



Ø 22,5mm

**Program B3**

Push Buttons  
EMERGENCY STOP Buttons  
Key Operated Rotary Switches

332



Rotary Knobs and Swing Knobs  
Illuminated Rotary Knobs and Swing Knobs  
Illuminated Push Buttons

333

334

335

335

336

336



Double Push Buttons  
Lens Caps  
Monoblock-Multi-LEDs

336

337

337



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

338

338

339



Connectors  
Insert Actuator  
Contact Blocks and Lamp Holders

340

340

340



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

341

341

342



Ø 30,5mm

**Program B5**

Push Buttons  
Rotary Knobs and Swing Knobs

344



Push Buttons  
Rotary Knobs and Swing Knobs

345

346



Key Operated Rotary Switches  
Illuminated Push Buttons  
Lens Caps

347

347

347



Connectors  
Contact Blocks and Lamp Holders  
Lamps, Accessories

348

348

349



**Units for Surface Mounting**  
Assembled Units IP65

351

351



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

352

352

352



**Push Buttons for Enclosures**  
Extensions for Push Buttons

353


353



**Technical Data**  
Approvals  
Dimensions

354

355

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

Push Buttons



page 331



IP65

page 333,  
334

EMERGENCY STOP Buttons



page 332

Illuminated Operators



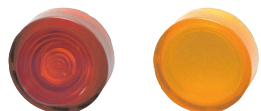
page 333, 334

Double Push Buttons with Indicator Lamp, IP65



page 334

Lens Caps



page 335

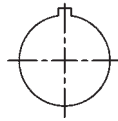
Mono Block Multi Chip LED IP65, IEC 60947, EN 60947



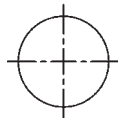
page 335

Mounting hole  
Ø 22,5mm

with key way



without key way



page 332



page 340

Connectors



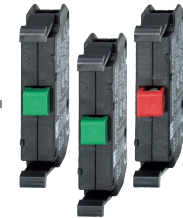
Thickness  
0,5 - 4 mm  
page 340

or

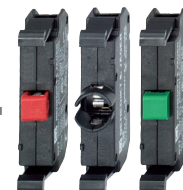


Thickness  
1 - 6 mm  
page 340

Contacts  
Lamp Holders



Actuator insert  
page 338



page 340



LED  
24-230V



Filament  
6-130V



Glow-discharge  
230V  
page 339

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



## Actuators 22mm IP67, Type 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
yellow		B3P1 GE	BS3P1 GE	BC3P1 GE	10	0,017
blue		B3P1 BL	BS3P1 BL	BC3P1 BL	10	0,017
black		B3P1 SW	BS3P1 SW	BC3P1 SW	10	0,017

Mushroom Head Ø40mm



red	0	B3P14 RT-0	BS3P14 RT-0	BC3P14 RT-0	10	0,020
-----	---	------------	-------------	-------------	----	-------

Mushroom Head Ø40mm






red		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, Type 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 <sup>2)</sup>	BS3P3 RT-0-RGE <sup>2)</sup>	BC3P3 RT-0-RGE <sup>2)</sup>	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 <sup>1)</sup>



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 manipulation, Thickness 1mm



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

### Sealing cap

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

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

# Actuators 22mm Type 12

Ring



Knob

Alu

Black

Chrome

Pack pcs.

Weight kg/pc.

## Rotary Knobs and Swing Knobs, black IP65



Rotary



Swing

maintained 60°



Rotary  
Swing

B3KN2  
B3KRN2

BS3KN2  
BS3KRN2

BC3KN2  
BC3KRN2

10  
10

0,020  
0,020

maintained 60°



Rotary

B3KN29

BS3KN29

BC3KN29

10

0,020

spring return 60°



Rotary  
Swing

B3KN8  
B3KRN8

BS3KN8  
BS3KRN8

BC3KN8  
BC3KRN8

10  
10

0,020  
0,020

spring return 60°



Rotary  
Swing

B3KN1  
B3KRN1

BS3KN1  
BS3KRN1

BC3KN1  
BC3KRN1

10  
10

0,020  
0,020

maintained 60°



Rotary  
Swing

B3KN3  
B3KRN3

BS3KN3  
BS3KRN3

BC3KN3  
BC3KRN3

10  
10

0,020  
0,020

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

## Illuminated Rotary Knobs and Swing Knobs, clear IP67, lamp max. 1,2W, lamps see page 339



Rotary



Swing

## Toggle IP65



maintained 90°



Rotary

B3KL2

BS3KL2

BC3KL2

10

0,016

spring return 60°



Rotary  
Swing

B3KL1  
B3KRL1

BS3KL1  
BS3KRL1

BC3KL1  
BC3KRL1

10  
10

0,016  
0,016

maintained 60°



Rotary  
Swing

B3KL3  
B3KRL3

BS3KL3  
BS3KRL3

BC3KL3  
BC3KRL3

10  
10

0,016  
0,016

maintained/spring return 60°



Rotary

B3KL6

BS3KL6

BC3KL6

10

0,016

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

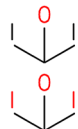
BS3SAT 0

BC3SAT 0

1

0,044

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



B3SARR 0

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

B3DT G/R <sup>1)</sup>

BS3DT G/R

BC3DT G/R

10

0,016

red

white

B3DT W/S <sup>1)</sup>

BS3DT W/S

BC3DT W/S

10

0,016

black

green

I

B3DT GI/RO <sup>1)</sup>

BS3DT GI/RO

BC3DT GI/RO

10

0,016

red

0

white

I

B3DT WI/SO <sup>1)</sup>

BS3DT WI/SO

BC3DT WI/SO

10

0,016

black

0

with non-standard marking on request

1) Plastic ring in alu design

# Lens Caps 22mm Type 12

suitable for Alu, Black and Chrome

Colour	Type	Pack pcs.	Weight kg/pc.
--------	------	-----------	---------------

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



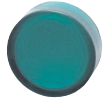
red	B3R RT	10	0,009
green	B3R GN	10	0,009
yellow	B3R GE	10	0,009
blue	B3R BL	10	0,009
clear	B3R KL	10	0,009
white	B3R WS	10	0,009

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



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



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
--------	---------	----------	---	------	-----------	--------------


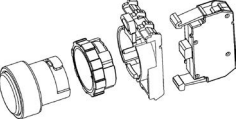


Monoblock LEDs IP65, IEC 60947, EN 60947 (6 years middle lifetime)



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

Actuator Colour	Symbol	with	Type	Pack pcs.	Weight kg/pc.
<b>Push Buttons, IP67</b>					
	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	 +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



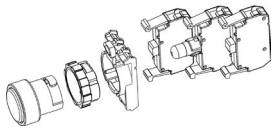
# Illuminated Push Button 22mm-Sets, with Contact Block, Connector and LED

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

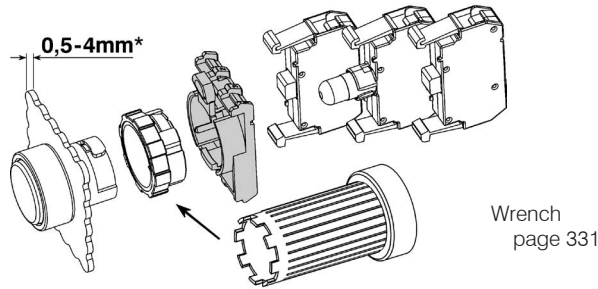
## Pilot Lights with LEDs, IP67



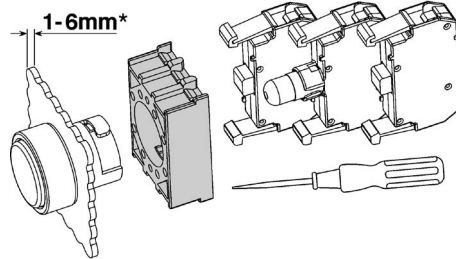
white	+connector +socket BA9S	20-30V AC/DC	B3R WS/L24	1	0,042
green	+connector +socket BA9S	20-30V AC/DC	B3R GN/L24	1	0,042
red	+connector +socket BA9S	20-30V AC/DC	B3R RT/L24	1	0,042
yellow	+connector +socket BA9S	20-30V AC/DC	B3R GE/L24	1	0,042
white	+connector +socket BA9S	90-120V AC/DC	B3R WS/L110	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



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

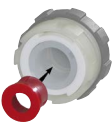


max. 690V AC	1 NC <sup>1)</sup>			B3T01 <sup>2)</sup>	10	0,010
max. 690V AC	1 NO <sup>1)</sup>			B3T10 <sup>2)</sup>	10	0,010

### 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

Socket BA9s	Lamp voltage	Type	Pack pcs.	Weight kg/pc.
-------------	--------------	------	-----------	---------------

### LED lamps<sup>2)</sup> (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	0,005

### Filament lamps



Power consumption		Type	Pack pcs.	Weight kg/pc.	
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 for B(S)3SB.., Ronis R786	B4-R455 B4-R786	1 1	0,007 0,007	
Hole Plug	black, for fixing holes grey Ø22,5mm	B3-DU SW B3-DU GR	10 10	0,007 0,007	
Sealing Cover	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 manipulation				
	Thickness 1mm yellow	B3-SK GE	1	0,04	
	Thickness 1mm grey	B3-SK GR	1	0,04	
Protection ring with thread	against unintentional manipulation				
	has to be mounted instead of the existing ring	black chrome alu	P921-1 P921-2 P921-3	1 1 1	0,012 0,012 0,012

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
0 I	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



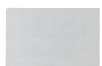
Legend plate yellow without marking	BK4-10827	10	0,0002
Legend plate yellow with marking NOT-AUS	BK4-10827-1	10	0,0002
Legend plate yellow with marking EMERGENCY STOP	BK4-10827-2	10	0,0002
Legend plate yellow with marking ARRET D`URGENCE	BK4-10827-3	10	0,0002

### 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		for illuminated buttons	
	B3D(R)	B5D(R)	B3DL(R)	B5DL(R)
	BS3D(R)	BS5D(R)	BS3DL(R)	BS5DL(R)
	BC3D(R)	BC5D(R)	BC3DL(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..		-	

marking	Type	-suffix for marking	marking	Type	-suffix for marking.	Pack pcs.	Weight kg/pc
---------	------	---------------------	---------	------	----------------------	-----------	--------------

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



			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



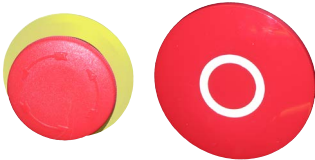
page 343



IP65

page 344,  
345

## EMERGENCY STOP Buttons



page 343

## Illuminated Operators



page 345

## Lens Caps

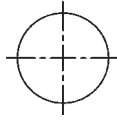


page 345

Wrench  
J7049

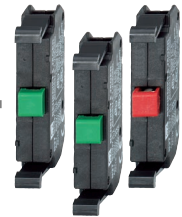


Mounting hole  
Ø 30,5mm

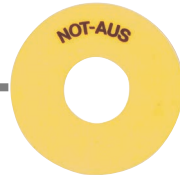


## Connectors

## Contacts Lamp Holder



Actuator insert  
page 346



page 343



page 347



Tthickness  
**0,5 - 3 mm**  
page 346



page 346



LED  
24-230V



Filament  
6-130V



Glow-discharge

230V

page 347

# 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

maintained 60°



Rotary  
Swing

**B5KN2**  
**B5KRN2**

**BS5KN2**  
**BS5KRN2**

**BC5KN2**  
**BC5KRN2**

10  
10

0,035  
0,035

spring return 60°



Rotary  
Swing

**B5KN8**  
**B5KRN8**

**BS5KN8**  
**BS5KRN8**

**BC5KN8**  
**BC5KRN8**

10  
10

0,035  
0,035

spring return 60°



Rotary  
Swing

**B5KN1**  
**B5KRN1**

**BS5KN1**  
**BS5KRN1**

**BC5KN1**  
**BC5KRN1**

10  
10

0,035  
0,035

spring return 60°



Rotary  
Swing

**B5KN3**  
**B5KRN3**

**BS5KN3**  
**BS5KRN3**

**BC5KN3**  
**BC5KRN3**

10  
10

0,035  
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

maintained 90°



Rotary

**B5KL2**

**BS5KL2**

**BC5KL2**

10

0,031

spring return 60°



Rotary  
Swing

**B5KL1**  
**B5KRL1**

**BS5KL1**  
**BS5KRL1**

**BC5KL1**  
**BC5KRL1**

10  
10

0,031  
0,031

maintained 60°



Rotary  
Swing

**B5KL3**  
**B5KRL3**

**BS5KL3**  
**BS5KRL3**

**BC5KL3**  
**BC5KRL3**

10  
10

0,031  
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

Ring

key  
removeable in



Alu



Black



Chrome

Pack  
pcs.

Weight  
kg/pc.

## Key Operated Rotary Switch with lock Ronis 455

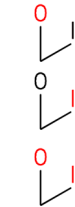


B3SAR 0



B3SARR 0

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

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

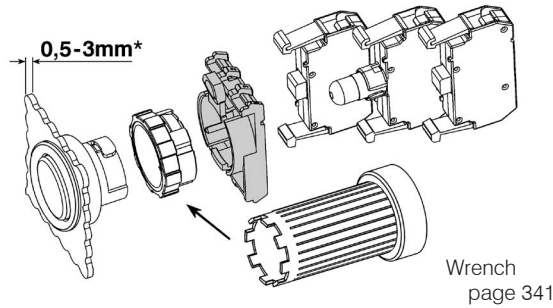
BC5R WS

10

0,029

## Connectors

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

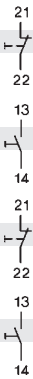


\*) inclusive Thickness from Label Holder and Yellow Disk

## Contact Blocks and Lamp Holders for Panel Mounting

for voltage	Description	Type	Pack pcs.	Weight kg/pc.
max. 690V AC	1 NC	B3T01 <sup>2)</sup>	10	0,010
max. 690V AC	1 NO	B3T10 <sup>2)</sup>	10	0,010
max. 690V~	1 NC <sup>1)</sup>	B3RT01 <sup>2)</sup>	10	0,010
max. 690V~	1 NO	B3RT10 <sup>2)</sup>	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)		X1 X2	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)		X5 X2 X1	B3FT	10	0,020
max. 250V	direct connection of LED		X5 X2 X1	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<sup>2)</sup> (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 <sup>1)</sup>	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

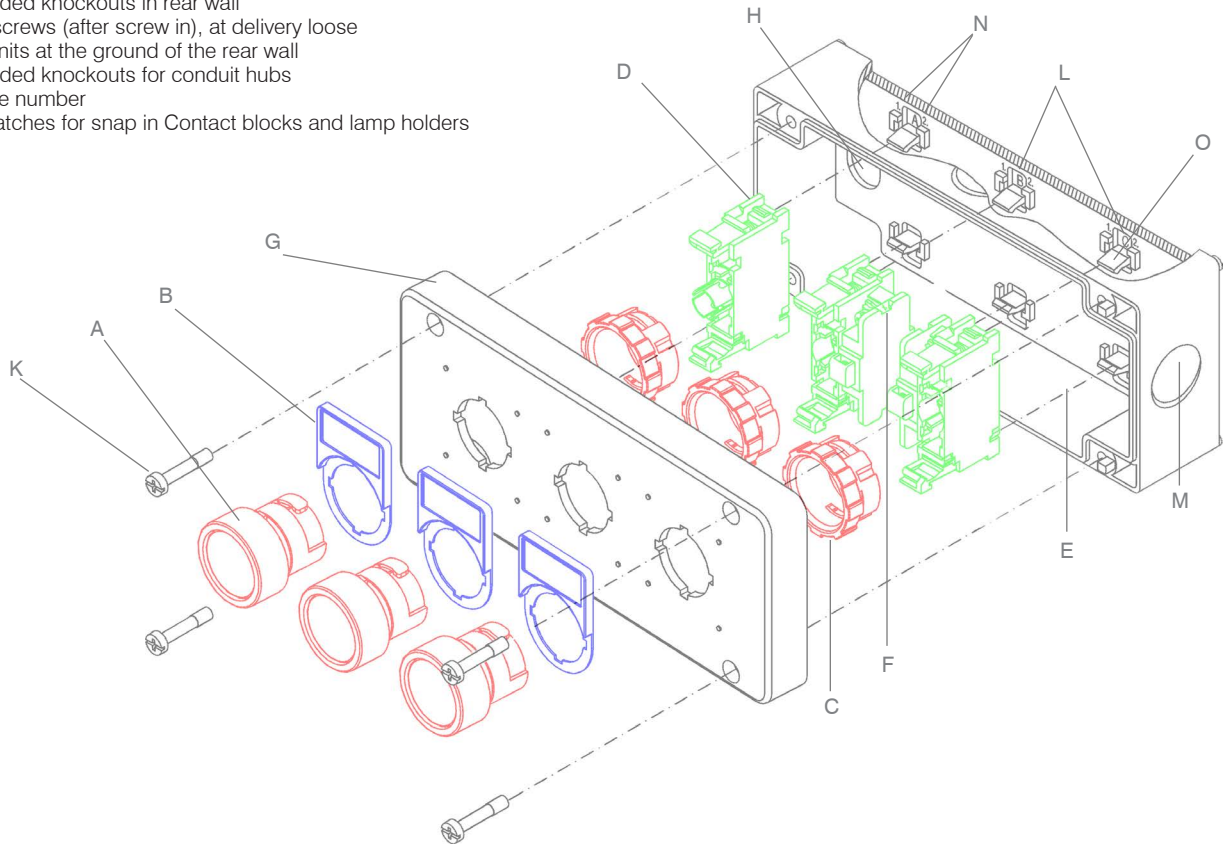
## Accessories



	Type	Pack pcs.	Weight kg/pc.	
<b>Wrench</b>	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018
<b>Marking plate</b>	for marking of contact blocks B3T. and lamp holders B3F	P672-1	10	0,001
<b>Lamp Installer</b>	used to install or replace lamps BA9s	B4-7408	1	0,010
<b>Spare Key</b>	for B(S)3SA.. and BS3P44S3, Ronis R455 for B(S)3SB.., Ronis R786	B4-R455 B4-R786	1 1	0,007 0,007
<b>Protectiv cover sealable</b>	against unintentional manipulation of buttons B5, (not for mushroom heads, rotary and swing knobs)	B5-SAP	1	0,008
<b>Label holder for legend plate BK5, black, 1 or 2 lines</b>		P942-1	10	0,0013
<b>Legend plate BK5 with for label holder P942-1 (with marking e. g.: BK5-MOTOR-START)</b>		BK5-11374	10	0,0003
<b>Legend plate alu without marking for label holder P42-1</b>	Text 1 or 2 lines, max. 2 x 13 letters, letter height 3mm			
<b>Label holder for legend plate BK10, black, 3 or 4 lines</b>		P1043	10	0,0015
<b>Legend plate BK10 with for label holder P1043 (with marking e. g.: BK10-WATER-PUMP-START)</b>		BK10-11724	10	0,0005
<b>Legend plate alu without marking for label holder P1043</b>	Text 3 or 4 lines, max. 4 x 13 letters, letter height 3mm			
<b>Adapter to convert Actuators 22mm to 30mm</b>				
	alu	B5	10	0,017
	black	BS5	10	0,017
	chrome	BC5	10	0,017

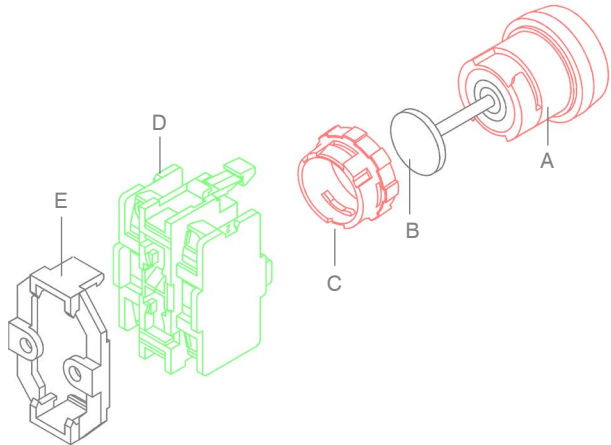
## Assembled Stations BG.. IP67 Type 12

- 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 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















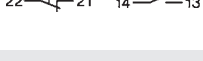

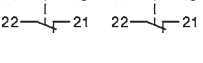

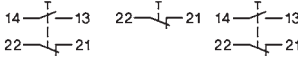

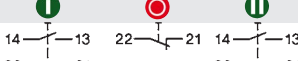

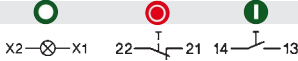










### Mounting Plate for base and DIN-rail mounting of contact blocks



		Type	Pack pcs.	Weight kg/pc.	
	Mounting Plate	for base and DIN-rail mounting of contact blocks and lamp holders	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

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	Diagram	Pack pcs.	Weight kg/pc.
<b>Plastic enclosed buttons and Pilot Lights</b>				
	ON push button green		BG10 GN	1 0,135
	OFF push button red		BG10 RT	1 0,135
	Pilot light green		BG01 GN	1 0,135
	Pilot light red		BG01 RT	1 0,135
	Key operated 0 - I <sup>1)</sup> lock Ronis R455 60° maintained		BG10SAR 0	1 0,165
	Key operated I - 0 - II <sup>1)</sup> 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
<b>Plastic enclosed EMERGENCY STOP buttons</b>				
	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, Type 12



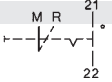


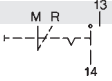


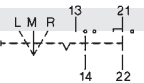


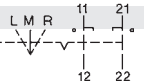





Number of units	Description	Type	Pack pcs.	Weight kg/pc.
1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
1 yellow	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1 GE	1	0,108
2	3 knockouts Ø20,5mm (M20 or PG13,5)	BG2	1	0,145
3	3 knockouts Ø20,5mm (M20 or PG13,5)	BG3	1	0,188

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



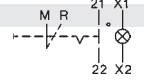








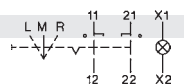


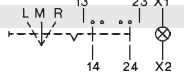
### Contact blocks for enclosures BG..




Contacts	Lamp voltage	Wiring diagram	actuators with 2 or 3 switch positions	Type	Pack pcs.	Weight kg/pc.
1NC <sup>1)</sup> 				B4TU01	10	0,015
1NO 				B4TU10	10	0,015
1NO+1NC <sup>1)</sup> 				B4TU11	10	0,022
2NC <sup>1)</sup> 				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



Contacts	Lamp voltage	Wiring diagram	actuators with 2 or 3 switch positions	Type	Pack pcs.	Weight kg/pc.
1NC <sup>1)</sup> 	max. 440V AC/DC			B4TU01F	10	0,020
1NO 	max. 440V AC/DC			B4TU10F	10	0,020
1NO+1NC <sup>1)</sup> 	max. 440V AC/DC			B4TU11F	10	0,027
2NC <sup>1)</sup> 	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
-----------------	---	--	------	----	-------

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.
<b>Wrench</b>	for mounting of actuators and lens caps B(S)3..	<b>J7049</b>	1	0,018
<b>Couple Part</b>	to couple enclosures BKLG or assembled stations BG..	<b>B4-8852</b>	1	0,018

## Push Buttons for Enclosures 22mm IP65



### Push buttons grey RAL7035

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

### Push buttons with metal ring and self adjusting extension pin



<b>Reset push button</b>	blue	R	19,5-38,5	<b>B3GRB-31,5</b>	10	0,023
	blue	R	38,5-60	<b>B3GRB-60</b>	10	0,026
<b>Reset push button with stop function</b>	red	0/R	19,5-38,5	<b>B3GR-31,5</b>	10	0,023
	red	0/R	38,5-60	<b>B3GR-60</b>	10	0,026
<b>Start push button</b>	green	I	19,5-38,5	<b>B3GI-31,5</b>	10	0,023
	green	I	38,5-60	<b>B3GI-60</b>	10	0,026
<b>Stop push button</b>	red	0	19,5-38,5	<b>B3G0-31,5</b>	10	0,023
	red	0	38,5-60	<b>B3G0-60</b>	10	0,026

Specification	Diameter Ø mm	Length mm	Type	Pack pcs.	Weight kg/pc.
---------------	---------------	-----------	------	-----------	---------------

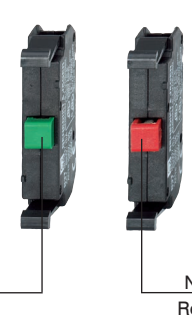
### Extensions for push buttons



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


# Technical Data

Terminal markings for control units according to DIN EN 50013

Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Colour code
10	13 14							01	21 22	 <p>NO Green</p> <p>NC Red</p>
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 <sup>1)</sup>	500
<b>Utilization category AC12</b> Control of resistive loads and solid stateloads with isolation by opto couplers			
Rated current $I_e$	220-240V A 380-415V A 500V A 690V A	10 10 10 10	10 10 10 -
<b>Utilization category AC15</b> Control of electromagnetic load (>72VA)			
Rated current $I_e$	220-240V A 380-415V A 500V A 690V A	6 5 3 2	6 5 3 -
<b>Utilization category DC12</b> L/R = 1ms Control of resistive loads and solid stateloads with isolation by opto couplers			
Rated current $I_e$	24V A 60V A 110V A 220V A	10 6 2,5 0,8	10 6 2,5 0,8
<b>Utilization category DC14</b> L/R = 15ms Control of electromagnetic loads having economy resistors in circuit			
Rated current $I_e$	24V A 60V A 110V A 220V A	8 1 2 0,5	8 1 2 0,5
<b>Utilization category DC13</b> L/R = 300ms Control of electromagnets			
Rated current $I_e$	24V A 60V A 110V A 220V A	2 5 0,5 0,2	2 5 0,5 0,2
Making capacity	A	60	60
Breaking capacity $\cos\phi = 0,7-1$	40-60Hz A	50	50
Mechanical life	millions of operations	10	10
Contact life (AC15)	millions of operations	10	10
100VA	millions of operations	3	3
300VA	millions of operations	1	1
800VA	millions of operations	0,5	0,5
1200VA	millions of operations		
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 <sup>2)</sup>	440 <sup>2)</sup>
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	°C -40 to +50
Cable cross-section	 solid, mm <sup>2</sup> 0,5 - 2,5 flexible, mm <sup>2</sup> 0,5 - 2,5 flexible with multicore cable end, mm <sup>2</sup> 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.
<b>Contact Block</b> for NO and NC	600 V AC max.	600 V AC max.
General use	10A	10A
Heavy pilot duty	A600	A600
<b>Lamp Holder</b> with socket BA9s	240V 2,6W max.	240V 2,6W max.
Wire (Contact and lamp holder)	14 - 18AWG	14 - 18AWG
Torque	9 lb/in.	9 lb/in.

## Approvals

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

o In standard version approved

- Not provided for test till now

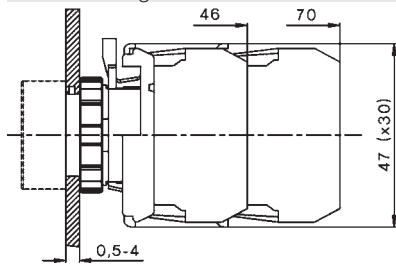
1) suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry):  $U_{imp} = 6kV$ .  
Data for other conditions on request

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

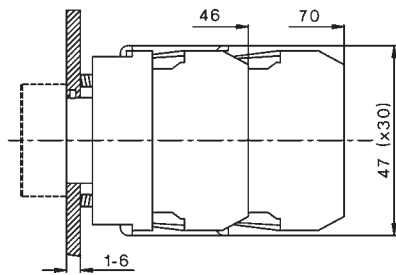
# Dimensions

## Actuators and Lens Caps 22mm

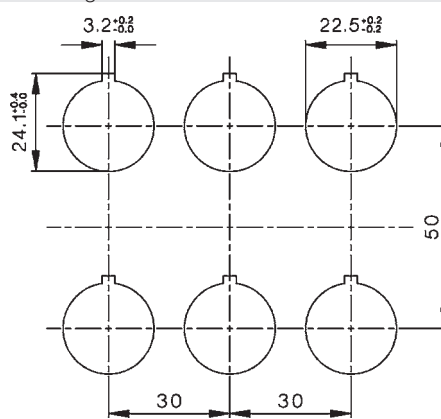
Panel mounting B3S



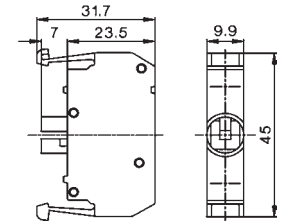
Panel mounting B3M



Mounting holes



Contact blocks and Lamp Holder B3...

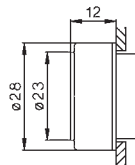


Dimensions of minimum space requirements according to IEC. Take to consideration the field of traverse of swing knobs (27mm) and the diameter of mushroom heads.

## Actuators and Lens caps

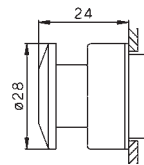
Flush Head  
Illuminated Flush Head

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



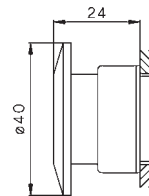
Mushroom Head Ø28mm  
Emergency Stop Ø28mm

B3P1 bis B3P3  
BS3P1 bis BS3P3  
BC3P1 bis BC3P3



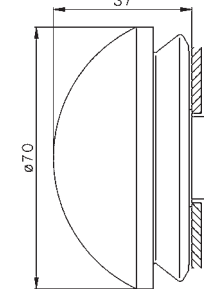
Mushroom Head Ø40mm  
Emergency Stop Ø40mm

B3P14, B3P34  
BS3P14, BS3P34  
BC3P14, BC3P34



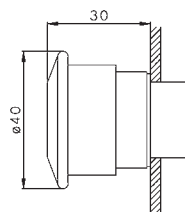
Mushroom Head Ø70mm  
Emergency Stop Ø70mm

BS3P14P  
BS3P34P



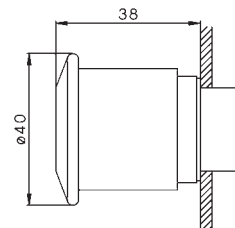
Push-and pull button Ø40mm

BS3P44

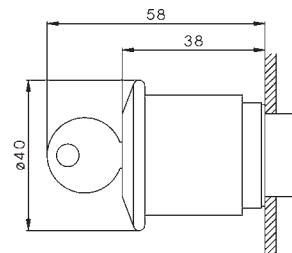


Push-and pull button Ø40mm

BS3P45

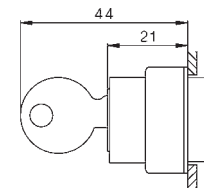


Push-and pull button Ø40mm  
with key  
BS3P44S3



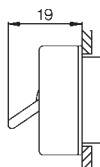
Lockable Push button

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



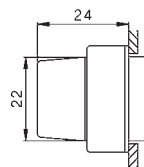
Toggle

B3E  
BS3E  
BC3E



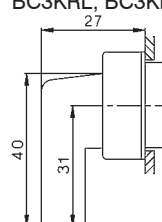
Rotary Knob

B3KN, B3KL  
BS3KN, BS3KL  
BC3KN, BC3KL



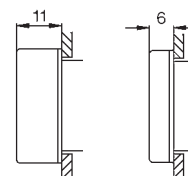
Swing Knob

B3KRL, B3KRN  
BS3KRL, BS3KRN  
BC3KRL, BC3KRN



Lens Cap

B3R(F) B3RN

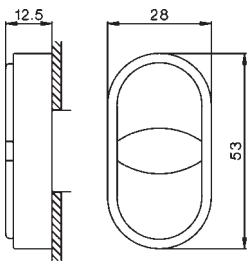


# Dimensions

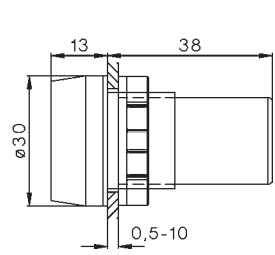
## Actuators and Lens Caps 22mm

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

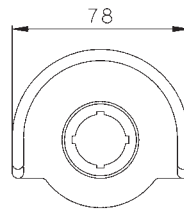
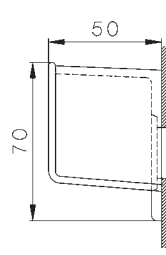
B3DT



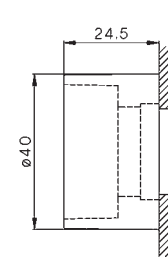
B3-MB...



B3-SK ..



P921-



Label holder

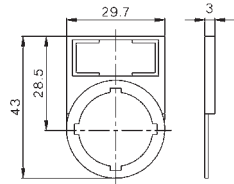
Legend plate

Label holder

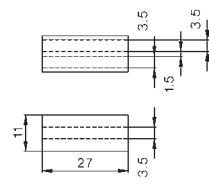
Label holder

Legend plate

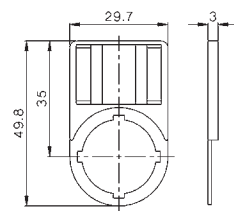
P751



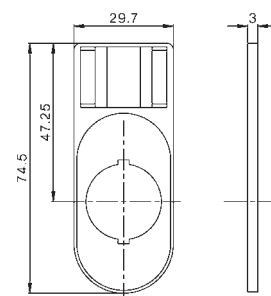
BK4-...



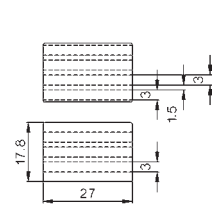
P761



P761-DT



BK8-...

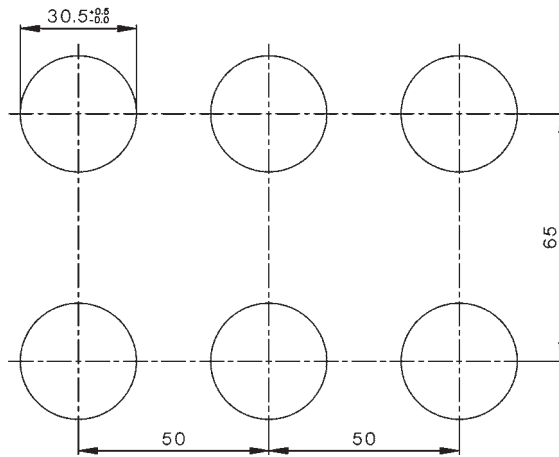
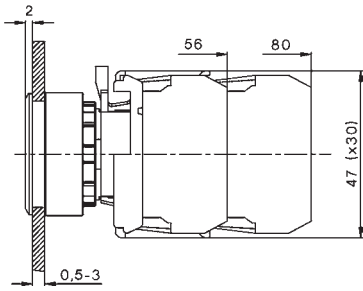


# Dimensions

## Actuators and Lens Caps 30mm

Panel mounting B3S

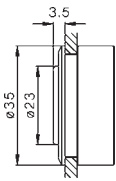
Mounting holes



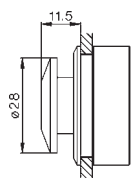
## Actuators and Lens caps

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)

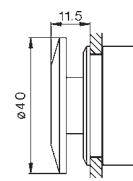


B5P1 to B5P3  
BS5P1 to BS5P3



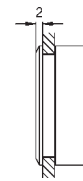
Mushroom Head Ø40mm  
Emergency Stop Ø40mm

B5P14, B5P34  
BS5P14, BS5P34



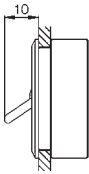
Lens Cap

B5RF



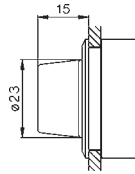
Toggle

B5E  
BS5E



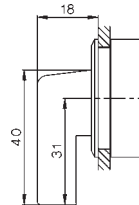
Rotary Knob

B5KN, B5KL  
BS5KN, BS5KL



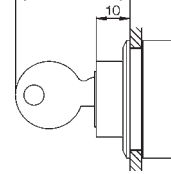
Swing Knob

B5KRL, B5KRN  
BS5KRL, BS5KRN



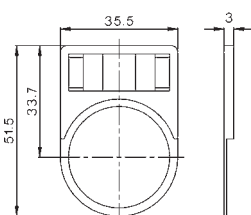
Lockable Push button

B5SAR., B5SAT.  
BS5SAR., BS5SAT.



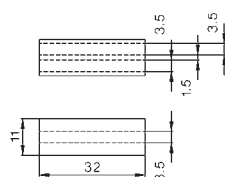
Label holder

P942-1



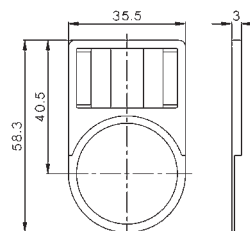
Legend plate

BK5-...



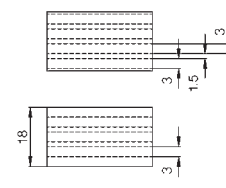
Label holder

P1043



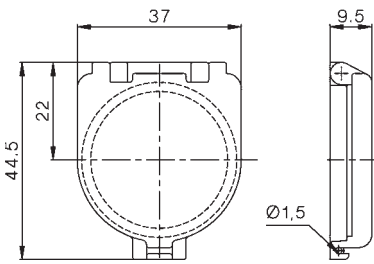
Legend plate

BK10-..

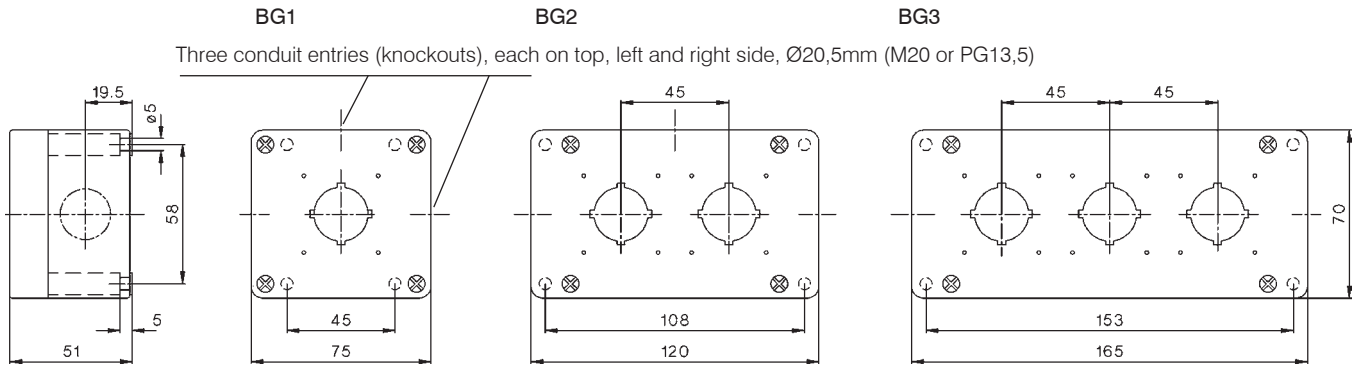


# Dimensions

Protective Cover  
B5-SAP

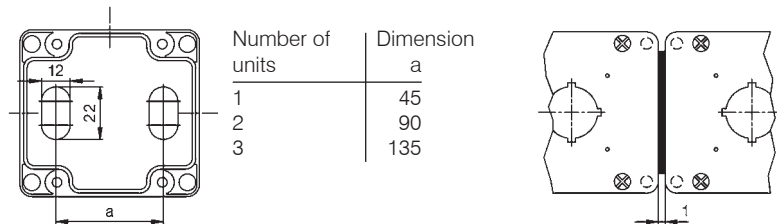


## Enclosures for Custom Built Stations



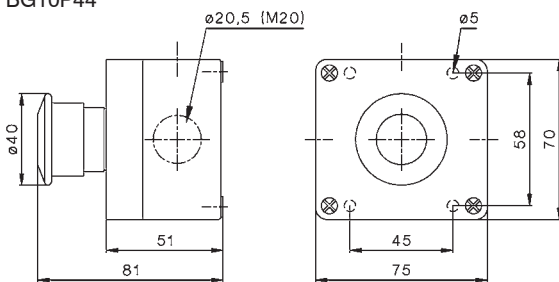
Conduit entries in the bottom  
(knockouts)

Coupled Enclosures  
B4-8852



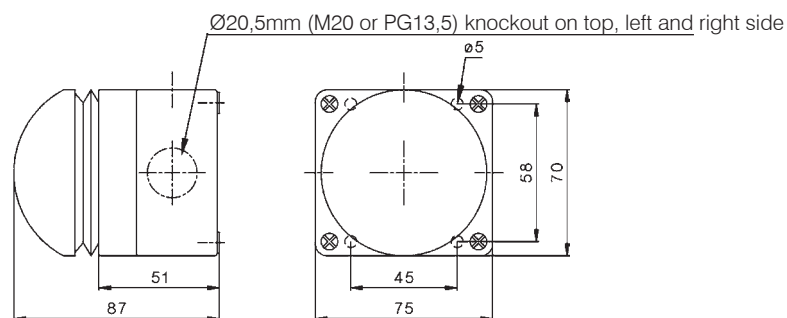
## EMERGENCY STOP Push Button Ø40 mm

BG10P44



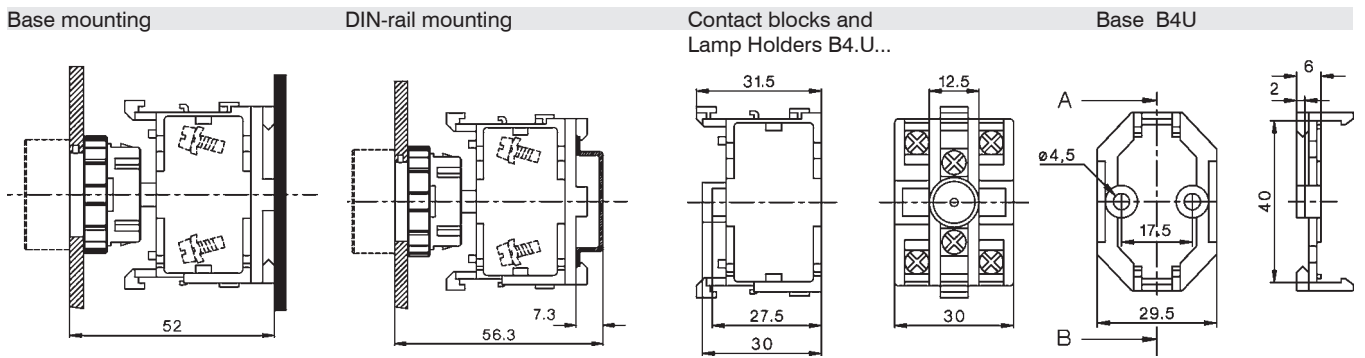
## EMERGENCY STOP Push Button Ø70 mm, Foot switch

BG10P34P, BG10P14P



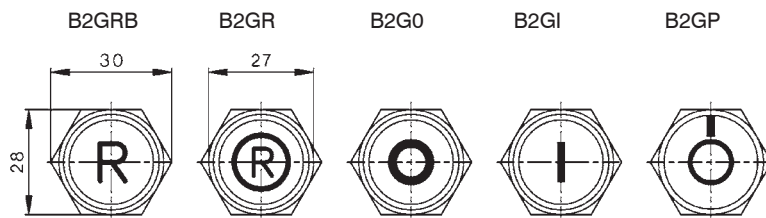
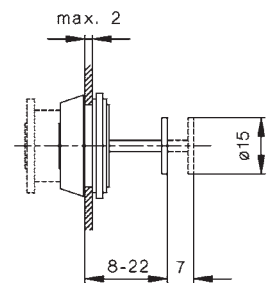
# Dimensions

## Actuators 22mm

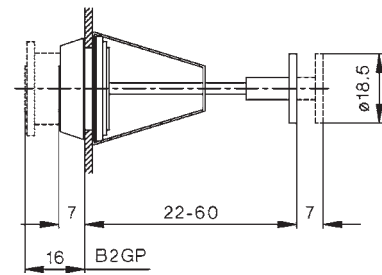


## Push buttons for enclosures

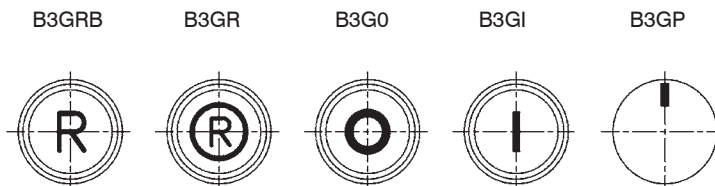
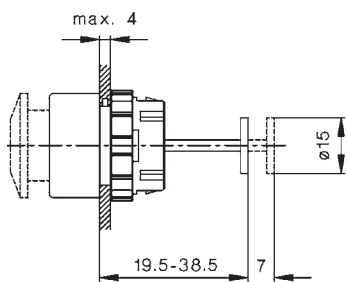
### B2G..-22



### B2G..-60



### B3G..-31,5



### B3G..-60

