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**Program B5**

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Units for Surface Mounting
 Assembled Units IP65
**Enclosures BG.**
 Contact Blocks and Lamp Holders
 for Enclosures BG..

Push Buttons for Enclosures
 Extensions for Push Buttons
**Technical Data**

Approvals	350
Dimensions	351

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

Push Buttons



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IP65

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EMERGENCY STOP Buttons



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Illuminated Operators



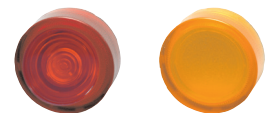
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Double Push Buttons with Indicator Lamp, IP65



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Lens Caps



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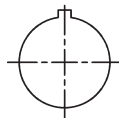
Mono Block Multi Chip LED IP65, IEC 60947, EN 60947



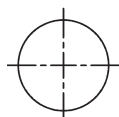
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Mounting hole
Ø 22,5mm

with key way



without key way



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Connectors



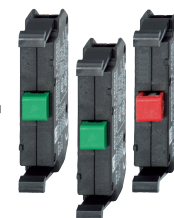
Thickness
0,5 - 4 mm
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or



Thickness
1 - 6 mm
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Contacts Lamp Holders



Actuator insert
→ page 336



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LED
24-230V



Filament
6-130V



Glow-discharge
230V
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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
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Mushroom Head Ø40mm



red		BS3P44T RT	BS3P44T RT	BS3P44T RT	10	0,028
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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				Pack pcs.	Weight kg/pc
			Alu	Black	Chrome		

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
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Spare Key	lock Ronis R455		B4-R455	1	0,007
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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
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red	Pfeile	B3P34 RT-PF	BS3P34 RT-PF	BC3P34 RT-PF	10	0,020
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red illuminated		B3P34L RT	BS3P34L RT	BC3P34L RT	10	0,020
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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 manipulation, Thickness 1mm



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

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

Actuators 22mm Type 12

Ring

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

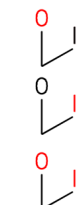
Pack
pcs.

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



B3SARR 0



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

Colour Symbol

Pack
pcs.

Weight
kg/pc.

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



red
green
yellow

B3DL RT
B3DL GN
B3DL GE

BS3DL RT
BS3DL GN
BS3DL GE

BC3DL RT
BC3DL GN
BC3DL GE

10
10
10

0,014
0,014
0,014

blue
white

B3DL BL
B3DL WS

BS3DL BL
BS3DL WS

BC3DL BL
BC3DL WS

10
10

0,014
0,014

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



red
green
yellow

B3DLR RT
B3DLR GN
B3DLR GE

BS3DLR RT
BS3DLR GN
BS3DLR GE

BC3DLR RT
BC3DLR GN
BC3DLR GE

10
10
10

0,014
0,014
0,014

blue
white

B3DLR BL
B3DLR WS

BS3DLR BL
BS3DLR WS

BC3DLR BL
BC3DLR WS

10
10

0,014
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.

Lens Caps 22mm Type 4X

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
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Monoblock LEDs IP65, IEC 60947, EN 60947 (6 years middle lifetime) ¹⁾



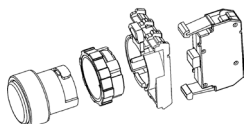
red	20-30V AC/DC	0,4	0,4	B3-MB24 RTB	10	0,022
green	20-30V AC/DC	0,4	0,4	B3-MB24 GNB	10	0,022
yellow	20-30V AC/DC	0,4	0,4	B3-MB24 GEB	10	0,022
blue	20-30V AC/DC	0,4	0,4	B3-MB24 BLB	10	0,022
white	20-30V AC/DC	0,4	0,4	B3-MB24 WSB	10	0,022
red	110-130V AC 110V DC	1,2	1,2	B3-MB110 RTB	10	0,022
green	110-130V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

1) Ambient temperatures on request.

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

Actuator Colour	Symbol	with	Type	Pack pcs.	Weight kg/pc.
-----------------	--------	------	------	-----------	---------------

Push Buttons, IP67



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



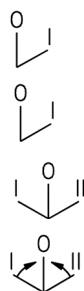
green/ red		+connector +1NO +1NC	BS3DT G/R/11	1	0,049
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EMERGENCY STOP Push Buttons, IP67 Ø40mm



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

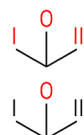


	+connector +1NO	BS3KN2/10	1	0,043
	+connector +1NO +1NC	BS3KN2/11	1	0,053
	+connector +2NO	BS3KN3/20	1	0,053
	+connector +2NO	BS3KN1/20	1	0,053

Key Operated Rotary Switch with lock Ronis 455, IP65



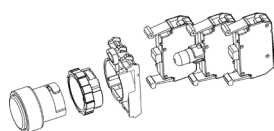
key removeable in 0-position	+connector +1NO	BS3SAR 0/10	1	0,057
key removeable in all positions	+connector +1NO	BS3SAR 01/10	1	0,057
key removeable in 0-position	+connector +1NO	BS3SAT 0/10	1	0,057



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

Illuminated Push Buttons, IP67



Actuator Colour	with	LED	Type	Pack pcs.	Weight kg/pc.
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

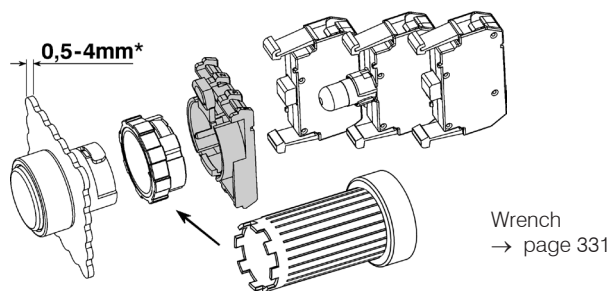
Specification	Description	Type	Pack pcs.	Weight kg/pc.
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Connector B3S

B3S

10

0,013

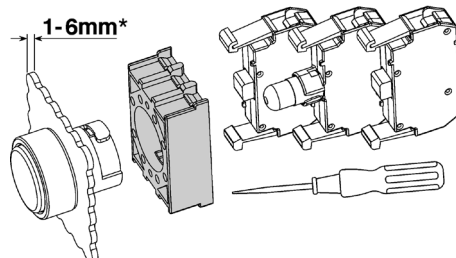


Connector B3M

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

Contact blocks, RAST 5 terminals (note coding)



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



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



max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)		X1 X2	B3F	10	0,012
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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 = / 1 mA and for difficult ambient conditions.

Lamps

Socket BA9s
Lamp voltage

Type

Pack
pcs.

Weight
kg/pc.

LED lamps ^{2) 3)} (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 ³⁾



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

Glow-discharge lamps ³⁾



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 Thickness 1mm grey	B3-SK GE B3-SK GR	1 1	0,04 0,04
Protection ring with thread	against unintentional manipulation has to be mounted instead of the existing ring	P921-1	1	0,012

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

2) Suitable for B3FT lamp test holders.

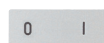
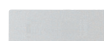
3) Ambient temperatures on request.

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

Marking 1 or 2 lines



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



marking	Type	marking	Type	Pack pcs.	Weight kg/pc.
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 Markings

Codes 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-..		-	

Actuator Caps with text, the Suffix must be completed with the colour code



Marking	Suffix for Marking	Marking	Suffix for Marking	Pack pcs.	Weight kg/pc.
START	...-START	NOT AUS	...-NOT-AUS	10	0,001
EIN	...-EIN	STOP	...-STOP	10	0,001
		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 ISO 7000, the Suffix must be completed with the colour code

Symbol	Suffix for Marking	ISO 7000 reference no.	Symbol	Suffix for Marking	ISO 7000 reference no.	Pack pcs.	Weight kg/pc.
	...-100	-		...-101	-	10	0,001
	...-102	-		...-103	-	10	0,001
	...-200	0011		...-201	0244	10	0,001
	...-202	-		...-203	-	10	0,001
	...-204	0355		...-205	-	10	0,001
	...-300	-		...-301	-	10	0,001
	...-302	-		...-303	-	10	0,001
	...-304	-		...-305	0259	10	0,001
	...-306	-		...-307	-	10	0,001
	...-400	-		...-401	0018	10	0,001
	...-402	0019		...-403	0020	10	0,001
	...-404	0021		...-405	0022	10	0,001
	...-406	0023		...-407	0910	10	0,001
	...-408	-		...-409	0096	10	0,001
	...-410	0017		...-411	0033	10	0,001
	...-412	0032		...-413	-	10	0,001

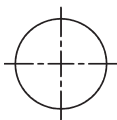
Actuators and Lens Caps 30mm IP67 (IP65)

Push Buttons



→ page 341

Mounting hole
Ø 30,5mm



Connectors

Contacts Lamp Holder



IP65

→ page 342,
343

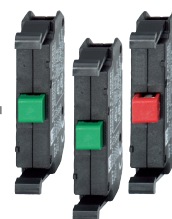
EMERGENCY STOP Buttons



→ page 341



→ page 341



Actuator insert
→ page 344

Illuminated Operators



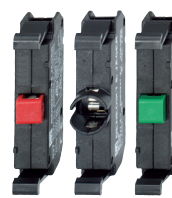
→ page 342



→ page 345



Thickness
0,5 - 3 mm
→ page 344



→ page 344

Lens Caps



→ page 343

Wrench
J7049



LED
24-230V



Filament
6-130V



Glow-discharge
230V

→ page 345

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
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EMERGENCY STOP Push Buttons, Ø 28mm, release by turning, with yellow ring



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

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



red	0	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
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



Swing

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

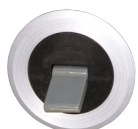
BS5KL6

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

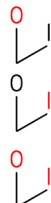


B3SAR 0



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

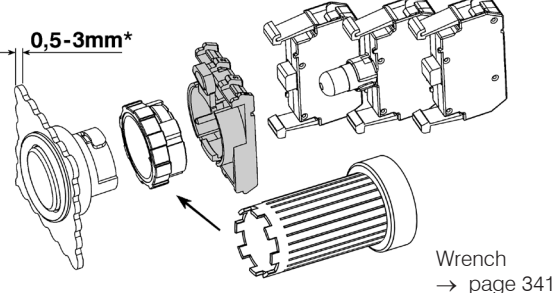
BC5R WS

10

0,029

Connectors

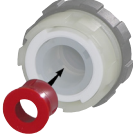
Specification	Description	Type	Pack pcs.	Weight kg/pc.
Connector B3S		B3S	10	0,013



*) 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.
Contact blocks				
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

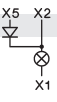
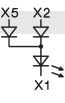


Lamp holders, socket BA9s

max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)	 B3F	10	0,012
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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) 3)} (6 years middle lifetime, for equivalent lens caps only)



Socket BA9s Lamp voltage	Power consumption		Type	Pack pcs.	Weight kg/pc.
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 ³⁾



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

Glow-discharge lamps ³⁾



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 holders.

3) Ambient temperatures on request.

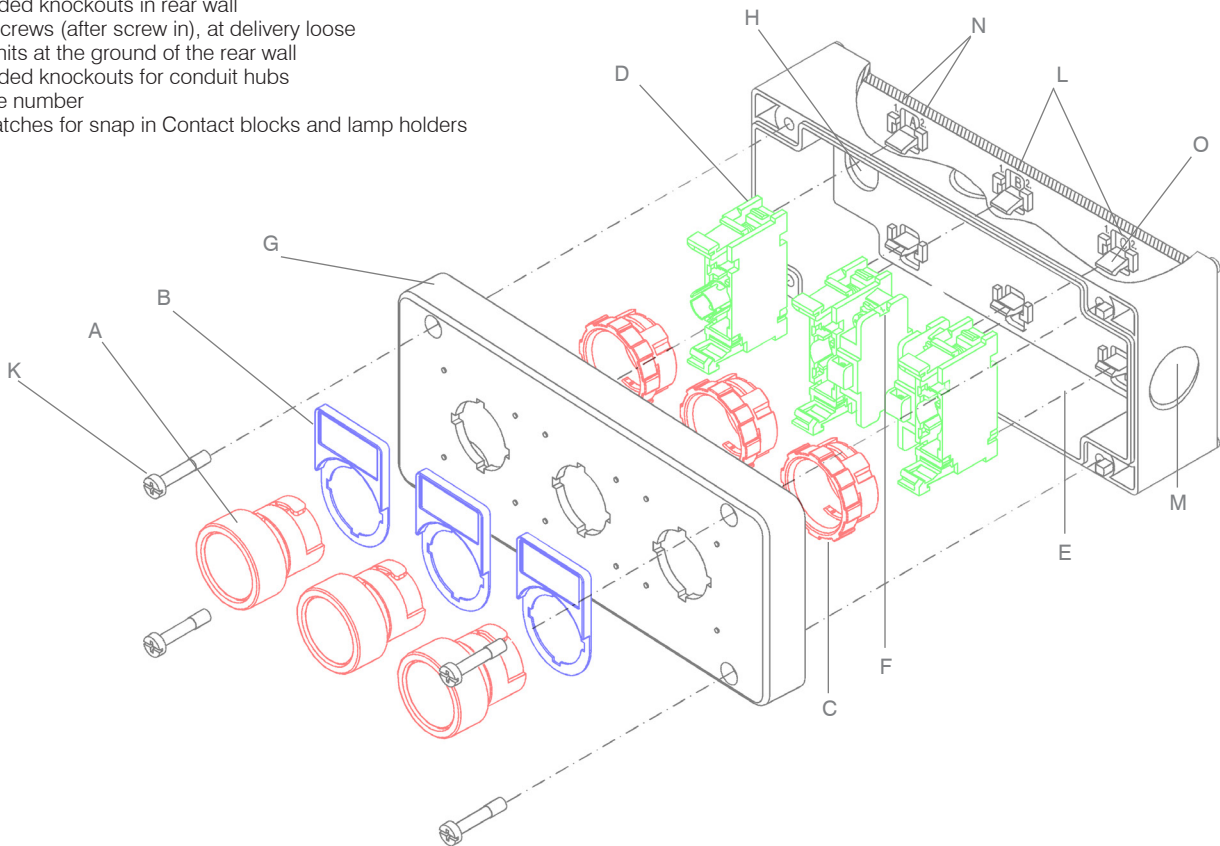
Accessories



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

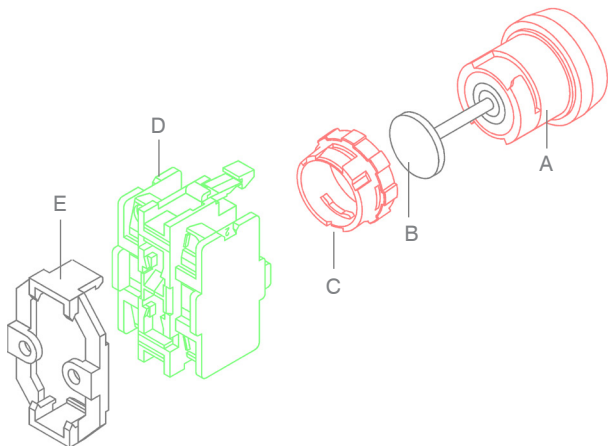
Assembled Stations BG.. IP67 Type 12

- 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



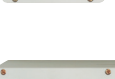
Mounting Plate for base and DIN-rail mounting of contact blocks



Mounting Plate	for base and DIN-rail mounting of contact blocks and lamp holders	B4U	10	0,010
Ring and Nut	for mounting former actuators and lens caps	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.
Plastic enclosed buttons and Pilot Lights					
	ON push button green		BG10 GN	1	0,135
		14 — 13			
	OFF push button red		BG10 RT	1	0,135
		22 — 21			
	Pilot light green	X2 — ⊗ — X1	BG01 GN	1	0,135
	Pilot light red		BG01 RT	1	0,135
	Key operated 0 - I ¹⁾ lock Ronis R455 60° maintained		BG10SAR 0	1	0,165
		14 — 13			
	Key operated I - 0 - II ¹⁾ lock Ronis R455 60° maintained		BG10SARR 0	1	0,172
		14 — 13 24 — 23			
	2 push buttons 0 - I		BG20	1	0,200
		22 — 21 14 — 13			
	2 push buttons ← →		BG20PF	1	0,200
		14 — 13 14 — 13 22 — 21 22 — 21			
	3 push buttons ← 0 →		BG30PF	1	0,283
		14 — 13 22 — 21 14 — 13 22 — 21 22 — 21			
	3 push buttons I - 0 - II		BG30	1	0,283
		14 — 13 22 — 21 14 — 13 22 — 21 22 — 21			
	2 push buttons 0 - I with pilot light green		BG21 GN	1	0,270
		X2 — ⊗ — X1 22 — 21 14 — 13			
	Foot and palm button mushroom Ø70mm		BG10P14P GR	1	0,187
		14 — 13 22 — 21			

Plastic enclosed EMERGENCY STOP buttons

	EMERGENCY STOP button head Ø40mm unlock by turning		BG10P34-11	1	0,145
		14 — 13 22 — 21			
	EMERGENCY STOP mushroom button Ø40mm according to EN ISO 13850 unlock by pull		BG10P44-11	1	0,145
		14 — 13 22 — 21			
	EMERGENCY STOP key operated button Ø40mm according to EN ISO 13850 unlock by key		BG10P44S3-11	1	0,178
		14 — 13 22 — 21			
	EMERGENCY STOP mushroom button Ø70mm unlock by turning		BG10P34P-11	1	0,187
		14 — 13 22 — 21			

1) IP65

Enclosures BG.. IP67, Type 12

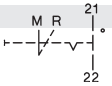
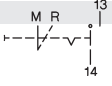
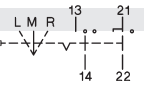
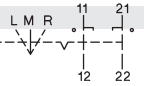
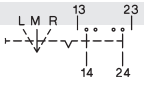


Number of units	Description	Type	Pack pcs.	Weight kg/pc.
1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
1 yellow	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1 GE	1	0,108
2	3 knockouts Ø20,5mm (M20 or PG13,5)	BG2	1	0,145
3	3 knockouts Ø20,5mm (M20 or PG13,5)	BG3	1	0,188

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

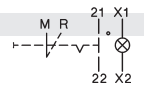
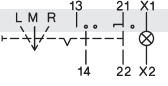
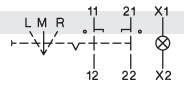
Contact blocks for enclosures BG..



Contacts	Lamp voltage	Wiring diagram	actuators with 2 or 3 switch positions	Type	Pack pcs.	Weight kg/pc.
1NC ¹⁾ 				B4TU01	10	0,015
1NO 				B4TU10	10	0,015
1NO+1NC ¹⁾ 				B4TU11	10	0,022
2NC ¹⁾ 				B4TU02	10	0,022
2NO 				B4TU20	10	0,022

Contact blocks with lamp holder, socket BA9s for LED or lamps, for enclosures BG.., lamps see page 347



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

Lamp holder, socket BA9s for LED or lamps, lamps see page 345

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

Accessories for Plastic enclosed buttons



		Type	Pack pcs.	Weight kg/pc.
Wrench	for mounting of actuators	J7049	1	0,018
	and lens caps B(S)3..			
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

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



self adjusting pin, for B(S, C)3D.. 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	Colour code
10								01		 NO Green NC Red
20		11						02		
30		21		12				03		
40		31		22		13		04		

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

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

Type		B3., B4., B5.
Protection degree (according to IEC 947-1) in assembled state, from the front from rear		IP67/IP65 IP20/IP00
Ambient temperature		
Operation	open °C	-40 to +60 ³⁾
	enclosed °C	-40 to +40
Storage	°C	-50 to +90
Cable cross-section		
	solid, 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	USA, Canada UL	Europe	Register of Shipping	CENELEC CB-Certificates
Type			Great Britain LRS	
B3T..	o	o	-	o
B3F..	o	o	-	o
B4TU..	o	o	o	o
B4T..UF	o	o	o	o
B4FU..	o	o	o	o
B3-MB..	-	o	-	-

o In standard version approved

- Not provided for test till now

1) Suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $U_{mp} = 6kV$.

Data for other conditions on request.

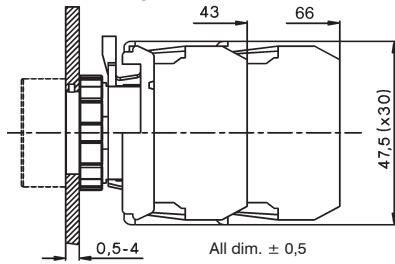
2) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{mp} = 4kV$

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

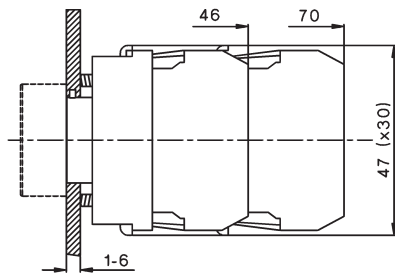
Dimensions

Actuators and Lens Caps 22mm

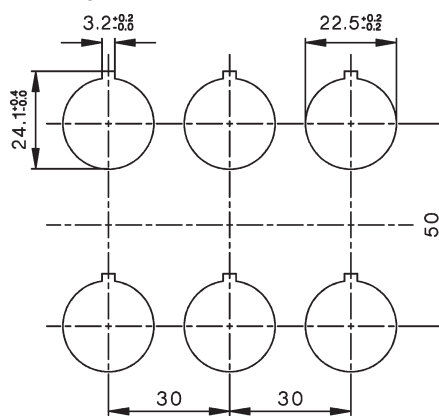
Panel mounting B3S



Panel mounting B3M

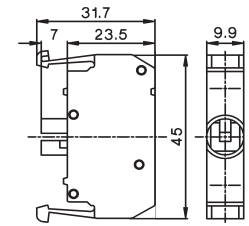


Mounting holes



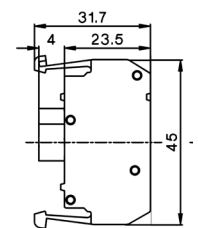
Dimensions of minimum space requirements according to IEC. Take to consideration the field of traverse of swing knobs (27mm) and the diameter of mushroom heads.

Contact blocks and Lamp Holder B3...



All dim. ± 0,2

Contact block B3T...



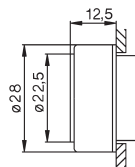
All dim. ± 0,2

Actuators and Lens caps

Flush Head

Illuminated Flush Head

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

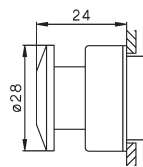


All dim. ± 0,5

Mushroom Head Ø28mm

Emergency Stop Ø28mm

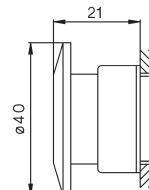
B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3



Mushroom Head Ø40mm

Emergency Stop Ø40mm

B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34

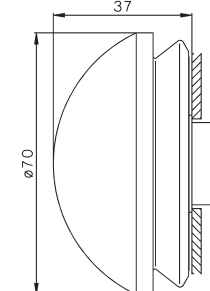


All dim. ± 0,5

Mushroom Head Ø70mm

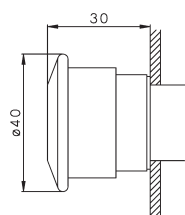
Emergency Stop Ø70mm

BS3P14P
BS3P34P



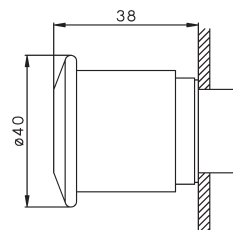
Push-and pull button Ø40mm

BS3P44



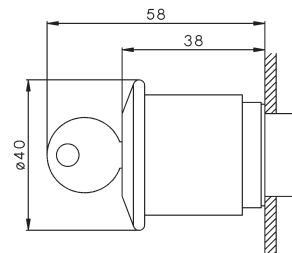
Push-and pull button Ø40mm

BS3P45



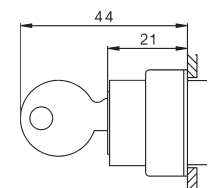
Push-and pull button Ø40mm with key

BS3P44S3



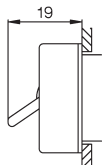
Lockable Push button

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



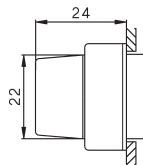
Toggle

B3E
BS3E
BC3E



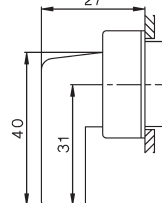
Rotary Knob

B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL



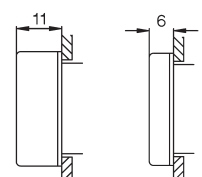
Swing Knob

B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN



Lens Cap

B3R(F) B3RN



Dimensions

Actuators and Lens Caps 22mm

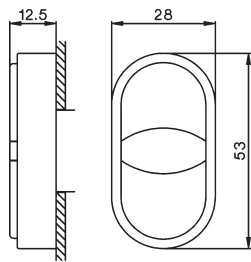
Double push button

Monoblock Multi-LED

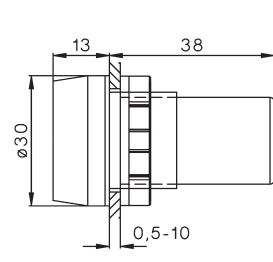
Protection cover

Protection ring w. thread

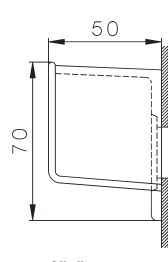
B3DT



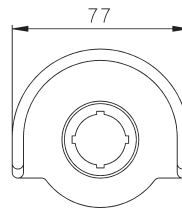
B3-MB...



B3-SK ..

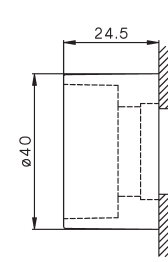


All dim. $\pm 0,5$



All dim. $\pm 0,5$

P921-.



Label holder

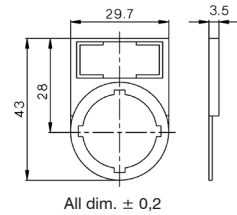
Legend plate

Label holder

Label holder

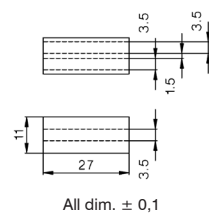
Legend plate

P751



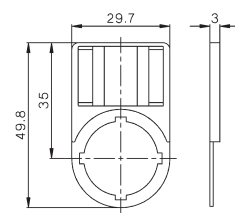
All dim. $\pm 0,2$

BK4-...

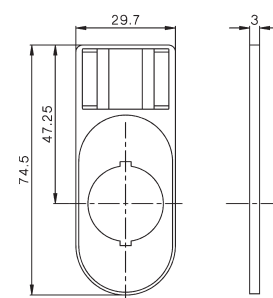


All dim. $\pm 0,1$

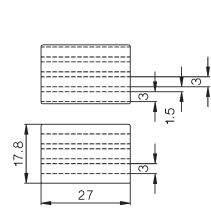
P761



P761-DT



BK8-...

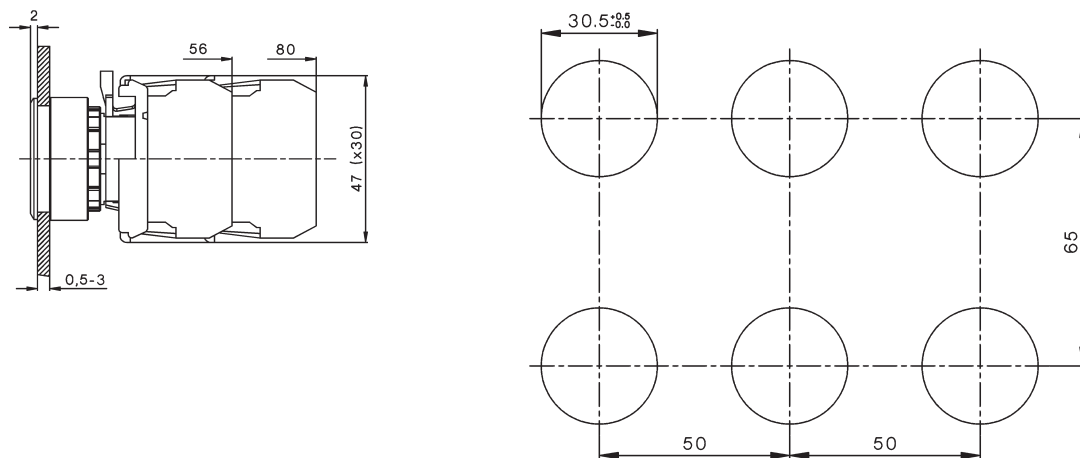


Dimensions

Actuators and Lens Caps 30mm

Panel mounting B3S

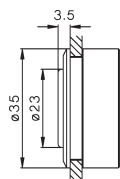
Mounting holes



Actuators and Lens caps

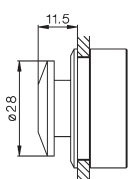
Flush Head
Illuminated Flush Head

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



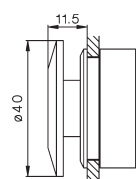
Mushroom Head Ø28mm
Emergency Stop Ø28mm

B5P1 to B5P3
BS5P1 to BS5P3



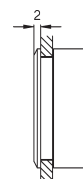
Mushroom Head Ø40mm
Emergency Stop Ø40mm

B5P14, B5P34
BS5P14, BS5P34



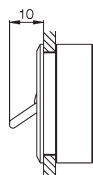
Lens Cap

B5RF



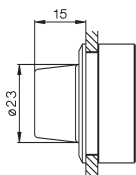
Toggle

B5E
BS5E



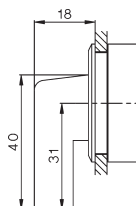
Rotary Knob

B5KN, B5KL
BS5KN, BS5KL



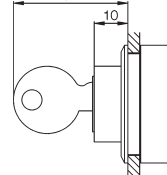
Swing Knob

B5KRL, B5KRN
BS5KRL, BS5KRN



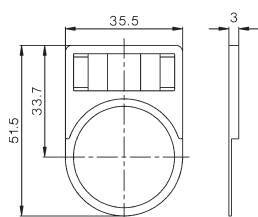
Lockable Push button

B5SAR., B5SAT.
BS5SAR., BS5SAT.



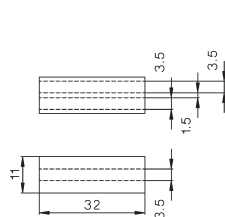
Label holder

P942-1



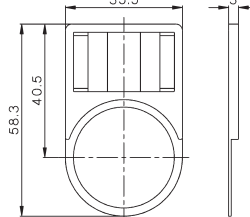
Legend plate

BK5-...



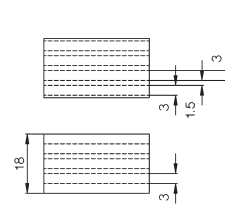
Label holder

P1043



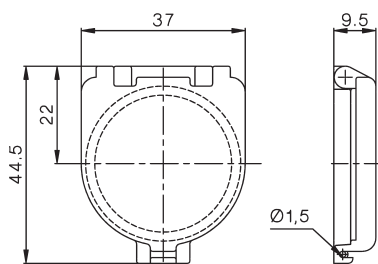
Legend plate

BK10-..

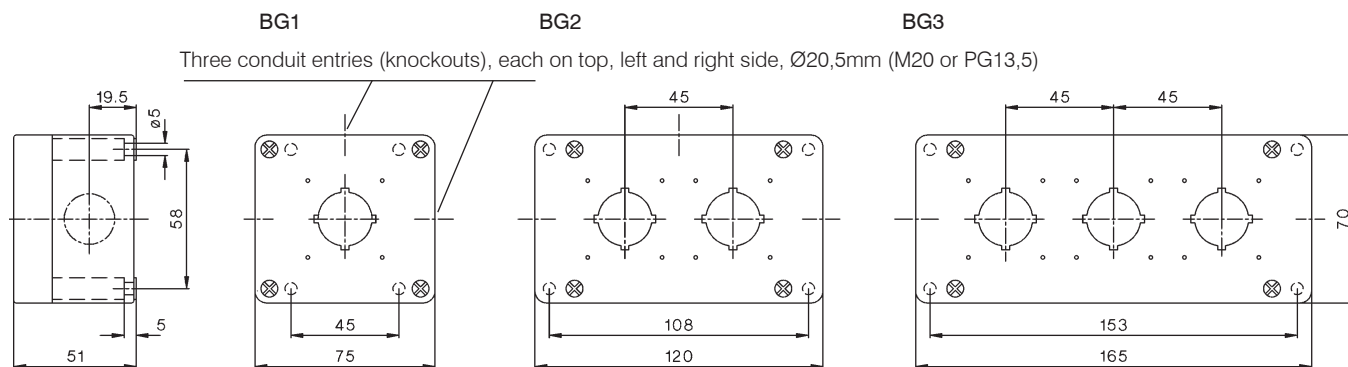


Dimensions

Protective Cover
B5-SAP

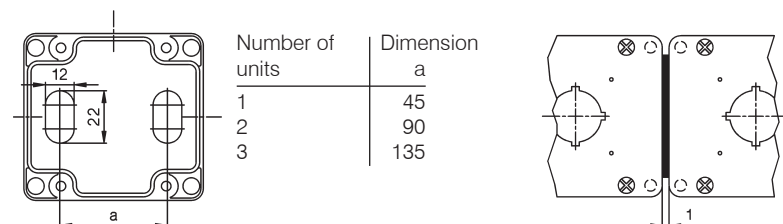


Enclosures for Custom Built Stations



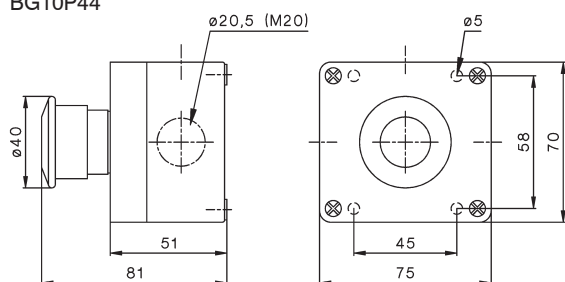
Conduit entries in the bottom
(knockouts)

Coupled Enclosures
B4-8852



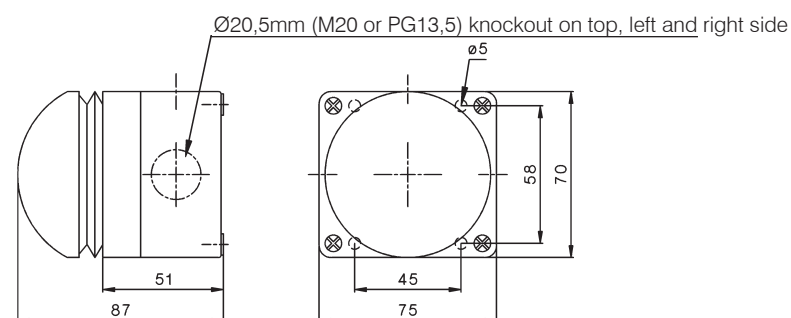
EMERGENCY STOP Push Button Ø40 mm

BG10P44



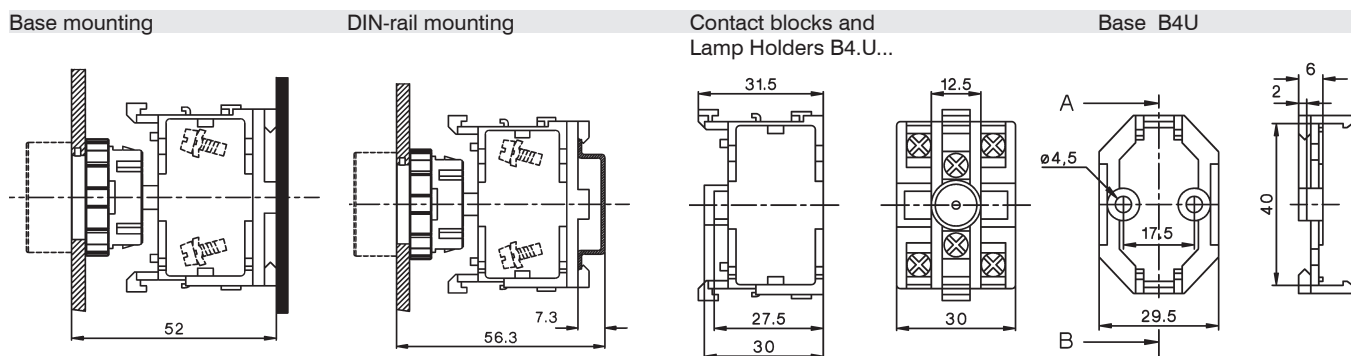
EMERGENCY STOP Push Button Ø70 mm, Foot switch

BG10P34P, BG10P14P



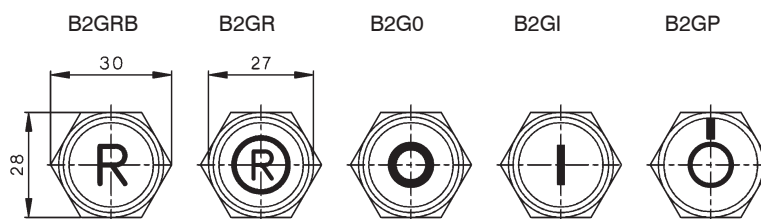
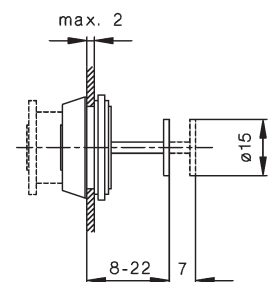
Dimensions

Actuators 22mm

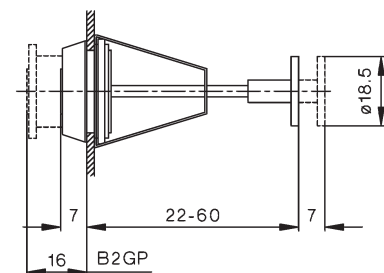


Push buttons for enclosures

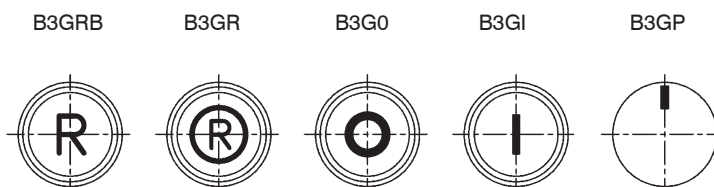
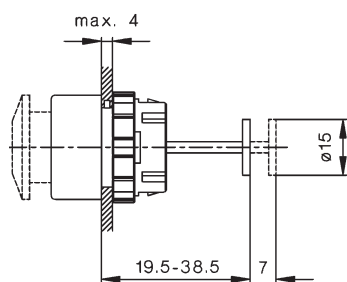
B2G...-22



B2G...-60



B3G...-31,5



B3G...-60

