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Actuators and Lens Caps 22mm IP67 (IP65), Type 12

Push Buttons



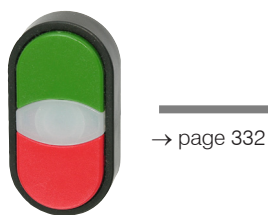
EMERGENCY STOP Buttons



Illuminated Operators



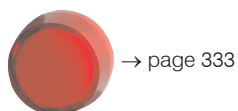
Double Push Buttons with Indicator Lamp, IP65



Lens Caps

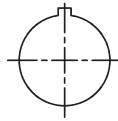


Mono Block Multi Chip LED IP65, IEC 60947, EN 60947

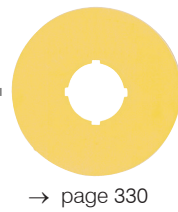
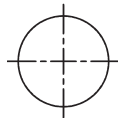


Mounting hole
Ø 22,5mm

with key way

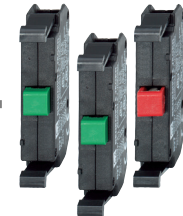


without key way

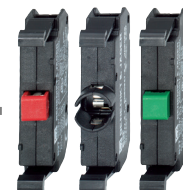


Connectors

Contacts Lamp Holders



Actuator insert
→ page 334



→ page 334



Thickness
0,5 - 4 mm
→ page 334

or



Thickness
1 - 6 mm
→ page 334



LED
24-230V



Glow-discharge lamps
230V
→ page 335

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



Actuators 22mm IP67, Type 12

Ring



Colour Symbol

Black

Chrome

Pack pcs. Weight kg/pc.

Push Buttons



red		BS3D RT	BC3D RT	10	0,014
red	0	BS3D RT-0	BC3D RT-0	10	0,014
green		BS3D GN	BC3D GN	10	0,014
grün	I	BS3D GN-I	BC3D GN-I	10	0,014
grün	II	BS3D GN-II	BC3D GN-II	10	0,014
grün	→	BS3D GN-PF	BC3D GN-PF	10	0,014
yellow		BS3D GE	BC3D GE	10	0,014
blue		BS3D BL	BC3D BL	10	0,014
white		BS3D WS	BC3D WS	10	0,014
black		BS3D SW	BC3D SW	10	0,014
black	→	BS3D SW-PF	BC3D SW-PF	10	0,014

Push Buttons, Maintained



red		BS3DR RT	BC3DR RT	10	0,014
green		BS3DR GN	BC3DR GN	10	0,014
yellow		BS3DR GE	BC3DR GE	10	0,014
blue		BS3DR BL	BC3DR BL	10	0,014
white		BS3DR WS	BC3DR WS	10	0,014
black		BS3DR SW	BC3DR SW	10	0,014

Mushroom Head Ø28mm



red		BS3P1 RT	BC3P1 RT	10	0,017
red	0	BS3P1 RT-0	BC3P1 RT-0	10	0,017
green		BS3P1 GN	BC3P1 GN	10	0,017
yellow		BS3P1 GE	BC3P1 GE	10	0,017
blue		BS3P1 BL	BC3P1 BL	10	0,017
black		BS3P1 SW	BC3P1 SW	10	0,017

Mushroom Head Ø40mm



red	0	BS3P14 RT-0	BC3P14 RT-0	10	0,020
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Mushroom Head Ø40mm



red		BS3P44T RT	BS3P44T RT	10	0,028
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Foot and Palm switch Ø70mm



red		BS3P14P RT	BS3P14P RT	1	0,062
grey		BS3P14P GR	BS3P14P GR	1	0,062

Actuators 22mm IP67, Type 12

Ring



Colour	Symbol/ high	Black	Chrome	Pack pcs.	Weight kg/pc
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EMERGENCY STOP Push Buttons, according to EN ISO 13850, push to trip, pull to release Ø40mm



red	30mm	BS3P44 RT	-	10	0,028
red	38mm	BS3P45 RT	-	10	0,028

EMERGENCY STOP Push Buttons, according to EN ISO 13850, release by key, Ø40mm



red	38mm	BS3P44S3	-	1	0,050
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Spare Key	lock Ronis R455			1	0,007
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EMERGENCY STOP Push Buttons, release by turning, Ø28mm



red		BS3P3 RT	BC3P3 RT	10	0,017
red	0	BS3P3 RT-0	BC3P3 RT-0	10	0,017
red	0	BS3P3 RT-0-RGE ²⁾	BC3P3 RT-0-RGE ²⁾	10	0,017

EMERGENCY STOP Push Buttons, release by turning, Ø40mm



red		BS3P34 RT-0	BC3P34 RT-0	10	0,020
-----	--	-------------	-------------	----	-------



red	arrow	BS3P34 RT-PF	BC3P34 RT-PF	10	0,020
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red illuminated		BS3P34L RT	BC3P34L RT	10	0,020
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EMERGENCY STOP Push Buttons, release by turning, Ø70mm



red		BS3P34P RT	-	1	0,062
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Yellow Disk Ø70mm, Thickness 1mm ¹⁾



neutral		B3-7603	1	0,004
with marking NOT-AUS and EMERGENCY-STOP-symbol		B3-7603-1	1	0,004
with marking EMERGENCY STOP and EMERGENCY-STOP-symbol		B3-7603-2	1	0,004
2-side markings: ARRET D`URGENCE / NOODSTOP with E-STOP-symbol		B3-7603-3	1	0,004
2-side markings: ARRET D`URGENCE / NØDSTOP with E-STOP-symbol		B3-7603-4	1	0,004



Protection cover against unintentional manipulation, Thickness 1mm



for Push Buttons Ø28mm and Ø40mm	yellow	B3-SK GE	1	0,04
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Sealing cap

for Push Buttons BS3P45RT and BS3P44S3	transparent	B3-PH GE	1	0,03
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1) Not for enclosure BG.. 2) Front ring yellow

Actuators 22mm Type 12

Ring



Black



Chrome

Pack pcs.

Weight kg/pc.
















Rotary Knobs and Swing Knobs, black IP65



Rotary



Swing

maintained 60°					
	Rotary	BS3KN2	BC3KN2	10	0,020
	Swing	BS3KRN2	BC3KRN2	10	0,020
spring return 60°					
	Rotary	BS3KN8	BC3KN8	10	0,020
	Swing	BS3KRN8	BC3KRN8	10	0,020
spring return 60°					
	Rotary	BS3KN1	BC3KN1	10	0,020
	Swing	BS3KRN1	BC3KRN1	10	0,020
maintained 60°					
	Rotary	BS3KN3	BC3KN3	10	0,020
	Swing	BS3KRN3	BC3KRN3	10	0,020
maintained/spring return 60°					
	Rotary	BS3KN6	BC3KN6	10	0,020
	Swing				
maintained 120°					
	Rotary	BS3KN9	BC3KN9	10	0,020
	Swing				
maintained 90° according to EN81					
	Rotary	BS3KN10	BC3KN10	10	0,020
	Swing				
maintained 90°					
	Rotary	BS3KN11	BC3KN11	10	0,020
	Swing				









Illuminated Rotary Knobs and Swing Knobs, clear IP67, LED or Glow Discharge lamps see page 337



Rotary



Swing

maintained 90°					
	Rotary	BS3KL2	BC3KL2	10	0,016
	Swing				
spring return 60°					
	Rotary	BS3KL1	BC3KL1	10	0,016
	Swing	BS3KRL1	BC3KRL1	10	0,016
maintained 60°					
	Rotary	BS3KL3	BC3KL3	10	0,016
	Swing	BS3KRL3	BC3KRL3	10	0,016
maintained/spring return 60°					
	Rotary	BS3KL6	BC3KL6	10	0,016
	Swing				

Actuators 22mm IP65, Type 12

Ring

Key
removeable in



Black



Chrome

Pack
pcs.

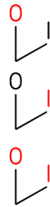
Weight
kg/pc.

Key Operated Rotary Switches with lock Ronis 455



BC3SAR 0

maintained 60°



BS3SAR 0	BC3SAR 0	1	0,044
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BS3SAR 1	BC3SAR 1	1	0,044
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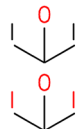
BS3SAR 01	BC3SAR 01	1	0,044
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spring return 60°



BS3SAT 0	BC3SAT 0	1	0,044
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maintained 60°



BS3SARR 0	BC3SARR 0	1	0,044
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BS3SARR 102	BC3SARR 102	1	0,044
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spring return/maintained 60°



BS3SATR 02	BC3SATR 02	1	0,044
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spring return 60°



BS3SATT 0	BC3SATT 0	1	0,044
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Spare Key lock Ronis R455

B4-R455	1	0,007
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BC3SAT 0

Colour Symbol

Pack
pcs.

Weight
kg/pc.

Illuminated Push Buttons IP67, lamp max. 1,9W, lamps see page 339



red	BS3DL RT	BC3DL RT	10	0,014
green	BS3DL GN	BC3DL GN	10	0,014
yellow	BS3DL GE	BC3DL GE	10	0,014

blue	BS3DL BL	BC3DL BL	10	0,014
white	BS3DL WS	BC3DL WS	10	0,014

Illuminated Push Buttons, Maintained IP67, lamp max. 1,9W, lamps see page 339



red	BS3DLR RT	BC3DLR RT	10	0,014
green	BS3DLR GN	BC3DLR GN	10	0,014
yellow	BS3DLR GE	BC3DLR GE	10	0,014

blue	BS3DLR BL	BC3DLR BL	10	0,014
white	BS3DLR WS	BC3DLR WS	10	0,014

Double Push Buttons, with indicator lamp white, lamp max. 1,9W, lamps see page 339



green red	BS3DT G/R	BC3DT G/R	10	0,016
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white black	BS3DT W/S	BC3DT W/S	10	0,016
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green red	I 0	BS3DT GI/RO	BC3DT GI/RO	10	0,016
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white black	I 0	BS3DT WI/SO	BC3DT WI/SO	10	0,016
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with non-standard marking on request

Lens Caps 22mm Type 4X

suitable for Alu, Black and Chrome

Colour	Type	Pack pcs.	Weight kg/pc.
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Lens Caps IP67 with fresnel lens for LED or Glow-discharge lamps see page 335



red	B3R RT	10	0,009
green	B3R GN	10	0,009
yellow	B3R GE	10	0,009
blue	B3R BL	10	0,009
clear	B3R KL	10	0,009
white	B3R WS	10	0,009

Lens Caps Low IP67 with fresnel lens for LED or Glow-discharge lamps see page 335



red	B3RN RT	10	0,008
green	B3RN GN	10	0,008
yellow	B3RN GE	10	0,008
blue	B3RN BL	10	0,008
clear	B3RN KL	10	0,008
white	B3RN WS	10	0,008

Lens Caps IP67 for LED or Glow-discharge lamps see page 335



red	B3RF RT	10	0,009
green	B3RF GN	10	0,009
yellow	B3RF GE	10	0,009
blue	B3RF BL	10	0,009
white	B3RF WS	10	0,009

Colour	Voltage	Power VA	W	Type	Pack pcs.	Weight kg/pc
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Monoblock LEDs IP65, IEC 60947, EN 60947 (6 years middle lifetime) ¹⁾

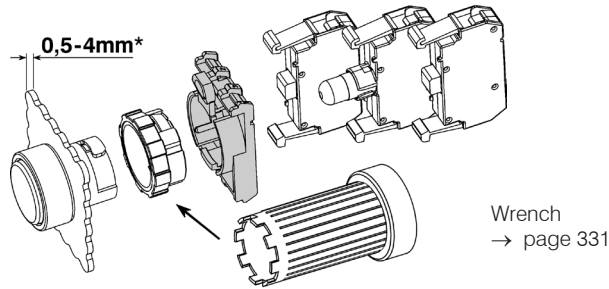


red	20-30V AC/DC	0,4	0,4	B3-MB24 RTB	10	0,022
green	20-30V AC/DC	0,4	0,4	B3-MB24 GNB	10	0,022
yellow	20-30V AC/DC	0,4	0,4	B3-MB24 GEB	10	0,022
blue	20-30V AC/DC	0,4	0,4	B3-MB24 BLB	10	0,022
white	20-30V AC/DC	0,4	0,4	B3-MB24 WSB	10	0,022
red	110-130V AC 110V DC	1,2	1,2	B3-MB110 RTB	10	0,022
green	110-130V AC 110V DC	1,2	1,2	B3-MB110 GNB	10	0,022
yellow	110-130V AC 110V DC	1,2	1,2	B3-MB110 GEB	10	0,022
blue	110-130V AC 110V DC	1,2	1,2	B3-MB110 BLB	10	0,022
white	110-130V AC 110V DC	1,2	1,2	B3-MB110 WSB	10	0,022
red	170-250V AC	4,0	1,0	B3-MB230 RTB	10	0,022
green	170-250V AC	4,0	1,0	B3-MB230 GNB	10	0,022
yellow	170-250V AC	4,0	1,0	B3-MB230 GEB	10	0,022
blue	170-250V AC	4,0	1,0	B3-MB230 BLB	10	0,022
white	170-250V AC	4,0	1,0	B3-MB230 WSB	10	0,022
red	400V AC		0,5	B3-MB400 RTB	10	0,022
green	400V AC		0,5	B3-MB400 GNB	10	0,022
yellow	400V AC		0,5	B3-MB400 GEB	10	0,022
blue	400V AC		0,5	B3-MB400 BLB	10	0,022
white	400V AC		0,5	B3-MB400 WSB	10	0,022

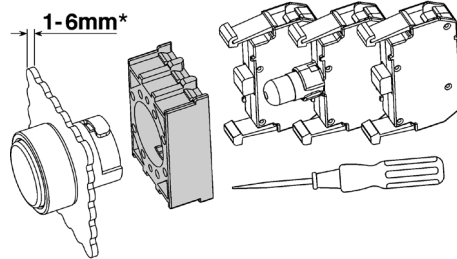
1) Ambient temperatures on request.

Connectors

Specification	Description	Type	Pack pcs.	Weight kg/pc.
Connector B3S		B3S	10	0,013



Connector B3M		B3M	10	0,013
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*) inclusive Thickness from Label Holder and Yellow Disk

Contact Blocks and Lamp Holders for Panel Mounting

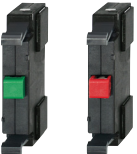
for voltage	Description	Type	Pack pcs.	Weight kg/pc.
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Contact blocks, screw terminals



max. 690V AC	1 NC ¹⁾		B3T01 ²⁾	10	0,010
max. 690V AC	1 NO ¹⁾		B3T10 ²⁾	10	0,010

Contact blocks, RAST 5 terminals (note coding)



max. 690V~	1 NC		B3RT01	10	0,010
max. 690V~	1 NO		B3RT10	10	0,010



Actuator insert	to actuate the center contact block		P642	10	0,001
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Lamp holders, socket BA9s



max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)		B3F	10	0,012
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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= / 1 mA and for difficult ambient conditions.

Lamps

Socket BA9s
Lamp voltage

Type

Pack
pcs.

Weight
kg/pc.

LED lamps¹⁾ (6 years middle lifetime, for equivalent lens caps only)



24V 10mA AC/DC +-10%	for red lens caps	B3-L24 RTB	50	0,005
24V 10mA AC/DC +-10%	for green lens caps	B3-L24 GNB	50	0,005
24V 10mA AC/DC +-10%	for yellow lens caps	B3-L24 GEB	50	0,005
24V 10mA AC/DC +-10%	for blue lens caps	B3-L24 BLB	50	0,005
24V 10mA AC/DC +-10%	for white lens caps	B3-L24 WSB	50	0,005
110V 3,2mA AC/DC +-10%	for red lens caps	B3-L110 RTB	50	0,005
110V 3,2mA AC/DC +-10%	for green lens caps	B3-L110 GNB	50	0,005
110V 3,2mA AC/DC +-10%	for yellow lens caps	B3-L110 GEB	50	0,005
110V 3,2mA AC/DC +-10%	for blue lens caps	B3-L110 BLB	50	0,005
110V 3,2mA AC/DC +-10%	for white lens caps	B3-L110 WSB	50	0,005
220V 1,7mA AC/DC +-10%	for red lens caps	B3-L230 RTB	50	0,005
220V 1,7mA AC/DC +-10%	for green lens caps	B3-L230 GNB	50	0,005
220V 1,7mA AC/DC +-10%	for yellow lens caps	B3-L230 GEB	50	0,005
220V 1,7mA AC/DC +-10%	for blue lens caps	B3-L230 BLB	50	0,005
220V 1,7mA AC/DC +-10%	for white lens caps	B3-L230 WSB	50	0,0

Glow-discharge lamps¹⁾



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

Accessories



		Type	Pack pcs.	Weight kg/pc.	
Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018	
Marking plate	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 B(S)3SA.. and BS3P44S3, Ronis R455 for B(S)3SB.., Ronis R786	B4-R455 B4-R786	1 1	0,007 0,007	
Hole Plug	black, for fixing holes grey	B3-DU SW B3-DU GR	10 10	0,007 0,007	
Protection cover	against unintentional manipulation Thickness 1mm Thickness 1mm	yellow 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	P921-1	1	0,012

1) Ambient temperatures on request.

Label Holders and Legend Plates for Push Buttons B3, 22mm

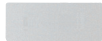
Marking 1 or 2 lines



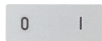
	Type	Pack pcs.	Weight kg/pc.
Label holder for legend plate BK4, black, Thickness 0,8mm	P751	100	0,001
Label holder for legend plate BK4, yellow, Thickness 0,8mm	P751-3	10	0,001

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



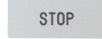
blank	BK4-9736			100	0,0002
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0	BK4-0-I	H 0 A	BK4-H 0 A	10	0,0002
---	---------	-------	-----------	----	--------



0	BK4-0__	1 0 2	BK4-1 0 2	10	0,0002
---	---------	-------	-----------	----	--------



START	BK4-START	STOP	BK4-STOP	10	0,0002
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Marking 3 or 4 lines



Label holder for legend plate BK8, black, Thickness 0,8mm	P761	10	0,0013
Label holder for legend plate BK8, yellow, Thickness 0,8mm	P761-3	10	0,0013
Label holder for BK8, for double push buttons only	P761-DT	10	0,0013

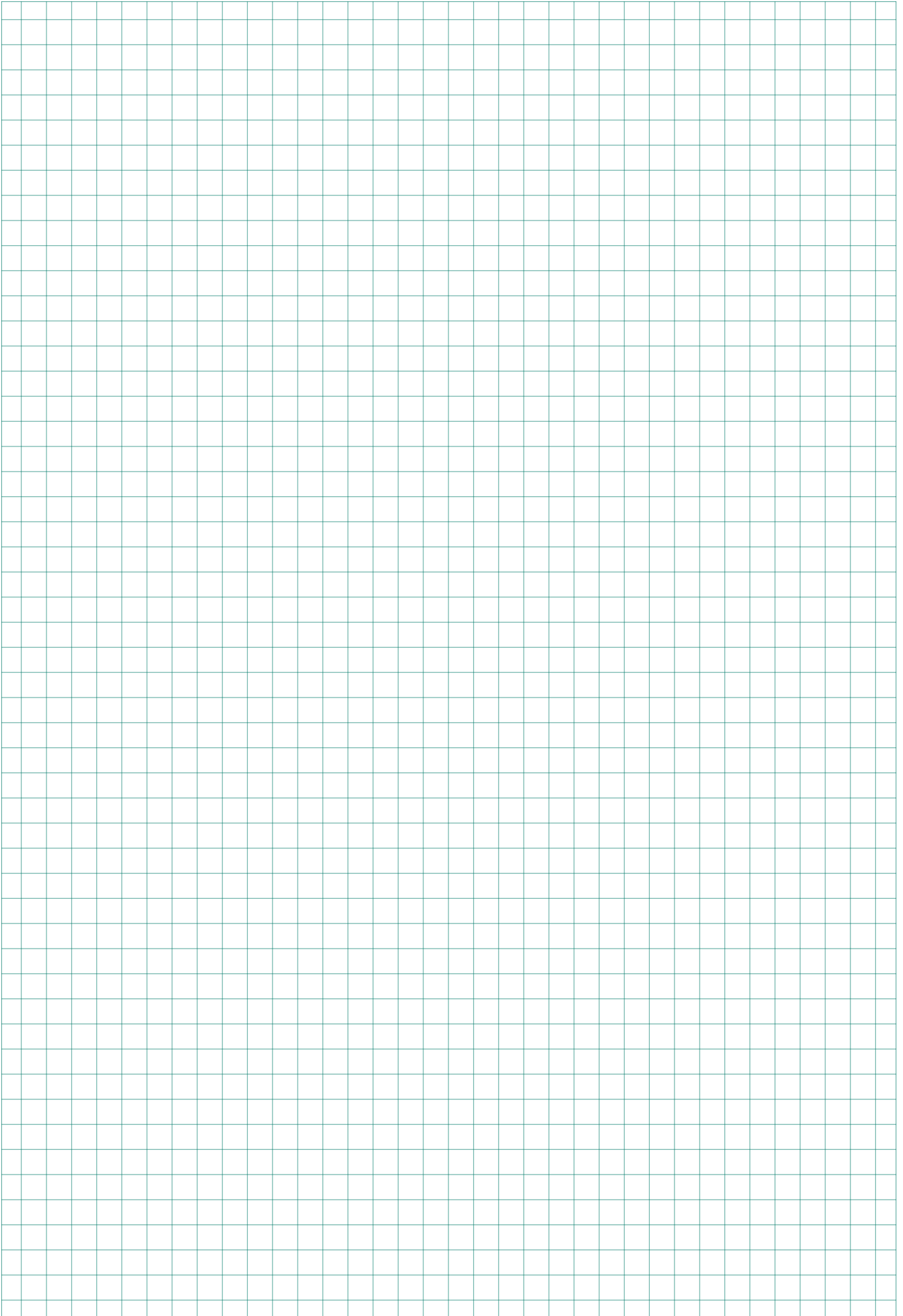
Legend plate BK8 for label holder P761 (with marking e. g.: BK8-WATER-PUMP-START)



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



Contactors, Motor-Starter

Circuit Breakers

Manual Motor-Starters

Switches

AC-Main Switches

DC-Switch Disconnector

Push Buttons

Representatives, Suppliers

Actuators and Lens Caps 30mm IP67 (IP65)

Push Buttons



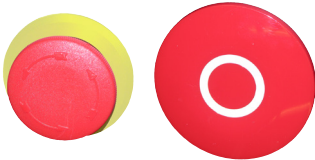
→ page 339



IP65

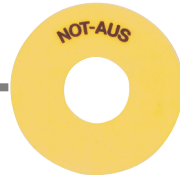
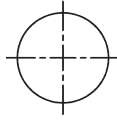
→ page 340,
341

EMERGENCY STOP Buttons



→ page 339

Mounting hole
Ø 30,5mm



→ page 339

Illuminated Operators



→ page 340



→ page 343

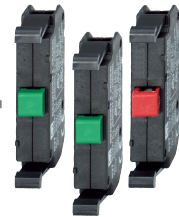
Lens Caps



→ page 341

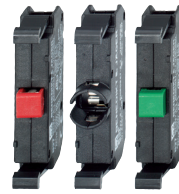
Connectors

Contacts Lamp Holder

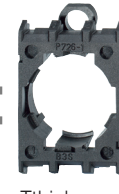


Actuator insert

→ page 342



→ page 342



Tthickness
0,5 - 3 mm
→ page 342



LED
24-230V



Glow-discharge
230V

→ page 343

Wrench
J7049



Actuators 30mm IP67

Ring



Colour Symbol

Black

Alu

Pack pcs.

Weight kg/pc.

Push Buttons, Actuator Caps markable



red		BS5D RT	B5D RT	10	0,029
red	0	BS5D RT-0	B5D RT-0	10	0,029
green		BS5D GN	B5D GN	10	0,029
green	I	BS5D GN-I	B5D GN-I	10	0,029
green	II	BS5D GN-II	B5D GN-II	10	0,029
green	→	BS5D GN-PF	B5D GN-PF	10	0,029



yellow		BS5D GE	B5D GE	10	0,029
blue		BS5D BL	B5D BL	10	0,029
white		BS5D WS	B5D WS	10	0,029
black		BS5D SW	B5D SW	10	0,029
black	→	BS5D SW-PF	B5D SW-PF	10	0,029

Push Buttons, Maintained, Actuator Caps markable



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

Mushroom Heads, Ø28mm



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

Mushroom Heads, Ø40mm



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



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

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



red	0	BS5P34 RT-0	B5P34 RT-0	10	0,035
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Yellow Disk for EMERGENCY-STOP Push Buttons, Ø70mm, Thickness 1mm



neutral		B5-7603		1	0,004
with marking NOT-HALT-symbol		B5-7603-S		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

Ring



Black

Alu

Pack
pcs.

Weight
kg/pc.

Rotary Knobs and Swing Knobs, black IP65



Rotary

maintained 60°



Rotary
Swing

BS5KN2
BS5KRN2

B5KN2
B5KRN2

10
10

0,035
0,035

spring return 60°



Rotary
Swing

BS5KN8
BS5KRN8

B5KN8
B5KRN8

10
10

0,035
0,035

spring return 60°



Rotary
Swing

BS5KN1
BS5KRN1

B5KN1
B5KRN1

10
10

0,035
0,035

spring return 60°



Rotary
Swing

BS5KN3
BS5KRN3

B5KN3
B5KRN3

10
10

0,035
0,035

maintained/spring return 60°



Rotary

BS5KN6

B5KN6

10

0,035

maintained 120°



Rotary

BS5KN9

B5KN9

10

0,035

maintained 90°
according to EN81



Rotary

BS5KN10

B5KN10

10

0,035



Swing

Illuminated Rotary Knobs and Swing Knobs IP67, clear, lamp max. 1,2W, lamps see page 347



Rotary

maintained 90°



Rotary

BS5KL2

B5KL2

10

0,031

spring return 60°



Rotary
Swing

BS5KL1
BS5KRL1

B5KL1
B5KRL1

10
10

0,031
0,031

maintained 60°



Rotary
Swing

BS5KL3
BS5KRL3

B5KL3
B5KRL3

10
10

0,031
0,031

maintained/spring return 60°



Rotary

BS5KL6

B5KL6

10

0,031



Swing

Actuators and Lens Caps 30mm IP65

Ring

key
removeable in



Black



Alu

Pack
pcs.

Weight
kg/pc.

Key Operated Rotary Switch with lock Ronis 455



B5SAR 0

maintained 60°



BS5SAR 0	B5SAR 0	1	0,059
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BS5SAR 1	B5SAR 1	1	0,059
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BS5SAR 01	B5SAR 01	1	0,059
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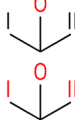
B5SAT 0

spring return 60°



BS5SAT 0	B5SAT 0	1	0,059
----------	---------	---	-------

maintained 60°



BS5SARR 0	B5SARR 0	1	0,059
-----------	----------	---	-------

BS5SARR 102	B5SARR 102	1	0,059
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spring return/maintained 60°



BS5SATR 02	B5SATR 02	1	0,059
------------	-----------	---	-------

spring return 60°



BS5SATT 0	B5SATT 0	1	0,059
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Spare Keylock Ronis R455	B4-R455	1	0,007
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Colour

Pack
pcs.

Weight
kg/pc.

Illuminated Push Buttons IP67, lamp max. 1,9W, lamps see page 347



red	BS5DL RT	B5DL RT	10	0,029
green	BS5DL GN	B5DL GN	10	0,029
yellow	BS5DL GE	B5DL GE	10	0,029

blue	BS5DL BL	B5DL BL	10	0,029
white	BS5DL WS	B5DL WS	10	0,029

Illuminated Push Buttons IP67, Maintained, lamp max. 1,9W, lamps see page 347



red	BS5DLR RT	B5DLR RT	10	0,029
green	BS5DLR GN	B5DLR GN	10	0,029
yellow	BS5DLR GE	B5DLR GE	10	0,029

blue	BS5DLR BL	B5DLR BL	10	0,029
white	BS5DLR WS	B5DLR WS	10	0,029

Lens Caps with fresnel lens IP67, lamp max. 1,9W, lamps see page 347

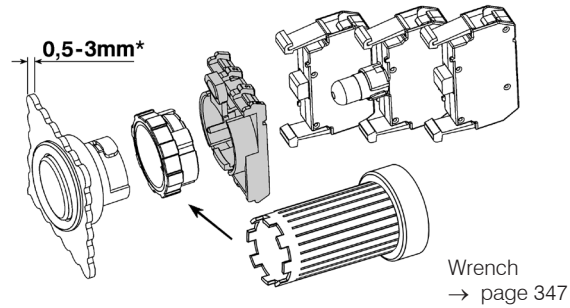


red	BS5R RT	B5R RT	10	0,029
green	BS5R GN	B5R GN	10	0,029
yellow	BS5R GE	B5R GE	10	0,029

blue	BS5R BL	B5R BL	10	0,029
clear	BS5R KL	B5R KL	10	0,029
white	BS5R WS	B5R WS	10	0,029





Connectors

Specification	Description	Type	Pack pcs.	Weight kg/pc.
Connector B3S		B3S	10	0,013

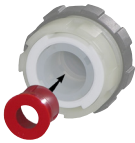


*) inclusive Thickness from Label Holder and Yellow Disk



Contact Blocks and Lamp Holders for Panel Mounting

for voltage	Description	Type	Pack pcs.	Weight kg/pc.
max. 690V AC	1 NC 	B3T01 ²⁾	10	0,010
max. 690V AC	1 NO 	B3T10 ²⁾	10	0,010
max. 690V~	1 NC ¹⁾ 	B3RT01 ²⁾	10	0,010
max. 690V~	1 NO 	B3RT10 ²⁾	10	0,010
Actuator insert	to actuate the center contact block	P642	10	0,001

Contact blocks



Lamp holders, socket BA9s

max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)	 	B3F	10	0,012
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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.
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LED lamps ¹⁾ (6 years middle lifetime, for equivalent lens caps only)



20-30V AC/DC	17mA / 0,4W	for red lens caps	B3-L24 RTB	50	0,005
20-30V AC/DC	17mA / 0,4W	for green lens caps	B3-L24 GNB	50	0,005
20-30V AC/DC	17mA / 0,4W	for yellow lens caps	B3-L24 GEB	50	0,005
20-30V AC/DC	17mA / 0,4W	for blue lens caps	B3-L24 BLB	50	0,005
20-30V AC/DC	17mA / 0,4W	for white lens caps	B3-L24 WSB	50	0,005
90-120V AC/DC	7mA / 0,8W	for red lens caps	B3-L110 RTB	50	0,005
90-120V AC/DC	7mA / 0,8W	for green lens caps	B3-L110 GNB	50	0,005
90-120V AC/DC	7mA / 0,8W	for yellow lens caps	B3-L110 GEB	50	0,005
90-120V AC/DC	7mA / 0,8W	for blue lens caps	B3-L110 BLB	50	0,005
90-120V AC/DC	7mA / 0,8W	for white lens caps	B3-L110 WSB	50	0,005
200-250V AC/DC	4mA / 0,9W	for red lens caps	B3-L230 RTB	50	0,005
200-250V AC/DC	4mA / 0,9W	for green lens caps	B3-L230 GNB	50	0,005
200-250V AC/DC	4mA / 0,9W	for yellow lens caps	B3-L230 GEB	50	0,005
200-250V AC/DC	4mA / 0,9W	for blue lens caps	B3-L230 BLB	50	0,005
200-250V AC/DC	4mA / 0,9W	for white lens caps	B3-L230 WSB	50	0,005

Glow-discharge lamps ¹⁾



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) Ambient temperatures on request.

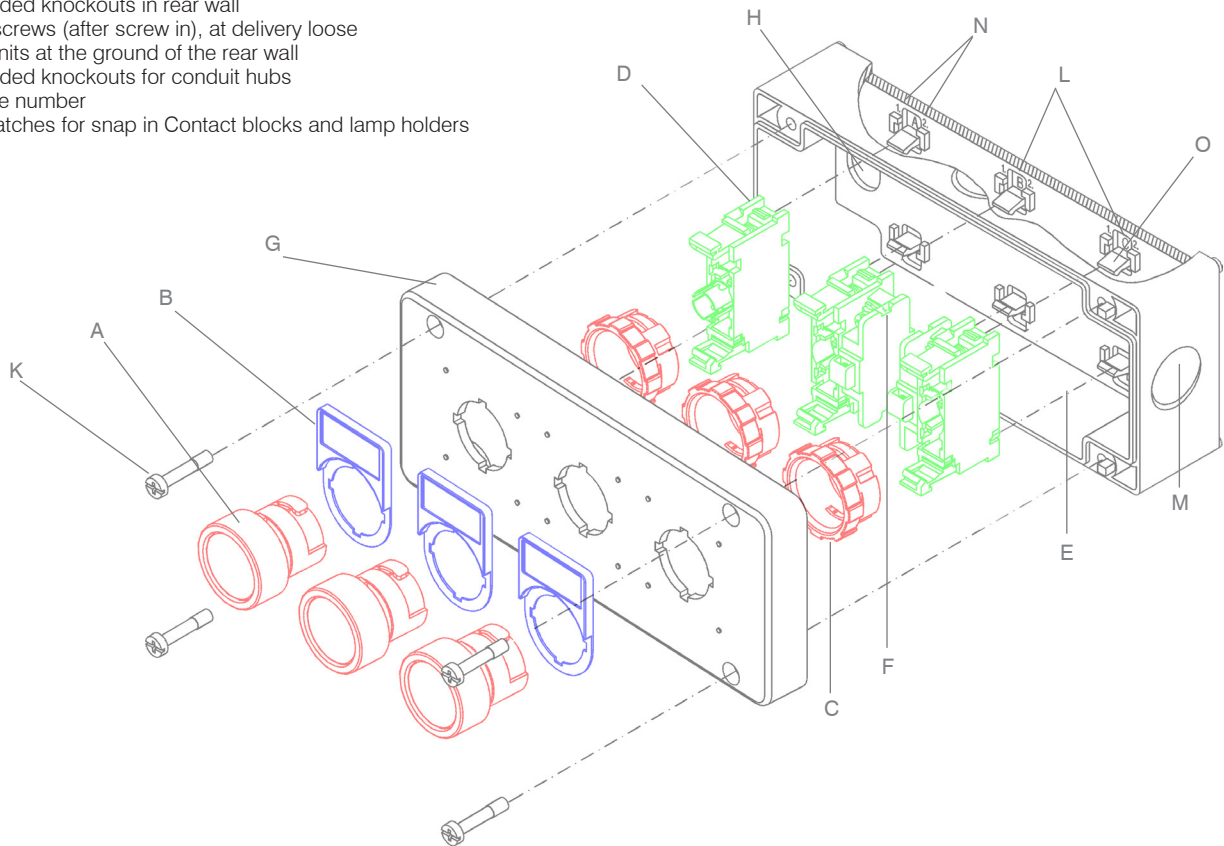
Accessories



	Type	Pack pcs.	Weight kg/pc.
Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1 0,018
Marking plate	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 B(S)3SA.. and BS3P44S3, Ronis R455 for B(S)3SB.., Ronis R786	B4-R455 B4-R786	1 0,007 1 0,007
Protectiv cover sealable	against unintentional manipulation of buttons B5, (not for mushroom heads, rotary and swing knobs)	B5-SAP	1 0,008
Label holder for legend plate BK5, black, 1 or 2 lines		P942-1	10 0,0013
Legend plate BK5 with for label holder P942-1 (with marking e. g.: BK5-MOTOR-START)		BK5-11374	10 0,0003
Legend plate alu without marking for label holder P42-1	Text 1 or 2 lines, max. 2 x 13 letters, letter height 3mm		
Label holder for legend plate BK10, black, 3 or 4 lines		P1043	10 0,0015
Legend plate BK10 with for label holder P1043 (with marking e. g.: BK10-WATER-PUMP-START)		BK10-11724	10 0,0005
Legend plate alu without marking for label holder P1043	Text 3 or 4 lines, max. 4 x 13 letters, letter height 3mm		
Adapter to convert Actuators 22mm to 30mm			
	alu	B5	10 0,017
	black	BS5	10 0,017

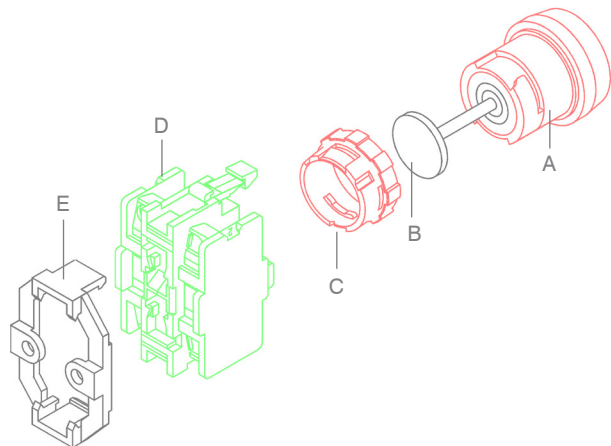
Assembled Stations BG.. IP67 Type 12

- A Actuators or Lens caps, see page 325 – 328
- B Legend plates with label holder
- C Ring and nut (included with actuator or lens cap)
- D Contact blocks and lamp holders, see page 344
- E Rear shroud
- F Function number
- G Cover
- H Pre-moulded knockouts in rear wall
- K Captive screws (after screw in), at delivery loose
- 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 Ø 22mm see page 329 – 332, Ø 30mm see page 339 – 341
- B Extension B4V...
- C Ring and nut (included with actuator or lens cap)
- D Contact block B4.. see page 344
- E Base B4U for base and DIN-rail mounting of contact blocks











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



		Type	Pack pcs.	Weight kg/pc.	
	Mounting Plate	for base and DIN-rail mounting of contact blocks and lamp holders	B4U	10	0,010
			B4.U...		
	Ring and Nut	for mounting former actuators and lens caps B4...	B3UP	10	0,004

Assembled Stations IP67 (IP65) Type 12

Knockouts 3 x Ø 20,5mm (on top, left and right side), for M20 or PG13,5 conduit entries.

	Diagram		Pack pcs.	Weight kg/pc
Plastic enclosed EMERGENCY STOP buttons				
	<p>EMERGENCY STOP button head Ø40mm unlock by turning</p> 	BG10P34-11	1	0,145
	<p>EMERGENCY STOP mushroom button Ø40mm according to EN ISO 13850 unlock by pull</p> 	BG10P44-11	1	0,145
	<p>EMERGENCY STOP key operated button Ø40mm according to EN ISO 13850 unlock by key</p> 	BG10P44S3-11	1	0,178
	<p>EMERGENCY STOP mushroom button Ø70mm unlock by turning</p> 	BG10P34P-11	1	0,187

Contactors, Motor-Starter

Circuit Breakers

Manual Motor-Starters

Switches

AC-Main Switches

DC-Switch Disconnect



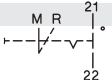


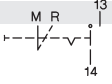


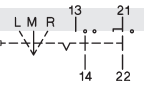


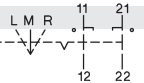



Push Buttons

Representatives, Suppliers



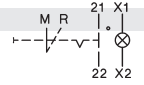


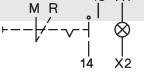


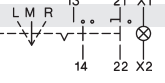





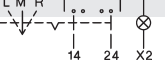
Enclosures BG.. IP67, Type 12

Number of units		Description	Type	Pack pcs.	Weight kg/pc.
	1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
	1 yellow	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1 GE	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 329 -332

Contacts	Lamp voltage	Wiring diagram	actuators with 2 or 3 switch positions	Type	Pack pcs.	Weight kg/pc.
 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 LED or lamps, for enclosures BG.., lamps see page 347

 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 for LED or lamps, lamps see page 345

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

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



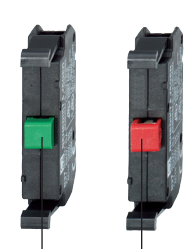
Push buttons with metal ring and self adjusting extension pin



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


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	 NO Green NC Red
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_e	220-240V A	10	10
	380-415V A	10	10
	500V A	10	10
	690V A	10	-
Utilization category AC15 Control of electromagnetic load (>72VA)			
Rated current I_e	220-240V A	6	6
	380-415V A	5	5
	500V A	3	3
	690V A	2	-
Utilization category DC12 L/R = 1ms Control of resistive loads and solid stateloads with isolation by opto couplers			
Rated current I_e	24V A	10	10
	60V A	6	6
	110V A	2,5	2,5
	220V A	0,8	0,8
Utilization category DC14 L/R = 15ms Control of electromagnetic loads having economy resistors in circuit			
Rated current I_e	24V A	8	8
	60V A	1	1
	110V A	2	2
	220V A	0,5	0,5
Utilization category DC13 L/R = 300ms Control of electromagnets			
Rated current I_e	24V A	2	2
	60V A	5	5
	110V A	0,5	0,5
	220V A	0,2	0,2
Making capacity	A	60	60
Breaking capacity $\cos\phi = 0,7-1$	40-60Hz A	50	50
Mechanical life	10 ⁵ operations	3	3
Contact life (AC15)			
100VA	10 ⁵ operations	2,5	2,5
300VA	10 ⁵ operations	2	2
800VA	10 ⁵ operations	1,5	1,5
1200VA	10 ⁵ operations	1	1
Maximum frequency of operations	ops. per hour	60	60
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., B5.
Protection degree (according to IEC 947-1) in assembled state, from the front from rear	IP67/IP65 IP20/IP00
Ambient temperature Operation	open °C -40 to +60 ³⁾ enclosed °C -40 to +40
Storage	°C -50 to +90
Cable cross-section	 solid, mm ² 0,5 - 2,5 flexible, mm ² 0,5 - 2,5 flexible with multicore cable end, mm ² 0,5 - 1,5
Cables per clamp	number 2
Mounting hole (according to IEC 947-1)	Ø mm 22,5 Ø mm 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) Torque	14 - 18AWG 9 lb/in.	14 - 18AWG 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): $U_{mp} = 6kV$.

Data for other conditions on request.

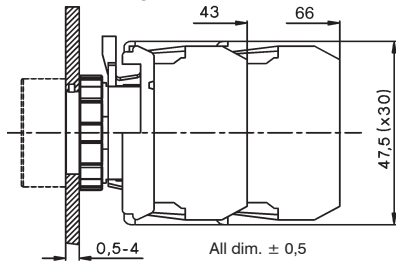
2) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{mp} = 4kV$

3) Ambient temperatures for lamps find on pages 337, 341, 349.

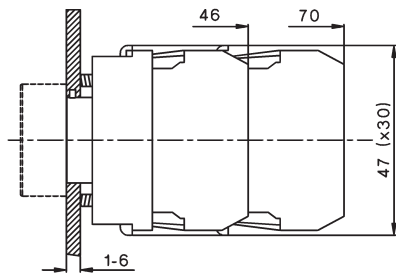
Dimensions

Actuators and Lens Caps 22mm

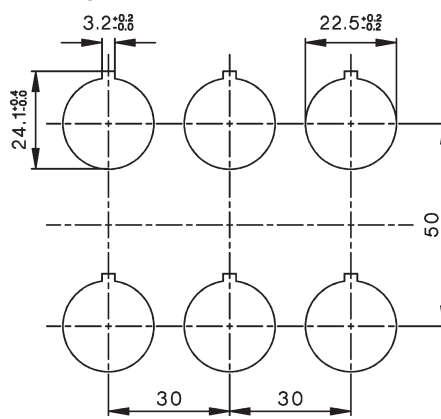
Panel mounting B3S



Panel mounting B3M

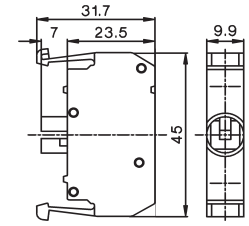


Mounting holes

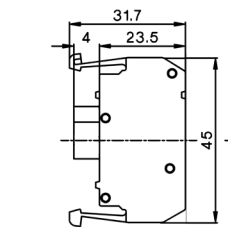


Dimensions of minimum space requirements according to IEC. Take to consideration the field of traverse of swing knobs (27mm) and the diameter of mushroom heads.

Contact blocks and Lamp Holder B3...



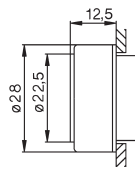
Contact block B3T...



Actuators and Lens caps

Flush Head
Illuminated Flush Head

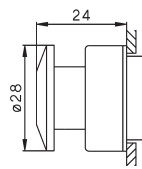
B3D(R), B3DL(R)
BS3D(R), BS3DL(R)
BC3D(R), BC3DL(R)



All dim. ± 0,5

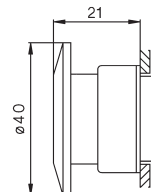
Mushroom Head Ø28mm
Emergency Stop Ø28mm

B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3



Mushroom Head Ø40mm
Emergency Stop Ø40mm

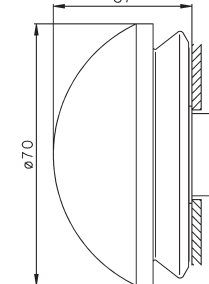
B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34



All dim. ± 0,5

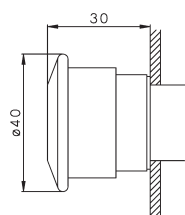
Mushroom Head Ø70mm
Emergency Stop Ø70mm

BS3P14P
BS3P34P



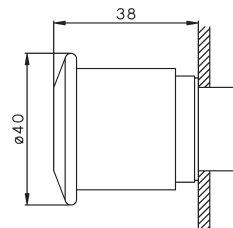
Push-and pull button Ø40mm

BS3P44

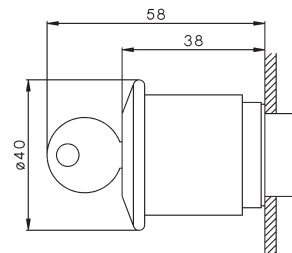


Push-and pull button Ø40mm

BS3P45

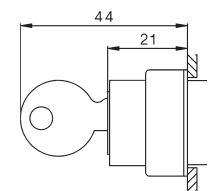


Push-and pull button Ø40mm
with key
BS3P44S3



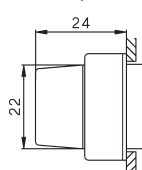
Lockable Push button

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



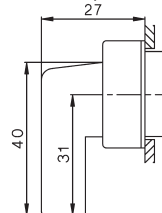
Rotary Knob

B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL



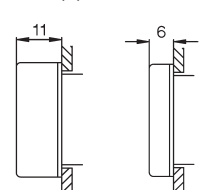
Swing Knob

B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN



Lens Cap

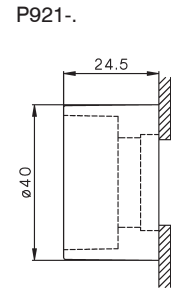
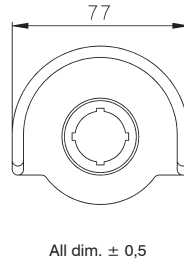
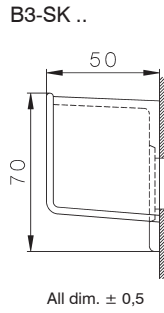
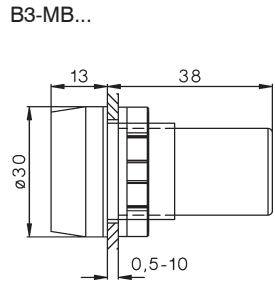
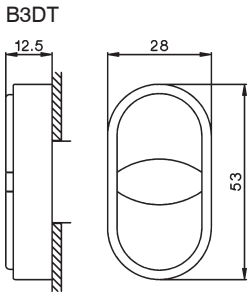
B3R(F) B3RN



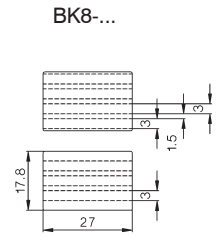
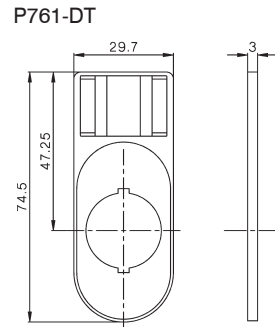
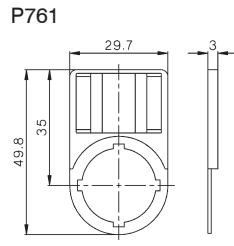
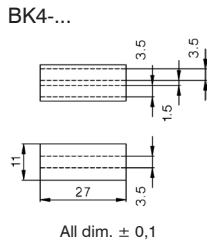
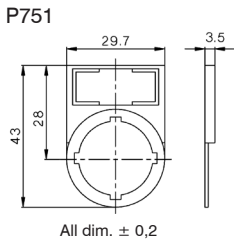
Dimensions

Actuators and Lens Caps 22mm

Double push button Monoblock Multi-LED Protection cover Protection ring w. thread



Label holder Legend plate Label holder Label holder Legend plate

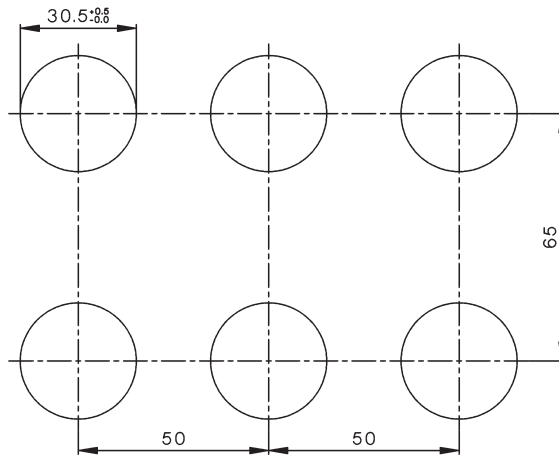
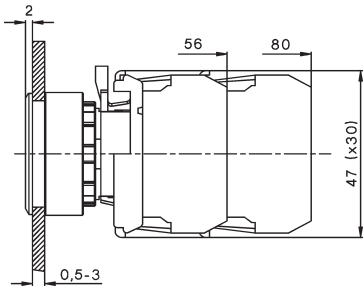


Dimensions

Actuators and Lens Caps 30mm

Panel mounting B3S

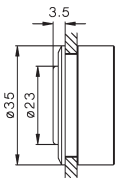
Mounting holes



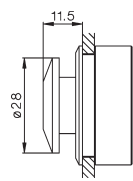
Actuators and Lens caps

Flush Head Illuminated Flush Head	Mushroom Head Ø28mm Emergency Stop Ø28mm	Mushroom Head Ø40mm Emergency Stop Ø40mm	Lens Cap
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B5D(R), B5DL(R)
BS5D(R), BS5DL(R)

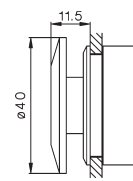


B5P1 to B5P3
BS5P1 to BS5P3

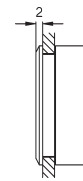


Mushroom Head Ø40mm
Emergency Stop Ø40mm

B5P14, B5P34
BS5P14, BS5P34



B5RF

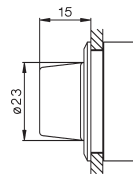


Rotary Knob

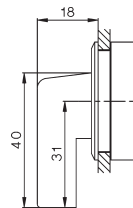
Swing Knob

Lockable Push button

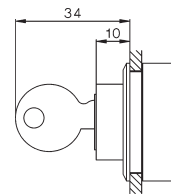
B5KN, B5KL
BS5KN, BS5KL



B5KRL, B5KRN
BS5KRL, BS5KRN



B5SAR., B5SAT.
BS5SAR., BS5SAT.



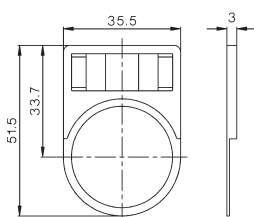
Label holder

Legend plate

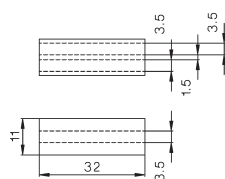
Label holder

Legend plate

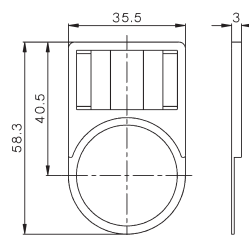
P942-1



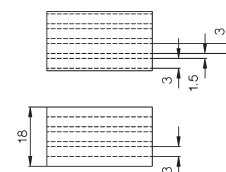
BK5-...



P1043

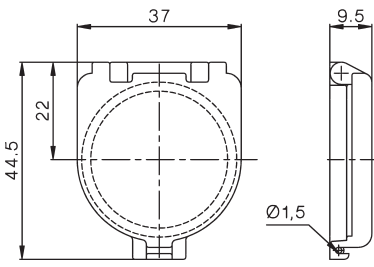


BK10-..

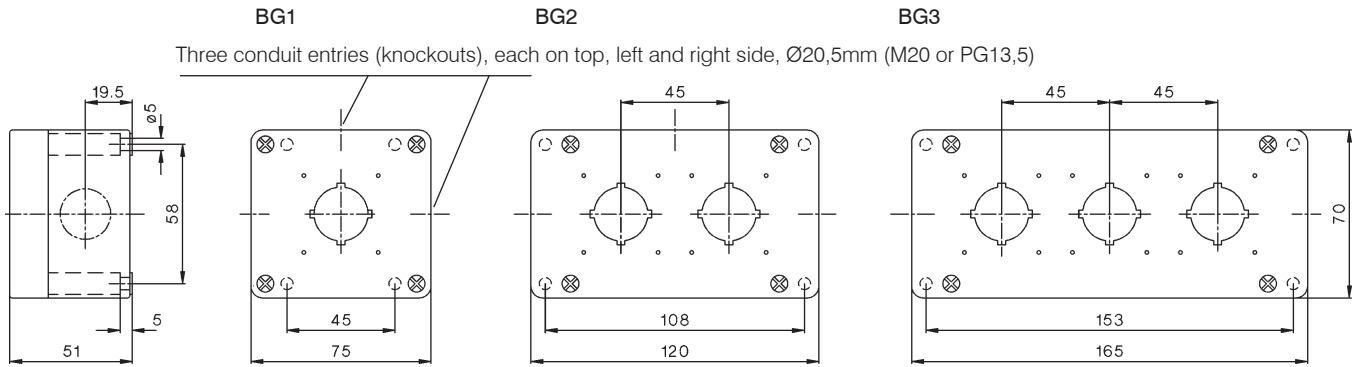


Dimensions

Protective Cover
B5-SAP

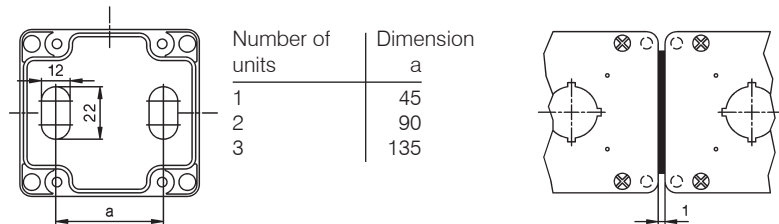


Enclosures for Custom Built Stations



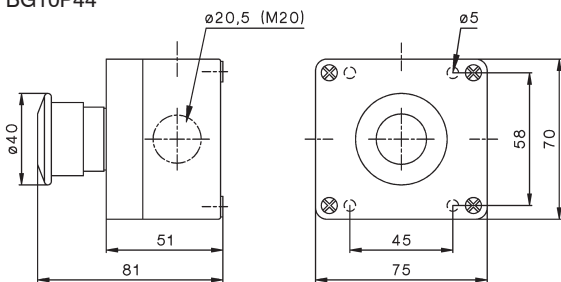
Conduit entries in the bottom
(knockouts)

Coupled Enclosures
B4-8852



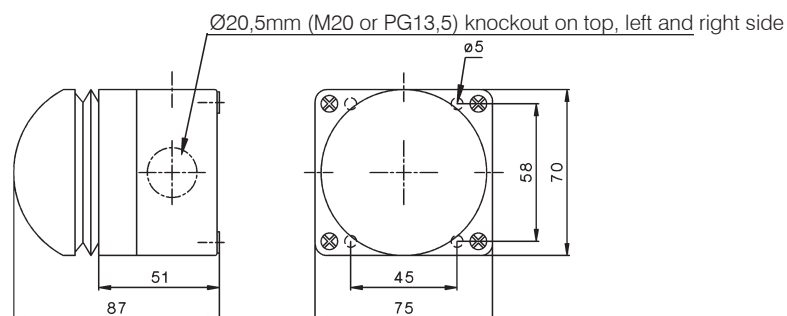
EMERGENCY STOP Push Button Ø40 mm

BG10P44



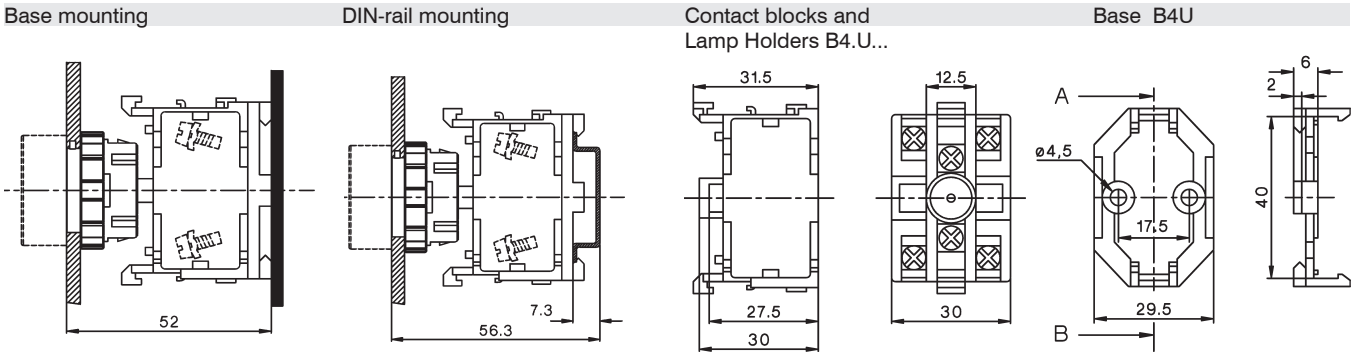
EMERGENCY STOP Push Button Ø70 mm, Foot switch

BG10P34P, BG10P14P



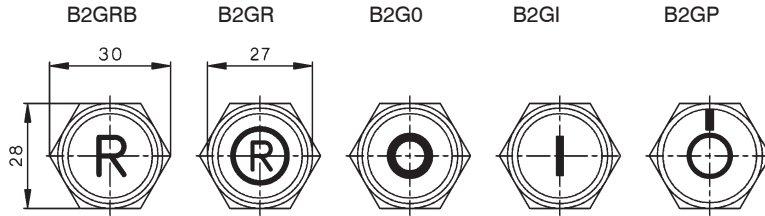
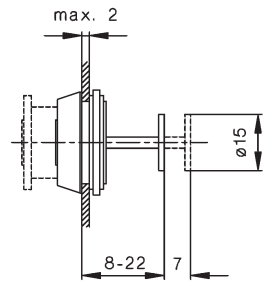
Dimensions

Actuators 22mm

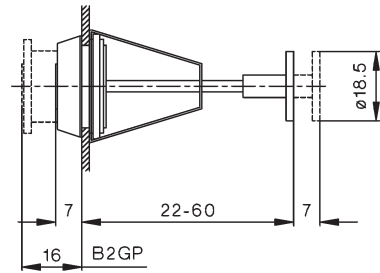


Push buttons for enclosures

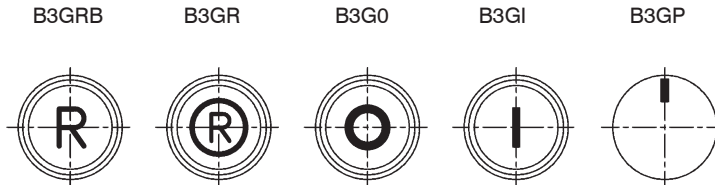
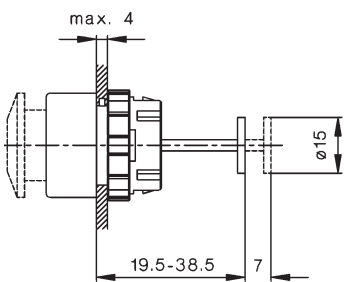
B2G..-22



B2G..-60



B3G..-31,5



B3G..-60

