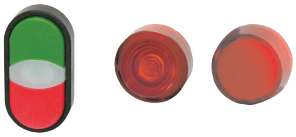
Ø 22,5mm

Program B3 330

Push Buttons 331
EMERGENCY STOP Buttons 332
Key Operated Rotary Switches 333

Rotary Knobs and Swing Knobs 333
Illuminated Rotary Knobs and Swing Knobs 334
Illuminated Push Buttons 334


Double Push Buttons 334
Lens Caps 334
Monoblock-Multi-LEDs 335

Push Button-Sets 336
Illuminated Push Button-Sets 336
Pilot Lights 336

Connectors 338
Insert Actuato 338
Contact Blocks and Lamp Holders 338

Lamps, LED Lamps 339
Accessories 339
Label Holder, Legend Plates, Actuator Caps 340

Program B5 342

Ø 30,5mm

Push Buttons 343
Rotary Knobs and Swing Knobs 344

Key Operated Rotary Switches 345
Illuminated Push Buttons 345
Lens Caps 345

Connectors 346
Contact Blocks and Lamp Holders 346
Lamps, Accessories 347

Units for Surface Mounting 349
Assembled Units IP65 349

Enclosures BG. 350
Contact Blocks and Lamp Holders 350
for Enclosures BG.. 350

Push Buttons for Enclosures 351
Extensions for Push Buttons 351

Technical Data, Approvals 352
Dimensions 353

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

Push Buttons

→ page 331

IP65

→ page 333, 334

EMERGENCY STOP Buttons

→ page 332

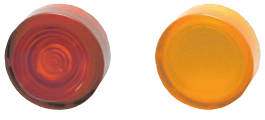
Illuminated Operators

→ page 333, 334

Double Push Buttons with Indicator Lamp, IP65

→ page 334

Lens Caps



→ page 335

Mounting hole Ø 22,5mm

with key way

without key way

→ page 332

→ page 340

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

Connectors

Thickness **0,5 - 4 mm**

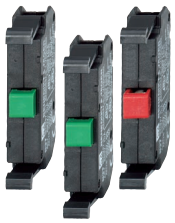
→ page 340

or

Thickness **1 - 6 mm**

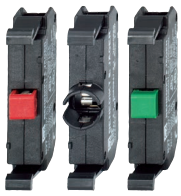
→ page 340

Contacts Lamp Holders



Actuator insert

→ page 338



→ page 340

LED 24-230V

Filament 6-130V

Glow-discharge 230V

→ page 339

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

→ page 335

Actuators 22mm IP67, cULusType 12

Ring

Colour	Symbol	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
Push Buttons, Actuator Caps markable see page 337						
red		B3D RT	BS3D RT	BC3D RT	10	0,014
red	0	B3D RT-0	BS3D RT-0	BC3D RT-0	10	0,014
green		B3D GN	BS3D GN	BC3D GN	10	0,014
grün	I	B3D GN-I	BS3D GN-I	BC3D GN-I	10	0,014
grün	II	B3D GN-II	BS3D GN-II	BC3D GN-II	10	0,014
grün	→	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 see page 339						
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						
red		B3P1 RT	BS3P1 RT	BC3P1 RT	10	0,017
red	0	B3P1 RT-0	BS3P1 RT-0	BC3P1 RT-0	10	0,017
green		B3P1 GN	BS3P1 GN	BC3P1 GN	10	0,017
yelow		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		BS3P44T RT	BS3P44T RT	BS3P44T RT	10	0,028
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 IP67, cULusType 12

Ring	Colour	Symbol/ high	Alu	Black	Chrome	Pack pcs.	Weight kg/pc

EMERGENCY STOP Push Buttons, according to EN ISO 13850, push to trip, pull to release Ø40mm

red	30mm	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 EN ISO 13850, release by key, Ø40mm

red	38mm	BS3P44S3	BS3P44S3	BS3P44S3	1	0,050
Spare Key	lock Ronis R455			B4-R455	1	0,007

EMERGENCY STOP Push Buttons, release by turning, Ø28mm

red		B3P3 RT	BS3P3 RT	BC3P3 RT	10	0,017
red	0	B3P3 RT-0	BS3P3 RT-0	BC3P3 RT-0	10	0,017
red	0	B3P3 RT-0-RGE [2]	BS3P3 RT-0-RGE [2]	BC3P3 RT-0-RGE [2]	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	Pfeile	B3P34 RT-PF	BS3P34 RT-PF	BC3P34 RT-PF	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

Yellow Disk Ø70mm, Thickness 1mm [1]

neutral		B3-7603	1	0,004
with marking NOT-HALT-symbol		B3-7603-S	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 manupulation, Thickness 1mm

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

Sealing cap

for Buttons BS3P45RT und BS3P44S3	transparent	B3-PH GE	1	0,03

1) Not for enclosure BG.. 2) Front ring yellow

Actuators 22mm cULus Type 12

Ring

Knob		Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
Rotary Knobs and Swing Knobs, black **IP65**						
maintained 60°						
	Rotary	B3KN2	BS3KN2	BC3KN2	10	0,020
	Swing	B3KRN2	BS3KRN2	BC3KRN2	10	0,020
maintained 60°						
	Rotary	B3KN29	BS3KN29	BC3KN29	10	0,020
spring return 60°						
	Rotary	B3KN8	BS3KN8	BC3KN8	10	0,020
	Swing	B3KRN8	BS3KRN8	BC3KRN8	10	0,020
spring return 60°						
	Rotary	B3KN1	BS3KN1	BC3KN1	10	0,020
	Swing	B3KRN1	BS3KRN1	BC3KRN1	10	0,020
maintained 60°						
	Rotary	B3KN3	BS3KN3	BC3KN3	10	0,020
	Swing	B3KRN3	BS3KRN3	BC3KRN3	10	0,020
maintained/spring return 60°						
	Rotary	B3KN6	BS3KN6	BC3KN6	10	0,020
spring return/maintained 60°						
	Rotary	B3KN7	BS3KN7	BC3KN7	10	0,020
maintained 120°						
	Rotary	B3KN9	BS3KN9	BC3KN9	10	0,020
maintained 90° according to EN81						
	Rotary	B3KN10	BS3KN10	BC3KN10	10	0,020
maintained 90°						
	Rotary	B3KN11	BS3KN11	BC3KN11	10	0,020

Rotary

Swing

Illuminated Rotary Knobs and Swing Knobs, clear IP67, lamp max. 1,2W, lamps see page 339						
maintained 90°						
	Rotary	B3KL2	BS3KL2	BC3KL2	10	0,016
spring return 60°						
	Rotary	B3KL1	BS3KL1	BC3KL1	10	0,016
	Swing	B3KRL1	BS3KRL1	BC3KRL1	10	0,016
maintained 60°						
	Rotary	B3KL3	BS3KL3	BC3KL3	10	0,016
	Swing	B3KRL3	BS3KRL3	BC3KRL3	10	0,016
maintained/spring return 60°						
	Rotary	B3KL6	BS3KL6	BC3KL6	10	0,016

Rotary

Swing

Toggle IP65						
O - I	B3E	BS3E	BC3E	10	0,017

Actuators 22mm IP65, Type 12

Ring

Key removeable in	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.

Key Operated Rotary Switches with lock Ronis 455

B3SAR 0

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

B3SARR 0

maintained 60°

B3SARR 0	BS3SARR 0	BC3SARR 0	1	0,044

B3SARR 102	BS3SARR 102	BC3SARR 102	1	0,044

spring return/maintained 60°

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				Pack pcs.	Weight kg/pc.

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

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

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 339

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

with non-standard marking on request

1) Plastic ring in alu design

suitable for Alu, Black and Chrome

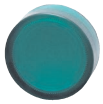
Lens Caps IP67 with fresnel lens, lamp max. 1,9W, lamps see page 339, laser marking on request

Colour	Type	Pack pcs.	Weight kg/pc.
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, lamp max. 1,9W, lamps see page 339, laser marking on request

Colour	Type	Pack pcs.	Weight kg/pc.
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, lamp max. 1,9W, lamps see page 337, laser marking on request



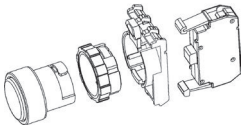
Colour	Type	Pack pcs.	Weight kg/pc.
red	B3RF RT	10	0,009
green	B3RF GN	10	0,009
yellow	B3RF GE	10	0,009
blue	B3RF BL	10	0,009
white	B3RF WS	10	0,009

Monoblock LEDs IP65, IEC 60947, EN 60947 (6 years middle lifetime)

Colour	Voltage	Power VA	W	Type	Pack pcs.	Weight kg/pc
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

Push Button 22mm-Sets, with Contact Block and Connector

Push Buttons, IP67

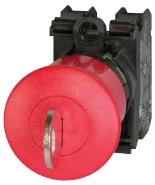


Actuator Colour	Symbol	with	Type	Pack pcs.	Weight kg/pc.
black		+connector +1NO	BS3D SW/10	1	0,037
green		+connector +1NO	BS3D GN/10	1	
yellow		+connector +1NO	BS3D GE/10	1	0,037
blue		+connector +1NO	BS3D BL/10	1	0,037
red		+connector +1NC	BS3D RT/01	1	
green	I	+connector +1NO	BS3D GN-I/10	1	0,037
red		+connector +1NC	BS3D RT-0/01	1	0,037

Double Push Buttons, IP65

green/ red		+connector +1NO +1NC	BS3DT G/R/11	1	0,049

EMERGENCY STOP Push Buttons, IP67 Ø40mm



pull to release acc. EN ISO 13850	+connector +1NO +1NC	BS3P44 RT/11	1	0,061
key release acc. EN ISO 13850	+connector +1NO +1NC	BS3P44S3 RT/11	1	0,083
twist release	+connector +1NO +1NC	BS3P34 RT-0/11	1	0,053

Rotary Knobs, IP65

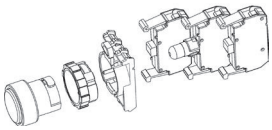
	+connector +1NO	BS3KN2/10	1	0,043
	+connector +1NO +1NC	BS3KN2/11	1	0,053
	+connector +2NO	BS3KN3/20	1	0,053
	+connector +2NO	BS3KN1/20	1	0,053

Key Operated Rotary Switch with lock Ronis 455, IP65

	key removeable in 0-position +connector +1NO	BS3SAR 0/10	1	0,057
	key removeable in all positions +connector +1NO	BS3SAR 01/10	1	0,057
	key removeable in 0-position +connector +1NO	BS3SAT 0/10	1	0,057

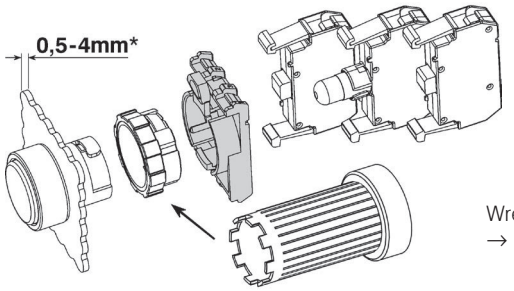
	key removeable in all positions +connector +2NO	BS3SARR 102/20	1	0,067
	key removeable in 0-position +connector +2NO	BS3SARR 0/20	1	0,067

Illuminated Push Button 22mm-Sets, with Contact Block, Connector and LED

Actuator Colour	with	LED	Type	Pack pcs.	Weight kg/pc.
Illuminated Push Buttons, IP67					
white	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DL WS/11/L24	1	0,054
green	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DL GN/11/L24	1	0,054
red	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DL RT/11/L24	1	0,054
yellow	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DL GE/11/L24	1	0,054
blue	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DL BL/11/L24	1	0,054
					
white	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DL WS/11/L110	1	0,054
green	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DL GN/11/L110	1	0,054
red	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DL RT/11/L110	1	0,054
yellow	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DL GE/11/L110	1	0,054
blue	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DL BL/11/L110	1	0,054
white	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DL WS/11/L230	1	0,054
green	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DL GN/11/L230	1	0,054
red	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DL RT/11/L230	1	0,054
yellow	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DL GE/11/L230	1	0,054
blue	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DL BL/11/L230	1	0,054
Double Push Buttons with Pilot Light, IP65					
green/ red	+connector +1NO +1NC +LED	20-30V AC/DC	BS3DT G/R/11/L24	1	0,066
green/ red	+connector +1NO +1NC +LED	90-120V AC/DC	BS3DT G/R/11/L110	1	0,066
green/ red	+connector +1NO +1NC +LED	200-250V AC/DC	BS3DT G/R/11/L230	1	0,066
Pilot Lights, IP67 with socket BA9S (without lamp)					
white	+connector +socket BA9S	-	B3R WS/0	1	0,037
green	+connector +socket BA9S	-	B3R GN/0	1	0,037
red	+connector +socket BA9S	-	B3R RT/0	1	0,037
yellow	+connector +socket BA9S	-	B3R GE/0	1	0,037
Pilot Lights with LEDs, IP67					
white	+connector +socket BA9S	20-30V AC/DC	B3R WS/L24	1	0,042
green	+connector +socket BA9S	20-30V AC/DC	B3R GN/L24	1	0,042
red	+connector +socket BA9S	20-30V AC/DC	B3R RT/L24	1	0,042
yellow	+connector +socket BA9S	20-30V AC/DC	B3R GE/L24	1	0,042
white	+connector +socket BA9S	90-120V AC/DC	B3R WS/L110	1	0,042
green	+connector +socket BA9S	90-120V AC/DC	B3R GN/L110	1	0,042
red	+connector +socket BA9S	90-120V AC/DC	B3R RT/L110	1	0,042
yellow	+connector +socket BA9S	90-120V AC/DC	B3R GE/L110	1	0,042
white	+connector +socket BA9S	200-250V AC/DC	B3R WS/L230	1	0,042
green	+connector +socket BA9S	200-250V AC/DC	B3R GN/L230	1	0,042
red	+connector +socket BA9S	200-250V AC/DC	B3R RT/L230	1	0,042
yellow	+connector +socket BA9S	200-250V AC/DC	B3R GE/L230	1	0,042

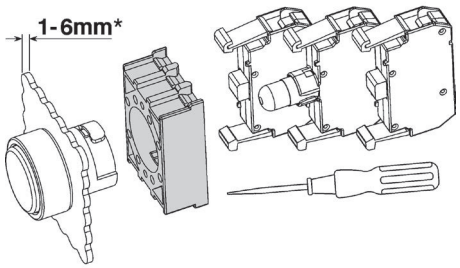
Connectors

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



Wrench
→ page 331

Connector B3M		B3M	10	0,013



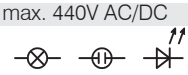
*) inclusive Thickness from Label Holder and Yellow Disk

Contact Blocks and Lamp Holders for Panel Mounting

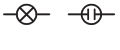
for voltage	Description		Type	Pack pcs.	Weight kg/pc.
Contact blocks, screw terminals					
max. 690V AC	1 NC [1] (→)		B3T01 [2]	10	0,010
max. 690V AC	1 NO [1]		B3T10 [2]	10	0,010

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

Lamp holders, socket BA9s					
max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)		B3F	10	0,012



Lamp holders for lamp test circuits, socket BA9s					
max. 440V AC	direct connection, for filament and glow-discharge lamps max. 1,7W (active power consumption)		B3FT	10	0,020
max. 250V	direct connection of LED		B3FTD	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

LED lamps [2] (6 years middle lifetime, for equivalent lens caps only)

Socket BA9s Lamp voltage		Type	Pack pcs.	Weight kg/pc.
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	0,005

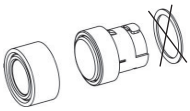
Filament lamps

	Power consumption				
24V	1,2W	for all lens caps	B4-G24	100	0,005
42V	1W	for all lens caps	B4-G42	100	0,005
48V	1,2W	for all lens caps	B4-G48	100	0,005
60V	1,2W	for all lens caps	B4-G60	100	0,005
110/120V 1)	1,5/1,8W	for all lens caps	B4-G130	100	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

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		B4-R455	1	0,007
	for B(S)3SB.., Ronis R786		B4-R786	1	0,007
Hole Plug	black, for fixing holes		**B3-DU SW**	10	0,007
	grey	Ø22,5mm	**B3-DU GR**	10	0,007
Sealing Cover protection against coarse contamination	for single and double push buttons, except B3D..R..(maintained) petrol-resistant, ambient temp. 0°…+50°C		**P279-1**	1	0,003
	for all single push buttons silicone, ambient temp. -25°…+60 °C		P279-5	1	0,003
	for double push buttons silicone, ambient temp. -25°…+60 °C		P279-DT	1	0,003
Protection cover	against unintentional manupulation				
	Thickness 1mm	yellow	B3-SK GE	1	0,04
	Thickness 1mm	grey	B3-SK GR	1	0,04
Protection ring with thread	against unintentional manupulation has to be mounted instead of the existing ring	black	P921-1	1	0,012
		chrome	P921-2	1	0,012
		alu	P921-3	1	0,012

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

2) suitable for B3FT lamp test lamp holders

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.
Legend plate alu, for label holder P751					
blank	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	BK4-START	STOP	BK4-STOP	10	0,0002
EIN	BK4-EIN	AUS	BK4-AUS	10	0,0002
BETRIEB	BK4-BETRIEB	STÖRUNG	BK4-STÖRUNG	10	0,0002
VOR	BK4-VOR	ZURÜCK	BK4-ZURÜCK	10	0,0002
HEBEN	BK4-HEBEN	SENKEN	BK4-SENKEN	10	0,0002
LINKS	BK4-LINKS	RECHTS	BK4-RECHTS	10	0,0002
MEHR	BK4-MEHR	WENIGER	BK4-WENIGER	10	0,0002
SCHNELL	BK4-SCHNELL	LANGSAM	BK4-LANGSAM	10	0,0002
HELLER	BK4-HELLER	DUNKLER	BK4-DUNKLER	10	0,0002
AUF	BK4-AUF	ZU	BK4-ZU	10	0,0002
AB	BK4-AB	HALT	BK4-HALT	10	0,0002
EILGANG	BK4-EILGANG	TIPPEN	BK4-TIPPEN	10	0,0002
Legend plate with non-standard marking (e. g.: BK4-MOTOR-START)					
Text 1 line, max. 11 letters, letter height 3mm	BK4-...			1	0,0002
Text 2 lines, max. 2 x 11 letters, letter height 3mm	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

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
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 with Laser Marking

Code for colours

Colour	for buttons B3D(R) BS3D(R) BC3D(R)	B5D(R) BS5D(R) BC5D(R)	for illuminated buttons B3DL(R) BS3DL(R) BC3DL(R)	B5DL(R) BS5DL(R) BC5DL(R)
red	DK RT-..		DKL RT-..	
green	DK GN-..		DKL GN-..	
yellow	DK GE-..		DKL GE-..	
blue	DK BL-..		DKL BL-..	
white	DK WS-..		DKL WS-..	
black	DK SW-..		-	

Actuator Caps with text, the Type must be completed with the code for colours

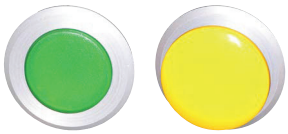
marking	Type	-suffix for marking	marking	Type	-suffix for marking.	Pack pcs.	Weight kg/pc
			NOT AUS	...-NOT-AUS		10	0,001
START	...-START		STOP	...-STOP		10	0,001
EIN	...-EIN		AUS	...-AUS		10	0,001
BETRIEB	...-BETRIEB		STÖRUNG	...-STÖRUNG		10	0,001
ANLAUF	...-ANLAUF		HALT	...-HALT		10	0,001
VOR	...-VOR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

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

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

Actuators and Lens Caps 30mm IP67 (IP65)

Push Buttons



→ page 343

Mounting hole
Ø 30,5mm

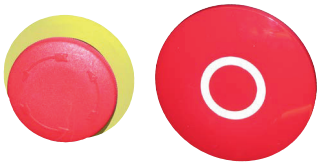
Connectors

Contacts
Lamp Holder

IP65

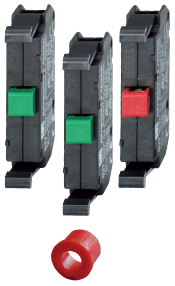
→ page 344, 345

EMERGENCY STOP Buttons



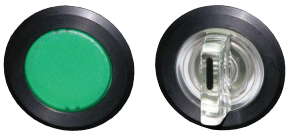
→ page 343

→ page 343



Actuator insert
→ page 346

Illuminated Operators



→ page 345

→ page 347

Tthickness
0,5 - 3 mm
→ page 346

→ page 346

Lens Caps

→ page 345

LED
24-230V

Filament
6-130V

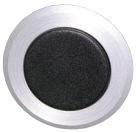
Glow-discharge

230V

→ page 347

Wrench
J7049

Actuators 30mm IP67

Ring	Colour	Symbol	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
Push Buttons, Actuator Caps markable							
	red		B5D RT	BS5D RT	BC5D RT	10	0,029
	red	0	B5D RT-0	BS5D RT-0	BC5D RT-0	10	0,029
	green		B5D GN	BS5D GN	BC5D GN	10	0,029
	green	I	B5D GN-I	BS5D GN-I	BC5D GN-I	10	0,029
	green	II	B5D GN-II	BS5D GN-II	BC 5D GN-II	10	0,029
	green	→	B5D GN-PF	BS5D GN-PF	BC5D GN-PF	10	0,029
	yellow		B5D GE	BS5D GE	BC5D GE	10	0,029
	blue		B5D BL	BS5D BL	BC5D BL	10	0,029
	white		B5D WS	BS5D WS	BC 5D WS	10	0,029
	black		B5D SW	BS5D SW	BC5D SW	10	0,029
	black	→	B5D SW-PF	BS5D SW-PF	BC5D SW-PF	10	0,029
Push Buttons, Maintained, Actuator Caps markable							
	red		B5DR RT	BS5DR RT	BC5DR RT	10	0,029
	green		B5DR GN	BS5DR GN	BC5DR GN	10	0,029
	yellow		B5DR GE	BS5DR GE	BC5DR GE	10	0,029
	blue		B5DR BL	BS5DR BL	BC5DR BL	10	0,029
	white		B5DR WS	BS5DR WS	BC5DR WS	10	0,029
	black		B5DR SW	BS5DR SW	BC5DR SW	10	0,029
Mushroom Heads, Ø28mm							
	red		B5P1 RT	BS5P1 RT	BC5P1 RT	10	0,032
	red	0	B5P1 RT-0	BS5P1 RT-0	BC5P1 RT-0	10	0,032
	green		B5P1 GN	BS5P1 GN	BC5P1 GN	10	0,032
	yellow		B5P1 GE	BS5P1 GE	BC5P1 GE	10	0,032
	blue		B5P1 BL	BS5P1 BL	BC5P1 BL	10	0,032
	black		B5P1 SW	BS5P1 SW	BC5P1 SW	10	0,032
Mushroom Heads, Ø40mm							
	red	0	B5P14 RT-0	BS5P14 RT-0	BC5P14 RT-0	10	0,035
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	B5P34 RT-0	BS5P34 RT-0	BC5P34 RT-0	10	0,035
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

Knob	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.

Rotary Knobs and Swing Knobs, black IP65

Rotary

Swing

maintained 60°						
	Rotary	B5KN2	BS5KN2	BC5KN2	10	0,035
	Swing	B5KRN2	BS5KRN2	BC5KRN2	10	0,035
spring return 60°						
	Rotary	B5KN8	BS5KN8	BC5KN8	10	0,035
	Swing	B5KRN8	BS5KRN8	BC5KRN8	10	0,035
spring return 60°						
	Rotary	B5KN1	BS5KN1	BC5KN1	10	0,035
	Swing	B5KRN1	BS5KRN1	BC5KRN1	10	0,035
spring return 60°						
	Rotary	B5KN3	BS5KN3	BC5KN3	10	0,035
	Swing	B5KRN3	BS5KRN3	BC5KRN3	10	0,035
maintained/spring return 60°						
	Rotary	B5KN6	BS5KN6	BC5KN6	10	0,035
spring return/maintained 60°						
	Rotary	B5KN7	BS5KN7	BC5KN7	10	0,035
maintained 120°						
	Rotary	B5KN9	BS5KN9	BC5KN9	10	0,035
maintained 90° according to EN81						
	Rotary	B5KN10	BS5KN10	BC5KN10	10	0,035

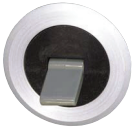
Illuminated Rotary Knobs and Swing Knobs IP67, clear, lamp max. 1,2W, lamps see page 347

Rotary

Swing

maintained 90°						
	Rotary	B5KL2	BS5KL2	BC5KL2	10	0,031
spring return 60°						
	Rotary	B5KL1	BS5KL1	BC5KL1	10	0,031
	Swing	B5KRL1	BS5KRL1	BC5KRL1	10	0,031
maintained 60°						
	Rotary	B5KL3	BS5KL3	BC5KL3	10	0,031
	Swing	B5KRL3	BS5KRL3	BC5KRL3	10	0,031
maintained/spring return 60°						
	Rotary	B5KL6	BS5KL6	BC5KL6	10	0,031

Toggle IP65



O - I	B5E	BS5E	BC5E	10	0,032

Actuators and Lens Caps 30mm IP65

Key Operated Rotary Switch with lock Ronis 455

Ring key removeable in	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
maintained 60°					
	B5SAR 0	BS5SAR 0	BC5SAR 0	1	0,059
	B5SAR 1	BS5SAR 1	BC5SAR 1	1	0,059
	B5SAR 01	BS5SAR 01	BC5SAR 01	1	0,059
spring return 60°					
	B5SAT 0	BS5SAT 0	BC5SAT 0	1	0,059
maintained 60°					
	B5SARR 0	BS5SARR 0	BC5SARR 0	1	0,059
	B5SARR 102	BS5SARR 102	BC5SARR 102	1	0,059
spring return/maintained 60°					
	B5SATR 02	BS5SATR 02	BC5SATR 02	1	0,059
spring return 60°					
	B5SATT 0	BS5SATT 0	BC5SATT 0	1	0,059
Spare Keylock Ronis R455		B4-R455		1	0,007

B3SAR 0

B3SARR 0

Colour				Pack pcs.	Weight kg/pc.

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

red	B5DL RT	BS5DL RT	BC5DL RT	10	0,029
green	B5DL GN	BS5DL GN	BC5DL GN	10	0,029
yellow	B5DL GE	BS5DL GE	BC5DL GE	10	0,029
blue	B5DL BL	BS5DL BL	BC5DL BL	10	0,029
white	B5DL WS	BS5DL WS	BC5DL WS	10	0,029

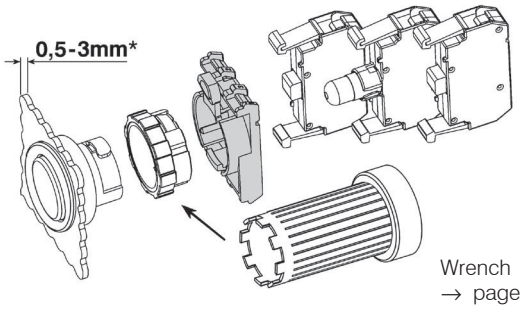
Illuminated Push Buttons IP67, Maintained, lamp max. 1,9W, lamps see page 347

red	B5DLR RT	BS5DLR RT	BC5DLR RT	10	0,029
green	B5DLR GN	BS5DLR GN	BC5DLR GN	10	0,029
yellow	B5DLR GE	BS5DLR GE	BC5DLR GE	10	0,029
blue	B5DLR BL	BS5DLR BL	BC5DLR BL	10	0,029
white	B5DLR WS	BS5DLR WS	BC5DLR WS	10	0,029

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

red	B5R RT	BS5R RT	BC5R RT	10	0,029
green	B5R GN	BS5R GN	BC5R GN	10	0,029
yellow	B5R GE	BS5R GE	BC5R GE	10	0,029
blue	B5R BL	BS5R BL	BC5R BL	10	0,029
clear	B5R KL	BS5R KL	BC5R KL	10	0,029
white	B5R WS	BS5R WS	BC5R WS	10	0,029

Connectors



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

Wrench
→ page 341

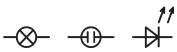
*) inclusive Thickness from Label Holder and Yellow Disk

Contact Blocks and Lamp Holders for Panel Mounting

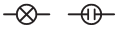
Contact blocks

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

Lamp holders, socket BA9s

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

Lamp holders for lamp test circuits, socket BA9s

max. 440V AC 	direct connection, for filament and glow-discharge lamps max. 1,7W (active power consumption)		B3FT	10	0,020
max. 250V	direct connection of LED		B3FTD	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.
LED lamps [2] (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

Filament lamps

24V	1,2W	for all lens caps	**B4-G24**	100	0,005
42V	1W	for all lens caps	**B4-G42**	100	0,005
48V	1,2W	for all lens caps	**B4-G48**	100	0,005
60V	1,2W	for all lens caps	**B4-G60**	100	0,005
110/120V [1]	1,5/1,8W	for all lens caps	**B4-G130**	100	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

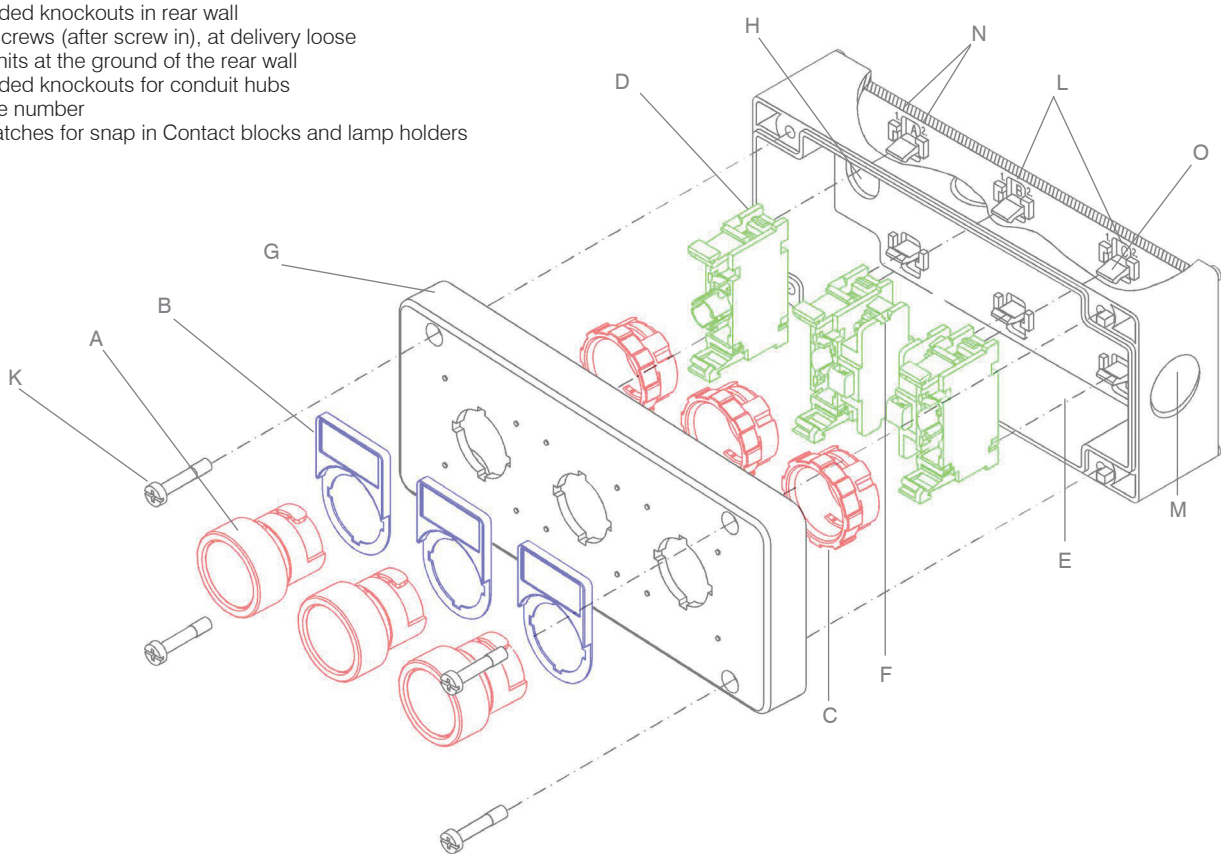
2) suitable for B3FT lamp test lamp holders

Accessories

		Type	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	**B4-R455**	1	0,007
	for B(S)3SB.. , Ronis R786	**B4-R786**	1	0,007
Protectiv cover sealable	against unintentional manupulation 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)				
Legend plate alu without marking for label holder P42-1		**BK5-11374**	10	0,0003
	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)				
Legend plate alu without marking for label holder P1043		**BK10-11724**	10	0,0005
	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
	chrome	**BC5**	10	0,017

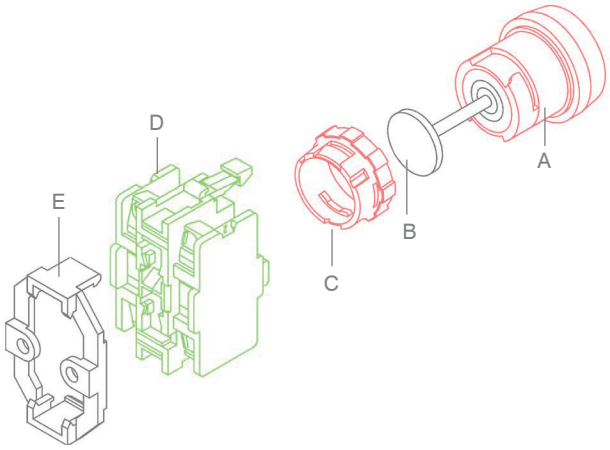
Assembled Stations BG.. IP67 cULus Type 12

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 325 – 328, Ø 30mm see page 337 – 339
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

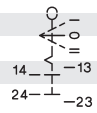
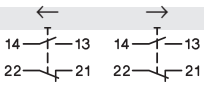
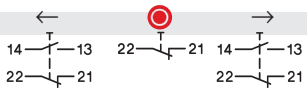
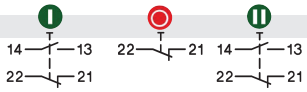
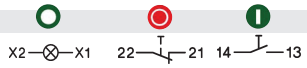
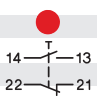
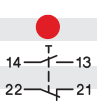


Mounting Plate for base and DIN-rail mounting of contact blocks

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

Assembled Stations IP67 (IP65) cULus Type 12

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

	Type	Diagram	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 Pilot light red		BG01 GN BG01 RT	1 1	0,135 0,135
	Key operated 0 - I [1] lock Ronis R455 60° maintained		BG10SAR 0	1	0,165
	Key operated I - 0 - II [1] 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 EN ISO 13850 unlock by pull		BG10P44-11	1	0,145
	EMERGENCY STOP key operated button Ø40mm according to EN ISO 13850 unlock by key		BG10P44S3-11	1	0,178
	EMERGENCY STOP mushroom button Ø70mm unlock by turning		BG10P34P-11	1	0,187

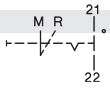
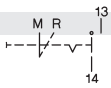
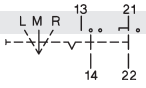
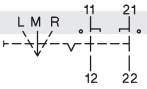
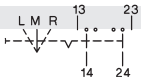
1) IP65

Enclosures BG.. IP67, cULus Type 12

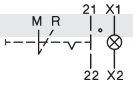
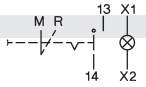
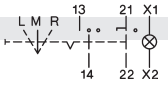
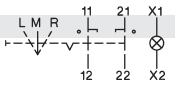
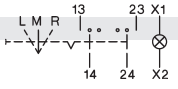
Number of units		Description	Type	Pack pcs.	Weight kg/pc.
1		3 knockouts Ø20,5mm (M20 or PG13,5)	**BG1**	1	0,108
1	yellow	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1 GE	1	0,108
2		3 knockouts Ø20,5mm (M20 or PG13,5)	**BG2**	1	0,145
3		3 knockouts Ø20,5mm (M20 or PG13,5)	**BG3**	1	0,188

Buttons and Lens Caps B3.. see page 331 -334

Contact blocks for enclosures BG..

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

			Type	Pack pcs.	Weight kg/pc.
max. 440V AC/DC	direct connection, for lamps max. 1,9W (take care for active power consumption)		**B4FU**	10	0,013

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 and lens caps B(S)3..	for mounting of actuators	**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

Push buttons grey RAL7035

Specification	Colour	Symbol	Length mm	Type	Pack pcs.	Weight kg/pc.
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

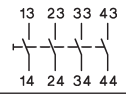
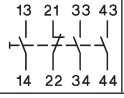
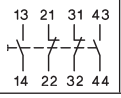
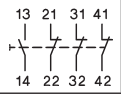
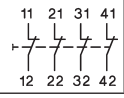
Reset push button	blue	R	19,5-38,5	**B3GRB-31,5**	10	0,023
	blue	R	38,5-60	**B3GRB-60**	10	0,026
Reset push button with stop function	red	0/R	19,5-38,5	**B3GR-31,5**	10	0,023
	red	0/R	38,5-60	**B3GR-60**	10	0,026
Start push button	green	I	19,5-38,5	**B3GI-31,5**	10	0,023
	green	I	38,5-60	**B3GI-60**	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

Extensions for push buttons

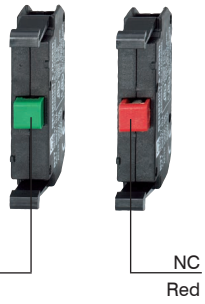
Specification	Diameter Ø mm	Length mm	Type	Pack pcs.	Weight kg/pc.
self adjusting pin, for B(S, C)3D.. and B(S, C)3P..	15	19,5 - 38,5	**B4V31,5**	10	0,001
	18,5	38,5 - 60	**B4V60**	10	0,004

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
10								01	
20		11						02	
30		21		12				03	
40		31		22		13		04	

Colour code



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 cosj = 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., B5.
Protection degree (according to IEC 947-1) in assembled state, from the front		IP67/IP65
from rear		IP20/IP00
Ambient temperature	°C	-40 to +50
Cable cross-section		
	solid, mm²	0,5 - 2,5
	flexible, mm²	0,5 - 2,5
	flexible with multicore cable end, mm²	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)	14 - 18AWG	14 - 18AWG
Torque	9 lb/in.	9 lb/in.

Approvals

Country / Type	USA, Canada UL c UL us	Europe CE	Register of Shipping Great Britain LRS	CENELEC CB-Certificates
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	-	-

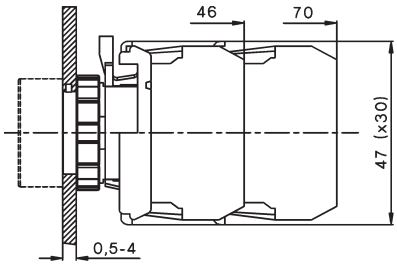
o In standard version approved - Not provided for test till now

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

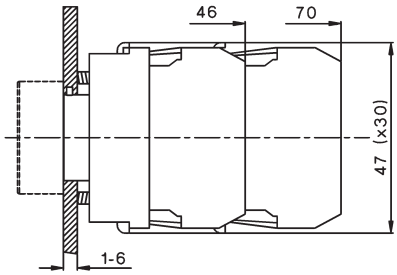
Dimensions

Actuators and Lens Caps 22mm

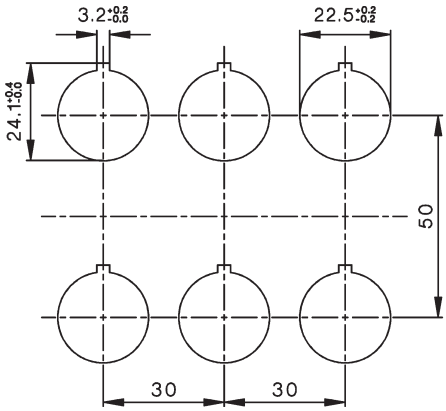
Panel mounting B3S



Panel mounting B3M

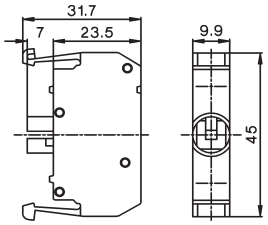


Mounting holes



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.

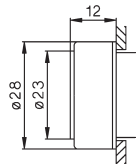
Contact blocks and Lamp Holder B3...



Actuators and Lens caps

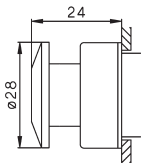
Flush Head
Illuminated Flush Head

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



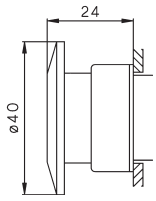
Mushroom Head Ø28mm
Emergency Stop Ø28mm

B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3



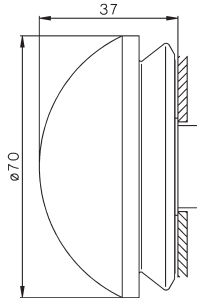
Mushroom Head Ø40mm
Emergency Stop Ø40mm

B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34



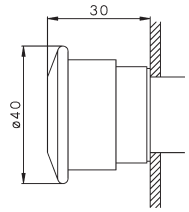
Mushroom Head Ø70mm
Emergency Stop Ø70mm

BS3P14P
BS3P34P



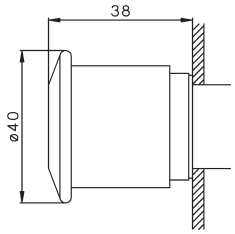
Push-and pull button Ø40mm

BS3P44



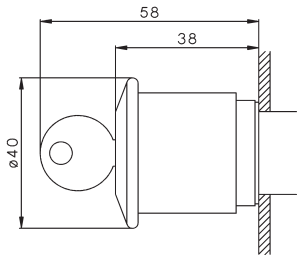
Push-and pull button Ø40mm

BS3P45



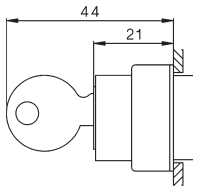
Push-and pull button Ø40mm with key

BS3P44S3



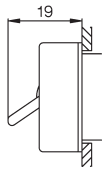
Lockable Push button

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



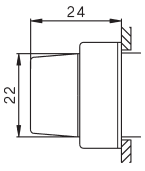
Toggle

B3E
BS3E
BC3E



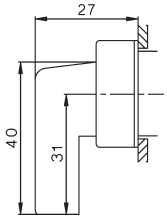
Rotary Knob

B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL



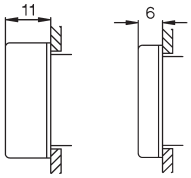
Swing Knob

B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN



Lens Cap

B3R(F) B3RN

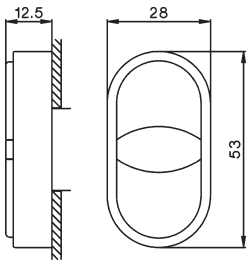


Dimensions

Actuators and Lens Caps 22mm

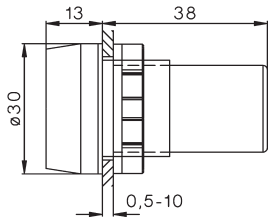
Double push button

B3DT



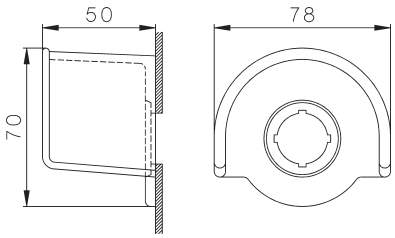
Monoblock Multi-LED

B3-MB...



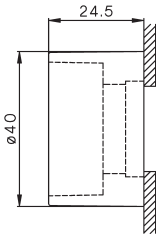
Protection cover

B3-SK ..



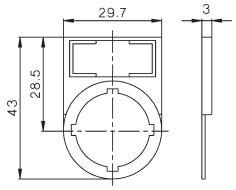
Protection ring w. thread

P921-.



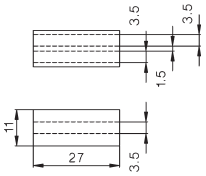
Label holder

P751



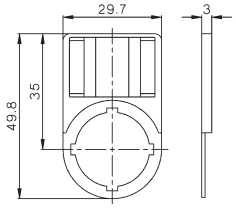
Legend plate

BK4-...



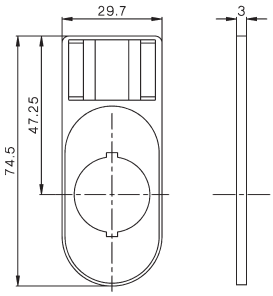
Label holder

P761



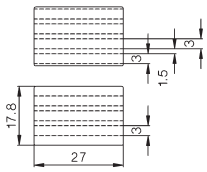
Label holder

P761-DT



Legend plate

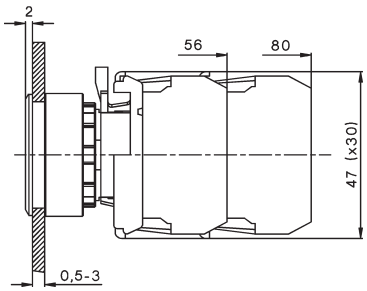
BK8-...



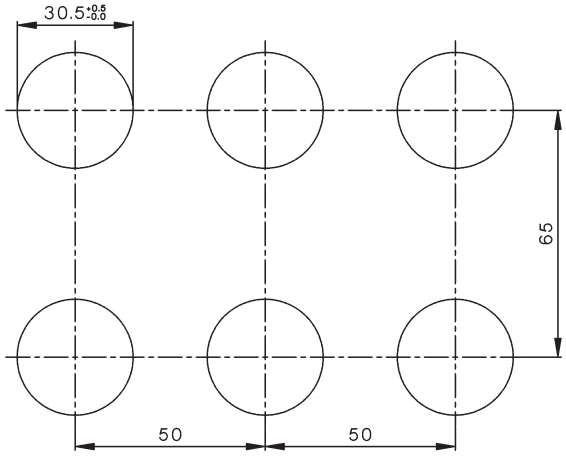
Dimensions

Actuators and Lens Caps 30mm

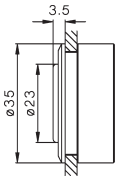
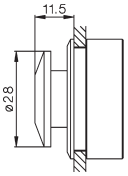
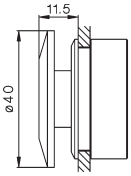
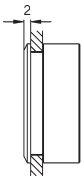
Panel mounting B3S

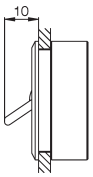
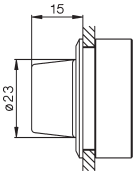
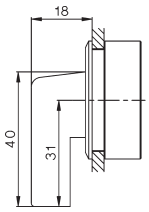
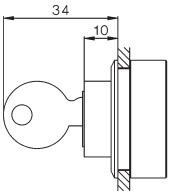


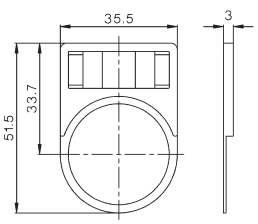
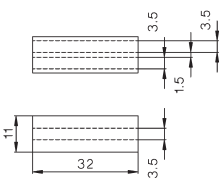
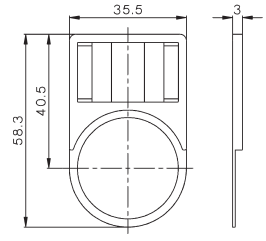
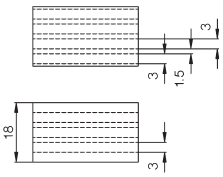
Mounting holes



Actuators and Lens caps

Flush Head Illuminated Flush Head	Mushroom Head Ø28mm Emergency Stop Ø28mm	Mushroom Head Ø40mm Emergency Stop Ø40mm	Lens Cap
B5D(R), B5DL(R) BS5D(R), BS5DL(R)	B5P1 to B5P3 BS5P1 to BS5P3	B5P14, B5P34 BS5P14, BS5P34	B5RF
			

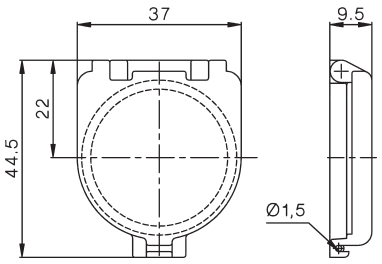
Toggle	Rotary Knob	Swing Knob	Lockable Push button
B5E BS5E	B5KN, B5KL BS5KN, BS5KL	B5KRL, B5KRN BS5KRL, BS5KRN	B5SAR., B5SAT. BS5SAR., BS5SAT.
			

Label holder	Legend plate	Label holder	Legend plate
P942-1	BK5-...	P1043	BK10-..
			

Dimensions

Protective Cover

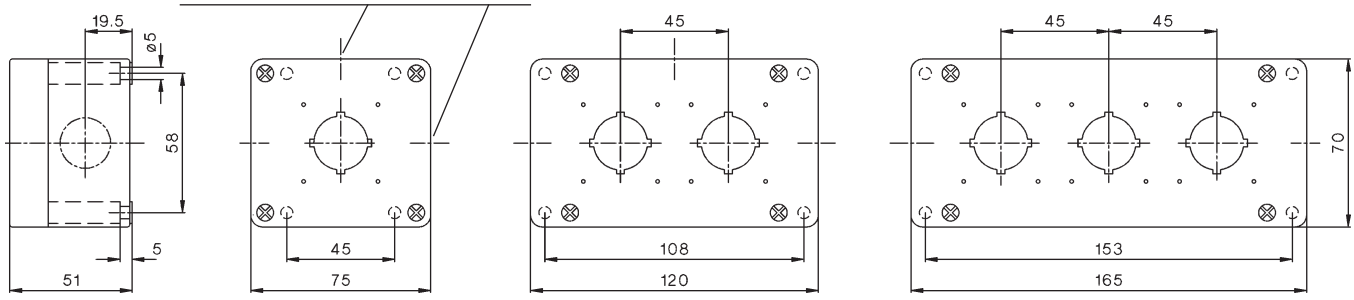
B5-SAP



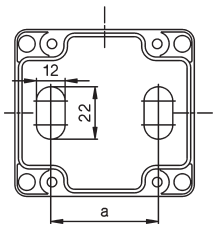
Enclosures for Custom Built Stations

BG1 BG2 BG3

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



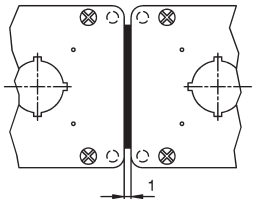
Conduit entries in the bottom (knockouts)



Number of units	Dimension a
1	45
2	90
3	135

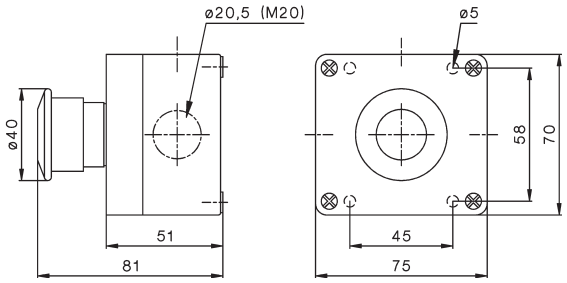
Coupled Enclosures

B4-8852



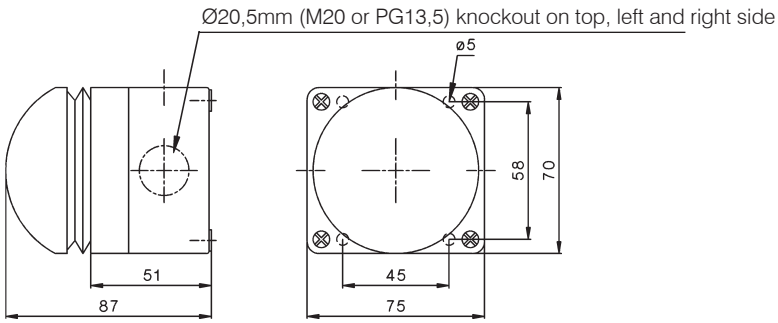
EMERGENCY STOP Push Button Ø40 mm

BG10P44



EMERGENCY STOP Push Button Ø70 mm, Foot switch

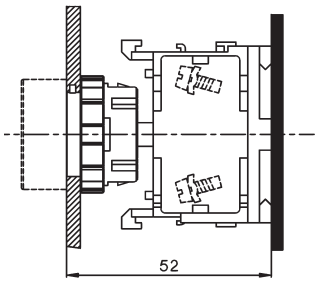
BG10P34P, BG10P14P



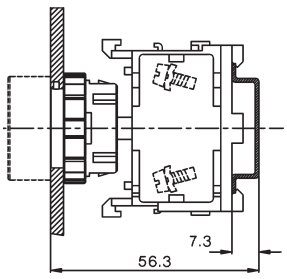
Dimensions

Actuators 22mm

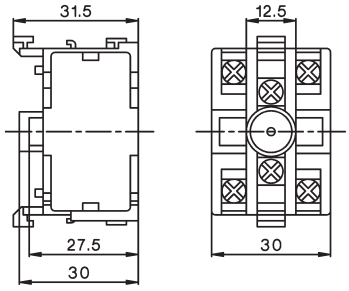
Base mounting



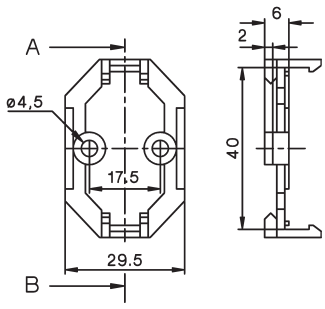
DIN-rail mounting



Contact blocks and Lamp Holders B4.U...

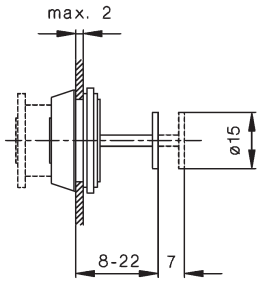


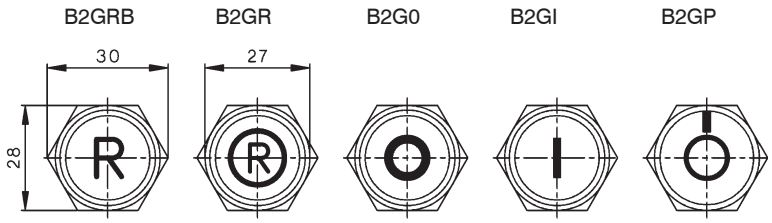
Base B4U



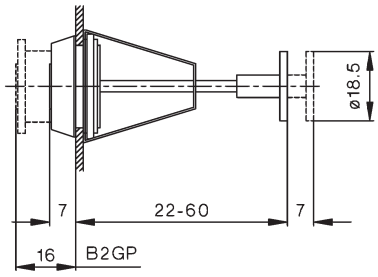
Push buttons for enclosures

B2G..-22

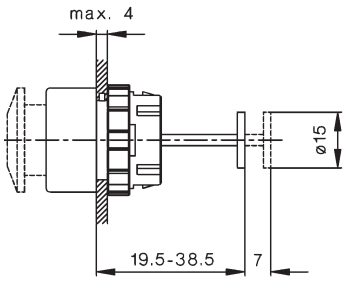


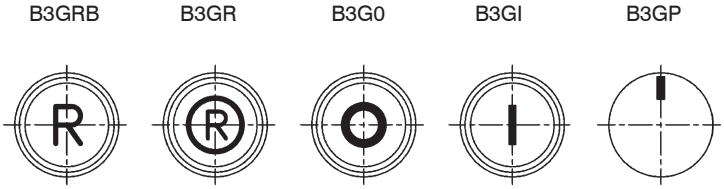
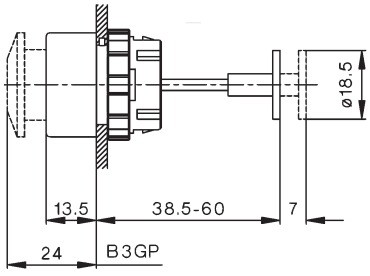


B2G..-60



B3G..-31,5





B3G..-60