

MADE IN GERMANY



ELEKTROKONTAKT

Fascinating Electrotechnics

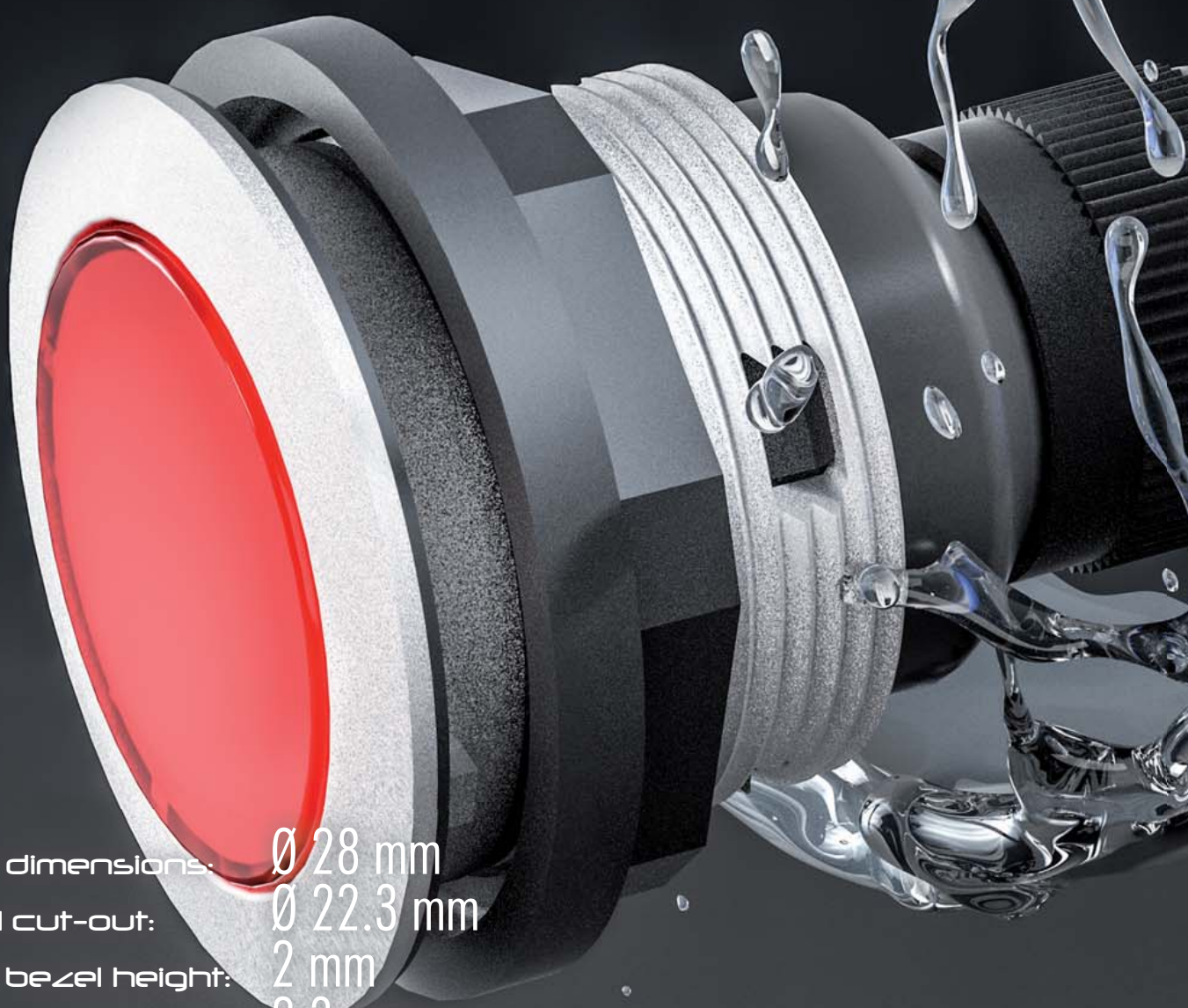


small & robust

SHORTRON® connect with M12 connection

9-0-1

M12 connection
all around tight
smallest emergency-stop
with M12 connector



Front dimensions: Ø 28 mm
Panel cut-out: Ø 22.3 mm
Front bezel height: 2 mm
Travel: 2.3 mm



SHORTRON® connect

SHORTRON® connect - small, quick, efficient

→ Simplicity

Quick and easy installation with M12 connector.



→ Efficiency

No enclosure necessary, low cabling effort, time-saving installation, also possible without technical staff.



→ Safety

High degree of protection IP65/IP67 in the front and on the rear. Anti-rotation/reverse polarity protection thanks to the M12 connector.



→ Flexibility

There are pushbuttons, selector and key switches, pilot lights and emergency-stops in various contact type combinations available. The nameplates of the pushbuttons which can be exchanged can be printed in one or more colours.



→ Compactness

Low space requirement thanks to the compact construction with less mounting depth.



→ Harmony

Colour design of the pushbuttons and switches with black, silver-coloured or stainless steel front ring. Pleasant illumination on the variants with illumination option.



→ Functionality

High mechanical and electrical lifetime, pleasant and perceptible switching characteristic.



Overview SHORTRON® connect series

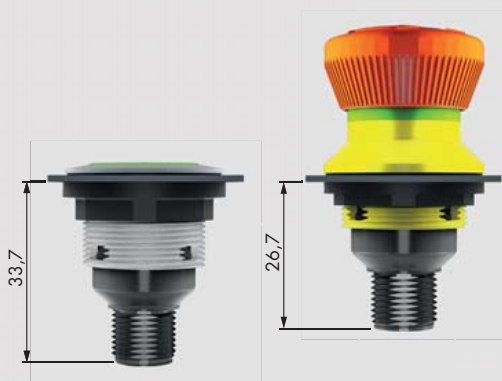


- | | |
|---------------------------|---------|
| 01 Pushbuttons | page 10 |
| 02 Emergency-Stop Buttons | page 14 |
| 03 Selector Switches | page 15 |
| 04 Key Switches | page 19 |
| 05 Pilot Lights | page 22 |
| 06 Mounting Brackets | page 24 |

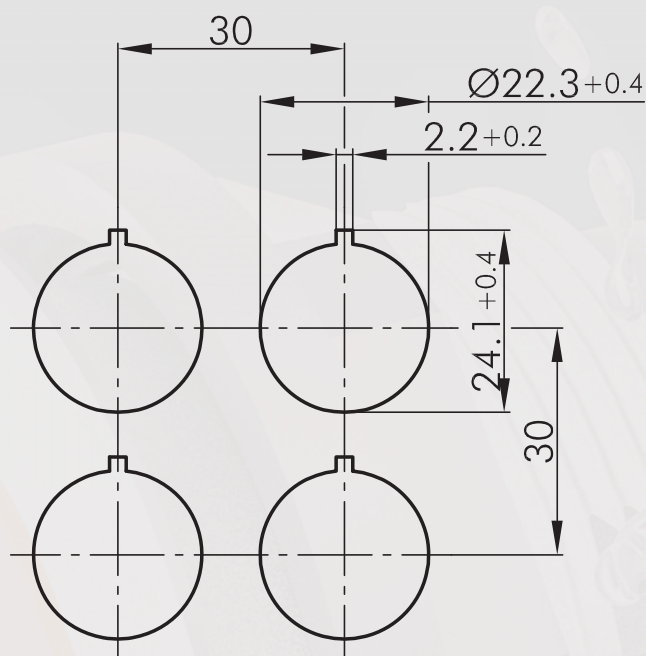
Housing Colours (silver-coloured, black, stainless steel glossy)



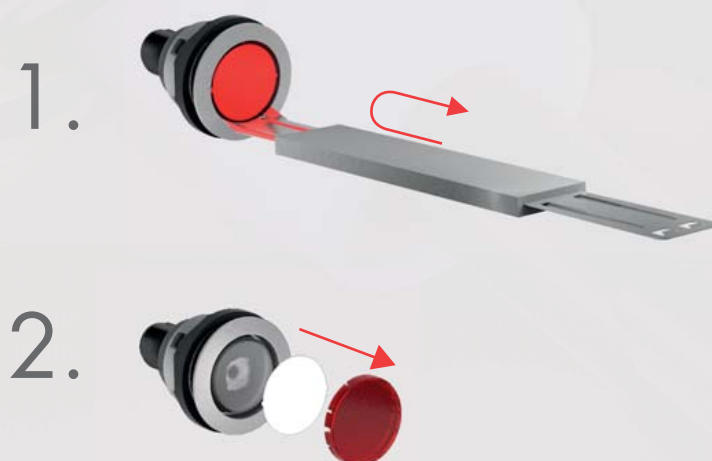
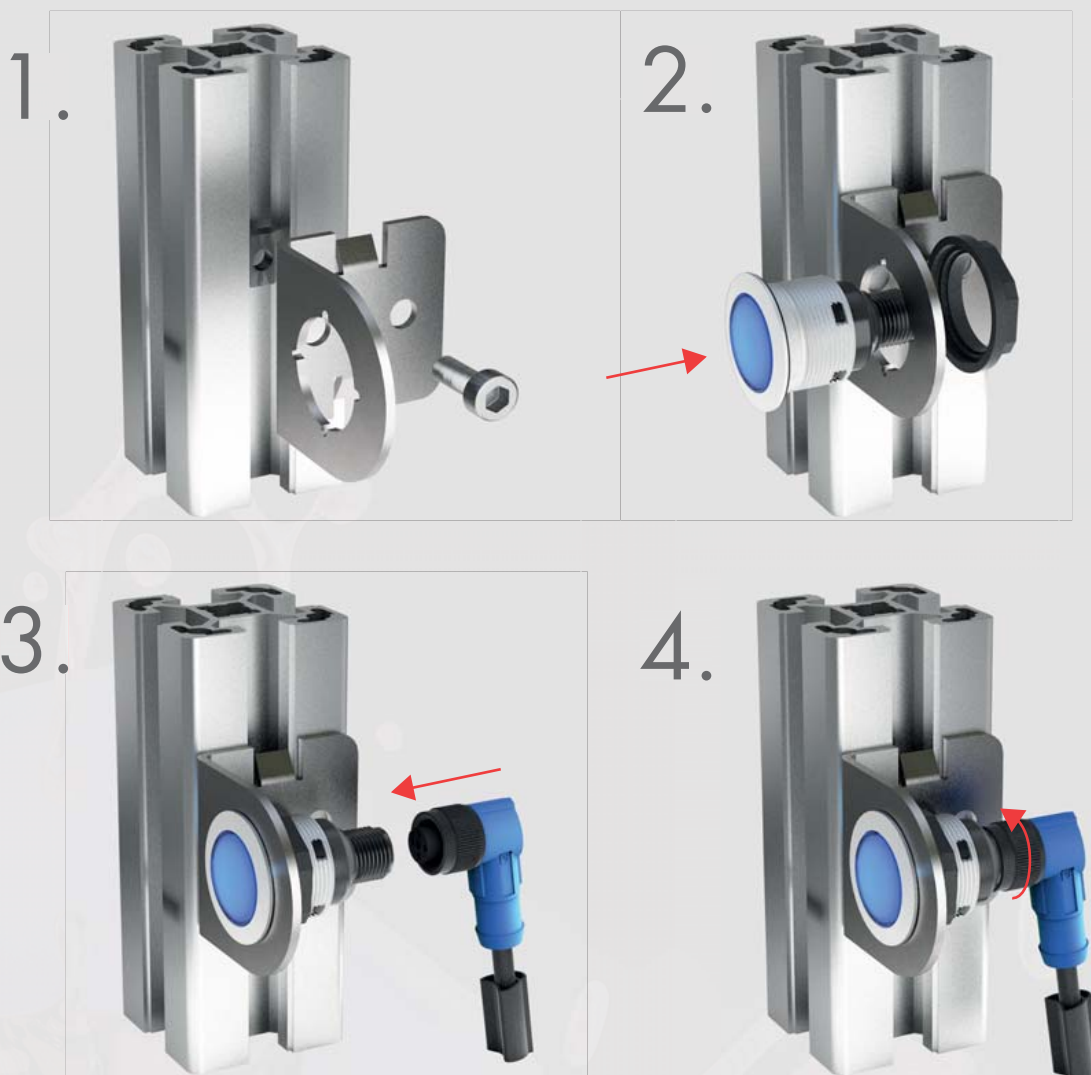
Mounting Depth Dimensions



Cutout Dimensions



Mounting and Service Instructions



Ø 22.3 mm

General Data

Type reference:	FRVKOO_Cyxx (y...version, xx...pinout)
Description:	Emergency-stop, foolproof with integrated M12 connector
Approvals:	CE
Contact type:	2NC
Degree of protection:	IP65 / IP67 (in the front); IP65 / IP67 (on the rear)
Contact material:	AgNi / AgNi, gold-plated 5µm
Max. storage temperature:	-40°C ... 80°C
Max. operating temperature:	-25°C ... 70°C
Mechanical life:	50,000
Electrical life (rated load):	50,000 at rated load
Contact resistance NC:	< 50 mOhm (new state)
Bouncing time NC:	< 10 ms
Positive opening contact:	acc. to EN60947-5-1, appendix K

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

	alternate current	direct current
Utilisation category:	AC15	DC13
Rated insulation voltage Ui:	250 V	250 V
Rated operating voltage Ue:	35 V	35 V
Rated operating current Ie:	4 A	2 A
Breaking capacity:	10Ie	1,1Ie
Continuous thermal current:	4 A	4 A

Additional Data

Mounting aperture:	22.3mm
Tightening torque (mounting nut):	1.0 ... 1.7 Nm
Release:	twist release, left or right
Mounting position:	any
Standards:	EN 60947-5-1, EN 60947-5-5, EN ISO 13850
Ld:	20% (NC)
B10d:	250,000
Rated impulse voltage:	2.5 kV
Material group:	I
Overvoltage category:	II
Pollution degree :	2
Operating force:	approx. 30N (at 20mm/min)

Note

NC = NC contact
With switching position indicator

Electrical features gold-plated version (5µm gold-plating)	
Switching voltage	20mV ... 35V AC/DC
Switching current	1mA ... 100mA
Switching capacity	250 mW

...Cyxx
"y"

version
0 = 4-pole connector, silver contact
3 = 4-pole connector, gold-plated contact

"xx"

pin assignment	Pin 1	Pin 2	Pin 3	Pin 4	Type
xx	NC (1)	NC (1)	NC (2)	NC (2)	2 NC
01					

Safety instructions / mounting instructions

- the connector must not be connected or disconnected under load
- the single connector pin may be loaded with max. 4A

General Data

Type reference:	S(VA)(SW)(T)(N)(TLR(L))(f)(WA)(WB)(WC)(L)(SSA...)(I)(O)(II)_Cyxx
Description:	Short-stroke pushbutton with integrated M12 connector
Approvals:	CE
Contact type:	2S / 1Ö + 1S / 1Ö + L / 1S + L / 1 S / L
Protection class:	II (protective insulation)
Degree of protection:	IP65/67 (T,TLR,N, in the front); IP65 (SSA,STA,STB,WA,WB,WC, in the front); IP65
Operation travel:	2.3 mm (pushbutton)
Contact material:	AgNi / AgNi, gold-plated 5µm
Max. storage temperature:	-40°C ... 80°C
Max. operating temperature:	-25°C ... 70°C
Mechanical life:	1 million (T, TL)
Electrical life (rated load):	30.000 (WA, WAL, WB, WC, SSA) 1 million (T, TL), DC13: max. 100.000 30.000 (WA, WAL, WB, WC, SSA)
Contact resistance NO:	< 50 mOhm (new state)
Contact resistance NC:	< 50 mOhm (new state)
Bouncing time NO:	< 10 ms
Bouncing time NC:	< 10 ms
Positive opening contact:	acc. to EN60947-5-1, appendix K

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

	alternate current	direct current
Utilisation category:	AC15	DC13
Rated insulation voltage Ui:	50 V	50 V
Rated operating voltage Ue:	35 V	35 V
Rated operating current Ie:	4 A	2 A
Continuous thermal current:	4 A	

Technical Data - Lamp

Lamp socket:	none, with integrated 3 mm LED white
Max. lamp voltage:	30 V AC/DC
Max. lamp output:	14mA (at 24 V DC)
Definition:	X1...anode, X2...cathode

Additional Data

Mounting aperture:	22.3mm
Tightening torque (mounting nut):	1.5 ... 1.9 Nm
Mounting position:	any
Standards:	EN 60947-5-1, EN 61058-1
Material group:	I
Overvoltage category:	II
Pollution degree :	2

Electrical Features gold-plated contacts

Operational voltage:	20 mV...35 V AC/DC
Switching current:	1mA ... 100mA
Breaking capacity (ohmic load):	250 mW
Contact resistance (new state):	< 50 mOhm

Note

NC / NO	...NC contact / NO contact
---------	----------------------------

...Cyxx

"y"	version
	0 = 4-pole connector, silver contact
	3 = 4-pole connector, gold-plated contact

"xx"

pin assignment	Pin 1	Pin 2	Pin 3	Pin 4	Type
xx	-	-	-	-	-
01	-	-	-	-	-
02	NO (1)	NO (1)	NO (2)	NO (2)	2 NO
03	NC	NC	NO	NO	1 NC 1 NO
04	NC	NC	LED -	LED +	1 NC + LED
05	NO	NO	LED -	LED +	1 NO + LED
06	NC	NC	-	-	1 NC
07	NO	NO	-	-	1 NO
08	COM	NC	-	NO	1 NC 1 NO
09	COM	NO (1)	-	NO (2)	2 NO
10	-	-	LED -	LED +	LED

Safety instructions / mounting instructions

- the connector must not be connected or disconnected under load
- the single connector pin may be loaded with max. 4A
- selector / key switches with bridged connection ("COM", pin assignment 08,09) a max. of 1A is allowed

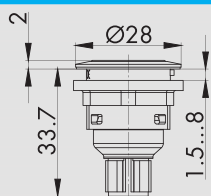
Pushbuttons

Illustration

Dimensions

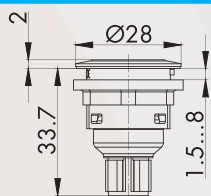
Description

Type



Pushbutton with 4-pole M12 connector with integrated 4-pole M12 connector, A-coded

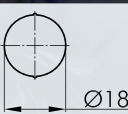
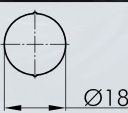
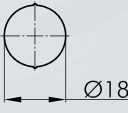
	PIN 1 / PIN 2		PIN 1 / PIN 2 PIN 1 / PIN 4 PIN 3 n.C.		PIN 1 / PIN 2 PIN 1 / PIN 4 PIN 3 n.C.	
	1NO		2NO		1NC + 1NO	
Front bezel						
black						
silver-coloured						
stainless steel, polished						
	SSWTI_C007		SSWTII_C009		SSWTOI_C008	
	STI_C007		STII_C009		STOI_C008	
	SVATI_C007		SVATII_C009		SVATOI_C008	



Illuminated pushbutton with 4-pole M12 connector with integrated 4-pole M12 connector, A-coded incl. white LED

PIN 1 / PIN 2			
1NO			
SSWTLI_C005			
STLI_C005			
SVATLI_C005			

Accessories for Pushbuttons

Illustration	Dimensions	Description	Type
Accessories			
		Flat lens, transparent	
	Colour	blue yellow green clear red opal white	 T22RRBL  T22RRGB  T22RRGN  T22RRKL  T22RRRT  T22RRWS
		High lens, transparent	
	Colour	blue yellow green clear red opal white	 T22HRRBL  T22HRRGB  T22HRRGN  T22HRRKL  T22HRRRT  T22HRRWS
		Flat lens, non-transparent	
	Colour	blue yellow green red black white	 T22RRGBL  T22RRGGB  T22RRGGN  T22RRGRT  T22RRGSW  T22RRGWS
		Blank nameplate	BSRRU
		Nameplate with standard imprint please specify index number (see nameplates from page 404 in the product catalogue)	BSRR...
		Nameplate with special imprint according to customer's specification	BSRRB
		Sealing cap made of silicone rubber, down to -50°C	TK28S

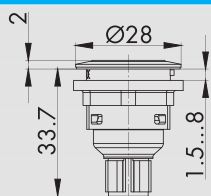
Pushbuttons

Illustration

Dimensions

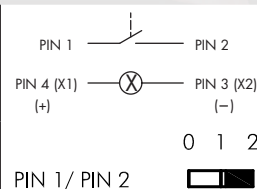
Description

Type



Pushbutton with ring illumination and 4-pole M12 connector

with integrated 4-pole M12 connector, A-coded
incl. lens and white LED



Front bezel		Illuminated ring		PIN 1/ PIN 2	1NO
stainless steel, polished		blue			SVATLRBI_C005
stainless steel, polished		green			SVATLRGI_C005
stainless steel, polished		red			SVATLRRI_C005
stainless steel, polished		white			SVATLRWI_C005
stainless steel, polished		yellow			SVATLRYI_C005
black		blue			SSWTLRBI_C005
black		green			SSWTLRGI_C005
black		red			SSWTLRRI_C005
black		white			SSWTLRWI_C005
black		yellow			SSWTLRYI_C005
silver-coloured		blue			STLRBI_C005
silver-coloured		green			STLRGI_C005
silver-coloured		red			STLRRI_C005
silver-coloured		white			STLRWI_C005
silver-coloured		yellow			STLRYI_C005

Pushbuttons

Illustration

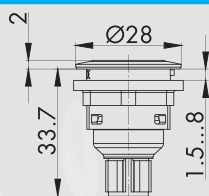
Dimensions

Description

Type

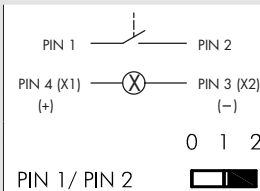
IP65
IP67

2.3mm



Pushbutton with ring illumination and laser printing 4-pole M12 connector

standard imprints see nameplates from page 404 in the product catalogue
(please specify index number)
special inscription on request
with integrated 4-pole M12 connector, A-coded
incl. lens and white LED



Front bezel		Illuminated ring		PIN 1 / PIN 2	1 NO
stainless steel, polished		blue		SVATLRBI..._C005	
stainless steel, polished		green		SVATLRGI..._C005	
stainless steel, polished		red		SVATLRRI..._C005	
stainless steel, polished		white		SVATLRWI..._C005	
stainless steel, polished		yellow		SVATLRXI..._C005	
black		blue		SSWTLRBI..._C005	
black		green		SSWTLRGI..._C005	
black		red		SSWTLRRI..._C005	
black		white		SSWTLRWI..._C005	
black		yellow		SSWTLRXI..._C005	
silver-coloured		blue		STLRBI..._C005	
silver-coloured		green		STLRGI..._C005	
silver-coloured		red		STLRRI..._C005	
silver-coloured		white		STLRWI..._C005	
silver-coloured		yellow		STLRXI..._C005	

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Emergency-Stops

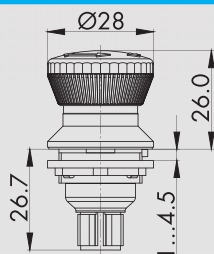
Illustration

Dimensions

Description

Type

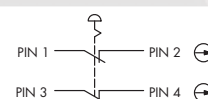
IP65
IP67



Emergency-stop with 4 pole M12 connector

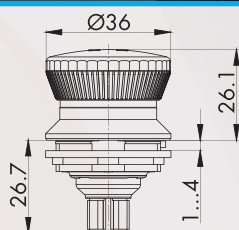
with integrated 4-pole M12 connector, A-coded

- 2 NC
- foolproof
- switching position indicator
- twist to release



Front bezel	Mushroom head	2NC
yellow	red	FRVKOO_C001

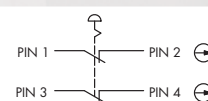
IP65
IP67



Emergency-stop with 4-pole M12 connector

with integrated 4-pole M12 connector, A-coded

- 2 NC
- foolproof
- switching position indicator
- twist to release



Front bezel	Mushroom head	2NC
yellow	red	KRVKOO_C001

Selector Switches (momentary/maintained)

I = Switching position
> = Spring return

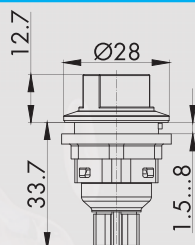
Illustration

Dimensions

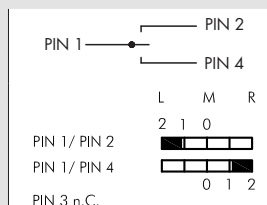
Description

Type

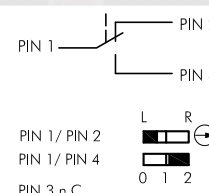
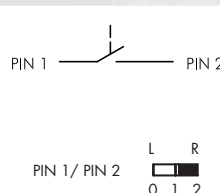
IP65
IP67



Selector switch, maintained, with 4-pole M12 connector
with integrated 4-pole M12 connector, A-coded



Front bezel		2NO
black		SSWWBII_C009
stainless steel, polished		SVAWBII_C009
silver-coloured		SWBII_C009



Front bezel	1NO	1NC + 1NO
black	SSWWAI_C007	SSWWAOI_C008
stainless steel, polished	SVAWAI_C007	SVAWAOI_C008
silver-coloured	SWAI_C007	SWAOI_C008

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Selector Switches (momentary/maintained)

⏏ = Switching position
> = Spring return

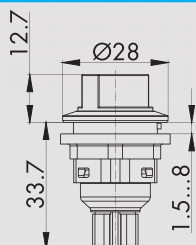
Illustration

Dimensions

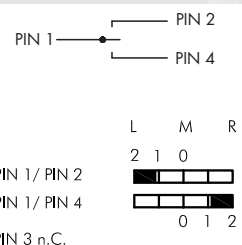
Description

Type

IP65
IP67



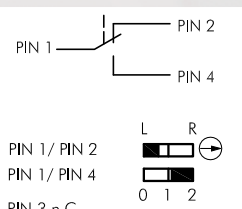
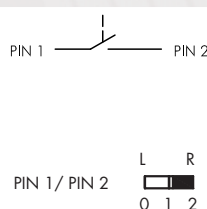
Selector switch, momentary, with 4-pole M12 connector
with integrated 4-pole M12 connector, A-coded



Front bezel		2NO
silver-coloured		SSTBII_C009
black		SSWSTBII_C009
stainless steel, polished		SVASTBII_C009



Front bezel	1NO	1NC + 1NO
silver-coloured	SSTAI_C007	SSTAOI_C008
black	SSWSTAI_C007	SSWSTAOI_C008
stainless steel, polished	SVASTAI_C007	SVASTAOI_C008



Selector Switches (momentary/maintained)

- I = Switching position
 > = Spring return

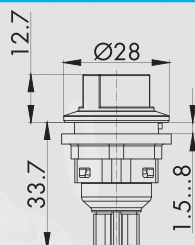
Illustration

Dimensions

Description

Type

IP65
IP67



**Selector switch, left maintained, right momentary
with 4-pole M12 connector**
with integrated 4-pole M12 connector, A-coded



	L	M	R
PIN 1 / PIN 2	2	1	0
PIN 1 / PIN 4	0	1	2
PIN 3 n.C.			

Front bezel		2NO
black		SSWWCII_C009
stainless steel, polished		SVAWCII_C009
silver-coloured		SWCII_C009

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Selector Switches (momentary/maintained)

I = Switching position
> = Spring return

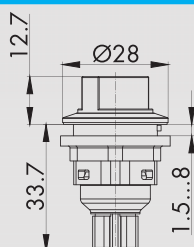
Illustration

Dimensions

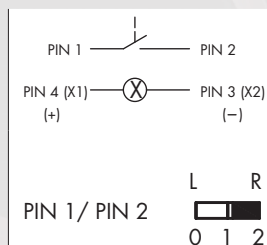
Description

Type

IP65
IP67

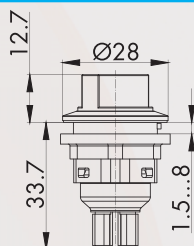


Illuminated selector switch, maintained, with 4-pole M12 connector
with integrated 4-pole M12 connector, A-coded
incl. white LED

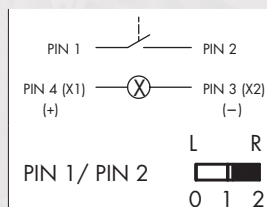


Front bezel		1NO
black		SSWWALI_C005
stainless steel, polished		SVAWALI_C005
silver-coloured		SWALI_C005

IP65
IP67



Illuminated selector switch, momentary, with 4-pole M12 connector
with integrated 4-pole M12 connector, A-coded
incl. white LED



Front bezel		1NO
silver-coloured		SSTALI_C005
black		SSWSTALI_C005
stainless steel, polished		SVASTALI_C005

Kein Kolumnentitel - Seitenzahlen schon zurückgeschrieben?

- I = Switching position
- > = Spring return
- O = Key removable position

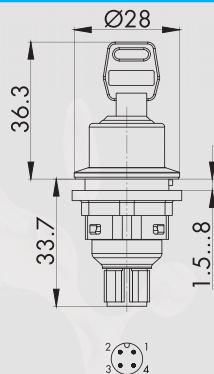
Illustration

Dimensions

Description

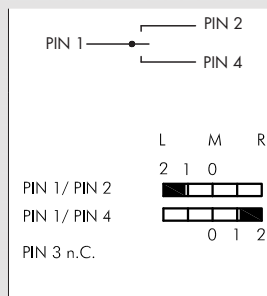
Type

IP65
IP67



Key-operated switch, maintained, with 4-pole M12 connector

with integrated 4-pole M12 connector, A-coded
including two keys
other lock types on request



Front bezel		2S
silver-coloured		SSSA12II_C009
black		SSWSSA12II_C009
stainless steel, polished		SVASSA12II_C009

Front bezel		2S
silver-coloured		SSSA13II_C009
black		SSWSSA13II_C009
stainless steel, polished		SVASSA13II_C009

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Key Switches (momentary/maintained)

- I = Switching position
- > = Spring return
- O = Key removable position

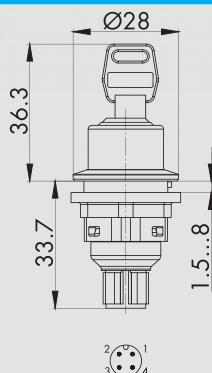
Illustration

Dimensions

Description

Type

IP65
IP67



Key-operated switch, maintained (3 different keys) with 4-pole M12 connector

with integrated 4-pole M12 connector, A-coded
incl. 3 keys

1st key: two-way operation

2nd key: operation to the left only

3rd key: operation to the right only



PIN 1	PIN 2				
	PIN 4				
		L	M	R	
PIN 1 / PIN 2		2	1	0	
PIN 1 / PIN 4					
PIN 3 n.C.			0	1	2

Front bezel		2NO
silver-coloured		SSSA311I_C009
black		SSWSSA311I_C009
stainless steel, polished		SVASSA311I_C009

Key Switches Accessories

- I = Switching position
> = Spring return
O = Key removable position

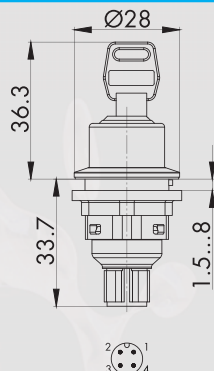
Illustration

Dimensions

Description

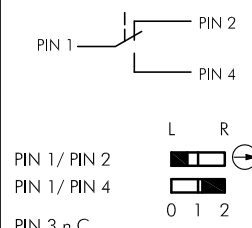
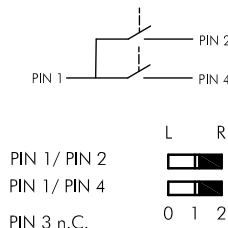
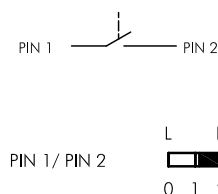
Type

IP65
IP67

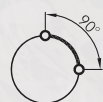


Key-operated switch, maintained, with 4-pole M12 connector

with integrated 4-pole M12 connector, A-coded
including two keys
other lock types on request



Front bezel	1S	2S	1Ö + 1S
silver-coloured	SSSA14I_C007	SSSA14II_C009	SSSA14OI_C008
black	SSWSSA14I_C007	SSWSSA14II_C009	SSWSSA14OI_C008
stainless steel, polished	SVASSA14I_C007	SVASSA14II_C009	SVASSA14OI_C008



Front bezel	1S	2S	1Ö + 1S
silver-coloured	SSSA15I_C007	SSSA15II_C009	SSSA15OI_C008
black	SSWSSA15I_C007	SSWSSA15II_C009	SSWSSA15OI_C008
stainless steel, polished	SVASSA15I_C007	SVASSA15II_C009	SVASSA15OI_C008



Front bezel	1S	2S	1Ö + 1S
silver-coloured	SSSA17I_C007	SSSA17II_C009	SSSA17OI_C008
black	SSWSSA17I_C007	SSWSSA17II_C009	SSWSSA17OI_C008
stainless steel, polished	SVASSA17I_C007	SVASSA17II_C009	SVASSA17OI_C008



Front bezel	1S	2S	1Ö + 1S
silver-coloured	SSSA18I_C007	SSSA18II_C009	SSSA18OI_C008
black	SSWSSA18I_C007	SSWSSA18II_C009	SSWSSA18OI_C008
stainless steel, polished	SVASSA18I_C007	SVASSA18II_C009	SVASSA18OI_C008

Accessories



Spare keys
please specify key number

ESMIC...

Pilot Lights

Illustration

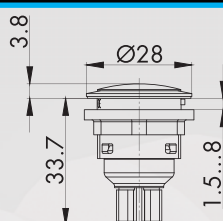
Dimensions

Description

Type



**For panel mount jacks,
please refer to page 552 in the product catalogue**



Pilot light with 4-pole M12 connector
with integrated 4-pole M12 connector, A-coded
incl. white LED

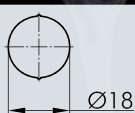
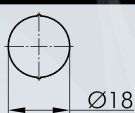
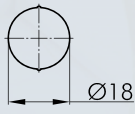


PIN 4 (X1) (+) — (X) — PIN 3 (X2) (-)

Front bezel

silver-coloured		SN_C010
black		SSWN_C010
stainless steel, polished		SVAN_C010

Accessories for Pushbuttons and Switches

Illustration	Dimensions	Description	Type
Accessories			
	Lens		
	Colour	blue	 K22RRBL
		yellow	 K22RRGB
		green	 K22RRGN
		clear	 K22RRKL
		red	 K22RRRT
		opal white	 K22RRWS
		Blank nameplate	BSRRU
		Nameplate with standard imprint please specify index number (see nameplates from page 404 in the product catalogue)	BSRR...
		Nameplate with special imprint according to customer's specification	BSRRB
		Lead-sealable protective lid	
	Colour	transparent	 KDP22RR
		Lead-sealable, robust, tight protective lid	
	Colour	transparent	 KDPR22RR
		black	 KDPR22RR_SW
		Protective lid made of TPE	
	Colour	black	 AK22RRSW
		Spacer ring suitable for the Shortron series for panel thickness from 0.5 to 2.5 mm	
	Colour	silver-coloured	 SDR
		black	 SDRSW

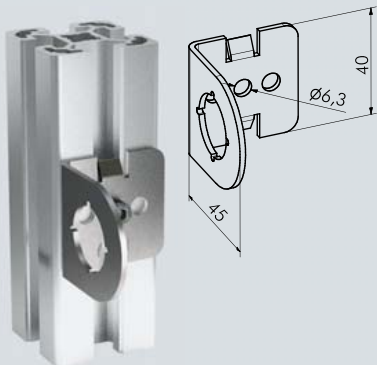
Accessories for Pushbuttons and Switches

Illustration

Dimensions

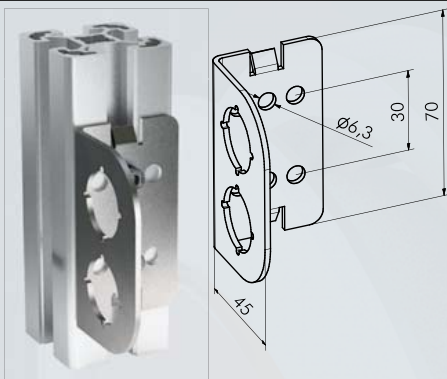
Description

Type



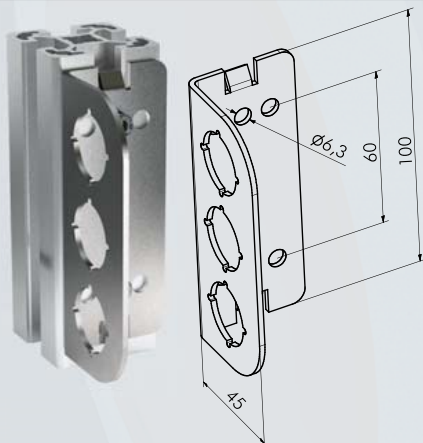
Mounting bracket 90° / 1 mounting hole
for a fast and easy assembly on profiles

S_CW190



Mounting bracket 90° / 2 mounting holes
for a fast and easy assembly on profiles

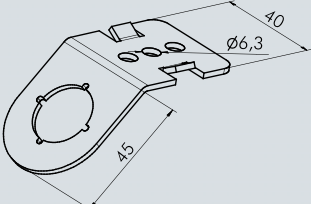
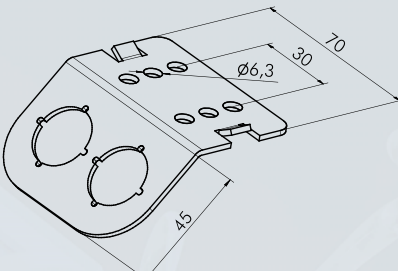
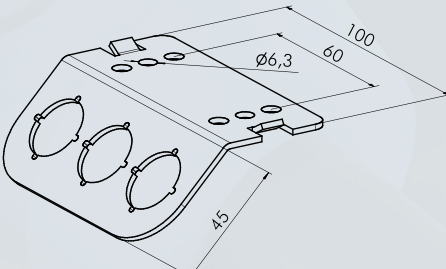
S_CW290



Mounting bracket 90° / 3 mounting holes
for a fast and easy assembly on profiles

S_CW390

Accessories for Pushbuttons and Switches

Illustration	Dimensions	Description	Type
		Mounting bracket 135° / 1 mounting hole for a fast and easy assembly on profiles	S_CW145
		Mounting bracket 135° / 2 mounting holes for a fast and easy assembly on profiles	S_CW245
		Mounting bracket 135° / 3 mounting holes for a fast and easy assembly on profiles	S_CW345





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