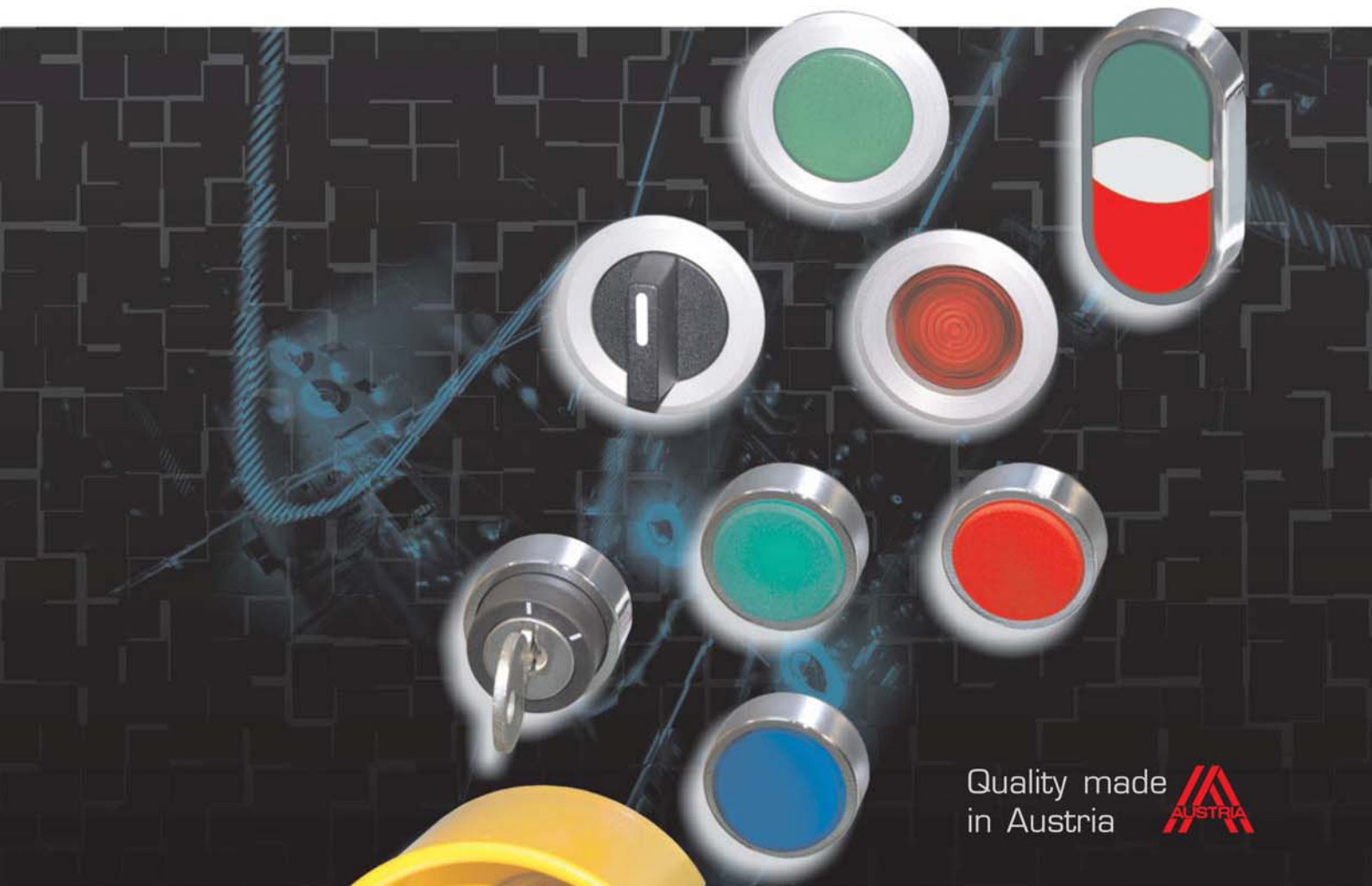


# Push Buttons



Quality made  
in Austria



D580E121



**MTO**  
electric a/s

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<b>Programm B3</b>		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
			Push Button-Sets 8
			Illuminated Push Button-Sets 8
			Pilot Lights 8
			Connector 10
			Insert Actuator 10
			Contact Blocks and Lamp Holders 10
			Lamps, LED Lamps 11
			Accessories 11
			Label Holder, Legend Plates, Actuator Caps 12, 13
<b>Program B5</b>		14	
	Ø 30,5mm		
			Push Buttons 15
			Rotary Knobs and Swing Knobs 16
			Key Operated Rotary Switches 17
			Rotary Knobs and Swing Knobs 17
			Lens Caps 17
			Connector 18
			Contact Blocks and Lamp Holders 18
			Lamps, Accessories 19
<b>Units for Surface Mounting</b>		21	
			Assembled Units IP65 21
<b>Enclosures BG..</b>		22	
			Contact Blocks and Lamp Holders for Enclosures BG.. 22
			22
<b>Push Buttons for Enclosures</b>		23	
			Extensions for Push Buttons 23
			23
<b>Technical Data, Approvals</b>		24	
			Dimensions 24-29
			25-29

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

Push Buttons



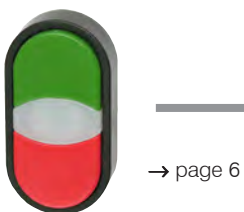
EMERGENCY STOP Buttons



Illuminated Operators



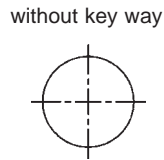
Double Push Buttons with Indicator Lamp IP65



Lens Caps



Mounting hole  
Ø 22,5mm



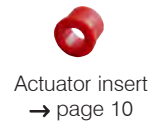
Wrench  
for Actuators  
Lens Caps and  
Mono Block Multi Chip LED  
J7049



Connectors



Connectors  
Lamp Holders



LED  
24-230V

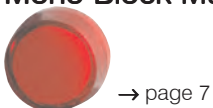


Filament  
6-130V



Glow-discharge  
230V  
→ page 11

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



# Actuators 22mm IP67, Type12

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

## Push Buttons, Actuator Caps markable



red			<b>B3D RT</b>	<b>BS3D RT</b>	<b>BC3D RT</b>	10	0,014
red	0		<b>B3D RT-0</b>	<b>BS3D RT-0</b>	<b>BC3D RT-0</b>	10	0,014
green			<b>B3D GN</b>	<b>BS3D GN</b>	<b>BC3D GN</b>	10	0,014
green	I		<b>B3D GN-I</b>	<b>BS3D GN-I</b>	<b>BC3D GN-I</b>	10	0,014
green	II		<b>B3D GN-II</b>	<b>BS3D GN-II</b>	<b>BC3D GN-II</b>	10	0,014
green	→		<b>B3D GN-PF</b>	<b>BS3D GN-PF</b>	<b>BC3D GN-PF</b>	10	0,014
yellow			<b>B3D GE</b>	<b>BS3D GE</b>	<b>BC3D GE</b>	10	0,014
blue			<b>B3D BL</b>	<b>BS3D BL</b>	<b>BC3D BL</b>	10	0,014
weiß			<b>B3D WS</b>	<b>BS3D WS</b>	<b>BC3D WS</b>	10	0,014
black			<b>B3D SW</b>	<b>BS3D SW</b>	<b>BC3D SW</b>	10	0,014
black	→		<b>B3D SW-PF</b>	<b>BS3D SW-PF</b>	<b>BC3D SW-PF</b>	10	0,014

## Push Buttons, Maintained, Actuator Caps markable



red			<b>B3DR RT</b>	<b>BS3DR RT</b>	<b>BC3DR RT</b>	10	0,014
green			<b>B3DR GN</b>	<b>BS3DR GN</b>	<b>BC3DR GN</b>	10	0,014
yellow			<b>B3DR GE</b>	<b>BS3DR GE</b>	<b>BC3DR GE</b>	10	0,014
blue			<b>B3DR BL</b>	<b>BS3DR BL</b>	<b>BC3DR BL</b>	10	0,014
weiß			<b>B3DR WS</b>	<b>BS3DR WS</b>	<b>BC3DR WS</b>	10	0,014
black			<b>B3DR SW</b>	<b>BS3DR SW</b>	<b>BC3DR SW</b>	10	0,014

## Mushroom Head Ø28mm



red			<b>B3P1 RT</b>	<b>BS3P1 RT</b>	<b>BC3P1 RT</b>	10	0,017
red	0		<b>B3P1 RT-0</b>	<b>BS3P1 RT-0</b>	<b>BC3P1 RT-0</b>	10	0,017
green			<b>B3P1 GN</b>	<b>BS3P1 GN</b>	<b>BC3P1 GN</b>	10	0,017
yellow			<b>B3P1 GE</b>	<b>BS3P1 GE</b>	<b>BC3P1 GE</b>	10	0,017
blue			<b>B3P1 BL</b>	<b>BS3P1 BL</b>	<b>BC3P1 BL</b>	10	0,017
black			<b>B3P1 SW</b>	<b>BS3P1 SW</b>	<b>BC3P1 SW</b>	10	0,017

## Mushroom Head Ø40mm



red	0		<b>B3P14 RT-0</b>	<b>BS3P14 RT-0</b>	<b>BC3P14 RT-0</b>	10	0,020
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## Mushroom Head Ø40mm



red			<b>BS3P44T RT</b>	<b>BS3P44T RT</b>	<b>BS3P44T RT</b>	10	0,028
-----	--	--	-------------------	-------------------	-------------------	----	-------

## Foot and Palm switch Ø70mm



red			<b>BS3P14P RT</b>	<b>BS3P14P RT</b>	<b>BS3P14P RT</b>	1	0,062
grey			<b>BS3P14P GR</b>	<b>BS3P14P GR</b>	<b>BS3P14P GR</b>	1	0,062

# Actuators 22mm IP67, Type12

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

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



red	30mm	<b>BS3P44 RT</b>	<b>BS3P44 RT</b>	<b>BS3P44 RT</b>	10	0,028
red	38mm	<b>BS3P45 RT</b>	<b>BS3P45 RT</b>	<b>BS3P45 RT</b>	10	0,028

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



red	38mm	<b>BS3P44S3</b>	<b>BS3P44S3</b>	<b>BS3P44S3</b>	1	0,050
-----	------	-----------------	-----------------	-----------------	---	-------

<b>Spare Key</b> lock Ronis R455	<b>B4-R455</b>	1	0,0077
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## EMERGENCY STOP Push Buttons, release by turning, Ø28mm



red		<b>B3P3 RT</b>	<b>BS3P3 RT</b>	<b>BC3P3 RT</b>	10	0,017
red	0	<b>B3P3 RT-0</b>	<b>BS3P3 RT-0</b>	<b>BC3P3 RT-0</b>	10	0,017

## EMERGENCY STOP Push Buttons, release by turning, Ø40mm



red	0	<b>B3P34 RT-0</b>	<b>BS3P34 RT-0</b>	<b>BC3P34 RT-0</b>	10	0,020
-----	---	-------------------	--------------------	--------------------	----	-------

red illuminated		<b>B3P34L RT</b>	<b>BS3P34L RT</b>	<b>BC3P34L RT</b>	10	0,020
-----------------	--	------------------	-------------------	-------------------	----	-------

## EMERGENCY STOP Push Buttons, release by turning, Ø70mm



red		<b>BS3P34P RT</b>	<b>BS3P34P RT</b>	<b>BS3P34P RT</b>	1	0,062
-----	--	-------------------	-------------------	-------------------	---	-------

Type

Pack Weight  
pcs. kg/pc.

## Yellow Disk Ø70mm, Thickness 1mm <sup>1)</sup>



neutral	<b>B3-7603</b>	1	0,004
with marking NOT-AUS	<b>B3-7603-1</b>	1	0,004
with marking EMERGENCY STOP	<b>B3-7603-2</b>	1	0,004

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

## Protection cover against unintentional manipulation, Thickness 1mm

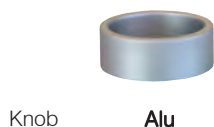


for Push Buttons Ø28mm and Ø40mm yellow	<b>B3-SK GE</b>	1	0,04
---	-----------------	---	------

1) Not for enclosure BG..

# Actuators 22mm Type12

Ring



Pack Weight  
pcs. kg/pc.

## Rotary Knobs and Swing Knobs, black IP65



maintained 60°						
	Rotary	<b>B3KN2</b>	<b>BS3KN2</b>	<b>BC3KN2</b>	10	0,020
	Swing	<b>B3KRN2</b>	<b>BS3KRN2</b>	<b>BC3KRN2</b>	10	0,020

spring return 60°						
	Rotary	<b>B3KN8</b>	<b>BS3KN8</b>	<b>BC3KN8</b>	10	0,020
	Swing	<b>B3KRN8</b>	<b>BS3KRN8</b>	<b>BC3KRN8</b>	10	0,020

spring return 60°						
	Rotary	<b>B3KN1</b>	<b>BS3KN1</b>	<b>BC3KN1</b>	10	0,020
	Swing	<b>B3KRN1</b>	<b>BS3KRN1</b>	<b>BC3KRN1</b>	10	0,020



maintained 60°						
	Rotary	<b>B3KN3</b>	<b>BS3KN3</b>	<b>BC3KN3</b>	10	0,020
	Swing	<b>B3KRN3</b>	<b>BS3KRN3</b>	<b>BC3KRN3</b>	10	0,020

maintained/spring return 60°						
	Rotary	<b>B3KN6</b>	<b>BS3KN6</b>	<b>BC3KN6</b>	10	0,020

spring return/maintained 60°						
	Rotary	<b>B3KN7</b>	<b>BS3KN7</b>	<b>BC3KN7</b>	10	0,020

maintained 120°						
	Rotary	<b>B3KN9</b>	<b>BS3KN9</b>	<b>BC3KN9</b>	10	0,020

maintained 90° entsprechend EN81						
	Rotary	<b>B3KN10</b>	<b>BS3KN10</b>	<b>BC3KN10</b>	10	0,020

maintained 90°						
	Rotary	<b>B3KN11</b>	<b>BS3KN11</b>	<b>BC3KN11</b>	10	0,020

## Illuminated Rotary Knobs and Swing Knobs, clear IP67, lamp max. 1,2W, lamps see page 11



maintained 90°						
	Rotary	<b>B3KL2</b>	<b>BS3KL2</b>	<b>BC3KL2</b>	10	0,016

spring return 60°						
	Rotary	<b>B3KL1</b>	<b>BS3KL1</b>	<b>BC3KL1</b>	10	0,016
	Swing	<b>B3KRL1</b>	<b>BS3KRL1</b>	<b>BC3KRL1</b>	10	0,016




maintained 60°						
	Rotary	<b>B3KL3</b>	<b>BS3KL3</b>	<b>BC3KL3</b>	10	0,016
	Swing	<b>B3KRL3</b>	<b>BS3KRL3</b>	<b>BC3KRL3</b>	10	0,016

maintained /spring return 60°						
	Rotary	<b>B3KL6</b>	<b>BS3KL6</b>	<b>BC3KL6</b>	10	0,016

## Toggle IP65






	O - I	<b>B3E</b>	<b>BS3E</b>	<b>BC3E</b>	10	0,017
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Ring				
	key removeable in	Alu	Black	Chrome
				Pack Weight pcs. kg/pc.

**Key Operated Rotary Switch with lock Ronis 455**








B3SAR 0

maintained 60°				
	<b>B3SAR 0</b>	<b>BS3SAR 0</b>	<b>BC3SAR 0</b>	1 0,044
	<b>B3SAR 1</b>	<b>BS3SAR 1</b>	<b>BC3SAR 1</b>	1 0,044
	<b>B3SAR 01</b>	<b>BS3SAR 01</b>	<b>BC3SAR 01</b>	1 0,044



B3SARR 0

spring return 60°				
	<b>B3SAT 0</b>	<b>BS3SAT 0</b>	<b>BC3SAT 0</b>	1 0,044
maintained 60°				
	<b>B3SARR 0</b>	<b>BS3SARR 0</b>	<b>BC3SARR 0</b>	1 0,044
	<b>B3SARR 102</b>	<b>BS3SARR 102</b>	<b>BC3SARR 102</b>	1 0,044
spring return /maintained 60°				
	<b>B3SATR 02</b>	<b>BS3SATR 02</b>	<b>BC3SATR 02</b>	1 0,044
spring return 60°				
	<b>B3SATT 0</b>	<b>BS3SATT 0</b>	<b>BC3SATT 0</b>	1 0,044
<b>Spare Key</b> lock Ronis R455		<b>B4-R455</b>		1 0,007

Colour      Symbol      pcs. kg/pc.

**Illuminated Push Buttons IP67**, lamp max. 1,9W, lamps see page 11



red	<b>B3DL RT</b>	<b>BS3DL RT</b>	<b>BC3DL RT</b>	10 0,014
green	<b>B3DL GN</b>	<b>BS3DL GN</b>	<b>BC3DL GN</b>	10 0,014
yellow	<b>B3DL GE</b>	<b>BS3DL GE</b>	<b>BC3DL GE</b>	10 0,014
blue	<b>B3DL BL</b>	<b>BS3DL BL</b>	<b>BC3DL BL</b>	10 0,014
white	<b>B3DL WS</b>	<b>BS3DL WS</b>	<b>BC3DL WS</b>	10 0,014

**Illuminated Push Buttons, Maintained IP67**, lamp max. 1,9W, lamps see page 11



red	<b>B3DLR RT</b>	<b>BS3DLR RT</b>	<b>BC3DLR RT</b>	10 0,014
green	<b>B3DLR GN</b>	<b>BS3DLR GN</b>	<b>BC3DLR GN</b>	10 0,014
yellow	<b>B3DLR GE</b>	<b>BS3DLR GE</b>	<b>BC3DLR GE</b>	10 0,014
blue	<b>B3DLR BL</b>	<b>BS3DLR BL</b>	<b>BC3DLR BL</b>	10 0,014
white	<b>B3DLR WS</b>	<b>BS3DLR WS</b>	<b>BC3DLR WS</b>	10 0,014

**Double Push Buttons**, with indicator lamp white, lamp max. 1,9W, lamps see page 11



green red	<b>B3DT G/R</b> <sup>1)</sup>	<b>BS3DT G/R</b>	<b>BC3DT G/R</b>	10 0,016
white black	<b>B3DT W/S</b> <sup>1)</sup>	<b>BS3DT W/S</b>	<b>BC3DT W/S</b>	10 0,016
green   red 0	<b>B3DT GI/RO</b> <sup>1)</sup>	<b>BS3DT GI/RO</b>	<b>BC3DT GI/RO</b>	10 0,016
white   black 0	<b>B3DT WI/SO</b> <sup>1)</sup>	<b>BS3DT WI/SO</b>	<b>BC3DT WI/SO</b>	10 0,016

with non-standard marking on request

1) Plastic ring in alu design

**suitable for Alu, Black and Chrome**

Colour	<b>Type</b>	Pack Weight pcs. kg/pc.
--------	-------------	----------------------------

**Lens Caps IP67 with fresnel lens, lamp max. 1,9W, lamps see page 11, laser marking on request**



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

**Lens Caps Low IP67 with fresnel lens, lamp max. 1,9W, lamps see page 11, laser marking on request**



red	<b>B3RN RT</b>	10	0,008
green	<b>B3RN GN</b>	10	0,008
yellow	<b>B3RN GE</b>	10	0,008
blue	<b>B3RN BL</b>	10	0,008
clear	<b>B3RN KL</b>	10	0,008
white	<b>B3RN WS</b>	10	0,008

**Lens Caps IP67, lamp max. 1,9W, lamps see page 11, laser marking on request**



red	<b>B3RF RT</b>	10	0,009
green	<b>B3RF GN</b>	10	0,009
yellow	<b>B3RF GE</b>	10	0,009
blue	<b>B3RF BL</b>	10	0,009
white	<b>B3RF WS</b>	10	0,009

Colour	voltage	power VA	W	<b>Type</b>	Pack Weight pcs. kg/pc.
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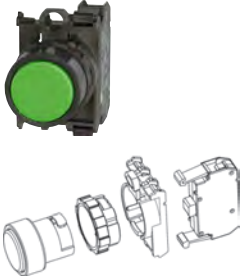


**Monoblock Multi-LED IP65, IEC 60947, EN 60947**



red	20-30V AC/DC	1,6	1,5	<b>B3-MB24 RTB</b>	10	0,022
green	20-30V AC/DC	0,4	0,4	<b>B3-MB24 GNB</b>	10	0,022
yellow	20-30V AC/DC	1,6	1,5	<b>B3-MB24 GEB</b>	10	0,022
blue	20-30V AC/DC	0,4	0,4	<b>B3-MB24 BLB</b>	10	0,022
white	20-30V AC/DC	1,6	1,5	<b>B3-MB24 WSB</b>	10	0,022
red	110-130V AC 110V DC	1,7	1,6	<b>B3-MB110 RTB</b>	10	0,022
green	110-130V AC 110V DC	1,7	1,6	<b>B3-MB110 GNB</b>	10	0,022
yellow	110-130V AC 110V DC	1,7	1,6	<b>B3-MB110 GEB</b>	10	0,022
blue	110-130V AC 110V DC	1,7	1,6	<b>B3-MB110 BLB</b>	10	0,022
white	110-130V AC 110V DC	1,7	1,6	<b>B3-MB110 WSB</b>	10	0,022
red	170-250V AC	4,1	1,0	<b>B3-MB230 RTB</b>	10	0,022
green	170-250V AC	4,1	1,0	<b>B3-MB230 GNB</b>	10	0,022
yellow	170-250V AC	4,1	1,0	<b>B3-MB230 GEB</b>	10	0,022
blue	170-250V AC	4,1	1,0	<b>B3-MB230 BLB</b>	10	0,022
white	170-250V AC	4,1	1,0	<b>B3-MB230 WSB</b>	10	0,022



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

Aktuator colour	Symbol	with	Type	Pack pcs.	Weight kg/pc.
<b>Push Buttons, IP67</b>					
	black	+connector +1NO	<b>BS3D SW/10</b>	1	0,037
	green	+connector +1NO	<b>BS3D GN/10</b>	1	0,037
	yellow	+connector +1NO	<b>BS3D GE/10</b>	1	0,037
	blue	+connector +1NO	<b>BS3D BL/10</b>	1	0,037
	red	+connector +1NC	<b>BS3D RT/01</b>	1	0,037
	green		+connector +1NO	<b>BS3D GN-I/10</b>	1
red		+connector +1NC	<b>BS3D RT-0/01</b>	1	0,037

## Double Push Buttons, IP65



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

## EMERGENCY STOP Push Buttons, IP67 Ø40mm



pull to release acc. EN418	+connector +1NO +1NC	<b>BS3P44 RT/11</b>	1	0,061
key release acc. EN418	+connector +1NO +1NC	<b>BS3P44S3/11</b>	1	0,083
twist release	+connector +1NO +1NC	<b>BS3P34 RT-0/11</b>	1	0,053




## Rotary Knobs, IP65





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

## Key Operated Rotary Switch with lock Ronis 455, IP65



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



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

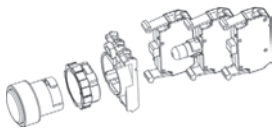
## Illuminated Push Button 22mm-Sets, with Contact Block, Connector and LED

Aktuator colour	with	LED	Type	Pack pcs.	Weight kg/pc.
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### Illuminated Push Buttons, IP67



white	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DL WS/11/L24</b>	1	0,054
green	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DL GN/11/L24</b>	1	0,054
red	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DL RT/11/L24</b>	1	0,054
yellow	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DL GE/11/L24</b>	1	0,054
blue	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DL BL/11/L24</b>	1	0,054



white	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DL WS/11/L110</b>	1	0,054
green	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DL GN/11/L110</b>	1	0,054
red	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DL RT/11/L110</b>	1	0,054
yellow	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DL GE/11/L110</b>	1	0,054
blue	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DL BL/11/L110</b>	1	0,054

white	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DL WS/11/L230</b>	1	0,054
green	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DL GN/11/L230</b>	1	0,054
red	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DL RT/11/L230</b>	1	0,054
yellow	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DL GE/11/L230</b>	1	0,054
blue	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DL BL/11/L230</b>	1	0,054

### Double Push Buttons with Pilot Light, IP65



green/ red	+ connector	+1NO +1NC +LED	20-30V AC/DC	<b>BS3DT G/R/11/L24</b>	1	0,066
green/ red	+ connector	+1NO +1NC +LED	90-120V AC/DC	<b>BS3DT G/R/11/L110</b>	1	0,066
green/ red	+ connector	+1NO +1NC +LED	200-250V AC/DC	<b>BS3DT G/R/11/L230</b>	1	0,066

### Pilot Lights, IP67 with socket BA9S (without lamp)



white	+ connector	+socket BA9S	-	<b>B3R WS/0</b>	1	0,037
green	+ connector	+socket BA9S	-	<b>B3R GN/0</b>	1	0,037
red	+ connector	+socket BA9S	-	<b>B3R RT/0</b>	1	0,037
yellow	+ connector	+socket BA9S	-	<b>B3R GE/0</b>	1	0,037

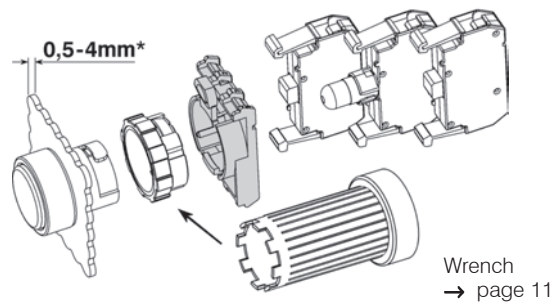
### Pilot Lights with LED, IP67



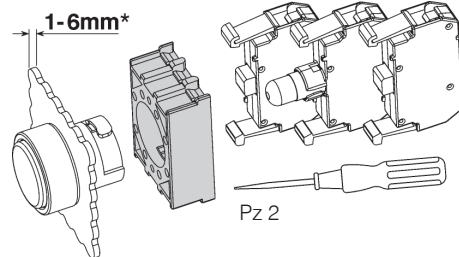
white	+ connector	+socket BA9S	20-30V AC/DC	<b>B3R WSL24</b>	1	0,042
green	+ connector	+socket BA9S	20-30V AC/DC	<b>B3R GNL24</b>	1	0,042
red	+ connector	+socket BA9S	20-30V AC/DC	<b>B3R RTL24</b>	1	0,042
yellow	+ connector	+socket BA9S	20-30V AC/DC	<b>B3R GEL24</b>	1	0,042
white	+ connector	+socket BA9S	90-120V AC/DC	<b>B3R WS/L110</b>	1	0,042
green	+ connector	+socket BA9S	90-120V AC/DC	<b>B3R GN/L110</b>	1	0,042
red	+ connector	+socket BA9S	90-120V AC/DC	<b>B3R RT/L110</b>	1	0,042
yellow	+ connector	+socket BA9S	90-120V AC/DC	<b>B3R GE/L110</b>	1	0,042
white	+ connector	+socket BA9S	200-250V AC/DC	<b>B3R WS/L230</b>	1	0,042
green	+ connector	+socket BA9S	200-250V AC/DC	<b>B3R GN/L230</b>	1	0,042
red	+ connector	+socket BA9S	200-250V AC/DC	<b>B3R RT/L230</b>	1	0,042
yellow	+ connector	+socket BA9S	200-250V AC/DC	<b>B3R GE/L230</b>	1	0,042

## Connectors

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



<b>Connector B3M</b>		<b>B3M</b>	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.
max. 690V AC	1 NC	<b>B3T01</b> <sup>2)</sup>	10	0,010
max. 690V AC	1 NO	<b>B3T10</b> <sup>2)</sup>	10	0,010
<b>Actuator insert</b>	to actuate the center contact block	<b>P642</b>	10	0,001

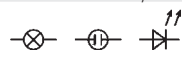
### Contact blocks



### Lamp holders, socket BA9s



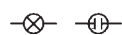
max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)	<b>B3F</b>	10	0,012
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### Lamp holders for lamp test circuits, socket BA9s



max. 440V AC	direct connection, for filament and glow-discharge lamps max. 1,7W (active power consumption)	<b>B3FT</b>	10	0,020
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max. 250V	direct connection of LED	<b>B3FTD</b>	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.
<b>LED lamps <sup>2)</sup></b> (6 years middle lifetime, for equivalent lens caps only)						
	20-30V AC/DC	17mA / 0,4W	for red lens caps	<b>B3-L24 RTB</b>	10	0,005
	20-30V AC/DC	17mA / 0,4W	for green lens caps	<b>B3-L24 GNB</b>	10	0,005
	20-30V AC/DC	17mA / 0,4W	for yellow lens caps	<b>B3-L24 GEB</b>	10	0,005
	20-30V AC/DC	17mA / 0,4W	for blue lens caps	<b>B3-L24 BLB</b>	10	0,005
	20-30V AC/DC	17mA / 0,4W	for white lens caps	<b>B3-L24 WSB</b>	10	0,005
	90-120V AC/DC	7mA / 0,8W	for red lens caps	<b>B3-L110 RTB</b>	10	0,005
	90-120V AC/DC	7mA / 0,8W	for green lens caps	<b>B3-L110 GNB</b>	10	0,005
	90-120V AC/DC	7mA / 0,8W	for yellow lens caps	<b>B3-L110 GEB</b>	10	0,005
	90-120V AC/DC	7mA / 0,8W	for blue lens caps	<b>B3-L110 BLB</b>	10	0,005
	90-120V AC/DC	7mA / 0,8W	for white lens caps	<b>B3-L110 WSB</b>	10	0,005
	200-250V AC/DC	4mA / 0,9W	for red lens caps	<b>B3-L230 RTB</b>	10	0,005
	200-250V AC/DC	4mA / 0,9W	for green lens caps	<b>B3-L230 GNB</b>	10	0,005
	200-250V AC/DC	4mA / 0,9W	for yellow lens caps	<b>B3-L230 GEB</b>	10	0,005
	200-250V AC/DC	4mA / 0,9W	for blue lens caps	<b>B3-L230 BLB</b>	10	0,005
	200-250V AC/DC	4mA / 0,9W	for white lens caps	<b>B3-L230 WSB</b>	10	0,005

## Filament lamps



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

## Glow-discharge lamps



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

## Accessories



			Type	VPE Stk.	Gewicht kg/Stk.
<b>Wrench</b>	for mounting of actuators and lens caps B(S)3..		<b>J7049</b>	1	0,018
<b>Marking plate</b>	for marking of contact blocks B3T. and lamp holders B3F		<b>P672-1</b>	10	0,001
<b>Lamp Installer</b>	used to install or replace lamps BA9s		<b>B4-7408</b>	1	0,010
<b>Spare Key</b>	for B(S)3SA.. and BS3P44S3, Ronis R455 for B(S)3SB.., Ronis R786		<b>B4-R455</b> <b>B4-R786</b>	1 1	0,007 0,007
<b>Hole Plug</b>	black, for fixing holes Ø22,5mm grey		<b>B3-DU SW</b> <b>B3-DU GR</b>	10 10	0,007 0,007
<b>Sealing Cover</b>	ambient temp. 0° - +50° C <sup>3)</sup> protection against coarse contamination		<b>P279-1</b> <b>P279-3</b>	1 1	0,003 0,003
	petrol-resistant <sup>3)</sup> ambient temp. -25° - +55° C		<b>P279-DT</b>	1	0,003
	for double push buttons, petrol-resistant ambient temp. -25° - +55° C				
<b>Protection cover</b>	against unintentional manipulation				
	Thickness 1mm yellow		<b>B3-SK GE</b>	1	0,04
	Thickness 1mm grey		<b>B3-SK GR</b>	1	0,04
<b>Protection ring with thread</b>	against unintentional manipulation has to be mounted instead of the existing ring	black chrome alu	<b>P921-1</b> <b>P921-2</b> <b>P921-3</b>	1 1 1	0,012 0,012 0,012

1) Voltage marking 130V / 2W max. rated voltage 120V / 1,8W    2) suitable for B3FT lamp test lamp holders  
3) not for B3D..R.. (maintained)

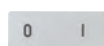
# Label Holder and Legend Plates for Push Buttons B3, 22mm

## Marking 1 or 2 lines



	Type	Pack pcs.	Weight kg/pc.
<b>Label holder</b> for legend plate BK4, black, Thickness 0,8mm		100	0,002
<b>Label holder</b> for legend plate BK4, yellow, Thickness 0,8mm		10	0,002

marking	Type	marking	Type	Pack pcs.	Weight kg/pc.
Legend plate alu, for label holder P751					
blank	<b>BK4-9736</b>			100	0,0002
I	<b>BK4-I</b>	II	<b>BK4-II</b>	10	0,0002
III	<b>BK4-III</b>	IV	<b>BK4-IV</b>	10	0,0002
V	<b>BK4-V</b>			10	0,0002
→	<b>BK4---&gt;</b>	←	<b>BK4-&lt;--</b>	10	0,0002
0 I	<b>BK4-0-I</b>	H 0 A	<b>BK4-H 0 A</b>	10	0,0002
0 I	<b>BK4-0__I</b>	1 0 2	<b>BK4-1 0 2</b>	10	0,0002
START	<b>BK4-START</b>	STOP	<b>BK4-STOP</b>	10	0,0002
EIN	<b>BK4-EIN</b>	AUS	<b>BK4-AUS</b>	10	0,0002
BETRIEB	<b>BK4-BETRIEB</b>	STÖRUNG	<b>BK4-STÖRUNG</b>	10	0,0002
VOR	<b>BK4-VOR</b>	ZURÜCK	<b>BK4-ZURÜCK</b>	10	0,0002
HEBEN	<b>BK4-HEBEN</b>	SENKEN	<b>BK4-SENKEN</b>	10	0,0002
LINKS	<b>BK4-LINKS</b>	RECHTS	<b>BK4-RECHTS</b>	10	0,0002
MEHR	<b>BK4-MEHR</b>	WENIGER	<b>BK4-WENIGER</b>	10	0,0002
SCHNELL	<b>BK4-SCHNELL</b>	LANGSAM	<b>BK4-LANGSAM</b>	10	0,0002
HELLER	<b>BK4-HELLER</b>	DUNKLER	<b>BK4-DUNKLER</b>	10	0,0002
AUF	<b>BK4-AUF</b>	ZU	<b>BK4-ZU</b>	10	0,0002
AB	<b>BK4-AB</b>	HALT	<b>BK4-HALT</b>	10	0,0002
EILGANG	<b>BK4-EILGANG</b>	TIPPEN	<b>BK4-TIPPEN</b>	10	0,0002
Legend plate with non-standard marking (e. g.: BK4-MOTOR-START)					
Text 1 line, max. 11 letters, letter height 3mm			<b>BK4-...</b>	1	0,0002
Text 2 lines, max. 2 x 11 letters, letter height 3mm			<b>BK4-...-...</b>	1	0,0002
Legend plate yellow, for label holder P751-3					
Legend plate yellow without marking			<b>BK4-10827</b>	10	0,0002
Legend plate yellow with marking NOT-AUS			<b>BK4-10827-1</b>	10	0,0002
Legend plate yellow with marking EMERGENCY STOP			<b>BK4-10827-2</b>	10	0,0002
Legend plate yellow with marking ARRET D`URGENCE			<b>BK4-10827-3</b>	10	0,0002



## Marking 3 or 4 lines



<b>Label holder</b> for legend plate <b>BK8</b> , black, Thickness 0,8mm	<b>P761</b>	10	0,002
<b>Label holder</b> for legend plate <b>BK8</b> , yellow, Thickness 0,8mm	<b>P761-3</b>	10	0,002
<b>Label holder</b> for <b>BK8</b> , for double push buttons only	<b>P761-DT</b>	10	0,002

Legend plate BK8 with for label holder P761 (with marking e. g.: BK8-WATER-PUMP-START)					
Legend plate without marking			<b>BK8-9736</b>	10	0,0004
Text 3 lines, max. 3 x 11 letters, letter height 3mm			<b>BK8-...-...-...</b>	10	0,0004
Text 4 lines, max. 4 x 11 letters, letter height 3mm			<b>BK8-...-...-...-...</b>	10	0,0004



# Actuator Caps with Laser Marking

## Code for colours

Colour	for buttons		for illuminated buttons	
	B3D(R)	B5D(R)	B3DL(R)	B5DL(R)
red	DK RT-..		DKL RT-..	
green	DK GN-..		DKL GN-..	
yellow	DK GE-..		DKL GE-..	
blue	DK BL-..		DKL BL-..	
white	DK WS-..		DKL WS-..	
black	DK SW-..	-		

marking	Type	-suffix for marking	marking	Type	-suffix for marking.	Pack Weight pcs.	kg/pc.
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Actuator Caps with text, the Type must be completed with the code for colours



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

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

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

# Actuators and Lens Caps 30mm IP67 (IP65)

## Push Buttons



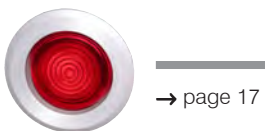
## EMERGENCY STOP Buttons



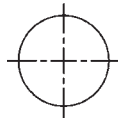
## Illuminated Operators



## Lens Caps

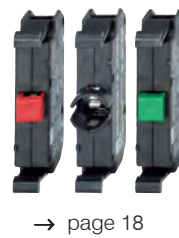


Mounting hole  
Ø 30,5mm



## Connectors

## Connectors Lamp Holders



Wrench  
J7049



## Actuators 30mm IP67

Ring	Colour	Symbol	 Alu	 Black	 Chrome	Pack pcs.	Weight kg/pc.
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### Push Buttons, Actuator Caps markable



red			<b>B5D RT</b>	<b>BS5D RT</b>	<b>BC5D RT</b>	10	0,029
red	0		<b>B5D RT-0</b>	<b>BS5D RT-0</b>	<b>BC5D RT-0</b>	10	0,029
green			<b>B5D GN</b>	<b>BS5D GN</b>	<b>BC5D GN</b>	10	0,029
green	I		<b>B5D GN-I</b>	<b>BS5D GN-I</b>	<b>BC5D GN-I</b>	10	0,029
green	II		<b>B5D GN-II</b>	<b>BS5D GN-II</b>	<b>BC 5D GN-II</b>	10	0,029
green	→		<b>B5D GN-PF</b>	<b>BS5D GN-PF</b>	<b>BC5D GN-PF</b>	10	0,029



yellow			<b>B5D GE</b>	<b>BS5D GE</b>	<b>BC5D GE</b>	10	0,029
blue			<b>B5D BL</b>	<b>BS5D BL</b>	<b>BC5D BL</b>	10	0,029
white			<b>B5D WS</b>	<b>BS5D WS</b>	<b>BC 5D WS</b>	10	0,029
black			<b>B5D SW</b>	<b>BS5D SW</b>	<b>BC5D SW</b>	10	0,029
black	→		<b>B5D SW-PF</b>	<b>BS5D SW-PF</b>	<b>BC5D SW-PF</b>	10	0,029

### Push Buttons, Maintained, Actuator Caps markable



red			<b>B5DR RT</b>	<b>BS5DR RT</b>	<b>BC5DR RT</b>	10	0,029
green			<b>B5DR GN</b>	<b>BS5DR GN</b>	<b>BC5DR GN</b>	10	0,029
yellow			<b>B5DR GE</b>	<b>BS5DR GE</b>	<b>BC5DR GE</b>	10	0,029
blue			<b>B5DR BL</b>	<b>BS5DR BL</b>	<b>BC5DR BL</b>	10	0,029
white			<b>B5DR WS</b>	<b>BS5DR WS</b>	<b>BC5DR WS</b>	10	0,029
black			<b>B5DR SW</b>	<b>BS5DR SW</b>	<b>BC5DR SW</b>	10	0,029

### Mushroom Head, Ø28mm



red			<b>B5P1 RT</b>	<b>BS5P1 RT</b>	<b>BC5P1 RT</b>	10	0,032
red	0		<b>B5P1 RT-0</b>	<b>BS5P1 RT-0</b>	<b>BC5P1 RT-0</b>	10	0,032
green			<b>B5P1 GN</b>	<b>BS5P1 GN</b>	<b>BC5P1 GN</b>	10	0,032
yellow			<b>B5P1 GE</b>	<b>BS5P1 GE</b>	<b>BC5P1 GE</b>	10	0,032
blue			<b>B5P1 BL</b>	<b>BS5P1 BL</b>	<b>BC5P1 BL</b>	10	0,032
black			<b>B5P1 SW</b>	<b>BS5P1 SW</b>	<b>BC5P1 SW</b>	10	0,032

### Mushroom Head, Ø40mm



red	0		<b>B5P14 RT-0</b>	<b>BS5P14 RT-0</b>	<b>BC5P14 RT-0</b>	10	0,035
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### EMERGENCY STOP Push Buttons, Ø 28mm, release by turning, with yellow ring



red			<b>B5P3 RT</b>	<b>BS5P3 RT</b>	<b>BC5P3 RT</b>	10	0,032
red	0		<b>B5P3 RT-0</b>	<b>BS5P3 RT-0</b>	<b>BC5P3 RT-0</b>	10	0,032

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



red	0		<b>B5P34 RT-0</b>	<b>BS5P34 RT-0</b>	<b>BC5P34 RT-0</b>	10	0,035
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### Yellow Disk for EMERGENCY-STOP Push Buttons, Ø70mm, Thickness 1mm



neutral			<b>B5-7603</b>			1	0,004
with marking NOT-AUS			<b>B5-7603-1</b>			1	0,004
with marking EMERGENCY STOP			<b>B5-7603-2</b>			1	0,004



## Actuators 30mm

Ring



Pack Weight  
pcs. kg/pc.

### Rotary Knobs and Swing Knobs, black IP65



Rotary

maintained 60°						
	Rotary	<b>B5KN2</b>	<b>BS5KN2</b>	<b>BC5KN2</b>	10	0,035
	Swing	<b>B5KRN2</b>	<b>BS5KRN2</b>	<b>BC5KRN2</b>	10	0,035

spring return 60°						
	Rotary	<b>B5KN8</b>	<b>BS5KN8</b>	<b>BC5KN8</b>	10	0,035
	Swing	<b>B5KRN8</b>	<b>BS5KRN8</b>	<b>BC5KRN8</b>	10	0,035

spring return 60°						
	Rotary	<b>B5KN1</b>	<b>BS5KN1</b>	<b>BC5KN1</b>	10	0,035
	Swing	<b>B5KRN1</b>	<b>BS5KRN1</b>	<b>BC5KRN1</b>	10	0,035



Swing

maintained 60°						
	Rotary	<b>B5KN3</b>	<b>BS5KN3</b>	<b>BC5KN3</b>	10	0,035
	Swing	<b>B5KRN3</b>	<b>BS5KRN3</b>	<b>BC5KRN3</b>	10	0,035

maintained /spring return 60°						
	Rotary	<b>B5KN6</b>	<b>BS5KN6</b>	<b>BC5KN6</b>	10	0,035

spring return /maintained 60°						
	Rotary	<b>B5KN7</b>	<b>BS5KN7</b>	<b>BC5KN7</b>	10	0,035

maintained 120°						
	Rotary	<b>B5KN9</b>	<b>BS5KN9</b>	<b>BC5KN9</b>	10	0,035

maintained 90° according to EN81						
	Rotary	<b>B5KN10</b>	<b>BS5KN10</b>	<b>BC5KN10</b>	10	0,035

### Illuminated Rotary Knobs and Swing Knobs IP67, clear, lamp max. 1,2W, lamps see page 19



Rotary

maintained 90°						
	Rotary	<b>B5KL2</b>	<b>BS5KL2</b>	<b>BC5KL2</b>	10	0,031

spring return 60°						
	Rotary	<b>B5KL1</b>	<b>BS5KL1</b>	<b>BC5KL1</b>	10	0,031
	Swing	<b>B5KRL1</b>	<b>BS5KRL1</b>	<b>BC5KRL1</b>	10	0,031



Swing

maintained 60°						
	Rotary	<b>B5KL3</b>	<b>BS5KL3</b>	<b>BC5KL3</b>	10	0,031
	Swing	<b>B5KRL3</b>	<b>BS5KRL3</b>	<b>BC5KRL3</b>	10	0,031

maintained /spring return 60°						
	Rotary	<b>B5KL6</b>	<b>BS5KL6</b>	<b>BC5KL6</b>	10	0,031

### Toggle IP65



O - I	<b>B5E</b>	<b>BS5E</b>	<b>BC5E</b>	10	0,032
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## Actuators and Lens Caps 30mm IP65

Ring	key removeable in	Alu	Black	Chrome	Pack pcs.	Weight kg/pc.
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### Key Operated Rotary Switch with lock Ronis 455



B3SAR 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



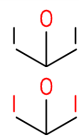
B3SARR 0

spring return 60°



B5SAT 0	BS5SAT 0	BC5SAT 0	1	0,059
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maintained 60°



B5SARR 0	BS5SARR 0	BC5SARR 0	1	0,059
B5SARR 102	BS5SARR 102	BC5SARR 102	1	0,059

tastend/maintained 60°



B5SATR 02	BS5SATR 02	BC5SATR 02	1	0,059
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spring return 60°



B5SATT 0	BS5SATT 0	BC5SATT 0	1	0,059
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Spare Key lock Ronis R455 B4-R455 1 0,007

Colour pcs. kg/pc.

### Illuminated Push Buttons IP67, lamp max. 1,9W, lamps see page 19



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 19



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

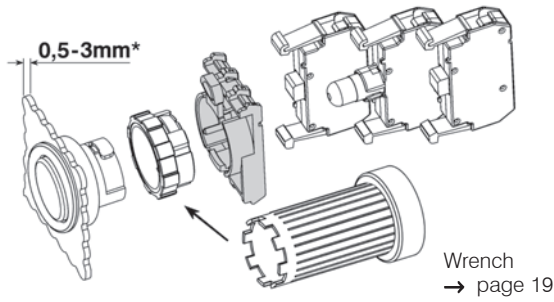
### Lens Caps with fresnel lens IP67, lamp max. 1,9W, lamps see page 19



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.
<b>Connector B3S</b>		<b>B3S</b>	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	<b>B3T01</b> <sup>2)</sup>	10	0,010
max. 690V AC	1 NO	<b>B3T10</b> <sup>2)</sup>	10	0,010



<b>Actuator insert</b>	to actuate the center contact block	<b>P642</b>	10	0,001
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### Lamp holders, socket BA9s



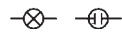
max. 440V AC/DC	direct connection, for lamps max. 1,9W (active power consumption)	<b>B3F</b>	10	0,012
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### Lamp holders for lamp test circuits, socket BA9s



max. 440V AC	direct connection, for filament and glow-discharge lamps max. 1,7W (active power consumption)	<b>B3FT</b>	10	0,020
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max. 250V	direct connection of LED	<b>B3FTD</b>	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<sup>2)</sup> (6 years middle lifetime, for equivalent lens caps only)



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

### Filament lamps



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

### Glow-discharge lamps

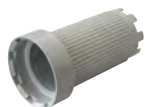


220-250V AC	0,3W	for clear, red, yellow lens caps	<b>B4-GL230K</b>	100	0,005
220-250V AC	0,3W	for green, blue lens caps	<b>B4-GL230G</b>	100	0,005

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

2) suitable for B3FT lamp test lamp holders

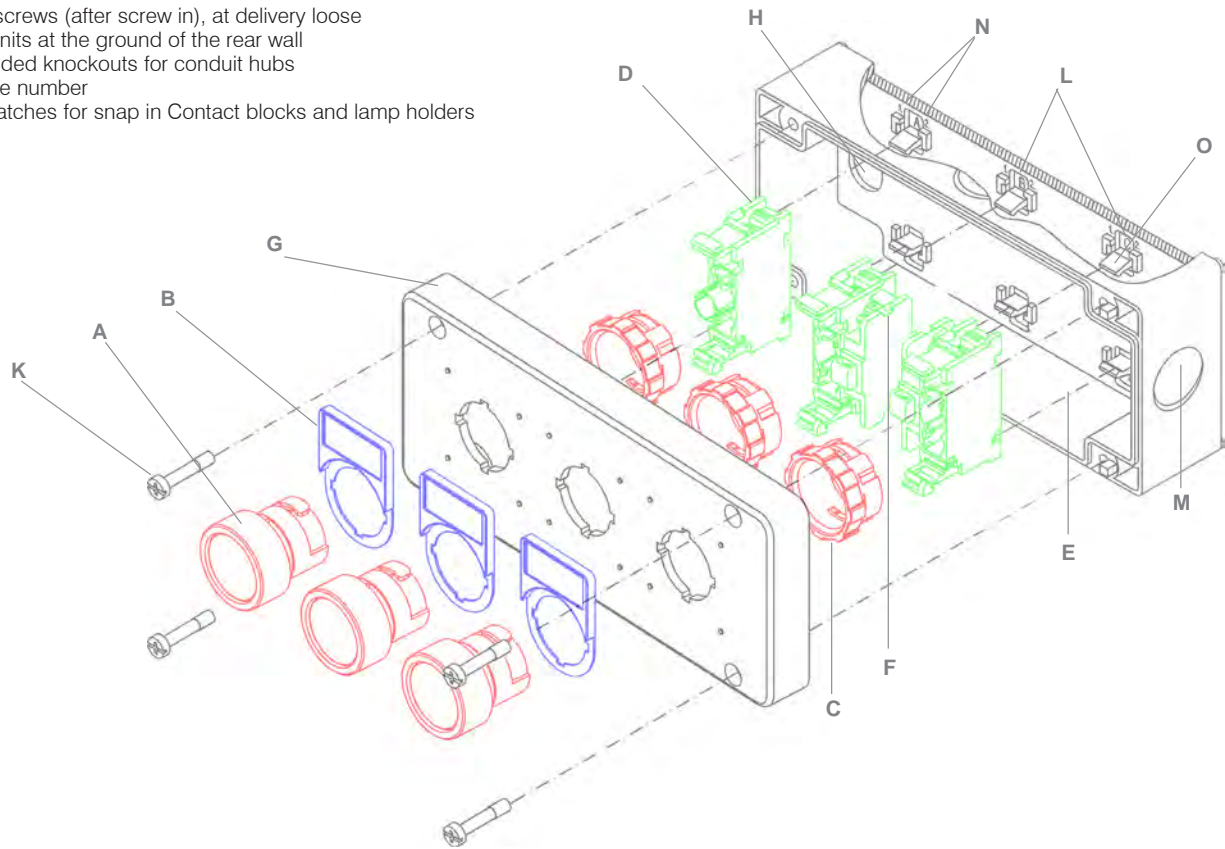
## Accessories



		Type	VPE Stk.	Gewicht kg/Stk.
<b>Wrench</b>	for mounting of actuators and lens caps B(S)3..	<b>J7049</b>	1	0,018
<b>Marking plate</b>	for marking of contact blocks B3T. and lamp holders B3F	<b>P672-1</b>	10	0,001
<b>Lamp Installer</b>	used to install or replace lamps BA9s	<b>B4-7408</b>	1	0,010
<b>Spare Key</b>	for B(S)3SA.. and BS3P44S3, Ronis R455 for B(S)3SB.., Ronis R786	<b>B4-R455</b> <b>B4-R786</b>	1 1	0,007 0,007
<b>Protectiv cover sealable</b>	against unintentional manipulation of buttons B5, (not for mushroom heads, rotary and swing knobs)	<b>B5-SAP</b>	1	0,008
<b>Label holder</b>	for legend plate BK5, black	<b>P942-1</b>	10	0,002
<b>Legend plate</b>	alu without marking Text 1 or 2 lines, max. 4 x 13 letters, letter height 3mm	<b>BK5-11374</b>	10	0,002
<b>Adapter</b>	to convert Actuators 22mm to 30mm			
	alu	<b>B5</b>	10	0,017
	black	<b>BS5</b>	10	0,017
	chrome	<b>BC5</b>	10	0,017

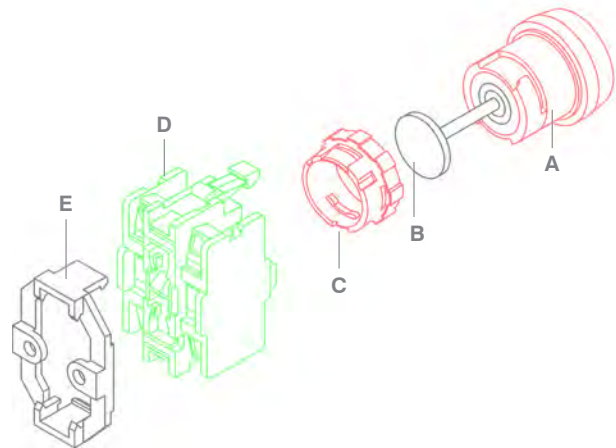
## Assembled Stations BG.. IP67 Type12

- 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 22
- 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 15 - 17
- B Extension B4V...
- C Ring and nut (included with actuator or lens cap)
- D Contact block B4.. see page 22
- E Base B4U for base and DIN-rail mounting of contact blocks













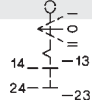





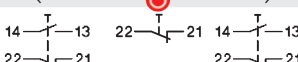

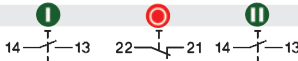

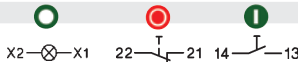










### Mounting Plate for base and DIN-rail mounting of contact blocks



		Type	Pack pcs.	Weight kg/pc.
<b>Mounting Plate</b>	for base and DIN-rail mounting of contact blocks and lamp holders <b>B4.U...</b>	<b>B4U</b>	10	0,010
<b>Ring and Nut</b>	for mounting former actuators and lens caps <b>B4...</b>	<b>B3UP</b>	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.
	<b>ON push button green</b>		<b>BG10 GN</b>	1	0,135
	<b>OFF push button red</b>		<b>BG10 RT</b>	1	0,135
	<b>Pilot light green</b>		<b>BG01 GN</b>	1	0,135
	<b>Pilot light red</b>		<b>BG01 RT</b>	1	0,135
	<b>Key operated 0 - I <sup>1)</sup></b> lock Ronis R455 60° maintained		<b>BG10SAR 0</b>	1	0,165
	<b>Key operated I - 0 - II <sup>1)</sup></b> lock Ronis R455 60° maintained		<b>BG10SARR 0</b>	1	0,172
	<b>2 push buttons 0 - I</b>		<b>BG20</b>	1	0,200
	<b>2 push buttons ← →</b>		<b>BG20PF</b>	1	0,200
	<b>3 push buttons ← 0 →</b>		<b>BG30PF</b>	1	0,283
	<b>3 push buttons I - 0 - II</b>		<b>BG30</b>	1	0,283
	<b>2 push buttons 0 - I with pilot light green</b>		<b>BG21 GN</b>	1	0,270
	<b>Foot and palm button</b> mushroom Ø70mm		<b>BG10P14P GR</b>	1	0,187
<b>Plastic enclosed EMERGENCY STOP buttons</b>					
	<b>EMERGENCY STOP button</b> head Ø40mm unlock by turning		<b>BG10P34-11</b>	1	0,145
	<b>EMERGENCY STOP mushroom button</b> Ø40mm according to EN418 unlock by pull		<b>BG10P44-11</b>	1	0,145
	<b>EMERGENCY STOP key operated button</b> Ø40mm according to EN418 unlock by key		<b>BG10P44S3-11</b>	1	0,178
	<b>EMERGENCY STOP mushroom button</b> Ø70mm unlock by turning		<b>BG10P34P-11</b>	1	0,187

1) IP65

## Enclosures BG.. IP67, Type12








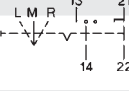


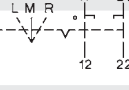

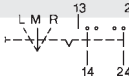
	Number of units	Description	Type	Pack pcs.	Weight kg/pc.
	1	3 knockouts Ø20,5mm (M20 or PG13,5)	<b>BG1</b>	1	0,108
	2	3 knockouts Ø20,5mm (M20 or PG13,5)	<b>BG2</b>	1	0,145
	3	3 knockouts Ø20,5mm (M20 or PG13,5)	<b>BG3</b>	1	0,188

## 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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
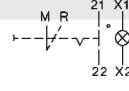

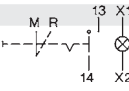





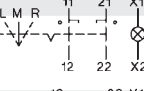

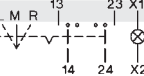
### Contact blocks for enclosures BG..




1NC <sup>1)</sup> 				<b>B4TU01</b>	10	0,015
1NO				<b>B4TU10</b>	10	0,015
1NO+1NC <sup>1)</sup> 				<b>B4TU11</b>	10	0,022
2NC <sup>1)</sup> 				<b>B4TU02</b>	10	0,022
2NO				<b>B4TU20</b>	10	0,022

### Contact blocks with lamp holder, socket BA9s for LED or lamps, for enclosures BG.., lamps see page 19



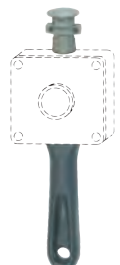
1NC <sup>1)</sup> 	max. 440V AC/DC			<b>B4TU01F</b>	10	0,020
1NO	max. 440V AC/DC			<b>B4TU10F</b>	10	0,020
1NO+1NC <sup>1)</sup> 	max. 440V AC/DC			<b>B4TU11F</b>	10	0,027
2NC <sup>1)</sup> 	max. 440V AC/DC			<b>B4TU02F</b>	10	0,027
2NO	max. 440V AC/DC			<b>B4TU20F</b>	10	0,027

### Lamp holder, socket BA9s for LED or lamps, lamps see page 19

max. 440V AC/DC	direct connection, for lamps max. 1,9W (take care for active power consumption)		<b>B4FU</b>	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.
<b>Wrench</b>	for mounting of actuators and lens caps B(S)3..	<b>J7049</b>	1	0,018
<b>Couple Part</b>	to couple enclosures BKL G or assembled stations BG..	<b>B4-8852</b>	1	0,018
<b>Suspension Eye</b>	for hanging stations	<b>B4-9929</b>	1	0,188
<b>Handle and Cable Inlet</b>	to change enclosures BG.. or assembled stations BG.. into a hanging station	<b>B4-9149</b>	1	0,064

## Push Buttons for Enclosures 22mm IP65

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

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



<b>Reset push button</b>	blue	R	19,5-38,5	<b>B3GRB-31,5</b>	10	0,023
	blue	R	38,5-60	<b>B3GRB-60</b>	10	0,026
<b>Reset push button with stop function</b>	red	0/R	19,5-38,5	<b>B3GR-31,5</b>	10	0,023
	red	0/R	38,5-60	<b>B3GR-60</b>	10	0,026
<b>Start push button</b>	green	I	19,5-38,5	<b>B3GI-31,5</b>	10	0,023
	green	I	38,5-60	<b>B3GI-60</b>	10	0,026
<b>Stop push button</b>	red	0	19,5-38,5	<b>B3G0-31,5</b>	10	0,023
	red	0	38,5-60	<b>B3G0-60</b>	10	0,026
<b>Mushroom head lockable Ø28mm</b>	red		19,5-38,5	<b>B3GP-31,5</b>	10	0,023
	red		38,5-60	<b>B3GP-60</b>	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	<b>B4V31,5</b>	10	0,001
	18,5	38,5 - 60	<b>B4V60</b>	10	0,004



# Technical Data

Terminal markings for control units according to DIN EN 50013

Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Distinc. number	Contact elements	Colour code
10								01		 <b>NO</b> Green <b>NC</b> 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
<b>Rated insulation voltage <math>U_i</math></b>	V AC	690 <sup>1)</sup>	500
<b>Utilization category AC12</b> Control of resistive loads and solid stateloads with isolation by opto couplers			
<b>Rated current <math>I_n</math></b>	220-240V A 380-415V A 500V A 690V A	10 10 10 10	10 10 10 -
<b>Utilization category AC15</b> Control of electromagnetic load (>72VA)			
<b>Rated current <math>I_n</math></b>	220-240V A 380-415V A 500V A 690V A	6 5 3 2	6 5 3 -
<b>Utilization category DC12</b> L/R = 1ms Control of resistive loads and solid stateloads with isolation by opto couplers			
<b>Rated current <math>I_n</math></b>	24V A 60V A 110V A 220V A	10 6 2,5 0,8	10 6 2,5 0,8
<b>Utilization category DC14</b> L/R = 15ms Control of electromagnetic loads having economy resistors in circuit			
<b>Rated current <math>I_n</math></b>	24V A 60V A 110V A 220V A	8 1 2 0,5	8 1 2 0,5
<b>Utilization category DC13</b> L/R = 300ms Control of electromagnets			
<b>Rated current <math>I_n</math></b>	24V A 60V A 110V A 220V A	2 5 0,5 0,2	2 5 0,5 0,2
<b>Making capacity</b>	A	60	60
<b>Breaking capacity</b> $\cos\phi = 0,7-1$	40-60Hz A	50	50
<b>Mechanical life</b>	millions of operations	10	10
<b>Contact life (AC15)</b>			
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
<b>Maximum frequency of operations</b>	ops. per hour	600	600
<b>Short circuit protection</b>	slow, gL (gG) A	25	25
<b>Type</b>		<b>B3F</b>	<b>B4F</b>
<b>Rated insulation voltage <math>U_i</math></b>	V AC	440 <sup>2)</sup>	440 <sup>2)</sup>
<b>Lamp base</b>		BA9s	

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

Data according to cULus

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

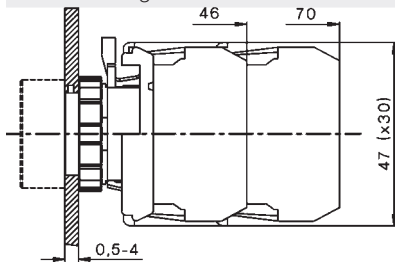
- Not provided for test till now

1) suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry):  $U_{imp} = 6kV$ . Data for other conditions on request  
2) suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry):  $U_{imp} = 4kV$

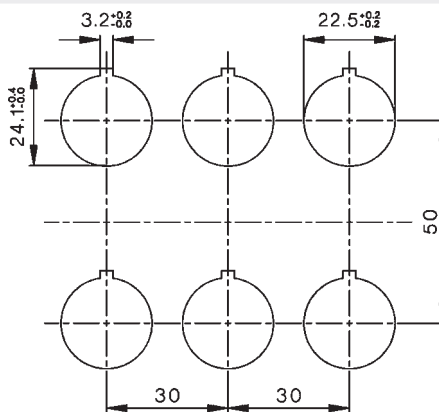
# Dimensions

## Actuators and Lens Caps 22mm

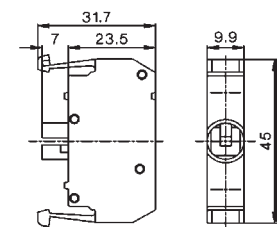
Panel mounting B3S



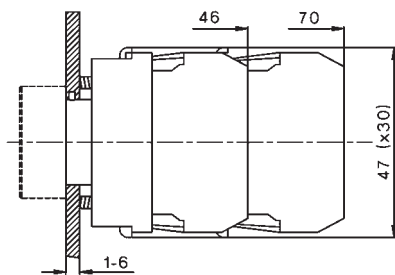
Mounting holes



Contact blocks and Lampenhalter B3...



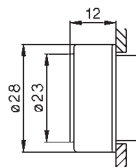
Panel mounting B3M



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

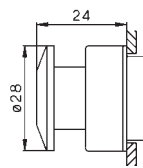
## Actuators and Lens caps

Flush Head  
Illuminated Flush Head



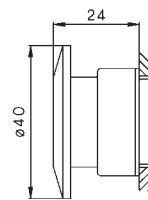
B3D(R), B3DL(R)  
BS3D(R), BS3DL(R)  
BC3D(R), BC3DL(R)

Mushroom Head Ø28mm  
Emergency Stop Ø28mm



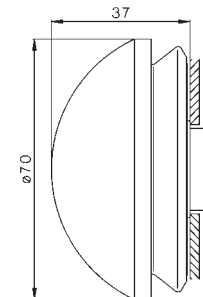
B3P1 bis B3P3  
BS3P1 bis BS3P3  
BC3P1 bis BC3P3

Mushroom Head Ø40mm  
Emergency Stop Ø40mm



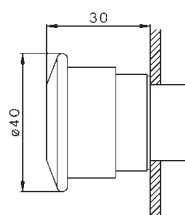
B3P14, B3P34  
BS3P14, BS3P34  
BC3P14, BC3P34

Mushroom Head Ø70mm  
Emergency Stop Ø70mm



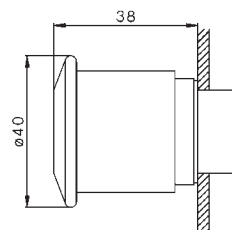
BS3P14P  
BS3P34P

Push-and pull button Ø40mm



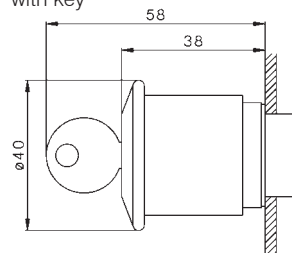
BS3P44

Push-and pull button Ø40mm



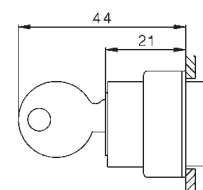
BS3P45

Push-and pull button Ø40mm  
with key



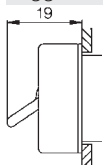
BS3P44S3

Lockable Push button



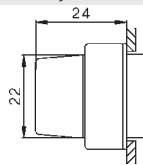
B3SAR., B3SAT.  
BS3SAR., BS3SAT.  
BC3SAR., BC3SAT.

Toggle



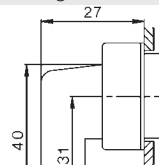
B3E  
BS3E  
BC3E

Rotary Knob



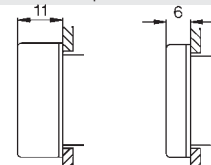
B3KN, B3KL  
BS3KN, BS3KL  
BC3KN, BC3KL

Swing Knob



B3KRL, B3KRN  
BS3KRL, BS3KRN  
BC3KRL, BC3KRN

Lens Cap

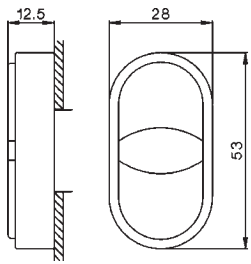


B3R(F)      B3RN

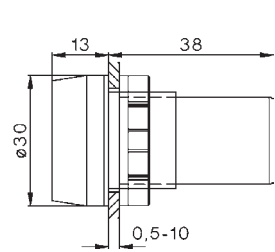
# Dimensions

## Actuators and Lens Caps 22mm

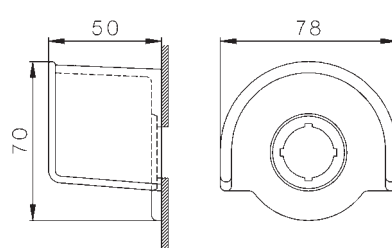
Double push button



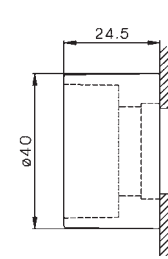
Monoblock Multi-LED



Protection cover



Protection ring w. thread



**B3DT**

**B3-MB...**

**B3-SK ..**

**P921-**

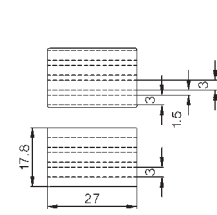
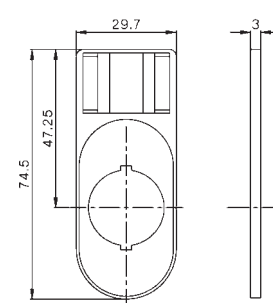
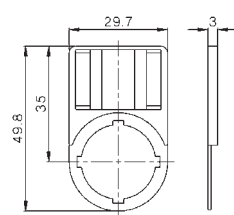
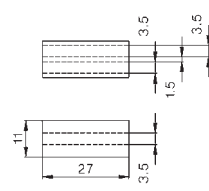
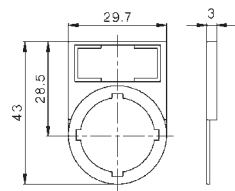
Label holder

Legend plate

Label holder

Label holder

Legend plate



**P751**

**BK4-...**

**P761**

**P761-DT**

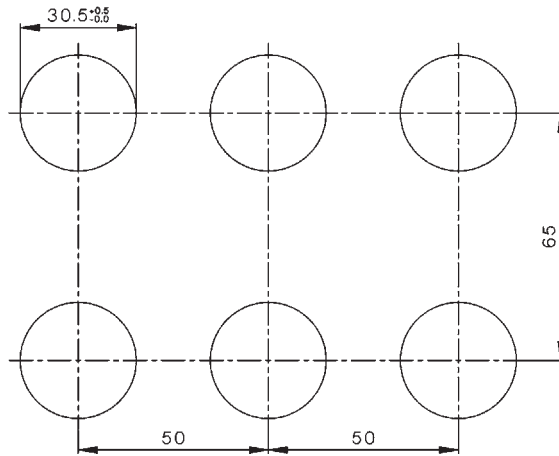
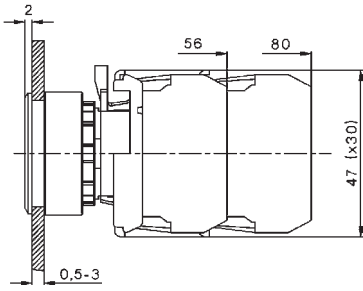
**BK8-...**

# Dimensions

## Actuators and Lens Caps 30mm

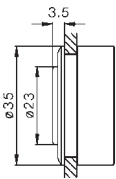
Panel mounting B3S

Mounting holes



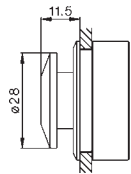
## Actuators and Lens caps

Flush Head  
Illuminated Flush Head



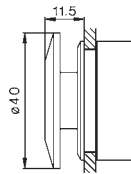
B5D(R), B5DL(R)  
BS5D(R), BS5DL(R)

Mushroom Head Ø28mm  
Emergency Stop Ø28mm



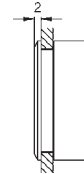
B5P1 to B5P3  
BS5P1 to BS5P3

Mushroom Head Ø40mm  
Emergency Stop Ø40mm



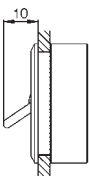
B5P14, B5P34  
BS5P14, BS5P34

Lens Cap



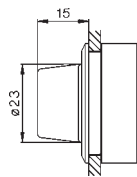
B5RF

Toggle



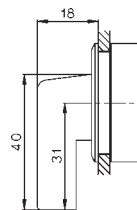
B5E  
BS5E

Rotary Knob



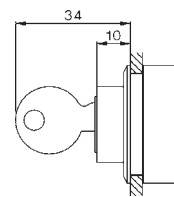
B5KN, B5KL  
BS5KN, BS5KL

Swing Knob



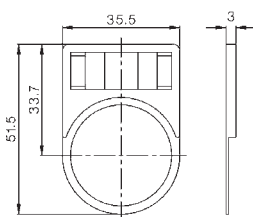
B5KRL, B5KRN  
BS5KRL, BS5KRN

Lockable Push button



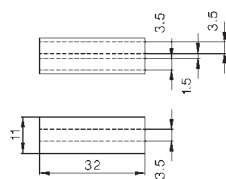
B5SAR., B5SAT.  
BS5SAR., BS5SAT.

Label holder



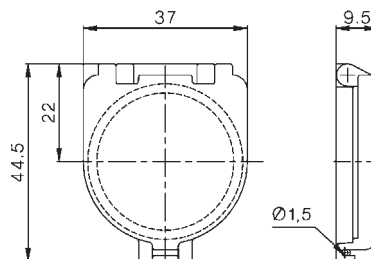
P761

Legend plate



BK5-...

Protectiv cover

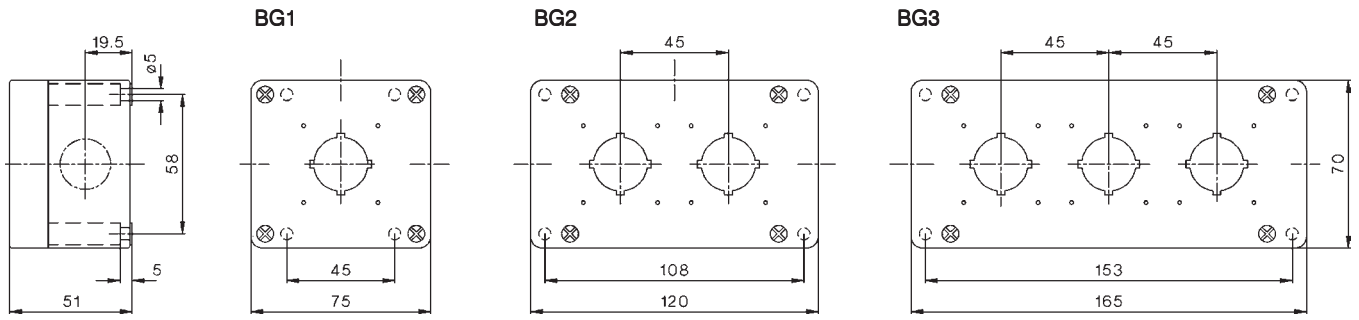


B5-SAP

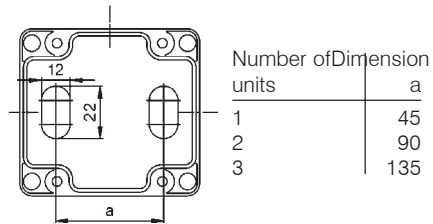
# Dimensions

## Enclosures for Custom Built Stations

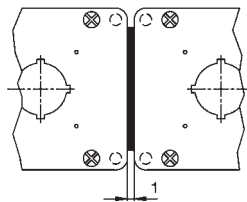
Three conduit entries (knockouts), each on top, left and right side, Ø20,5mm (M20 or PG13,5)



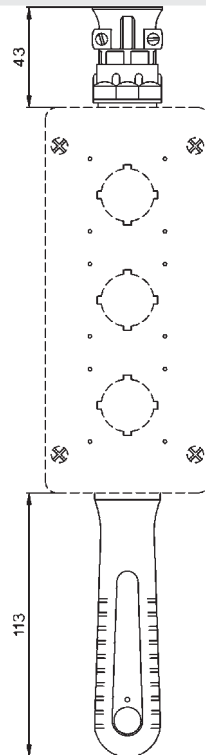
### Conduit entries in the bottom (knockouts)



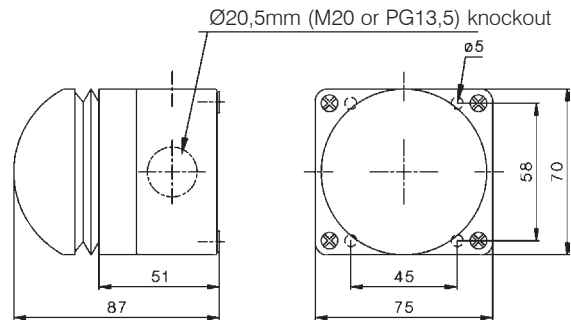
### Coupled Enclosures B4-8852



### Hanging Station B4-9149



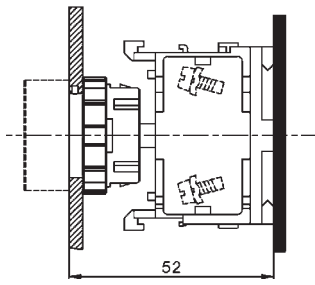
### EMERGENCY STOP Push Button Ø70 mm, Foot switch BG10P34P, BG10P14P



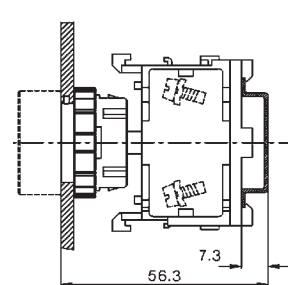
# Dimensions

## Actuators 22mm

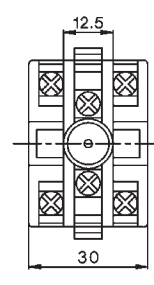
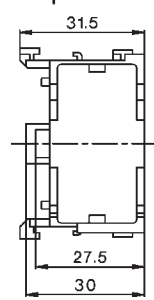
Base mounting



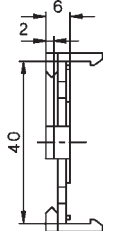
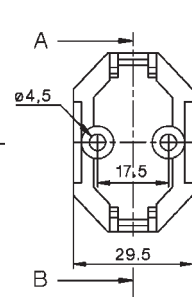
DIN-rail mounting



Contact blocks and Lamp Holders B4.U...

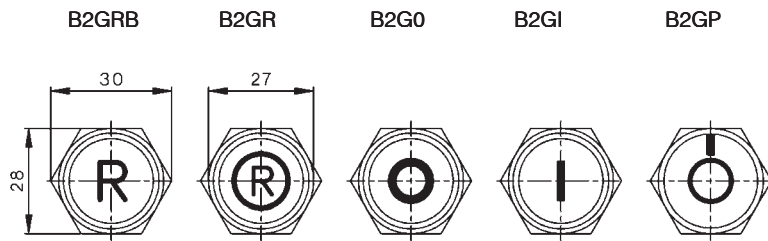
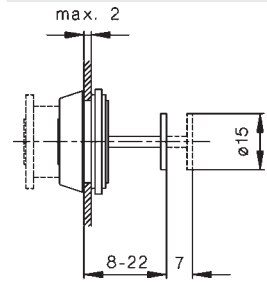


Base B4U

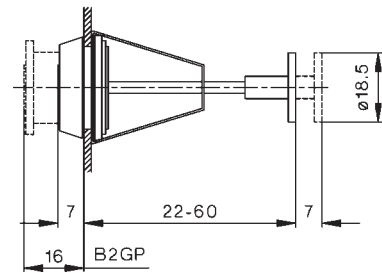


## Push buttons for enclosures

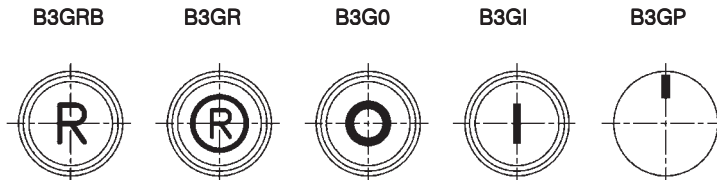
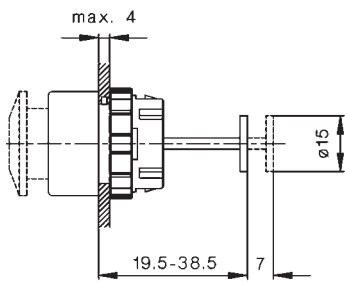
B2G...-22



B2G...-60



B3G...-31,5



B3G...-60

