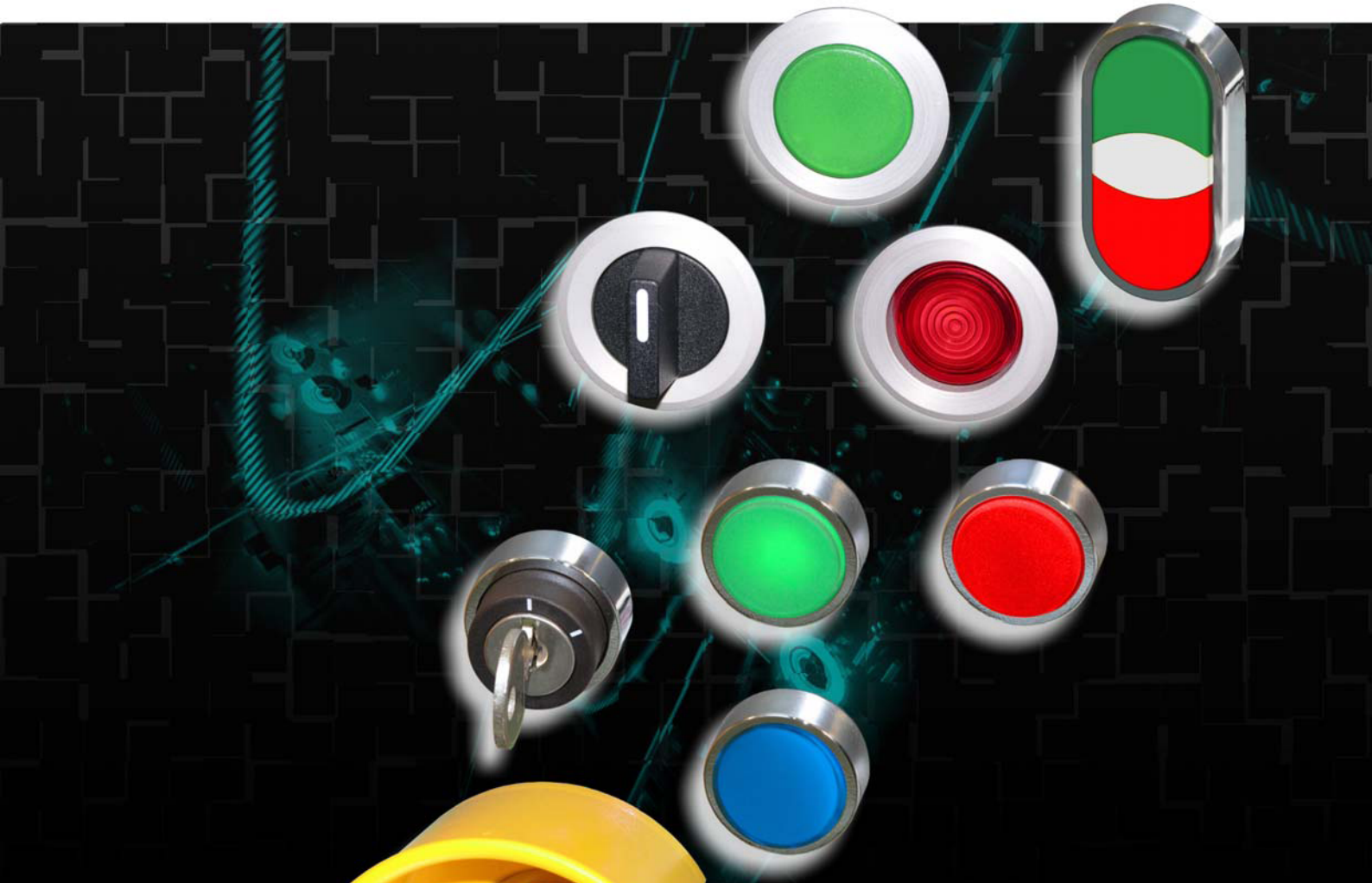





Push Buttons



	Program B3	2	
	Ø 22,5mm		
			Push Buttons 3
			EMERGENCY STOP Buttons 4
			Key Operated Rotary Switches 4
			Rotary Knobs and Swing Knobs 5
			Illuminated Rotary Knobs and Swing Knobs 5
			Illuminated Push Buttons 6
			Double Push Buttons 6
			Lens Caps 7
			Monoblock-Multi-LED 7
			Connector 8
			Insert Actuator 8
			Contact Blocks and Lamp Holders 8
			Lamps, LED Lamps 9
			Accessories 9
			Label Holder, Legend Plates, Actuator Cap 10, 11
			Connector 12
			Contact Blocks and Lamp Holders 12
			Lamps, Accessories 13
	Units for Surface Mounting		
	Assembled Units IP65		15
	Enclosures BG..		16
	Contact Blocks and Lamp Holders for Enclosures BG..		16
	Push Buttons for Enclosures		18
	Extensions for Push Buttons		18
	Technical Data, Approvals		19
	Dimensions		20-24

Actuators and Lens Caps 22mm IP67 (IP65),  Type12

Push Buttons



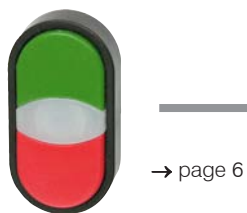
EMERGENCY STOP Buttons



Illuminated Operators



Double Push Buttons with Indicator Lamp IP65



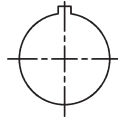
Lens Caps



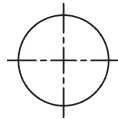
→ page 7

Mounting hole
Ø 22,5mm

with key way



without key way



→ page 4



→ page 10

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



Connectors

Thickness
0,5 - 4 mm
→ page 8

or



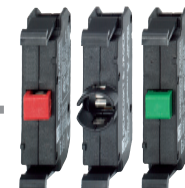
Thickness
1 - 6 mm
→ page 8



Connectors
Lamp Holders



Actuator insert
→ page 8



→ page 8



LED
24-230V



Filament
6-130V



Glow-discharge
230V
→ page 9

Actuators 22mm IP67, Type12

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

Push Buttons, Actuator Caps markable



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
green	I		B3D GN-I	BS3D GN-I	BC3D GN-I	10	0,014
green	II		B3D GN-II	BS3D GN-II	BC3D GN-II	10	0,014
green	→		B3D GN-PF	BS3D GN-PF	BC3D GN-PF	10	0,014
yellow			B3D GE	BS3D GE	BC3D GE	10	0,014
blue			B3D BL	BS3D BL	BC3D BL	10	0,014
weiß			B3D WS	BS3D WS	BC3D WS	10	0,014
black			B3D SW	BS3D SW	BC3D SW	10	0,014
black	→		B3D SW-PF	BS3D SW-PF	BC3D SW-PF	10	0,014

Push Buttons, Maintained, Actuator Caps markable



red			B3DR RT	BS3DR RT	BC3DR RT	10	0,014
green			B3DR GN	BS3DR GN	BC3DR GN	10	0,014
yellow			B3DR GE	BS3DR GE	BC3DR GE	10	0,014
blue			B3DR BL	BS3DR BL	BC3DR BL	10	0,014
weiß			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, Type12

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

EMERGENCY STOP Push Buttons, according to EN418, push to trip, pull to release Ø40mm



red	26mm	BS3P44 RT	BS3P44 RT	BS3P44 RT	10	0,028
red	38mm	BS3P45 RT	BS3P45 RT	BS3P45 RT	10	0,028

EMERGENCY STOP Push Buttons, according to EN418, release by key, Ø40mm



red	38mm	BS3P44S3	BS3P44S3	BS3P44S3	1	0,050
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Spare Key

lock Ronis R455	B4-R455	1	0,0077
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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

EMERGENCY STOP Push Buttons, release by turning, Ø40mm



red	0	B3P34 RT-0	BS3P34 RT-0	BC3P34 RT-0	10	0,020
red illuminated		B3P34L RT	BS3P34L RT	BC3P34L RT	10	0,020

EMERGENCY STOP Push Buttons, release by turning, Ø70mm



red		BS3P34P RT	BS3P34P RT	BS3P34P RT	1	0,062
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Type

Pack Weight pcs. kg/pc.

Yellow Disk Ø70mm, Thickness 1mm



neutral	B3-7603	1	0,004
with marking NOT-AUS	B3-7603-1	1	0,004
with marking EMERGENCY STOP	B3-7603-2	1	0,004
2-side markings: NOT-AUS / EMERGENCY STOP	B3-7603-12	1	0,004
2-side markings: ARRET D`URGENCE / NØDSTOP	B3-7603-34	1	0,004
2-side markings: ARRET D`URGENCE / NOODSTOP	B3-7603-35	1	0,004

Protection cover against unintentional manipulation, Thickness 1mm



for Push Buttons Ø28mm and Ø40mm yellow	B3-SK GE	1	0,04
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Actuators 22mm Type12

Ring	Knob	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
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Rotary Knobs and Swing Knobs, black IP65



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

Illuminated Rotary Knobs and Swing Knobs, clear IP67, lamp max. 1,2W, lamps see page 13



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

Toggle IP65



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

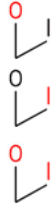
Ring	key removeable in				Pack Weight pcs. kg/pc.
		Alu	Black	Chrome	

Key Operated Rotary Switch 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

pcs. kg/pc.

Illuminated Push Buttons IP67, lamp max. 1,9W, lamps see page 13



red
green
yellow

B3DL RT
B3DL GN
B3DL GE

BS3DL RT
BS3DL GN
BS3DL GE

BC3DL RT
BC3DL GN
BC3DL GE

10 0,014
10 0,014
10 0,014

blue
white

B3DL BL
B3DL WS

BS3DL BL
BS3DL WS

BC3DL BL
BC3DL WS

10 0,014
10 0,014

Illuminated Push Buttons, Maintained IP67, lamp max. 1,9W, lamps see page 13



red
green
yellow

B3DLR RT
B3DLR GN
B3DLR GE

BS3DLR RT
BS3DLR GN
BS3DLR GE

BC3DLR RT
BC3DLR GN
BC3DLR GE

10 0,014
10 0,014
10 0,014

blue
white

B3DLR BL
B3DLR WS

BS3DLR BL
BS3DLR WS

BC3DLR BL
BC3DLR WS

10 0,014
10 0,014

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



green
red

B3DT G/R 1)

BS3DT G/R

BC3DT G/R

10 0,016

white
black

B3DT W/S 1)

BS3DT W/S

BC3DT W/S

10 0,016

green
red

I
0

B3DT GI/RO 1)

BS3DT GI/RO

BC3DT GI/RO

10 0,016

white
black

I
0

B3DT WI/SO 1)

BS3DT WI/SO

BC3DT WI/SO

10 0,016

with non-standard marking on request

1) Plastic ring in alu design

suitable for Alu, Black and Chrome

Colour	Type	Pack	Weight
		pcs.	kg/pc.

Lens Caps IP67 with fresnel lens, lamp max. 1,9W, lamps see page 13



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

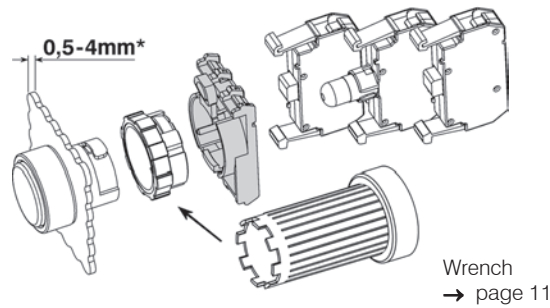
Lens Caps IP67, lamp max. 1,9W, lamps see page 13



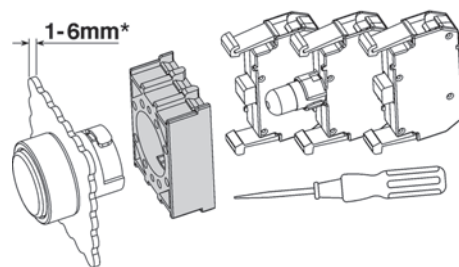
red	B3RF RT	10	0,009
green	B3RF GN	10	0,009
yellow	B3RF GE	10	0,009
blue	B3RF BL	10	0,009
white	B3RF WS	10	0,009

Connectors

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



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

Contact Blocks and Lamp Holders for Panel Mounting

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



max. 690V AC	1 NC	21 22	B3T01 ²⁾	10	0,010
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max. 690V AC	1 NO	13 14	B3T10 ²⁾	10	0,010
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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 (take care for 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 lamps max. 1,7W (active power consumption)	X5 X2 X1	B3FT	10	0,020
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1) NC contact has a positive opening according to IEC/EN 60947-5-1

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

Lamps

	Socket BA9s Lamp voltage	Power consumption		Type	Pack pcs.	Weight kg/pc.
LED lamps ²⁾ 10 years lifetime						
	20-30V AC/DC	17mA / 0,4W	for red lens caps	B3-L24 RTB	10	0,005
	20-30V AC/DC	17mA / 0,4W	for green lens caps	B3-L24 GNB	10	0,005
	20-30V AC/DC	17mA / 0,4W	for yellow lens caps	B3-L24 GEB	10	0,005
	20-30V AC/DC	17mA / 0,4W	for blue lens caps	B3-L24 BLB	10	0,005
	20-30V AC/DC	17mA / 0,4W	for white lens caps	B3-L24 WSB	10	0,005
	90-120V AC/DC	7mA / 0,8W	for red lens caps	B3-L110 RTB	10	0,005
90-120V AC/DC	7mA / 0,8W	for green lens caps	B3-L110 GNB	10	0,005	
90-120V AC/DC	7mA / 0,8W	for yellow lens caps	B3-L110 GEB	10	0,005	
	90-120V AC/DC	7mA / 0,8W	for blue lens caps	B3-L110 BLB	10	0,005
	90-120V AC/DC	7mA / 0,8W	for white lens caps	B3-L110 WSB	10	0,005
	200-250V AC/DC	4mA / 0,9W	for red lens caps	B3-L230 RTB	10	0,005
	200-250V AC/DC	4mA / 0,9W	for green lens caps	B3-L230 GNB	10	0,005
	200-250V AC/DC	4mA / 0,9W	for yellow lens caps	B3-L230 GEB	10	0,005
	200-250V AC/DC	4mA / 0,9W	for blue lens caps	B3-L230 BLB	10	0,005
200-250V AC/DC	4mA / 0,9W	for white lens caps	B3-L230 WSB	10	0,005	

Filament lamps

12V	1,2W	for all lens caps	B4-G12	50	0,005
24V	1,2W	for all lens caps	B4-G24	50	0,005
42V	1,2W	for all lens caps	B4-G42	50	0,005
48V	1,2W	for all lens caps	B4-G48	50	0,005
60V	1,2W	for all lens caps	B4-G60	50	0,005
110/120V ¹⁾	1,5/1,8W	for all lens caps	B4-G130	50	0,005

Glow-discharge lamps



220-250V AC	0,3W	for clear, red, yellow lens caps	B4-GL230K	100	0,005
220-250V AC	0,3W	for green, blue lens caps	B4-GL230G	100	0,005

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


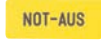


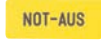


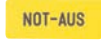


2) suitable for B3FT lamp test lamp holders

Accessories



			Type	VPE Stk.	Gewicht kg/Stk.
Wrench	for mounting of actuators and lens caps B(S)3..		J7049	1	0,018
Marking plate	for marking of contact blocks B3T. and lamp holders B3F		P672-1	10	0,001
Lamp Installer	used to install or replace lamps BA9s		B4-7408	1	0,010
Spare Key	for B(S)3SA.. and BS3P44S3, Ronis R455		B4-R455	1	0,007
	for B(S)3SB.., Ronis R786		B4-R786	1	0,007
Hole Plug	black, for fixing holes Ø22,5mm		B3-DU SW	10	0,007
	grey		B3-DU GR	10	0,007
Sealing Cover	protection against coarse contamination	ambient temp. 0° - +50° C	P279-1	1	0,003
		petrol-resistant, <i>not for B3D..R.. (maintained)</i> ambient temp. -25° - +55° C	P279-3	1	0,003
		for double push buttons, petrol-resistant ambient temp. -25° - +55° 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	P921-1	1	0,012
		chrome	P921-2	1	0,012
		alu	P921-3	1	0,012

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

				Type	Pack pcs.	Weight kg/pc.																																																																																																																																																																																																																																														
Marking 1 or 2 lines																																																																																																																																																																																																																																																				
	Label holder for legend plate BK4, black, Thikness 0,8mm				100	0,002																																																																																																																																																																																																																																														
	Label holder for legend plate BK4, yellow, Thikness 0,8mm				10	0,002																																																																																																																																																																																																																																														
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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, Thikness 0,8mm				P761	10	0,002	Label holder for legend plate BK8, yellow, Thikness 0,8mm				P761-3	10	0,002	Label holder for BK8, for double push buttons only				P761-DT	10	0,002	Legend plate BK8 with for label holder P761 (with marking e. g.: BK8-WATER-PUMP-START)							Legend plate without marking				BK8-9736	10	0,0004	Text 3 lines, max. 3 x 11 letters, letter height 3mm				BK8-...-...-...	10	0,0004	Text 4 lines, max. 4 x 11 letters, letter height 3mm				BK8-...-...-...-...	10	0,0004
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Actuator Caps

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

Actuator Caps with markings, the Type must be completed with the code for colours (see below)



START	DK(L) ..-START	NOT AUS	DK(L) ..-NOT-AUS	10	0,001
EIN	DK(L) ..-EIN	STOP	DK(L) ..-STOP	10	0,001
		AUS	DK(L) ..-AUS	10	0,001
BETRIEB	DK(L) ..-BETRIEB	STÖRUNG	DK(L) ..-STÖRUNG	10	0,001
ANLAUF	DK(L) ..-ANLAUF	HALT	DK(L) ..-HALT	10	0,001
VOR	DK(L) ..-VOR	ZURÜCK	DK(L) ..-ZURÜCK	10	0,001
HEBEN	DK(L) ..-HEBEN	SENKEN	DK(L) ..-SENKEN	10	0,001
LINKS	DK(L) ..-LINKS	RECHTS	DK(L) ..-RECHTS	10	0,001
MEHR	DK(L) ..-MEHR	WENIGER	DK(L) ..-WENIGER	10	0,001
SCHNELL	DK(L) ..-SCHNELL	LANGSAM	DK(L) ..-LANGSAM	10	0,001
HELLER	DK(L) ..-HELLER	DUNKLER	DK(L) ..-DUNKLER	10	0,001
AUF	DK(L) ..-AUF	ZU	DK(L) ..-ZU	10	0,001
AB	DK(L) ..-AB	LAUF	DK(L) ..-LAUF	10	0,001
EILGANG	DK(L) ..-EILGANG	TIPPEN	DK(L) ..-TIPPEN	10	0,001

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

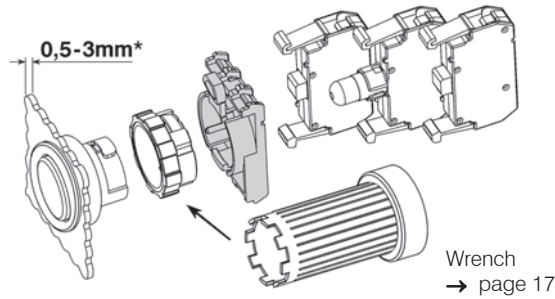
	DK(L) ..-100		DK(L) ..-101	10	0,001
	DK(L) ..-102		DK(L) ..-103	10	0,001
	DK(L) ..-200		DK(L) ..-201	10	0,001
	DK(L) ..-202		DK(L) ..-203	10	0,001
	DK(L) ..-204		DK(L) ..-205	10	0,001
	DK(L) ..-300		DK(L) ..-301	10	0,001
	DK(L) ..-302		DK(L) ..-303	10	0,001
	DK(L) ..-304		DK(L) ..-305	10	0,001
	DK(L)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

Code for colours

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

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.
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Contact blocks



max. 690V AC	1 NC (→)	21 ├──┤ 22	B3T01 ²⁾	10	0,010
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max. 690V AC	1 NO	13 ├──┤ 14	B3T10 ²⁾	10	0,010
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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 (take care for 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 lamps max. 1,7W (active power consumption)	x5 ├──┤ x2 ⊗ x1	B3FT	10	0,020
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1) (→) NC contact has a positive opening according to IEC/EN 60947-5-1

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

Lamps

LED lamps ²⁾ 10 years lifetime



20-30V AC/DC	17mA / 0,4W	for red lens caps	B3-L24 RTB	10	0,005
20-30V AC/DC	17mA / 0,4W	for green lens caps	B3-L24 GNB	10	0,005
20-30V AC/DC	17mA / 0,4W	for yellow lens caps	B3-L24 GEB	10	0,005
20-30V AC/DC	17mA / 0,4W	for blue lens caps	B3-L24 BLB	10	0,005
20-30V AC/DC	17mA / 0,4W	for white lens caps	B3-L24 WSB	10	0,005
90-120V AC/DC	7mA / 0,8W	for red lens caps	B3-L110 RTB	10	0,005
90-120V AC/DC	7mA / 0,8W	for green lens caps	B3-L110 GNB	10	0,005
90-120V AC/DC	7mA / 0,8W	for yellow lens caps	B3-L110 GEB	10	0,005
90-120V AC/DC	7mA / 0,8W	for blue lens caps	B3-L110 BLB	10	0,005
90-120V AC/DC	7mA / 0,8W	for white lens caps	B3-L110 WSB	10	0,005
200-250V AC/DC	4mA / 0,9W	for red lens caps	B3-L230 RTB	10	0,005
200-250V AC/DC	4mA / 0,9W	for green lens caps	B3-L230 GNB	10	0,005
200-250V AC/DC	4mA / 0,9W	for yellow lens caps	B3-L230 GEB	10	0,005
200-250V AC/DC	4mA / 0,9W	for blue lens caps	B3-L230 BLB	10	0,005
200-250V AC/DC	4mA / 0,9W	for white lens caps	B3-L230 WSB	10	0,005

Filament lamps



12V	1,2W	for all lens caps	B4-G12	50	0,005
24V	1,2W	for all lens caps	B4-G24	50	0,005
42V	1,2W	for all lens caps	B4-G42	50	0,005
48V	1,2W	for all lens caps	B4-G48	50	0,005
60V	1,2W	for all lens caps	B4-G60	50	0,005
110/120V ¹⁾	1,5/1,8W	for all lens caps	B4-G130	50	0,005

Glow-discharge lamps



220-250V AC	0,3W	for clear, red, yellow lens caps	B4-GL230K	100	0,005
220-250V AC	0,3W	for green, blue lens caps	B4-GL230G	100	0,005

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

2) suitable for B3FT lamp test lamp holders

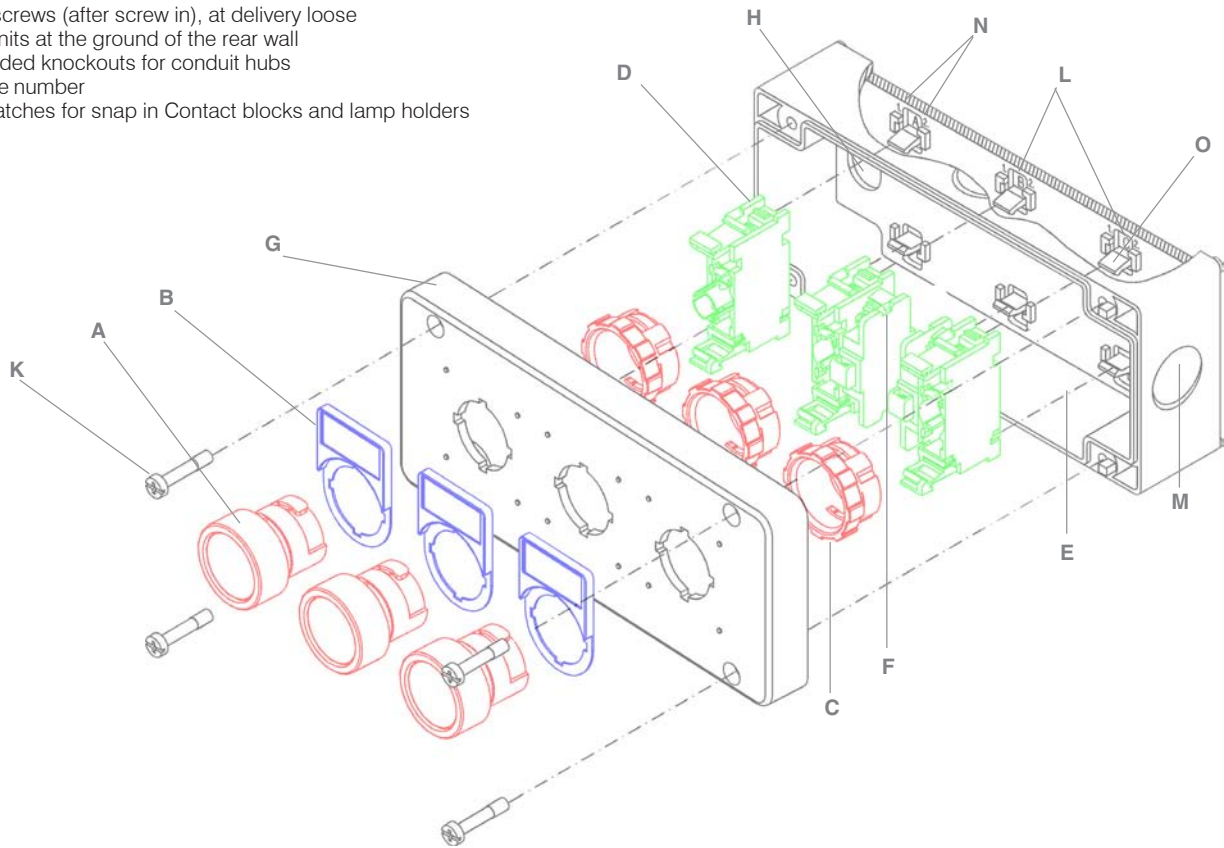
Accessories



		Type	VPE Stk.	Gewicht kg/Stk.
Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018
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	P942-1	10	0,002
Legend plate	alu without marking Text 1 or 2 lines, max. 4 x 13 letters, letter height 3mm	BK5-11374	10	0,002
Adapter	to convert actuator Actuators 22mm to 30mm			
	alu	B5	10	0,017
	black	BS5	10	0,017
	chrome	BC5	10	0,017

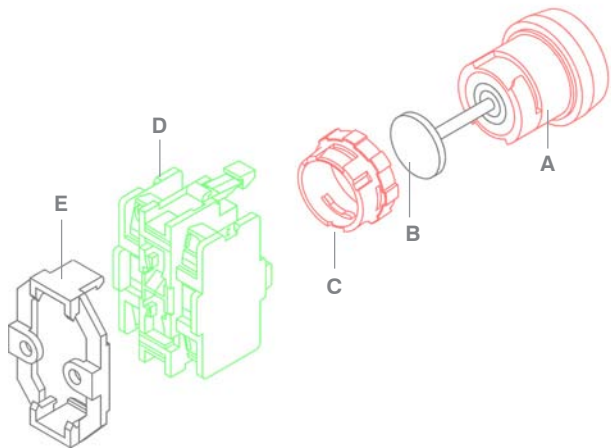
Assembled Stations BG.. IP67 Type12

- A Actuators or Lens caps, see page 3 - 6
- B Legend plates with label holder
- C Ring and nut (included with actuator or lens cap)
- D Contact blocks and lamp holders, see page 20
- 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 3 - 6, Ø 30mm see page 13 - 15
- B Extension B4V...
- C Ring and nut (included with actuator or lens cap)
- D Contact block B4.. see page 20
- E Base B4U for base and DIN-rail mounting of contact blocks



Type

Pack Weight
pcs. kg/pc.













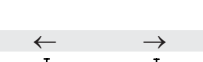
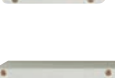
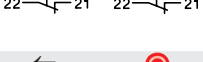



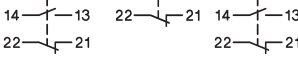

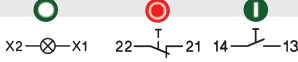










Mounting Plate for base and DIN-rail mounting of contact blocks



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

Assembled Stations IP67 (IP65) Typ12

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

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

1) IP65

Enclosures BG.. IP67, Type12





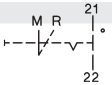

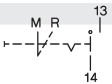


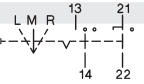


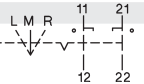

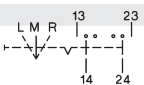
Number of units	Description	Type	Pack pcs.	Weight kg/pc.
1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
2	3 knockouts Ø20,5mm (M20 or PG13,5)	BG2	1	0,145
3	3 knockouts Ø20,5mm (M20 or PG13,5)	BG3	1	0,188

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

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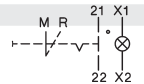

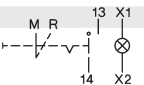


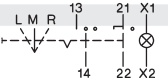


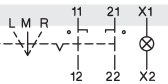

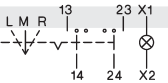
Contact blocks for enclosures BG..




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

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



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

Lamp holder, socket BA9s for LED or lamps

max. 440V AC/DC	direct connection, for lamps max. 1,9W (take care for active power consumption)		X1 X2	B4FU	10	0,013
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1)  NC contact has a positive opening according to IEC/EN 60947-5-1

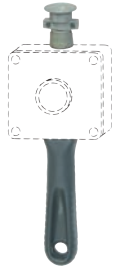
Accessories for Plastic enclosed buttons



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




Couple Part	to couple enclosures BKLG or assembled stations BG..	B4-8852	1	0,018
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Suspension Eye	for hanging stations	B4-9929	1	0,188
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Handle and Cable Inlet	to change enclosures BG.. or assembled stations BG.. into a hanging station	B4-9149	1	0,064
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Push Buttons for Enclosures 22mm IP65

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

Push buttons with metal ring and self adjusting extension pin

	Reset push button	blue	R	19,5-38,5	B3GRB-31,5	10 0,023
		blue	R	38,5-60	B3GRB-60	10 0,026
	Reset push button with stop function	red	0/R	19,5-38,5	B3GR-31,5	10 0,023
		red	0/R	38,5-60	B3GR-60	10 0,026
	Start push button	green	I	19,5-38,5	B3GI-31,5	10 0,023
		green	I	38,5-60	B3GI-60	10 0,026
	Stop push button	red	0	19,5-38,5	B3G0-31,5	10 0,023
		red	0	38,5-60	B3G0-60	10 0,026
	Mushroom head lockable Ø28mm	red	0	19,5-38,5	B3GP-31,5	10 0,023
		red	0	38,5-60	B3GP-60	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..	15	19,5 - 38,5	B4V31,5	10 0,001
	and B(S, C)3P..	18,5	38,5 - 60	B4V60	10 0,004

Technical Data

Terminal markings for control units according to DIN EN 50013

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

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

Data according to cULus

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

Approvals

Country	USA, Canada UL	Europe	Register of Shipping 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

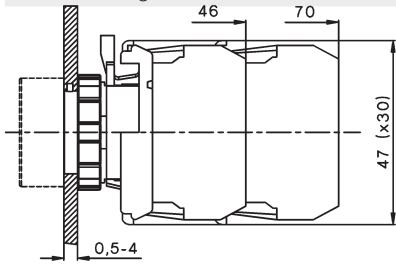
- Not provided for test till now

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): $U_{imp} = 4kV$

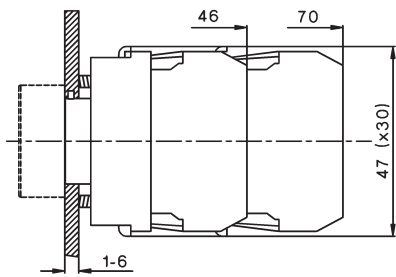
Dimensions

Actuators and Lens Caps 22mm

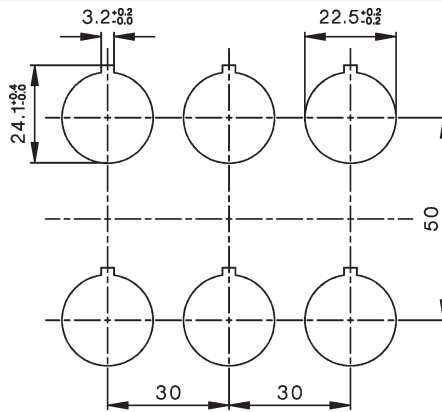
Panel mounting B3S



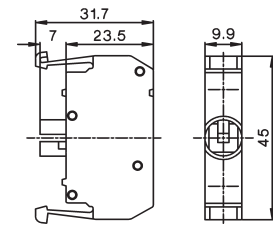
Panel mounting B3M



Mounting holes



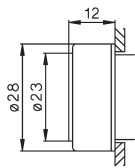
Contact blocks and Lampenhalter B3...



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.

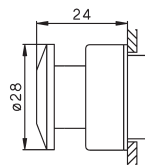
Actuators and Lens caps

Flush Head
Illuminated Flush Head



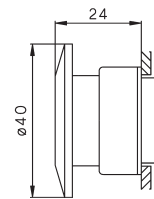
B3D(R), B3DL(R)
BS3D(R), BS3DL(R)
BC3D(R), BC3DL(R)

Mushroom Head Ø28mm
Emergency Stop Ø28mm



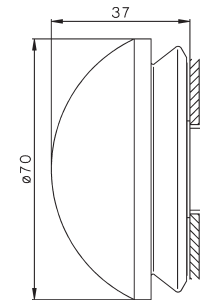
B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3

Mushroom Head Ø40mm
Emergency Stop Ø40mm



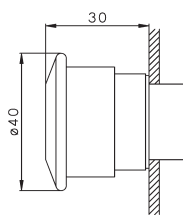
B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34

Mushroom Head Ø70mm
Emergency Stop Ø70mm



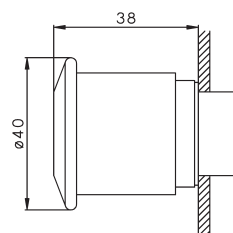
BS3P14P
BS3P34P

Push-and pull button Ø40mm



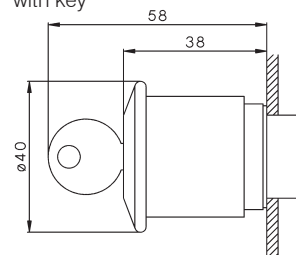
BS3P44

Push-and pull button Ø40mm



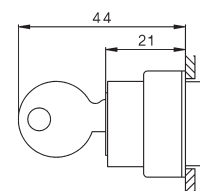
BS3P45

Push-and pull button Ø40mm
with key



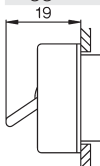
BS3P44S3

Lockable Push button



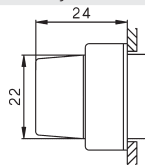
B3SAR., B3SAT.
BS3SAR., BS3SAT.
BC3SAR., BC3SAT.

Toggle



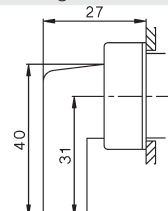
B3E
BS3E
BC3E

Rotary Knob



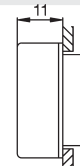
B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL

Swing Knob



B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN

Lens Cap

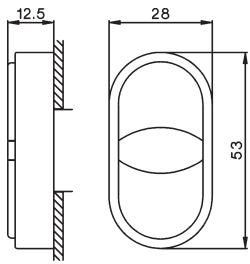


B3R(F)

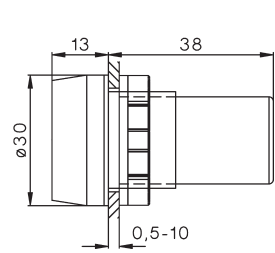
Dimensions

Actuators and Lens Caps 22mm

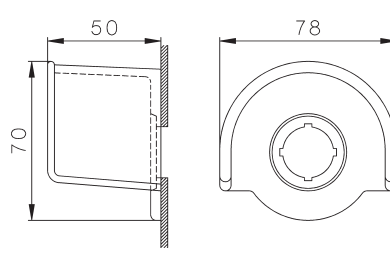
Double push button



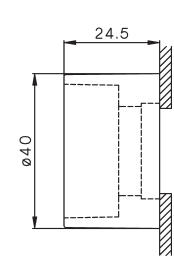
Monoblock Multi-LED



Protection cover



Protection ring w. thread



B3DT

B3-MB...

B3-SK ..

P921-.

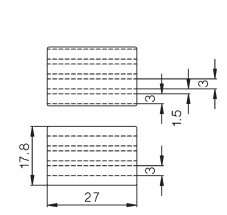
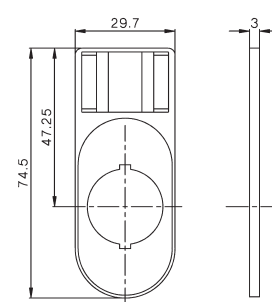
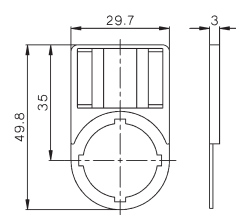
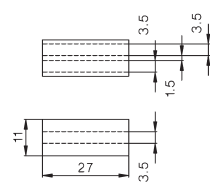
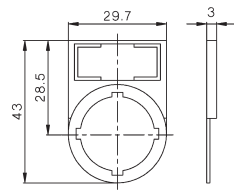
Label holder

Legend plate

Label holder

Label holder

Legend plate



P751

BK4-...

P761

P761-DT

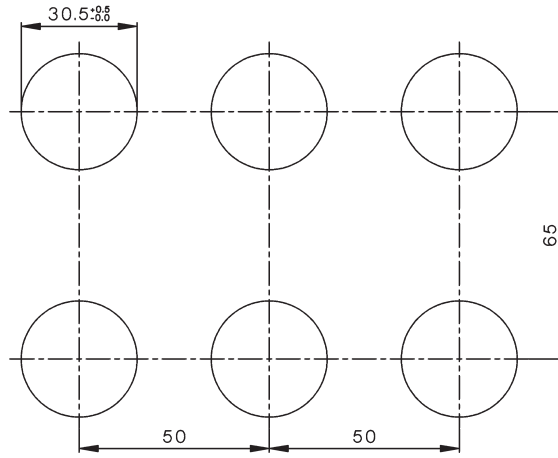
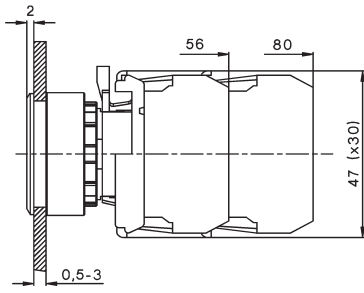
BK8-...

Dimensions

Actuators and Lens Caps 30mm

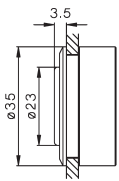
Panel mounting B3S

Mounting holes



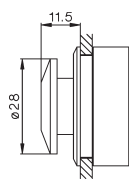
Actuators and Lens caps

Flush Head
Illuminated Flush Head



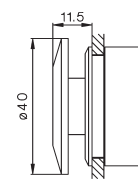
B5D(R), B5DL(R)
BS5D(R), BS5DL(R)

Mushroom Head Ø28mm
Emergency Stop Ø28mm



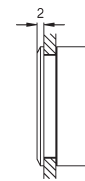
B5P1 to B5P3
BS5P1 to BS5P3

Mushroom Head Ø40mm
Emergency Stop Ø40mm



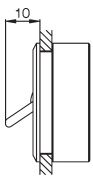
B5P14, B5P34
BS5P14, BS5P34

Lens Cap



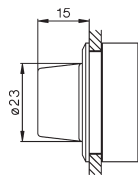
B5RF

Toggle



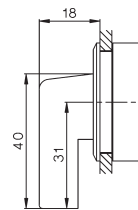
B5E
BS5E

Rotary Knob



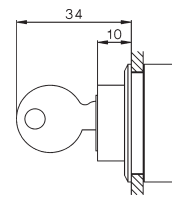
B5KN, B5KL
BS5KN, BS5KL

Swing Knob



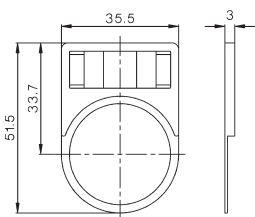
B5KRL, B5KRN
BS5KRL, BS5KRN

Lockable Push button



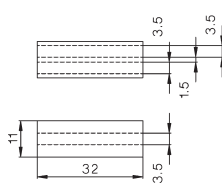
B5SAR., B5SAT.
BS5SAR., BS5SAT.

Label holder



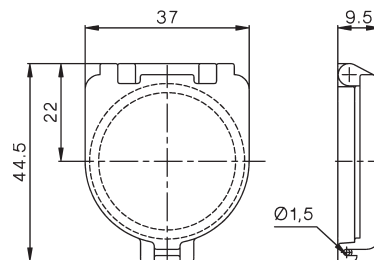
P761

Legend plate



BK5-...

Protectiv cover

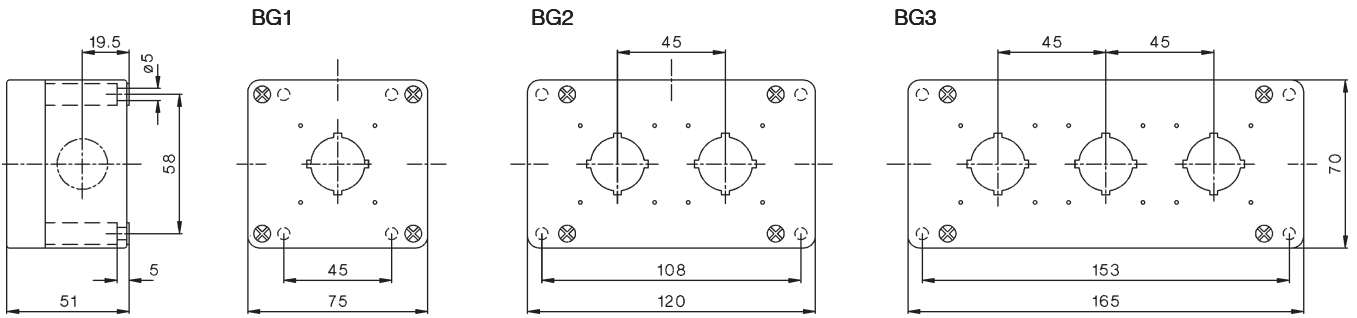


B5-SAP

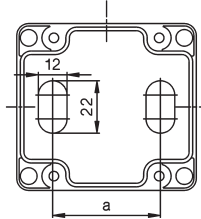
Dimensions

Enclosures for Custom Built Stations

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

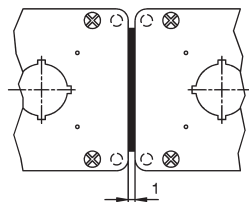


Conduit entries in the bottom (knockouts)

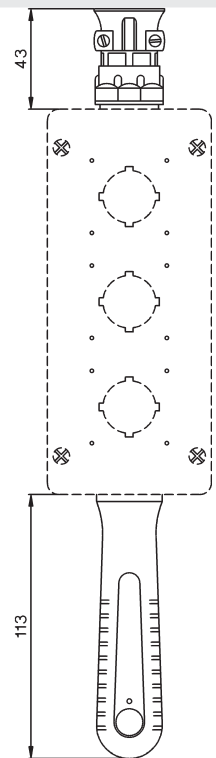


Number of units	Dimension a
1	45
2	90
3	135

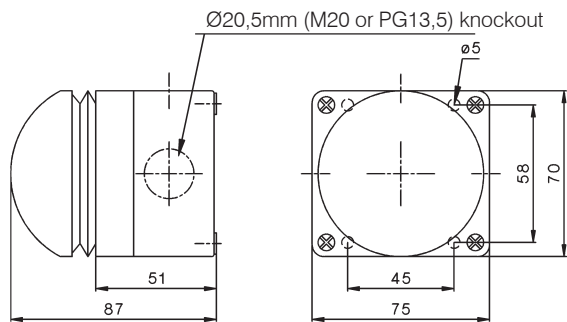
Coupled Enclosures B4-8852



Hanging Station B4-9149



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



Dimensions

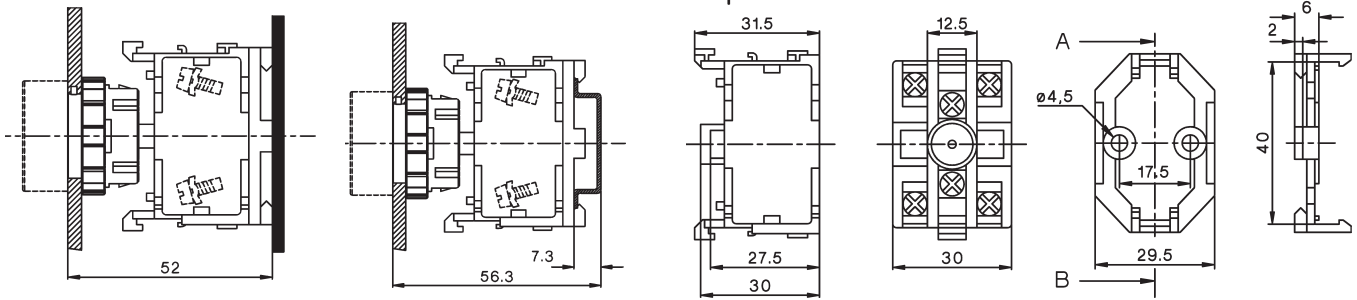
Actuators 22mm

Base mounting

DIN-rail mounting

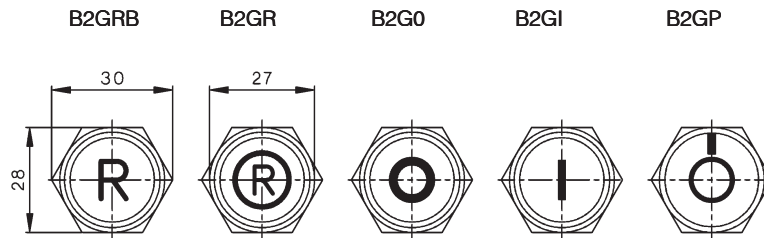
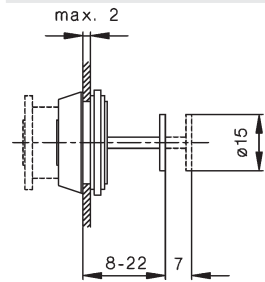
Contact blocks and
Lamp Holders B4.U...

Base B4U

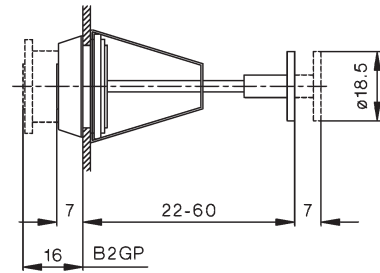


Push buttons for enclosures

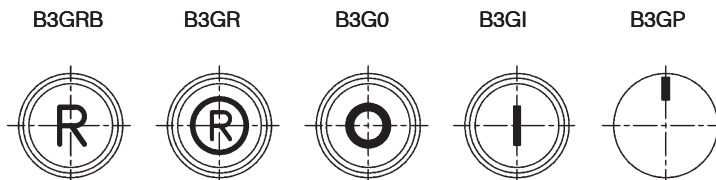
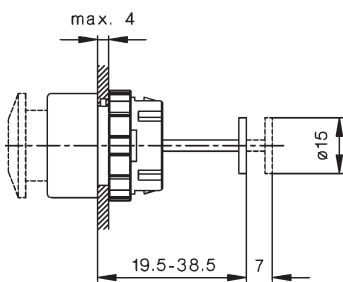
B2G...-22



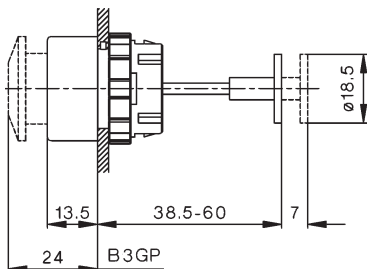
B2G...-60

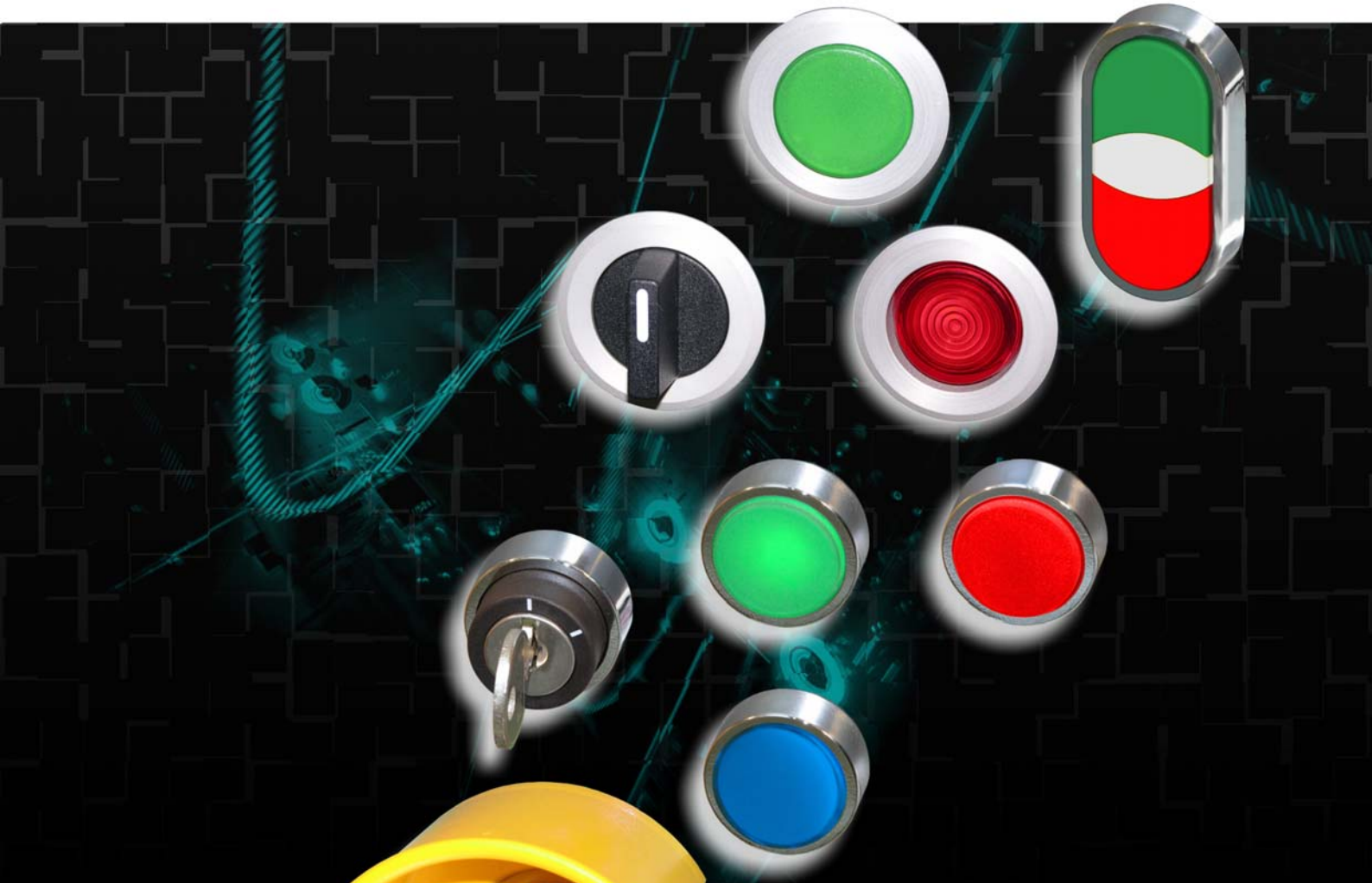


B3G...-31,5



B3G...-60





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