1,6	B3-MB110 GNB	10 0,022
	yellow	110-130V AC 110V DC	1,7	1,6	B3-MB110 GEB	10 0,022
	blue	110-130V AC 110V DC	1,7	1,6	B3-MB110 BLB	10 0,022
	white	110-130V AC 110V DC	1,7	1,6	B3-MB110 WSB	10 0,022
	red	170-250V AC	4,1	1,0	B3-MB230 RTB	10 0,022
	green	170-250V AC	4,1	1,0	B3-MB230 GNB	10 0,022
	yellow	170-250V AC	4,1	1,0	B3-MB230 GEB	10 0,022
	blue	170-250V AC	4,1	1,0	B3-MB230 BLB	10 0,022
	white	170-250V AC	4,1	1,0	B3-MB230 WSB	10 0,022

Monoblock Multi-LED IP65, IEC 60947, EN 60947

Actuators and Lens Caps 30mm IP65

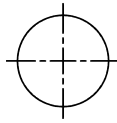
Push Buttons



EMERGENCY STOP Buttons



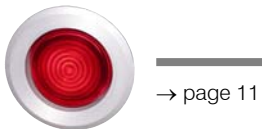
Mounting hole
Ø 30,5mm



Illuminated Operators



Lens Caps



Connectors

Connectors Lamp Holders



→ page 12



→ page 12

or



→ page 12



→ page 12



→ page 12







→ page 13



Wrench
J7049



Actuators 30mm IP65

	Colour	Symbol	Alu	Black	Pack pcs.	Weight kg/pc.
Push Buttons, Actuator Caps markable						
	red	0	B5D RT	BS5D RT	10	0,029
	red		B5D RT-0	BS5D RT-0	10	0,029
	green		B5D GN	BS5D GN	10	0,029
	green	I	B5D GN-I	BS5D GN-I	10	0,029
	green	II	B5D GN-II	BS5D GN-II	10	0,029
	green	→	B5D GN-PF	BS5D GN-PF	10	0,029
	yellow		B5D GE	BS5D GE	10	0,029
	blue		B5D BL	BS5D BL	10	0,029
	white		B5D WS	BS5D WS	10	0,029
	black	→	B5D SW	BS5D SW	10	0,029
	black		B5D SW-PF	BS5D SW-PF	10	0,029

Push Buttons, Maintained, Actuator Caps markable

	red		B5DR RT	BS5DR RT	10	0,029
	green		B5DR GN	BS5DR GN	10	0,029
	yellow		B5DR GE	BS5DR GE	10	0,029
	blue		B5DR BL	BS5DR BL	10	0,029
	white		B5DR WS	BS5DR WS	10	0,029
	black		B5DR SW	BS5DR SW	10	0,029


Mushroom Head Ø28mm

	black		B5P1 RT	BS5P1 RT	10	0,032
	red		B5P1 RT-0	BS5P1 RT-0	10	0,032
	green		B5P1 GN	BS5P1 GN	10	0,032
	yellow		B5P1 GE	BS5P1 GE	10	0,032
	blue		B5P1 BL	BS5P1 BL	10	0,032
	black		B5P1 SW	BS5P1 SW	10	0,032

Mushroom Head Ø40mm

	red	0	B5P14 RT-0	BS5P14 RT-0	10	0,035
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EMERGENCY STOP Push Buttons, release by turning, Ø 28mm

	red	0	B5P3 RT	BS5P3 RT	10	0,032
	red		B5P3 RT-0	BS5P3 RT-0	10	0,032

EMERGENCY STOP Push Buttons, release by turning, Ø 40mm

	red	0	B5P34 RT-0	BS5P34 RT-0	10	0,035
-------------------------------------------------------------------------------------	-----	---	------------	-------------	----	-------

Accessories for EMERGENCY STOP Push Buttons

			Typ	VPE Stk.	Gewicht kg/Stk.
Yellow Disk Ø70mm, Thickness 1mm					
	neutral		B5-7603	1	0,004
	with marking NOT-AUS		B5-7603-1	1	0,004
	with marking EMERGENCY STOP		B5-7603-2	1	0,004

Actuators 30mm IP65



Knob

Alu

Black

Pack Weight
pcs. kg/pc.

Rotary Knobs and Swing Knobs, black



Rotary

maintained 60°



Rotary
Swing

B5KN2
B5KRN2

BS5KN2
BS5KRN2

10 0,035
10 0,035

spring return 60°



Rotary
Swing

B5KN8
B5KRN8

BS5KN8
BS5KRN8

10 0,035
10 0,035

spring return 60°



Rotary
Swing

B5KN1
B5KRN1

BS5KN1
BS5KRN1

10 0,035
10 0,035

maintained 60°



Rotary
Swing

B5KN5
B5KRN5

BS5KN5
BS5KRN5

10 0,035
10 0,035

2 x 60°



Rotary

B5KN6

BS5KN6

10 0,035

2 x 60°



Rotary

B5KN7

BS5KN7

10 0,035

maintained 120°



Rotary

B5KN9

BS5KN9

10 0,035

maintained 90°
according to EN81



Rotary

B5KN10

BS5KN10

10 0,035



Swing

Illuminated Rotary Knobs and Swing Knobs, clear, lamp max. 1,2W, lamps see page 13



Rotary

maintained 90°



Rotary

B5KL2

BS5KL2

10 0,031

spring return 60°



Rotary
Swing

B5KL1
B5KRL1

BS5KL1
BS5KRL1

10 0,031
10 0,031

maintained 60°



Rotary
Swing

B5KL5
B5KRL5

BS5KL5
BS5KRL5

10 0,031
10 0,031

2 x 60°



Rotary

B5KL6

BS5KL6

10 0,031



Swing

Toggle















O - I


B5E

BS5E


10 0,032


Actuators and Lens Caps 30mm IP65

				Pack pcs.	Weight kg/pc.
key removeable in		Alu	Black		
Key Operated Rotary Switch with lock Ronis 455					
	maintained 60°		B5SAR 0	BS5SAR 0	1 0,059
			B5SAR 1	BS5SAR 1	1 0,059
			B5SAR 01	BS5SAR 01	1 0,059
	spring return 60°		B5SAT 0	BS5SAT 0	1 0,059
	maintained 60°		B5SARR 0	BS5SARR 0	1 0,059
			B5SARR 102	BS5SARR 102	1 0,059
	2 x 60°		B5SATR 02	BS5SATR 02	1 0,059
	spring return 60°		B5SATT 0	BS5SATT 0	1 0,059
Spare Key lock Ronis R455				B4-R455	1 0,007


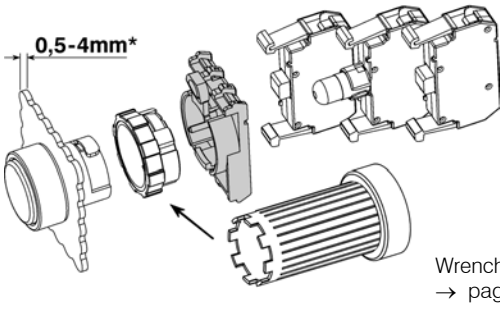

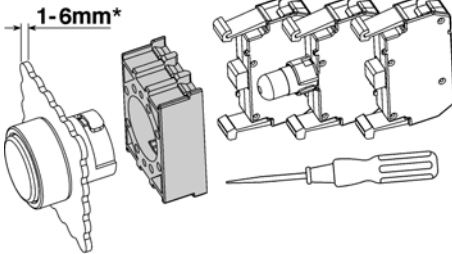
				pcs.	kg/pc.
Colour					
Illuminated Push Buttons, lamp max. 1,9W, lamps see page 13					
	red	B5DL RT	BS5DL RT	10	0,029
	green	B5DL GN	BS5DL GN	10	0,029
	yellow	B5DL GE	BS5DL GE	10	0,029
	blue	B5DL BL	BS5DL BL	10	0,029
	white	B5DL WS	BS5DL WS	10	0,029

Illuminated Push Buttons, Maintained, lamp max. 1,9W, lamps see page 13					
	red	B5DLR RT	BS5DLR RT	10	0,029
	green	B5DLR GN	BS5DLR GN	10	0,029
	yellow	B5DLR GE	BS5DLR GE	10	0,029
	blue	B5DLR BL	BS5DLR BL	10	0,029
	white	B5DLR WS	BS5DLR WS	10	0,029

Lens Caps with fresnel lens IP66, lamp max. 1,9W, lamps see page 13					
	red	B5R RT	BS5R RT	10	0,029
	green	B5R GN	BS5R GN	10	0,029
	yellow	B5R GE	BS5R GE	10	0,029
	blue	B5R BL	BS5R BL	10	0,029
	clear	B5R KL	BS5R KL	10	0,029
	white	B5R WS	BS5R WS	10	0,029










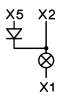
Adapter to convert actuator B3.. in B5..					
		B5	BS5	10	0,011


Connectors

Specification	Description	Type	Pack pcs.	Weight kg/pc.
 <p>Connector B3S</p>  <p>0,5-4mm*</p> <p>Wrench → page 11</p>		B3S	10	0,013
 <p>Connector B3M</p>  <p>1-6mm*</p>		B3M	10	0,013

*) inclusive Thickness from Label Holder and Yellow Disk




Contact Blocks and Lamp Holders for Panel Mounting

for voltage	Description	Type	Pack pcs.	Weight kg/pc.
Contact blocks				
 <p>max. 690V AC</p>	<p>1 NC ¹⁾ </p>	 <p>B3T01 ²⁾</p>	10	0,010
 <p>max. 690V AC</p>	<p>1 NO</p>	 <p>B3T10 ²⁾</p>	10	0,010
 <p>Actuator insert</p>	<p>to actuate the center contact block</p>	P642	10	0,001
Lamp holders, socket BA9s				
 <p>max. 440V AC/DC</p>	<p>direct connection, for lamps max. 1,9W (take care for active power consumption)</p>	 <p>B3F</p>	10	0,012
Lamp holders for lamp test circuits, socket BA9s				
 <p>max. 440V AC</p>	<p>direct connection, for lamps max. 1,7W (active power consumption)</p>	 <p>B3FT</p>	10	0,020

1) NC contact has a positive opening according to IEC/EN 60947-5-1 

2) Contact blocks with gold contacts (B3T..G) on request suitable for 17V= /1mA and for difficult ambient conditions.


Lamps

	Socket BA9s Lamp voltage	Power consumption		Type	Pack pcs.	Weight kg/pc.	
Filament lamps							
	6V	1,2W	for all lens caps	B4-G6	50	0,005	
	12V	1,2W	for all lens caps	B4-G12	50	0,005	
	24V	1,2W	for all lens caps	B4-G24	50	0,005	
	42V	1,2W	for all lens caps	B4-G42	50	0,005	
	48V	1,2W	for all lens caps	B4-G48	50	0,005	
	60V	1,2W	for all lens caps	B4-G60	50	0,005	
	110/120V ¹⁾	1,5/1,8W	for all lens caps	B4-G130	50	0,005	
	LED lamps²⁾ 10 years lifetime						
		20-30V AC/DC	17mA / 0,4W	for red lens caps	B3-L24 RTB	10	0,005
		20-30V AC/DC	17mA / 0,4W	for green lens caps	B3-L24 GNB	10	0,005
20-30V AC/DC		17mA / 0,4W	for yellow lens caps	B3-L24 GEB	10	0,005	
20-30V AC/DC		17mA / 0,4W	for blue lens caps	B3-L24 BLB	10	0,005	
20-30V AC/DC		17mA / 0,4W	for white lens caps	B3-L24 WSB	10	0,005	
90-120V AC/DC		7mA / 0,8W	for red lens caps	B3-L110 RTB	10	0,005	
90-120V AC/DC		7mA / 0,8W	for green lens caps	B3-L110 GNB	10	0,005	
90-120V AC/DC		7mA / 0,8W	for yellow lens caps	B3-L110 GEB	10	0,005	
90-120V AC/DC		7mA / 0,8W	for blue lens caps	B3-L110 BLB	10	0,005	
90-120V AC/DC		7mA / 0,8W	for white lens caps	B3-L110 WSB	10	0,005	
200-250V AC/DC		4mA / 0,9W	for red lens caps	B3-L230 RTB	10	0,005	
200-250V AC/DC		4mA / 0,9W	for green lens caps	B3-L230 GNB	10	0,005	
200-250V AC/DC		4mA / 0,9W	for yellow lens caps	B3-L230 GEB	10	0,005	
200-250V AC/DC		4mA / 0,9W	for blue lens caps	B3-L230 BLB	10	0,005	
200-250V AC/DC		4mA / 0,9W	for white lens caps	B3-L230 WSB	10	0,005	
Glow-discharge lamps							
		220-250V AC	0,3W	for clear, red, yellow lens caps	B4-GL230K	100	0,005
		220-250V AC	0,3W	for green, blue lens caps	B4-GL230G	100	0,005

1) Voltage marking 130V / 2W max. rated voltage 120V / 1,8W

2) suitable for B3FT lamp test lamp holders

Accessories

			Type	VPE Stk.	Gewicht kg/Stk.	
	Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018	
	Bezeichnungsschild	for marking of contact blocks B3T. and lamp holders B3F	P672-1	10	0,001	
	Lamp Installer	used to install or replace lamps BA9s	B4-7408	1	0,010	
	Spare Key	for lockable push buttons	B4-R455 B4-R786	1	0,007	
	Hole Plug	black, for fixing holes Ø22,5mm	B4-10022	10	0,007	
	Sealing Cover	protection against coarse contamination petrol-resistant ambient temperature 0° - +50° C ambient temperature -20° - +50° C	P279-1 P279-3	1 1	0,003 0,003	
	Protection cover	against unintentional manipulation Thickness 1mm yellow Thickness 1mm grey	B3-SK GE B3-SK GR	1 1	0,04 0,04	
	Protection ring with thread	against unintentional manipulation has to be mounted instead of the existing ring	black chrome alu	P921-1 P921-2 P921-3	1 1 1	0,012 0,012 0,012

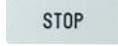
Label Holder and Legend Plate

		Type	Pack pcs.	Weight kg/pc.
Label Holder for Legend Plates BK4 with 1 or 2 lines, Thickness 0,8mm				
	Label holder for legend plate BK4, black	P751	100	0,002
	Label holder for legend plate BK4, yellow	P751-3	10	0,002

marking	Type	marking	Type	Pack pcs.	Weight kg/pc.
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Legend plate alu, for label holder P751

without marking



	BK4-9736			100	0,0002
I	BK4-I	II	BK4-II	10	0,0002
III	BK4-III	IV	BK4-IV	10	0,0002
V	BK4-V			10	0,0002
→	BK4-→	←	BK4-←	10	0,0002
0 I	BK4-0-I	H 0 A	BK4-H 0 A	10	0,0002
0 I	BK4-0 I	1 0 2	BK4-1 0 2	10	0,0002
START ON	BK4-START BK4-ON	STOP OFF	BK4-STOP BK4-OFF	10	0,0002
RUN AUTO	BK4-RUN BK4-AUTO	FAULT HAND	BK4-FAULT BK4-HAND	10	0,0002
UP OPEN	BK4-UP BK4-OPEN	DOWN CLOSE	BK4-DOWN BK4-CLOSE	10	0,0002
FORWARD REVERSE	BK4-FORWARD BK4-REVERSE	INCH RESET	BK4-INCH BK4-RESET	10	0,0002
TEST	BK4-TEST	OFF ON	BK4-OFF ON	10	0,0002

Legend plate with non-standard marking, (e. g.: BK4-MOTOR-START)

Text 1 line, max. 11 letters, letter height 3mm
Text 2 lines, max. 2 x 11 letters, letter height 3mm

BK4-...	1	0,0002
BK4-...-...	1	0,0002

Legend plate yellow, for label holder P751-3



Legend plate yellow without marking	BK4-10827	10	0,0002
Legend plate yellow with marking NOT-AUS	BK4-10827-1	10	0,0002
Legend plate yellow with marking EMERGENCY STOP	BK4-10827-2	10	0,0002
Legend plate yellow with marking ARRET D`URGENCE	BK4-10827-3	10	0,0002

Label Holder for Legend Plates with 3 or 4 lines, Thickness 0,8mm




Label holder for legend plate BK8, black	P761	10	0,002
Label holder for legend plate BK8, yellow	P761-3	10	0,002
Label holder for BK8, for double push buttons only	P761-D	10	0,002

































Legend plate BK8 with for label holder P761 (with marking e. g.: BK8-WATER-PUMP-START)

Legend plate without marking	BK8-9736	10	0,0004
Text 3 lines, max. 3 x 11 letters, letter height 3mm	BK8-.....	10	0,0004
Text 4 lines, max. 4 x 11 letters, letter height 3mm	BK8-.../.../.../...	10	0,0004

Actuator Caps

marking	Type -suffix for marking	marking	Type -suffix for marking.	Pack Weight pcs. kg/pc.	
 START EIN	DK(L) ..-START DK(L) ..-EIN	NOT AUS STOP AUS	DK(L) ..-NOT-AUS DK(L) ..-STOP DK(L) ..-AUS	10 0,001 10 0,001 10 0,001	
	BETRIEB ANLAUF VOR	DK(L) ..-BETRIEB DK(L) ..-ANLAUF DK(L) ..-VOR	STÖRUNG HALT ZURÜCK	DK(L) ..-STÖRUNG DK(L) ..-HALT DK(L) ..-ZURÜCK	10 0,001 10 0,001 10 0,001
	HEBEN LINKS MEHR	DK(L) ..-HEBEN DK(L) ..-LINKS DK(L) ..-MEHR	SENKEN RECHTS WENIGER	DK(L) ..-SENKEN DK(L) ..-RECHTS DK(L) ..-WENIGER	10 0,001 10 0,001 10 0,001
SCHNELL HELLER AUF	DK(L) ..-SCHNELL DK(L) ..-HELLER DK(L) ..-AUF	LANGSAM DUNKLER ZU	DK(L) ..-LANGSAM DK(L) ..-DUNKLER DK(L) ..-ZU	10 0,001 10 0,001 10 0,001	
AB EILGANG	DK(L) ..-AB DK(L) ..-EILGANG	LAUF TIPPEN	DK(L) ..-LAUF DK(L) ..-TIPPEN	10 0,001 10 0,001	

Actuator Caps with symbols according to DIN 30600, the Type must be completed with the code for colours

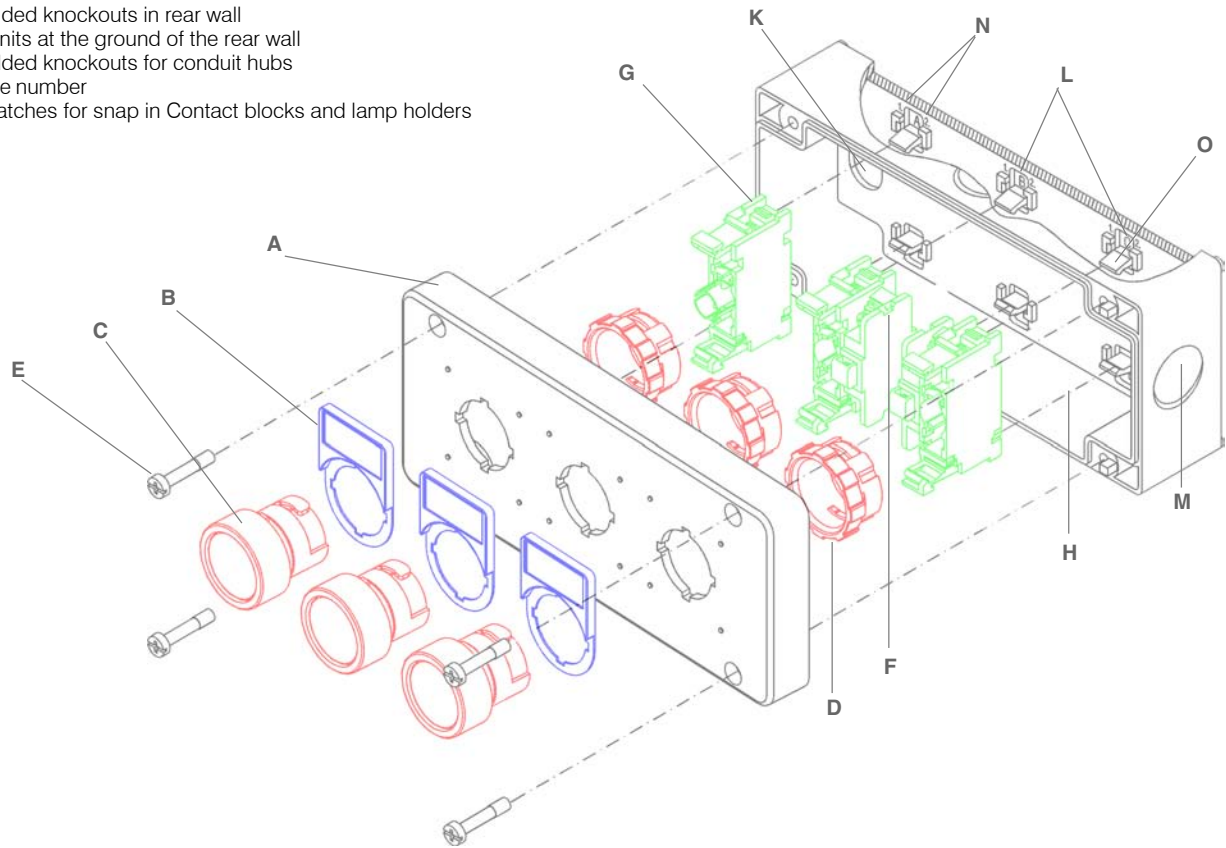
	DK(L) ..-100		DK(L) ..-101	10 0,001
	DK(L) ..-102		DK(L) ..-103	10 0,001
	DK(L) ..-200		DK(L) ..-201	10 0,001
	DK(L) ..-202		DK(L) ..-203	10 0,001
	DK(L) ..-204		DK(L) ..-205	10 0,001
	DK(L) ..-300		DK(L) ..-301	10 0,001
	DK(L) ..-302		DK(L) ..-303	10 0,001
	DK(L) ..-304		DK(L) ..-305	10 0,001
	DK(L) ..-306		DK(L) ..-307	10 0,001
	DK(L) ..-400		DK(L) ..-401	10 0,001
	DK(L) ..-402		DK(L) ..-403	10 0,001
	DK(L) ..-404		DK(L) ..-405	10 0,001
	DK(L) ..-406		DK(L) ..-407	10 0,001
	DK(L) ..-408		DK(L) ..-409	10 0,001
	DK(L) ..-410		DK(L) ..-411	10 0,001
	DK(L) ..-412		DK(L) ..-413	10 0,001

Code for colours

Colour	for buttons	for illuminated buttons	Colour	for buttons	for illuminated buttons
red	DK RT-..	DKL RT-..	blue	DK BL-..	DKL BL-..
green	DK GN-..	DKL GN-..	white	DK WS-..	DKL WS-..
yellow	DK GE-..	DKL GE-..	black	DK SW-..	-

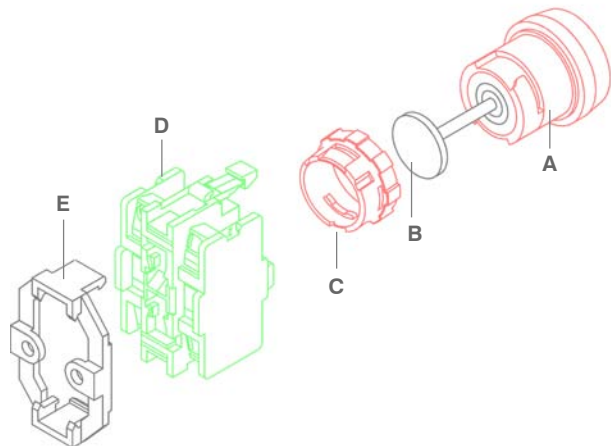
Assembled Stations BG.. IP65 Type12

- A Cover
- B Legend plates with label holder
- C Actuators or Lens caps
- D Ring and nut (included with actuator or lens cap)
- E Captive screws (after screw in), at delivery loose
- F Function number
- G Contact blocks and lamp holders
- H Rear shroud
- K Pre-moulded knockouts in rear wall
- L Sign of units at the ground of the rear wall
- M Pre-moulded knockouts for conduit hubs
- N Sequence number
- O Spring-catches for snap in Contact blocks and lamp holders



Buttons for base mounting

- A Actuator
- B Extension B4V...
- C Ring and nut (included with actuator or lens cap)
- D Contact block B4..
- E Base B4U for base and DIN-rail mounting of contact blocks



Mounting Plate for base and DIN-rail mounting of contact blocks



Mounting Plate for base and DIN-rail mounting of contact blocks and lamp holders **B4.U...**

Ring and Nut for mounting former actuators and lens caps **B4...**












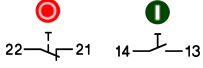

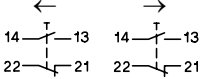

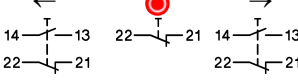

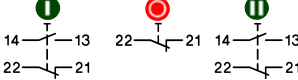

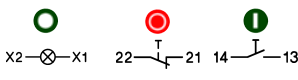










Type	Pack pcs.	Weight kg/pc.
B4U	10	0,010
B3UP	10	0,004

Actuators B3 see page 3 - 6, **Actuators B5** see page 9 - 11




Contact blocks see page 18

Assembled Stations IP65 Typ12

For conduit entries are in top and both small sides only one knockouts for conduit hubs Ø20,5mm, for M20 or PG13,5 provided.

		Diagram	Type	Pack pcs.	Weight kg/pc.
Plastic enclosed buttons and Pilot Lights					
	ON push button green		BG10 GN	1	0,135
	OFF push button red		BG10 RT	1	0,135
	Pilot light green	x2—⊗—x1	BG01 GN	1	0,135
	Pilot light red		BG01 RT	1	0,135
	Key operated 0 - I lock Ronis R455 60° maintained		BG10SAR 0	1	0,165
	Key operated I - 0 - II lock Ronis R455 60° maintained		BG10SARR 0	1	0,172
	2 push buttons 0 - I		BG20	1	0,200
	2 push buttons ← →		BG20PF	1	0,200
	3 push buttons ← 0 →		BG30PF	1	0,283
	3 push buttons I - 0 - II		BG30	1	0,283
	2 push buttons 0 - I with pilot light green		BG21 GN	1	0,270
	Foot and palm button mushroom Ø70mm		BG10P14P GR	1	0,187
Plastic enclosed EMERGENCY STOP buttons					
	EMERGENCY STOP button head Ø40mm unlock by turning		BG10P34-11	1	0,145
	EMERGENCY STOP mushroom button Ø40mm according to EN418 unlock by pull		BG10P44-11	1	0,145
	EMERGENCY STOP key operated button Ø40mm according to EN418 unlock by key		BG10P44S3-11	1	0,178
	EMERGENCY STOP mushroom button Ø70mm unlock by turning		BG10P34P-11	1	0,187




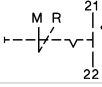

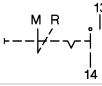


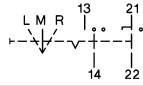


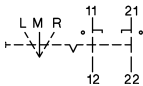


Enclosures BG.. IP65, Type12

	Number of units	Description	Type	Pack pcs.	Weight kg/pc.
	1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
	2	3 knockouts Ø20,5mm (M20 or PG13,5)	BG2	1	0,145
	3	3 knockouts Ø20,5mm (M20 or PG13,5)	BG3	1	0,188




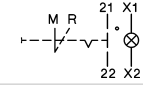

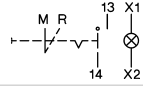


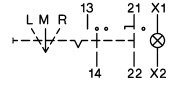


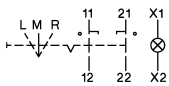

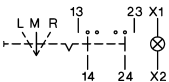
Buttons and Lens Caps B3.. see page 3 to 6

	Contacts	Lamp voltage	Wiring diagram	actuators with 2 or 3 switch positions	Type	Pack pcs.	Weight kg/pc.
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Contact blocks for enclosures BG..


	1NC ¹⁾ 				B4TU01	10	0,015
	1NO				B4TU10	10	0,015
	1NO+1NC ¹⁾ 				B4TU11	10	0,022
	2NC ¹⁾ 				B4TU02	10	0,022
	2NO				B4TU20	10	0,022

Contact blocks with lamp holder, socket BA9s, for enclosures BG..



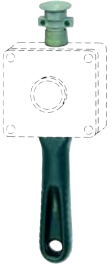
	1NC ¹⁾ 	max. 440V AC/DC			B4TU01F	10	0,020
	1NO	max. 440V AC/DC			B4TU10F	10	0,020
	1NO+1NC ¹⁾ 	max. 440V AC/DC			B4TU11F	10	0,027
	2NC ¹⁾ 	max. 440V AC/DC			B4TU02F	10	0,027
	2NO	max. 440V AC/DC			B4TU20F	10	0,027

Lamp holder, socket BA9s

	max. 440V AC/DC	direct connection, for lamps max. 1,9W (take care for active power consumption)		B4FU	10	0,013
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1) NC contact has a positive opening according to IEC/EN 60947-5-1 


Accessories for Plastic enclosed buttons

			Type	Pack pcs.	Weight kg/pc.
	Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018
	Couple Part	to couple enclosures BKLG or assembled stations BG..	B4-8852	1	0,018
	Suspension Eye	for hanging stations	B4-9929	1	0,188
	Handle and Cable Inlet	to change enclosures BG.. or assembled stations BG.. into a hanging station	B4-9149	1	0,064

Push Buttons for Enclosures 22mm IP65

Specification	Colour	Symbol	Length mm	Type	Pack pcs.	Weight kg/pc.	
Push buttons grey RAL7035							
	Reset push button	blue	R	8-22	B2GRB-22	10	0,005
		blue	R	22-60	B2GRB-60	10	0,016
	Reset push button with stop function	red	0/R	8-22	B2GR-22	10	0,005
		red	0/R	22-60	B2GR-60	10	0,016
	Start push button	green	I	8-22	B2GI-22	10	0,005
		green	I	22-60	B2GI-60	10	0,016
	Stop push button	red	0	8-22	B2G0-22	10	0,005
		red	0	22-60	B2G0-60	10	0,016
	Mushroom head lockable Ø28mm	red	0	8-22	B2GP-22	10	0,005
		red	0	22-60	B2GP-60	10	0,016

Push buttons with metal ring and self adjusting extension pin

	Reset push button	blue	R	19,5-38,5	B3GRB-31,5	10	0,023
		blue	R	38,5-60	B3GRB-60	10	0,026
	Reset push button with stop function	red	0/R	19,5-38,5	B3GR-31,5	10	0,023
		red	0/R	38,5-60	B3GR-60	10	0,026
	Start push button	green	I	19,5-38,5	B3GI-31,5	10	0,023
	green	I	38,5-60	B3GI-60	10	0,026	
	Stop push button	red	0	19,5-38,5	B3G0-31,5	10	0,023
		red	0	38,5-60	B3G0-60	10	0,026
	Mushroom head lockable Ø28mm	red		19,5-38,5	B3GP-31,5	10	0,023
		red		38,5-60	B3GP-60	10	0,026

Specification	Diameter Ø mm	Length mm	Type	Pack pcs.	Weight kg/pc.
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Extensions for push buttons

	self adjusting pin, for B(S, C)3D..	15	19,5 - 38,5	B4V31,5	10	0,001
	and B(S, C)3P..	18,5	38,5 - 60	B4V60	10	0,004

Technical Data

Terminal markings for control units according to DIN EN 50013

Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Colour code
10	13 14							01	21 22	
20	13 23 14 24	11	13 21 14 22					02	11 21 12 22	
30	13 23 33 14 24 34	21	13 21 33 14 22 34	12	13 21 31 14 22 32			03	12 22 32 12 22 32	
40	13 23 33 43 14 24 34 44	31	13 21 33 43 14 22 34 44	22	13 21 31 43 14 22 32 44	13	13 21 31 41 14 22 32 42	04	11 21 31 41 12 22 32 42	

Data according to IEC 947-5-1, VDE 0660, EN 60947-5-1

Type		B3T	B4T
Rated insulation voltage U_i	V AC	690 ¹⁾	500
Utilization category AC12 Control of resistive loads and solid stateloads with isolation by opto couplers			
Rated current I_n	220-240V A 380-415V A 500V A 690V A	10 10 10 10	10 10 10 -
Utilization category AC15 Control of electromagnetic load (>72VA)			
Rated current I_n	220-240V A 380-415V A 500V A 690V A	6 5 3 2	6 5 3 -
Utilization category DC12 L/R = 1ms Control of resistive loads and solid stateloads with isolation by opto couplers			
Rated current I_n	24V A 60V A 110V A 220V A	10 6 2,5 0,8	10 6 2,5 0,8
Utilization category DC14 L/R = 15ms Control of electromagnetic loads having economy resistors in circuit			
Rated current I_n	24V A 60V A 110V A 220V A	8 1 2 0,5	8 1 2 0,5
Utilization category DC13 L/R = 300ms Control of electromagnets			
Rated current I_n	24V A 60V A 110V A 220V A	2 5 0,5 0,2	2 5 0,5 0,2
Making capacity	A	60	60
Breaking capacity $\cos\phi = 0,7-1$	40-60Hz A	50	50
Mechanical life	millions of operations	10	10
Contact life (AC15)			
100VA	millions of operations	10	10
300VA	millions of operations	3	3
800VA	millions of operations	1	1
1200VA	millions of operations	0,5	0,5
Maximum frequency of operations	ops. per hour	600	600
Short circuit protection	slow, gL (gG) A	25	25
Type		B3F	B4F
Rated insulation voltage U_i	V AC	440 ²⁾	440 ²⁾
Lamp base		BA9s	

Type		B3., B4.
Protection degree (according to IEC 947-1) in assembled state, from the front from rear		IP65 IP00
Ambient temperature	°C	-20 to +50
Cable cross-section		
	solid, mm ² flexible, mm ² flexible with multicore cable end, mm ² number	0,5 - 2,5 0,5 - 2,5 0,5 - 1,5 2
Cables per clamp		
Mounting hole (according to IEC 947-1)	Ø mm Ø mm	22,5 30,5
Mounting position		optional
Terminal screws		Pozidriv No. 2 screws M3,5

Data according to cULus

Type	B3.	B4.
Contact Block for NO and NC	600 V AC max.	600 V AC max.
General use	10A	10A
Heavy pilot duty	A600	A600
Lamp Holder with socket BA9s	240V 2,6W max.	240V 2,6W max.
Wire (Contact and lamp holder)	14 - 18AWG	14 - 18AWG
Torque	9 lb/in.	9 lb/in.

Approvals

Country	USA, Canada UL	Europe	Register of Shipping	CENELEC CB- Certificates
Type			Great Britain LRS	
B3T..	o	o	-	o
B3F..	o	o	-	o
B4TU..	o	o	o	o
B4T..UF	o	o	o	o
B4FU..	o	o	o	o
B3-MB..	-	o	-	-

o In standard version approved

- Not provided for test till now

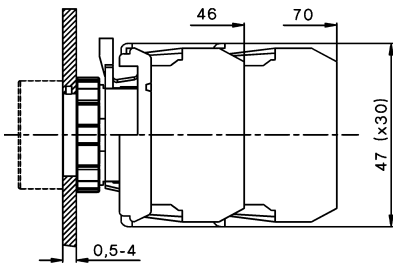
1) suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $U_{imp} = 6kV$. Data for other conditions on request

2) suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{imp} = 4kV$

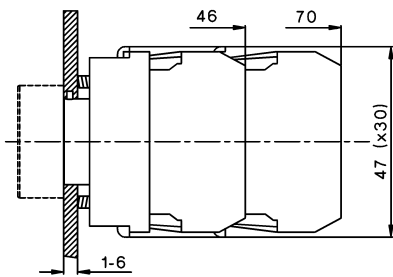
Dimensions

Actuators and Lens Caps 22mm

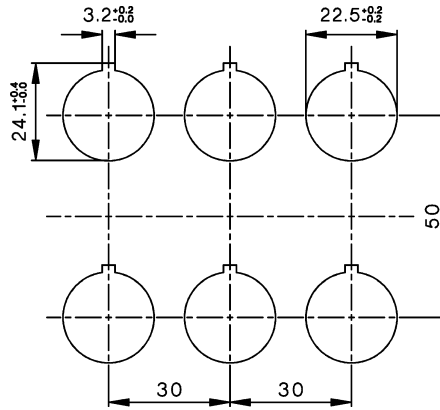
Panel mounting B3S



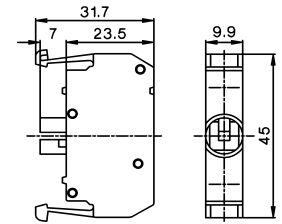
Panel mounting B3M



Mounting holes



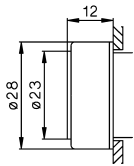
Contact blocks and Lamp Holders **B3...**



Dimensions of minimum space requirements according to IEC. Take into consideration the field of traverse of swing knobs (27mm) and the diameter of mushroom heads.

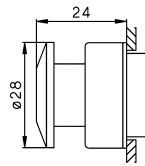
Actuators and Lens caps

Flush Head
Illuminated Flush Head



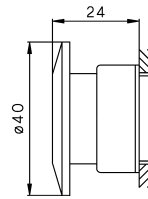
B3D(R), B3DL(R)
BS3D(R), BS3DL(R)
BC3D(R), BC3DL(R)

Mushroom Head Ø28mm
Emergency Stop Ø28mm



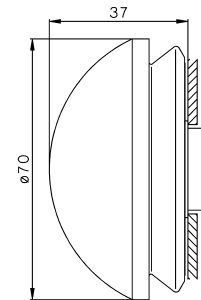
B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3

Mushroom Head Ø40mm
Emergency Stop Ø40mm



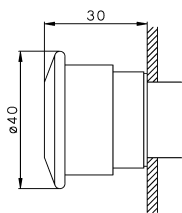
B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34

Mushroom Head Ø70mm
Emergency Stop Ø70mm



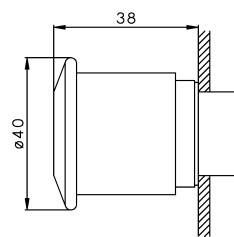
BS3P14P
BS3P34P

Push-and pull button Ø40mm



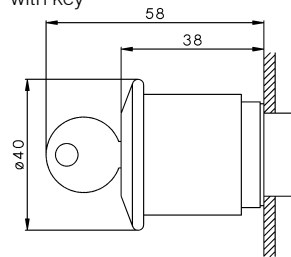
BS3P44

Push-and pull button Ø40mm



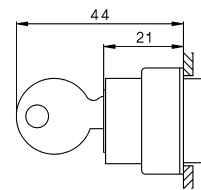
BS3P45

Push-and pull button Ø40mm
with key



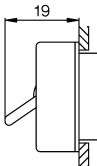
BS3P44S3

Lockable Push button



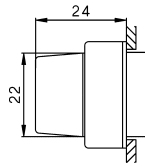
B3SAR., B3SAT.
BS3SAR., BS3SAT.
BC3SAR., BC3SAT.

Toggle



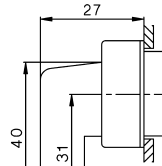
B3E
BS3E
BC3E

Rotary Knob



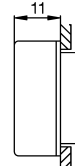
B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL

Swing Knob



B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN

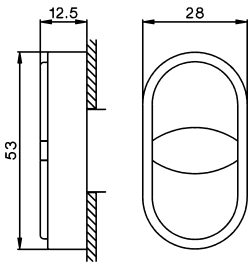
Lens Cap



B3R(F)

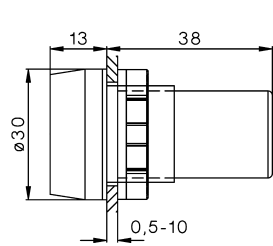
Dimensions

Double push button



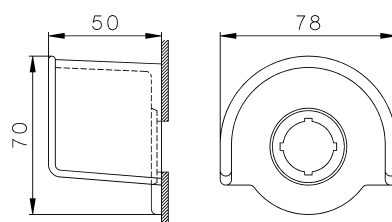
B3DT

Monoblock Multi-LED



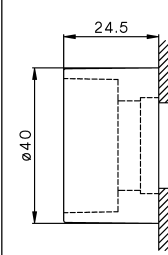
B3-MB...

Protection cover



B3-SK ..

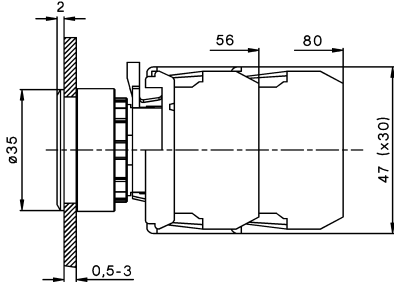
Protection ring w. thread



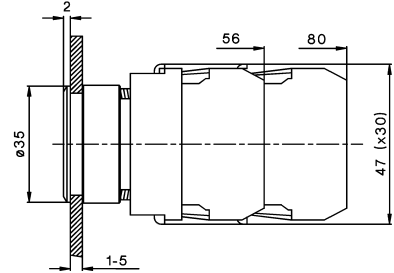
P921-.

Actuators and Lens Caps 30mm

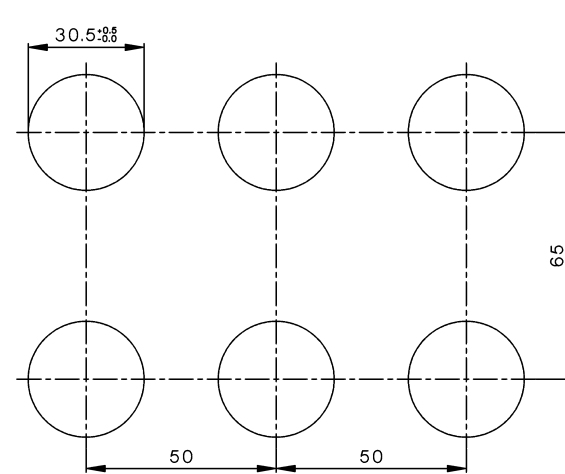
Panel mounting B3S



Panel mounting B3M

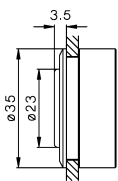


Mounting holes



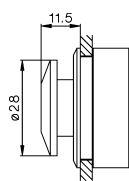
Actuators and Lens caps

Flush Head
Illuminated Flush Head



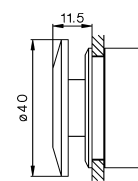
B5D(R), B5DL(R)
BS5D(R), BS5DL(R)

Mushroom Head Ø28mm
Emergency Stop Ø28mm



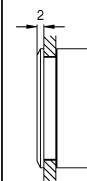
B5P1 to B5P3
BS5P1 to BS5P3

Mushroom Head Ø40mm
Emergency Stop Ø40mm



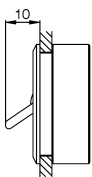
B5P14, B5P34
BS5P14, BS5P34

Lens Cap



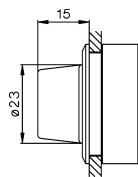
B5RF

Toggle



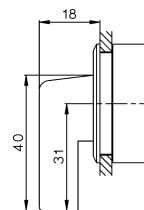
B5E
BS5E

Rotary Knob



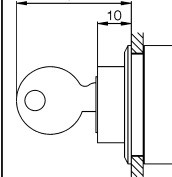
B5KN, B5KL
BS5KN, BS5KL

Swing Knob



B5KRL, B5KRN
BS5KRL, BS5KRN

Lockable Push button

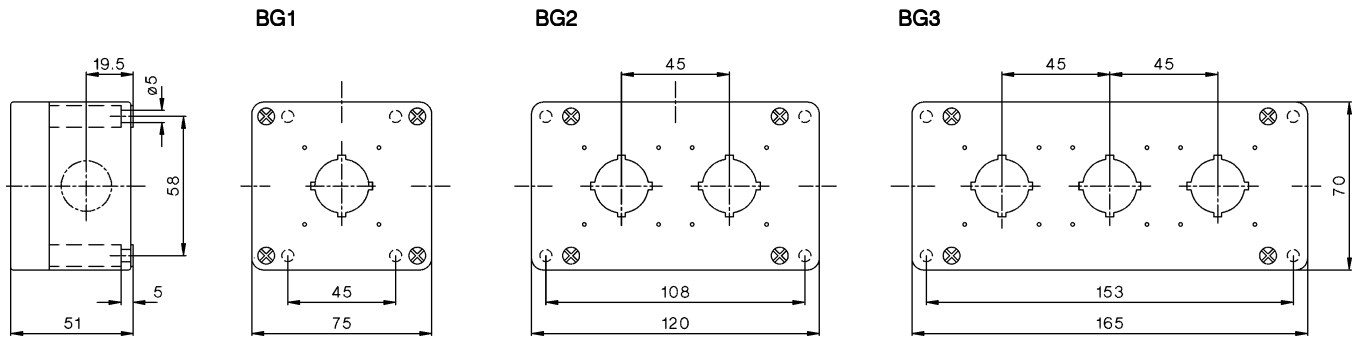


B5SAR., B5SAT.
BS5SAR., BS5SAT.

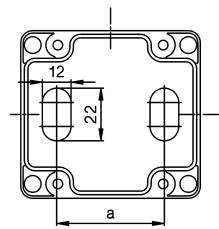
Dimensions

Enclosures for Custom Built Stations

Three conduit entries (knockouts), each on top, left and right side, Ø20,5mm (M20 or PG13,5)

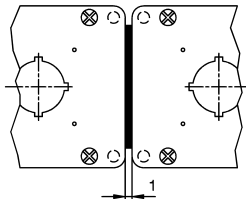


Conduit entries in the bottom (knockouts)

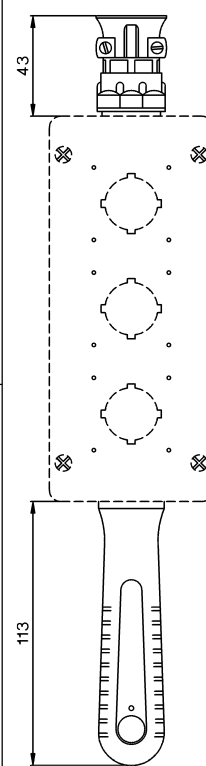


Number of units	Dimension a (mm)
1	45
2	90
3	135

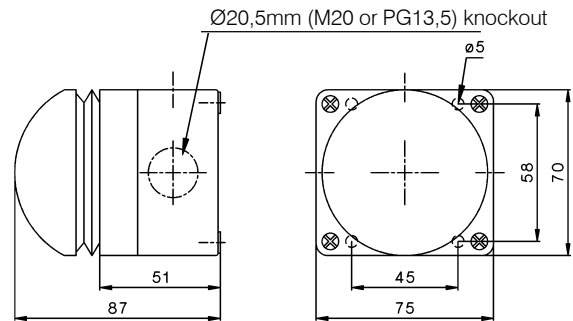
Coupled Enclosures B4-8852



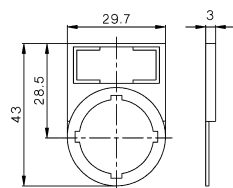
Hanging Station B4-9149



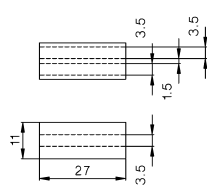
EMERGENCY STOP Push Button Ø70 mm, Foot switch BG10P34P, BG10P14P



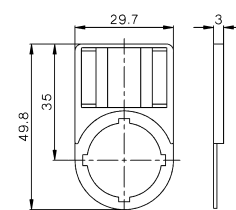
Label holder P751



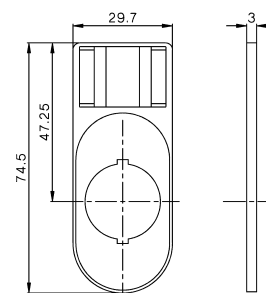
Legend plate BK4-...



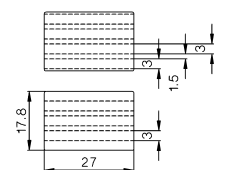
Label holder P761



Label holder P761-D



Legend plate BK8-...



Dimensions

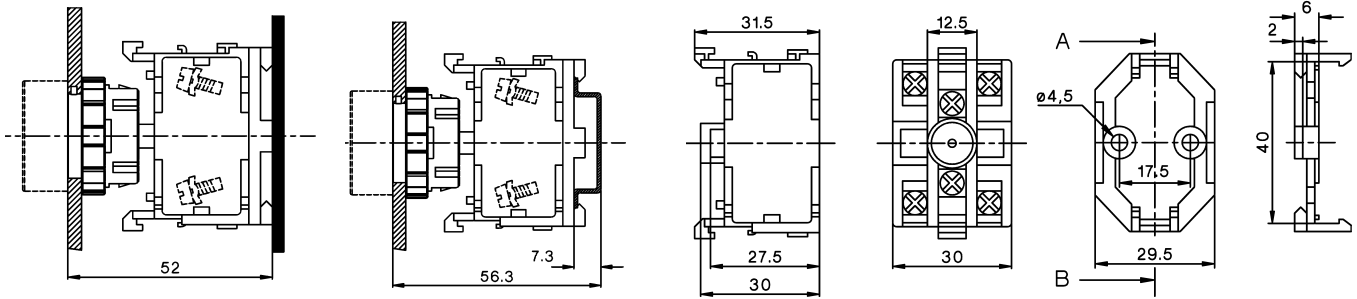
Actuators 22mm

Base mounting

DIN-rail mounting

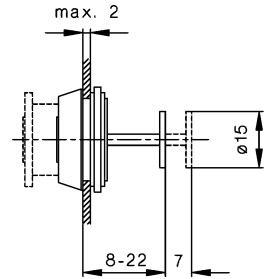
Contact blocks and
Lamp Holders B4.U...

Base B4U



Push buttons for enclosures

B2G...22



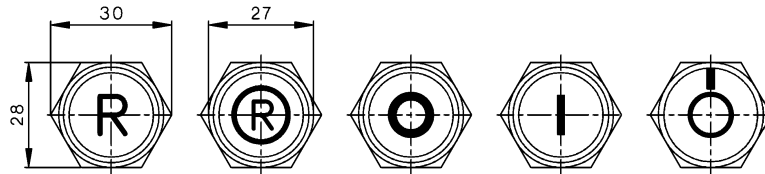
B2GRB

B2GR

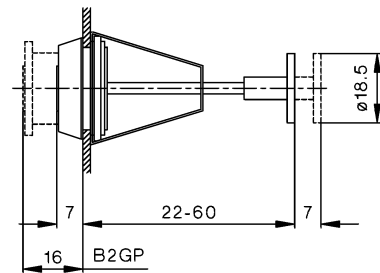
B2G0

B2GI

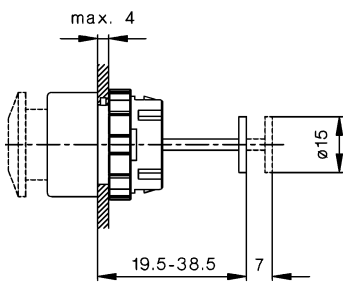
B2GP



B2G...60



B3G...31,5



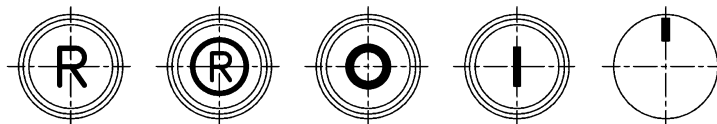
B3GRB

B3GR

B3G0

B3GI

B3GP



B3G...60

