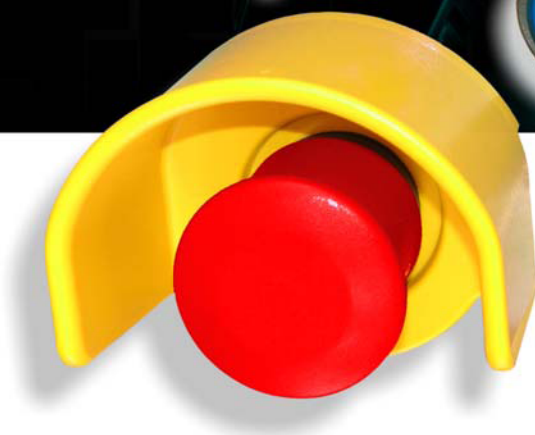
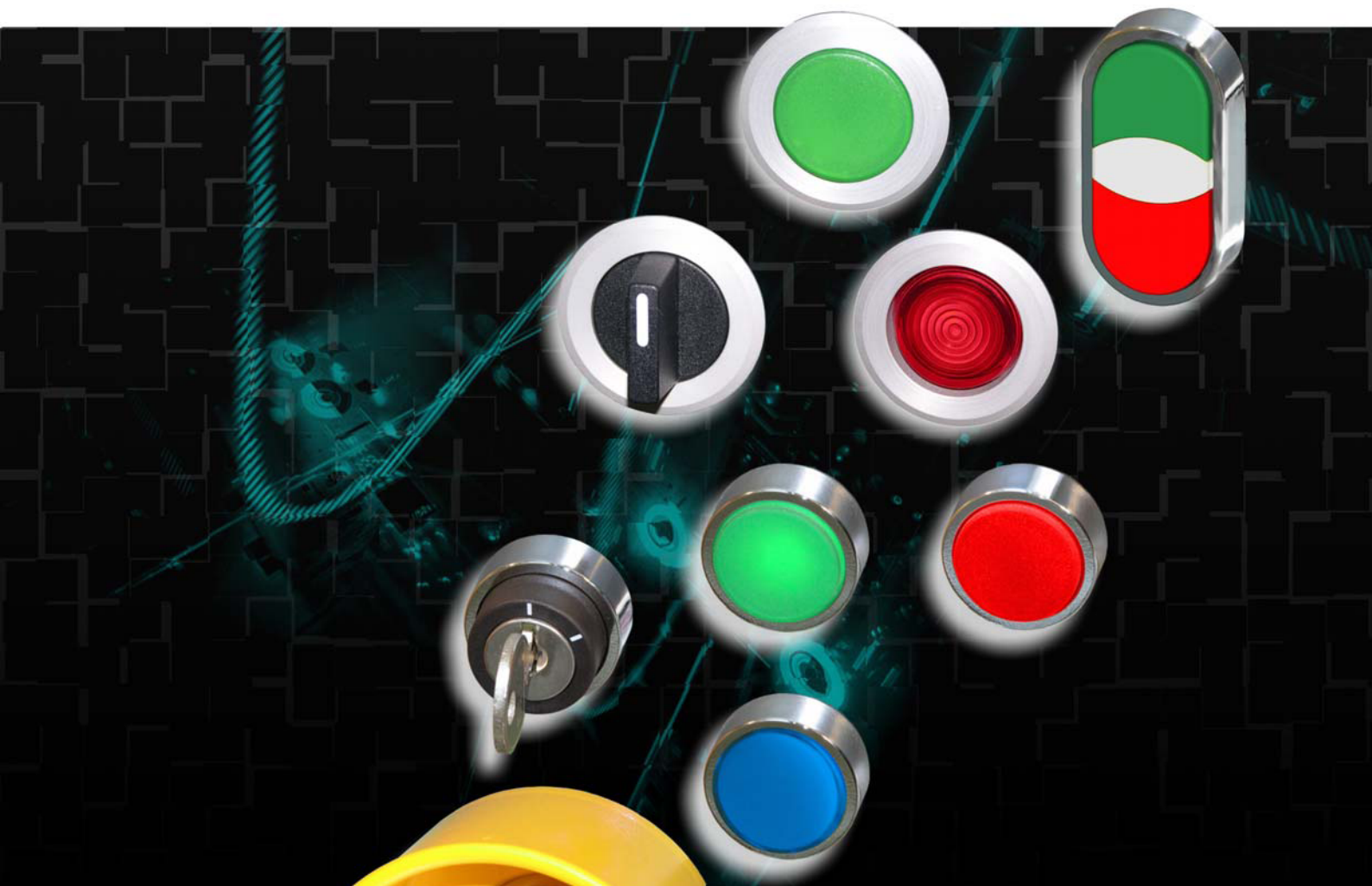


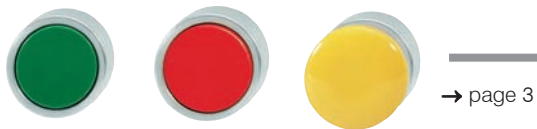
Push Buttons



Program B3		2
 Ø 22,5mm		
  	Push Buttons	3
	EMERGENCY STOP Buttons	4
	Key Operated Rotary Switches	4
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Acuators and Lens Caps 22mm IP67 (IP65), cULus Type12

Push Buttons



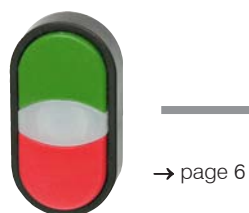
EMERGENCY STOP Buttons



Illuminated Operators



Double Push Buttons with Indicator Lamp IP65



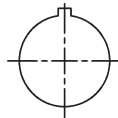
Lens Caps



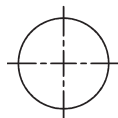
→ page 7

Mounting hole Ø 22,5mm

with key way



without key way



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



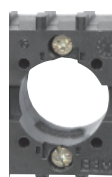
Connectors

Thikness
0,5 - 4 mm
→ page 8

or



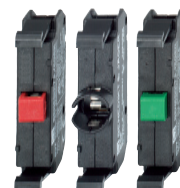
Thikness
1 - 6 mm
→ page 8



Connectors Lamp Holders



Actuator insert
→ page 8



LED
24-230V



Filament
6-130V



Glow-discharge
230V
→ page 9

Actuators 22mm IP67, Type12

Ring



Colour

Symbol

Alu

Black

Chrome

Pack Weight
pcs. 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
-----	--	------------	------------	------------	----	-------

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				Pack pcs.	Weight kg/pc.
			Alu	Black	Chrome		

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

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

Actuators 22mm Type12

Ring

Knob

Alu

Black

Chrome

Pack Weight
pcs. kg/pc.

Rotary Knobs and Swing Knobs, black IP65



Rotary



Swing

maintained 60°



Rotary
Swing

B3KN2
B3KRN2

BS3KN2
BS3KRN2

BC3KN2
BC3KRN2

10 0,020
10 0,020

spring return 60°



Rotary
Swing

B3KN8
B3KRN8

BS3KN8
BS3KRN8

BC3KN8
BC3KRN8

10 0,020
10 0,020

spring return 60°



Rotary
Swing

B3KN1
B3KRN1

BS3KN1
BS3KRN1

BC3KN1
BC3KRN1

10 0,020
10 0,020

maintained 60°



Rotary
Swing

B3KN3
B3KRN3

BS3KN3
BS3KRN3

BC3KN3
BC3KRN3

10 0,020
10 0,020

maintained/spring return 60°



Rotary

B3KN6

BS3KN6

BC3KN6

10 0,020

spring return/maintained 60°



Rotary

B3KN7

BS3KN7

BC3KN7

10 0,020

maintained 120°



Rotary

B3KN9

BS3KN9

BC3KN9

10 0,020

maintained 90°
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



Rotary



Swing

maintained 90°



Rotary

B3KL2

BS3KL2

BC3KL2

10 0,016

spring return 60°



Rotary
Swing

B3KL1
B3KRL1

BS3KL1
BS3KRL1

BC3KL1
BC3KRL1

10 0,016
10 0,016

maintained 60°



Rotary
Swing

B3KL3
B3KRL3

BS3KL3
BS3KRL3

BC3KL3
BC3KRL3

10 0,016
10 0,016

maintained /spring return 60°



Rotary

B3KL6

BS3KL6

BC3KL6

10 0,016

Toggle IP65



O - I

B3E

BS3E

BC3E

10 0,017

Actuators 22mm IP65, Type12

Ring

key
removeable in



Alu



Black



Chrome

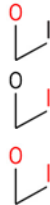
Pack Weight
pcs. kg/pc.

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



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

pcs. kg/pc.

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



red
green
yellow

B3DL RT

BS3DL RT

BC3DL RT

10 0,014

B3DL GN

BS3DL GN

BC3DL GN

10 0,014

B3DL GE

BS3DL GE

BC3DL GE

10 0,014

blue
white

B3DL BL

BS3DL BL

BC3DL BL

10 0,014

B3DL WS

BS3DL WS

BC3DL WS

10 0,014

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



red
green
yellow

B3DLR RT

BS3DLR RT

BC3DLR RT

10 0,014

B3DLR GN

BS3DLR GN

BC3DLR GN

10 0,014

B3DLR GE

BS3DLR GE

BC3DLR GE

10 0,014

blue
white

B3DLR BL

BS3DLR BL

BC3DLR BL

10 0,014

B3DLR WS

BS3DLR WS

BC3DLR WS

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
O

B3DT GI/RO ¹⁾

BS3DT GI/RO

BC3DT GI/RO

10 0,016

white
black

I
O

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



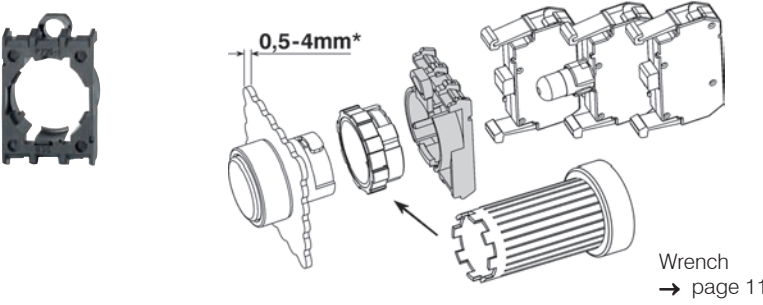
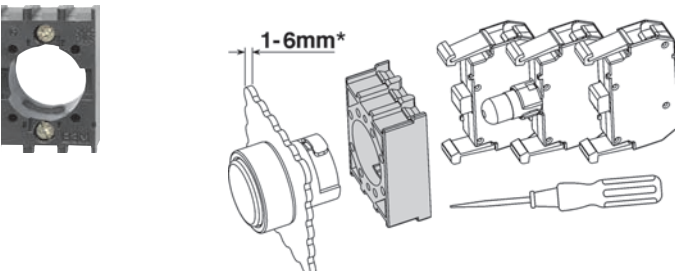
red	B3R RT	10	0,009
green	B3R GN	10	0,009
yellow	B3R GE	10	0,009
blue	B3R BL	10	0,009
clear	B3R KL	10	0,009
white	B3R WS	10	0,009

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				
				
Connector B3M				
				

*) 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
	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 (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
	200-250V AC/DC	4mA / 0,9W				

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 black	P921-1	1	0,012
	of the existing ring 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
	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, 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

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

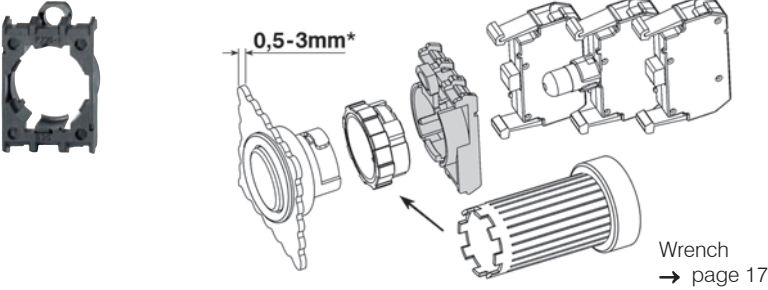
Actuator Caps with symbols according to DIN 30600, the Type must be completed with the code for colours

	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				
				
Wrench → page 17				

*) inclusive Thikness 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
	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 (take care for 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 lamps max. 1,7W (active power consumption)		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

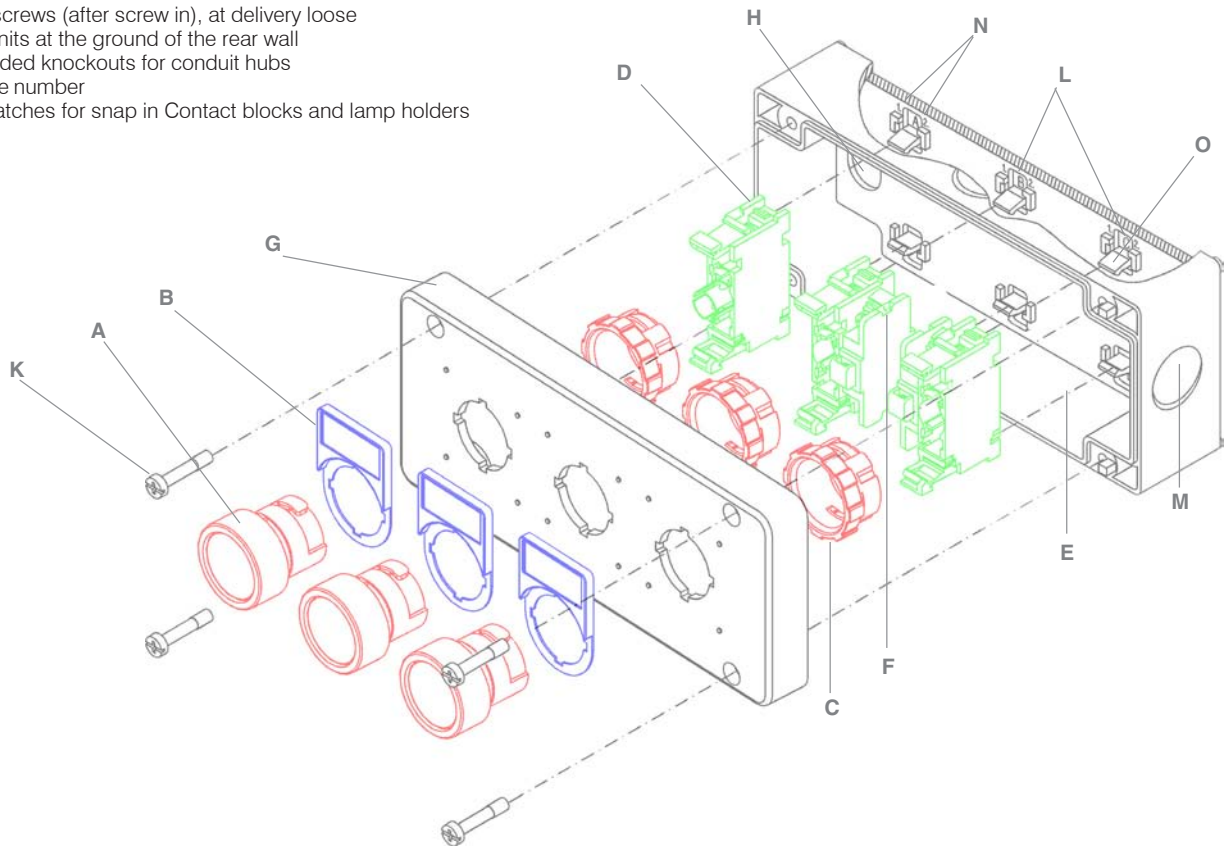
Accessories



		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

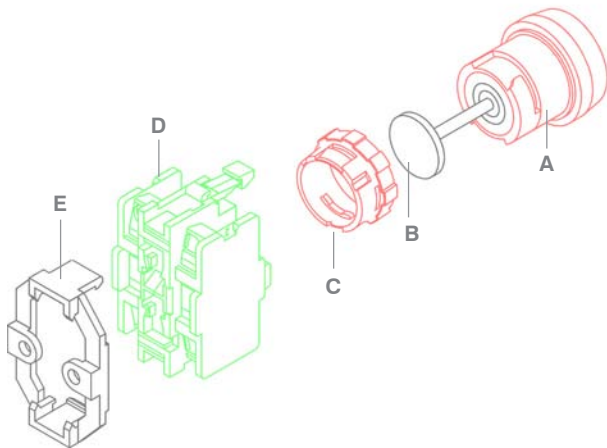
Assembled Stations BG.. IP67 cULus Type12

- 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

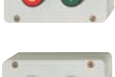
- A Actuator Ø 22mm see page 3 - 6, Ø 30mm see page 13 - 15
- B Extension B4V...
- C Ring and nut (included with actuator or lens cap)
- D Contact block B4.. see page 20
- E Base B4U for base and DIN-rail mounting of contact blocks



Type		Pack pcs.	Weight kg/pc.
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 B4.U...	B4U	10 0,010
Ring and Nut	for mounting former actuators and lens caps B4...	B3UP	10 0,004

Assembled Stations IP67 (IP65) 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	 14 — 13	BG10 GN	1	0,135
	OFF push button red	 22 — 21	BG10 RT	1	0,135
	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	 14 — 13	BG10SAR 0	1	0,165
	Key operated I - 0 - II ¹⁾ lock Ronis R455 60° maintained	 14 — 13 24 — 23	BG10SARR 0	1	0,172
	2 push buttons 0 - I	 22 — 21 14 — 13	BG20	1	0,200
	2 push buttons ← →	 14 — 13 14 — 13 22 — 21 22 — 21	BG20PF	1	0,200
	3 push buttons ← 0 →	 14 — 13 22 — 21 14 — 13 22 — 21 22 — 21	BG30PF	1	0,283
	3 push buttons I - 0 - II	 14 — 13 22 — 21 14 — 13 22 — 21 22 — 21	BG30	1	0,283
	2 push buttons 0 - I with pilot light green	 X2 — ⊗ — X1 22 — 21 14 — 13	BG21 GN	1	0,270
	Foot and palm button mushroom Ø70mm	 14 — 13 22 — 21	BG10P14P GR	1	0,187
Plastic enclosed EMERGENCY STOP buttons					
	EMERGENCY STOP button head Ø40mm unlock by turning	 14 — 13 22 — 21	BG10P34-11	1	0,145
	EMERGENCY STOP mushroom button Ø40mm according to EN418 unlock by pull	 14 — 13 22 — 21	BG10P44-11	1	0,145
	EMERGENCY STOP key operated button Ø40mm according to EN418 unlock by key	 14 — 13 22 — 21	BG10P44S3-11	1	0,178
	EMERGENCY STOP mushroom button Ø70mm unlock by turning	 14 — 13 22 — 21	BG10P34P-11	1	0,187

1) IP65

Enclosures BG.. IP67, Type12



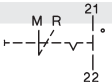
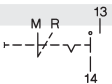
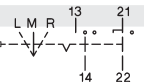
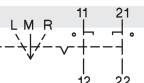
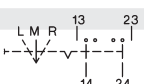
Number of units	Description	Type	Pack pcs.	Weight kg/pc.
1	3 knockouts Ø20,5mm (M20 or PG13,5)	BG1	1	0,108
2	3 knockouts Ø20,5mm (M20 or PG13,5)	BG2	1	0,145
3	3 knockouts Ø20,5mm (M20 or PG13,5)	BG3	1	0,188

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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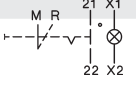
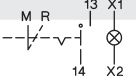
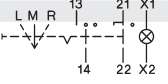
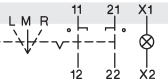
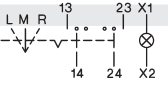
Contact blocks for enclosures BG..



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)		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

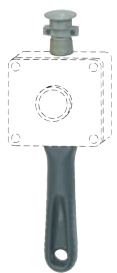


Type			Pack pcs.	Weight kg/pc.
Wrench	for mounting of actuators and lens caps B(S)3..	J7049	1	0,018

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		19,5-38,5	B3GP-31,5	10 0,023
		red		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	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_n			
	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_n			
	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_n			
	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_n			
	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 $\cos \varphi = 0,7-1$	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	0,5 - 2,5
	flexible, mm ²	0,5 - 2,5
	flexible with multicore cable end, mm ² number	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	CENELEC CB- Certificates
Type	cULus	CE	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

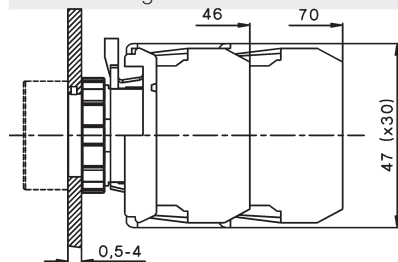
1) suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $U_{imp} = 6kV$. Data for other conditions on request

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

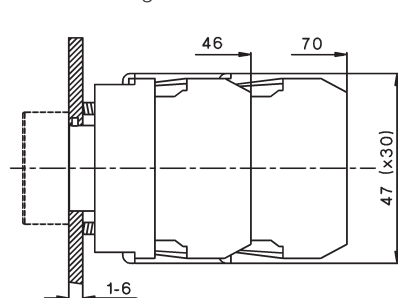
Dimensions

Actuators and Lens Caps 22mm

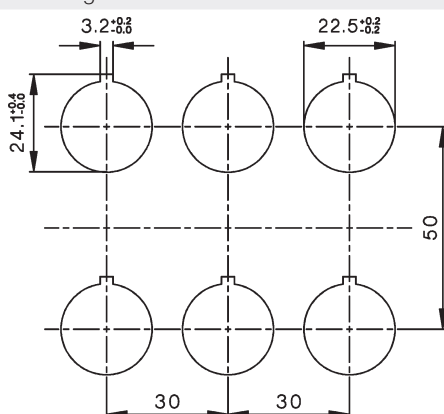
Panel mounting B3S



Panel mounting B3M

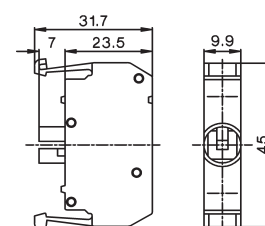


Mounting holes



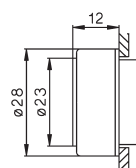
Dimensions of minimum space requirements according to IEC. Take to consideration the field of traverse of swing knobs (27mm) and the diameter of mushroom heads.

Contact blocks and Lampenhalter B3...



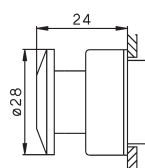
Actuators and Lens caps

Flush Head
Illuminated Flush Head



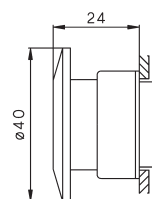
B3D(R), B3DL(R)
BS3D(R), BS3DL(R)
BC3D(R), BC3DL(R)

Mushroom Head Ø28mm
Emergency Stop Ø28mm



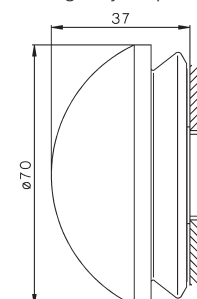
B3P1 bis B3P3
BS3P1 bis BS3P3
BC3P1 bis BC3P3

Mushroom Head Ø40mm
Emergency Stop Ø40mm



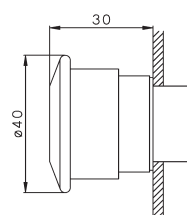
B3P14, B3P34
BS3P14, BS3P34
BC3P14, BC3P34

Mushroom Head Ø70mm
Emergency Stop Ø70mm



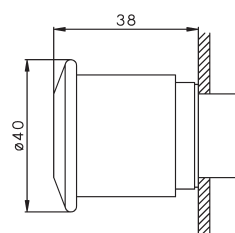
BS3P14P
BS3P34P

Push-and pull button Ø40mm



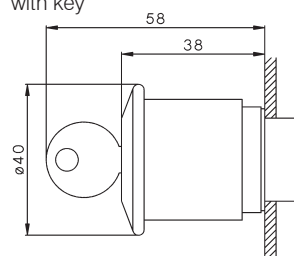
BS3P44

Push-and pull button Ø40mm



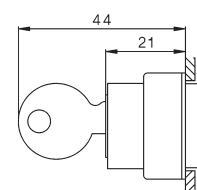
BS3P45

Push-and pull button Ø40mm
with key



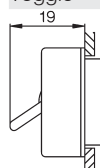
BS3P44S3

Lockable Push button



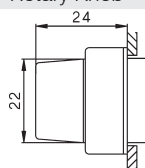
B3SAR., B3SAT.
BS3SAR., BS3SAT.
BC3SAR., BC3SAT.

Toggle



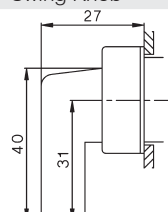
B3E
BS3E
BC3E

Rotary Knob



B3KN, B3KL
BS3KN, BS3KL
BC3KN, BC3KL

Swing Knob



B3KRL, B3KRN
BS3KRL, BS3KRN
BC3KRL, BC3KRN

Lens Cap

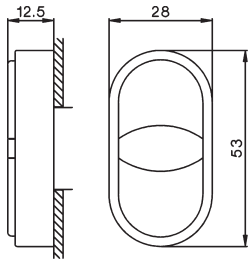


B3R(F)

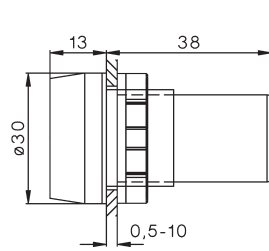
Dimensions

Actuators and Lens Caps 22mm

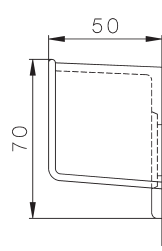
Double push button



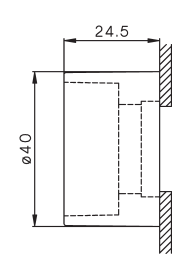
Monoblock Multi-LED



Protection cover



Protection ring w. thread



B3DT

B3-MB...

B3-SK ..

P921-

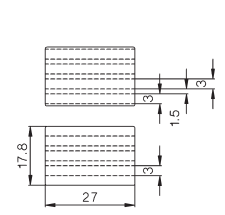
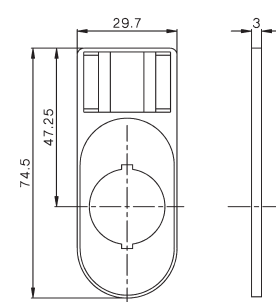
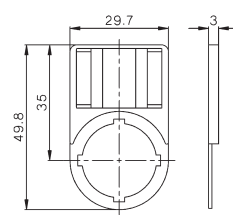
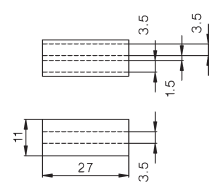
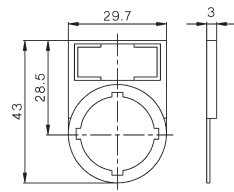
Label holder

Legend plate

Label holder

Label holder

Legend plate



P751

BK4-...

P761

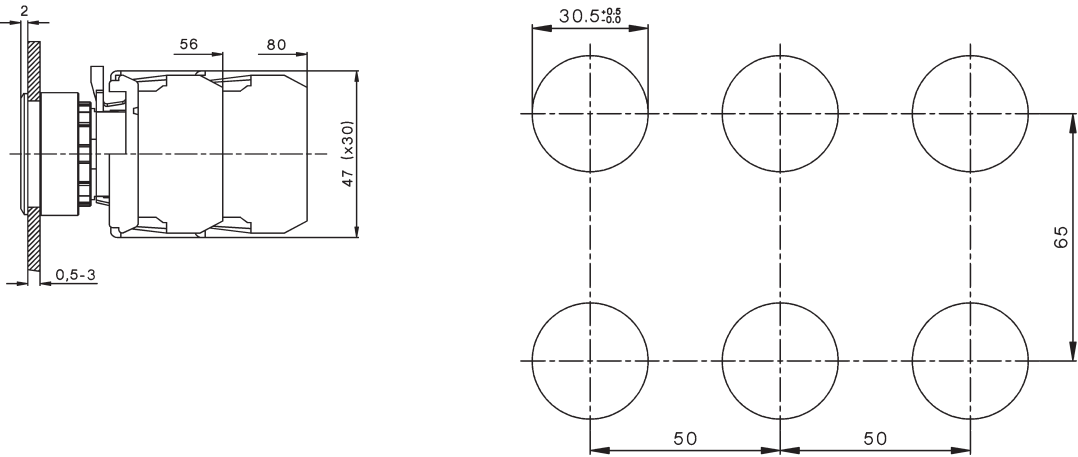
P761-DT

BK8-...

Dimensions

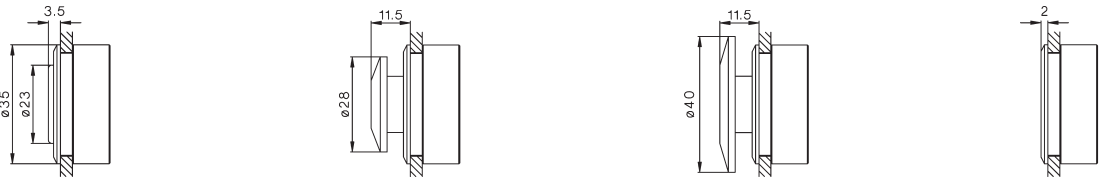
Actuators and Lens Caps 30mm

Panel mounting B3S	Mounting holes
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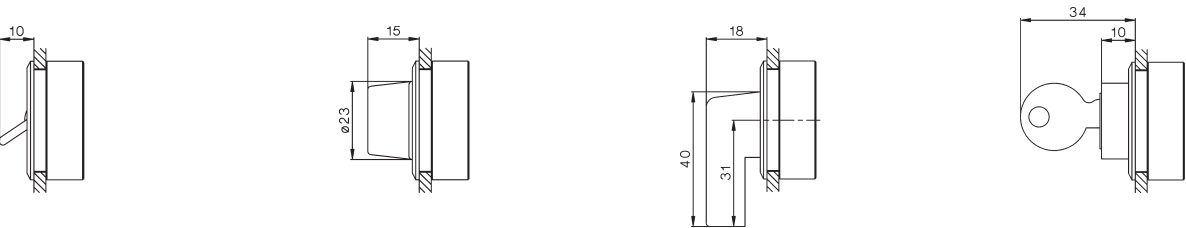
Actuators and Lens caps

Flush Head Illuminated Flush Head	Mushroom Head Ø28mm Emergency Stop Ø28mm	Mushroom Head Ø40mm Emergency Stop Ø40mm	Lens Cap
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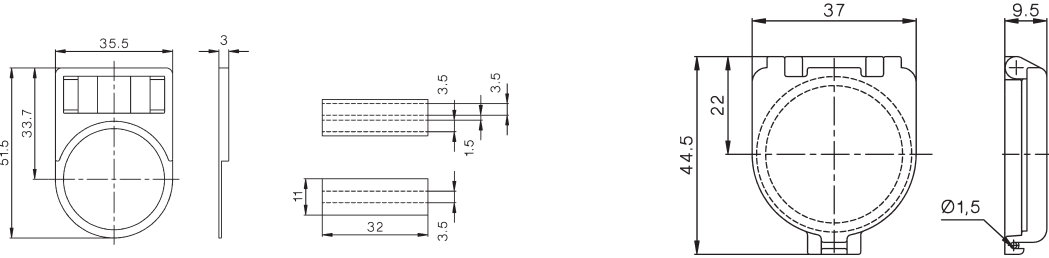
B5D(R), B5DL(R) BS5D(R), BS5DL(R)	B5P1 to B5P3 BS5P1 to BS5P3	B5P14, B5P34 BS5P14, BS5P34	B5RF
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Toggle	Rotary Knob	Swing Knob	Lockable Push button
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B5E BS5E	B5KN, B5KL BS5KN, BS5KL	B5KRL, B5KRN BS5KRL, BS5KRN	B5SAR., B5SAT. BS5SAR., BS5SAT.
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Label holder	Legend plate	Protectiv cover
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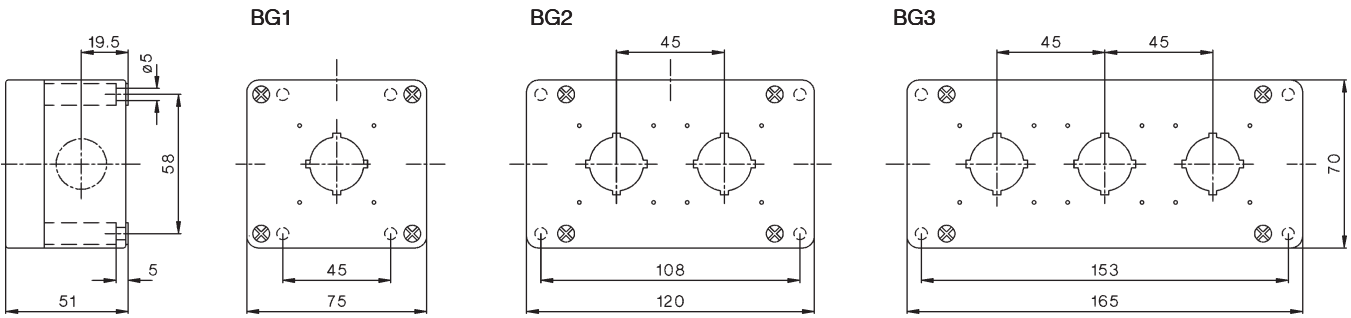


P761	BK5-...	B5-SAP
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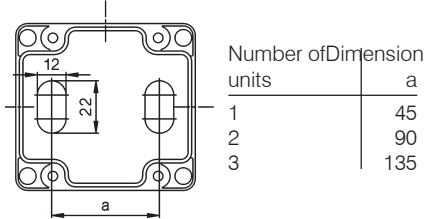
Dimensions

Enclosures for Custom Built Stations

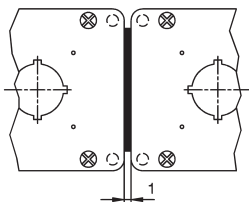
Three conduit entries (knockouts), each on top, left and right side, Ø20,5mm (M20 or PG13,5)



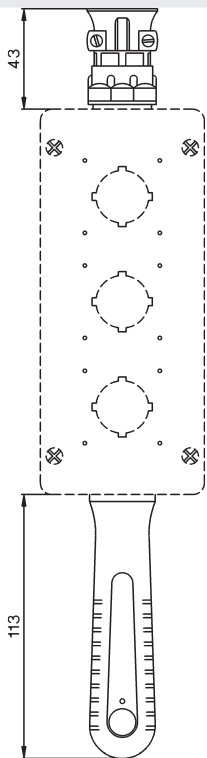
Conduit entries in the bottom (knockouts)



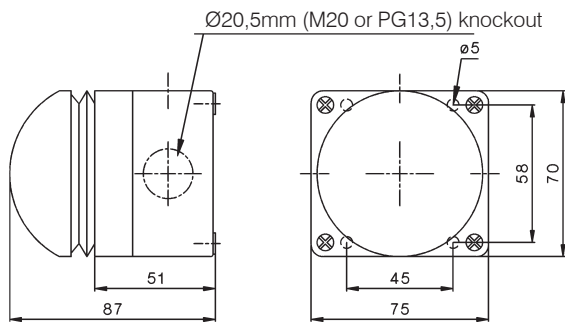
Coupled Enclosures B4-8852



Hanging Station B4-9149



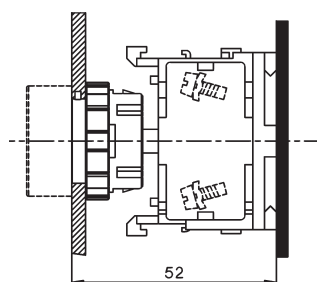
EMERGENCY STOP Push Button Ø70 mm, Foot switch BG10P34P, BG10P14P



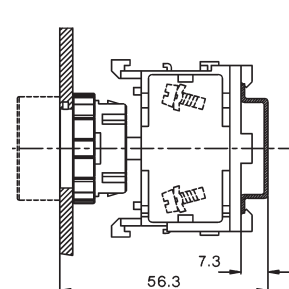
Dimensions

Actuators 22mm

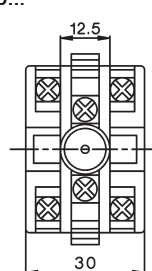
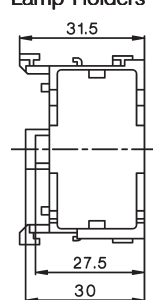
Base mounting



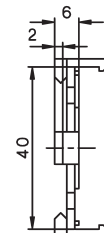
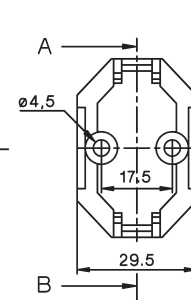
DIN-rail mounting



Contact blocks and
Lamp Holders B4.U...

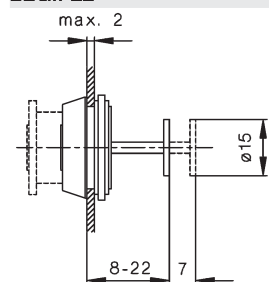


Base B4U



Push buttons for enclosures

B2G...-22



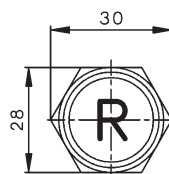
B2GRB

B2GR

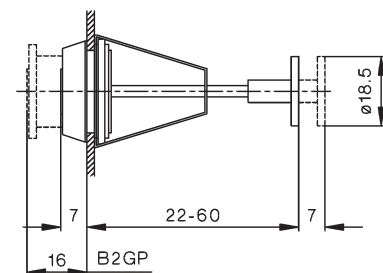
B2G0

B2GI

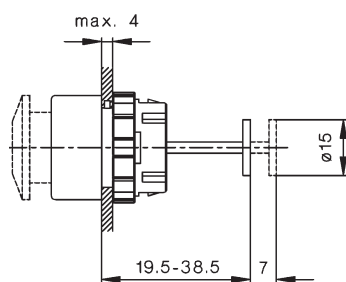
B2GP



B2G...-60



B3G...-31,5



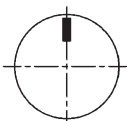
B3GRB

B3GR

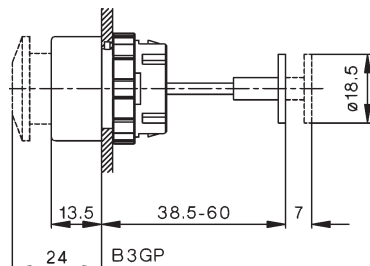
B3G0

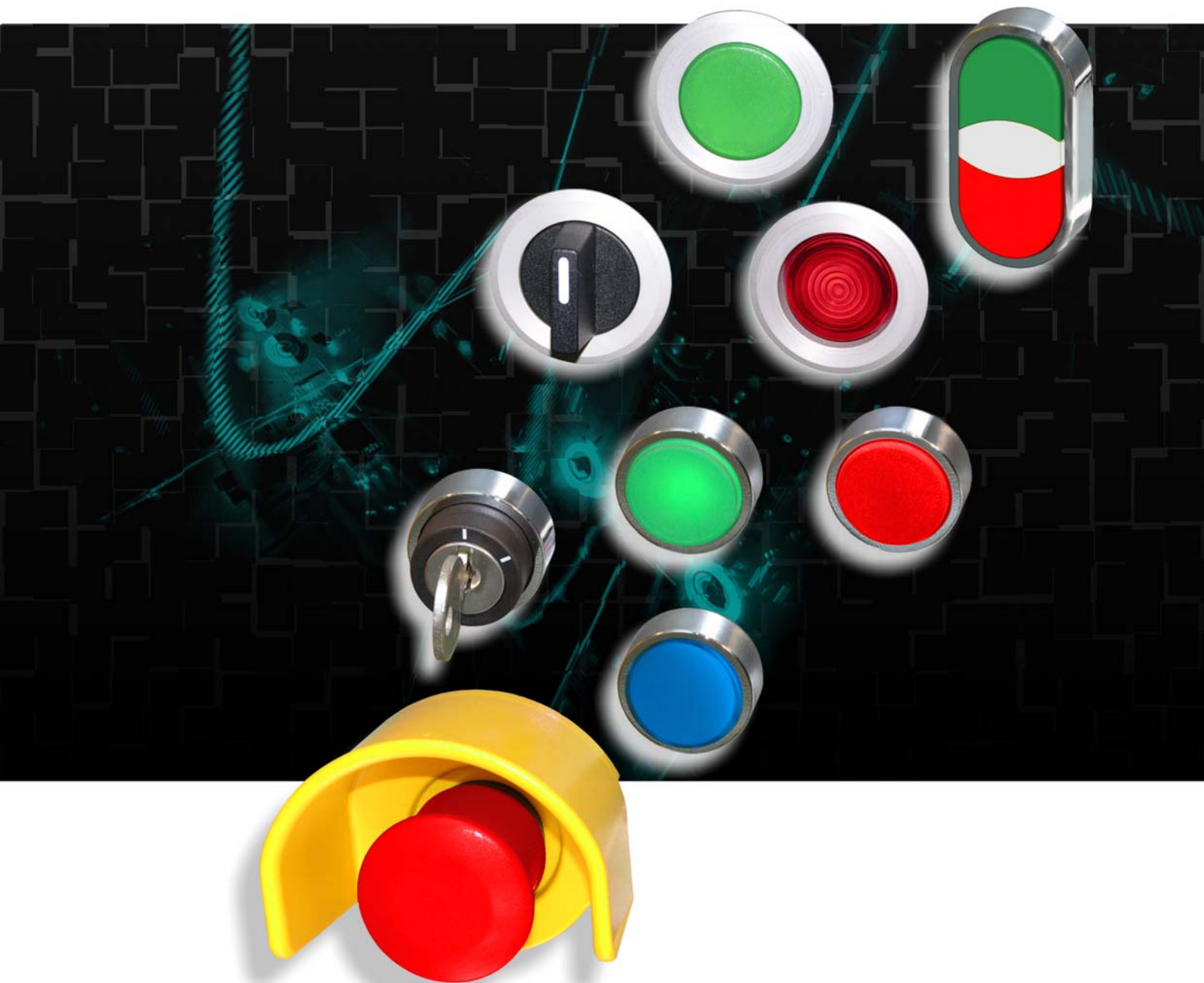
B3GI

B3GP



B3G...-60





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