



# Product Overview

Pushbuttons and switches  
Emergency-stop buttons  
Panel mount jacks  
Industrial networks  
RFID systems  
Enclosures  
Wireless systems  
Pedal switches  
Terminal blocks  
Customised solutions



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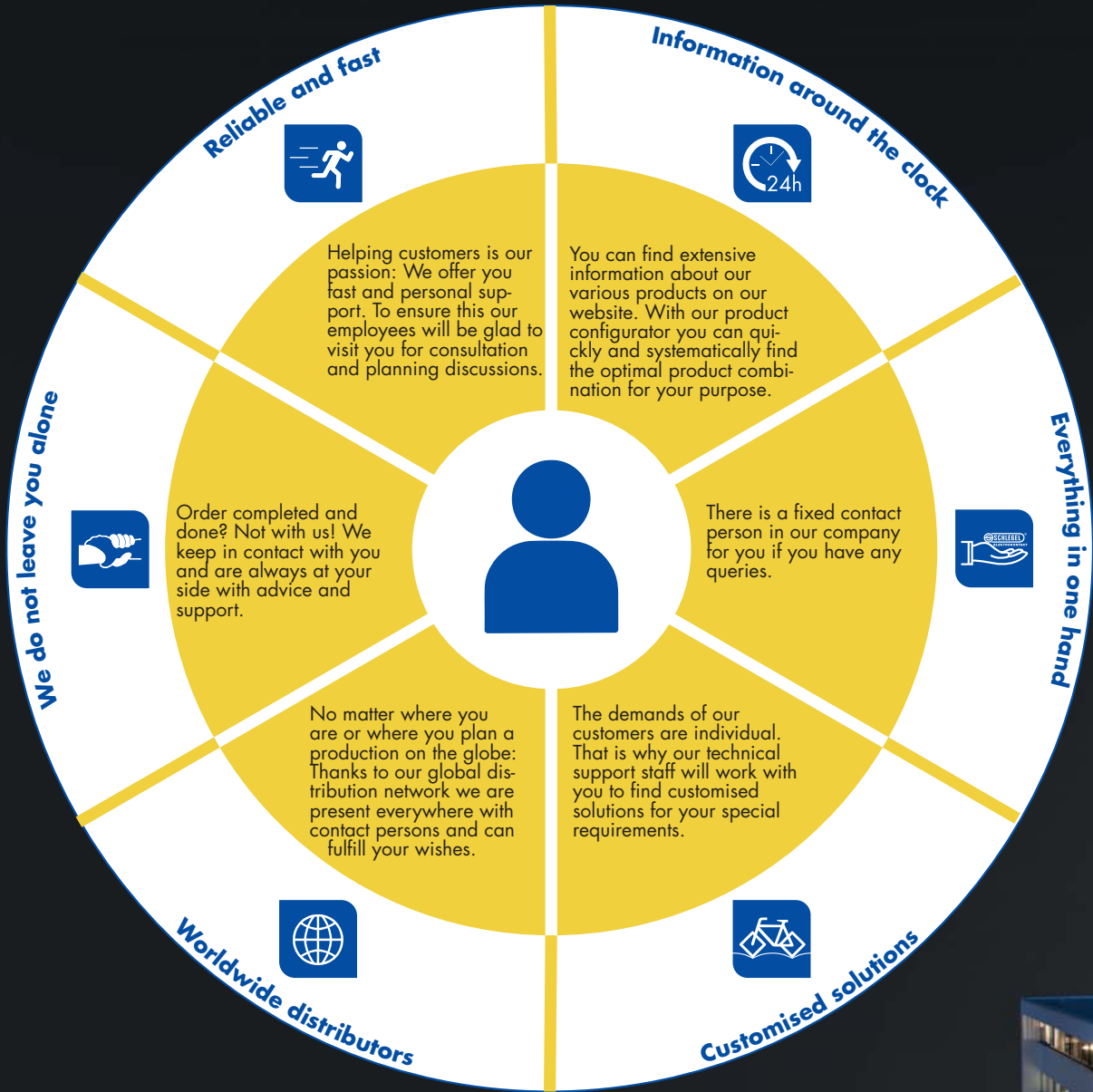
For detailed information, please refer to [www.schlegel.biz](http://www.schlegel.biz)

**Note:**

The technical data is only intended as guiding information and may vary depending on the product. For the exact technical data, please refer to the relevant product data sheet.

# → ABOUT US

**Our service offerings for your success - focus on the customer**



GEORG SCHLEGEL GmbH & Co. KG is a leading supplier of control units to operate machines and devices. For more than 75 years SCHLEGEL has been developing, designing and producing emergency-stop switches, enclosures, control panels, pushbuttons and switches as well as RFID systems, modular bus systems, panel mount jacks and terminal blocks for many industries.

The family company based in Dürmentingen has another production site in Leipzig and sales offices in Austria, Singapore, China and the USA. In addition, SCHLEGEL has distributors in more than 80 countries on five continents. Renowned companies all around the globe have trust in the quality of SCHLEGEL products.

SCHLEGEL products, all "Made in Germany", are characterised by high quality and award-winning design. Our extensive product portfolio in a modular system is perfectly harmonised so that elements of our series allow versatile combinations.

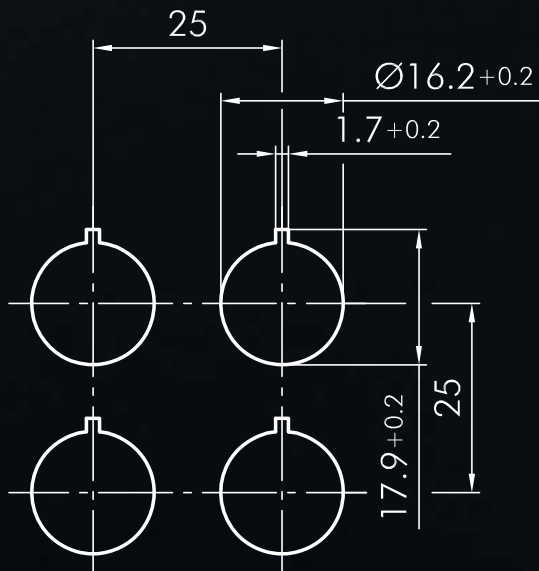
The high degree of independence and high production depth gives us the necessary scope for demanding tasks. Our customers appreciate this flexibility when looking for customised solutions. A close support in the development and production process is just as natural for us as a transparent and fair culture of cooperation.

The company GEORG SCHLEGEL GmbH & Co. KG is a company with tradition which also faces the new challenges of the future with pleasure. With our innovative products we ensure a further development in our target industries. True to the company's motto: "If you stop trying to improve, one day you will stop being good."



# → mYnitron®

Front dimension:	Ø 23.5 mm
Panel cut-out:	Ø 16.2 mm
Front bezel height:	4 mm
Degree of protection*:	IP65/IP67 IP65/IP67/IP69K (Emergency-stop)
Front bezel colour:	 

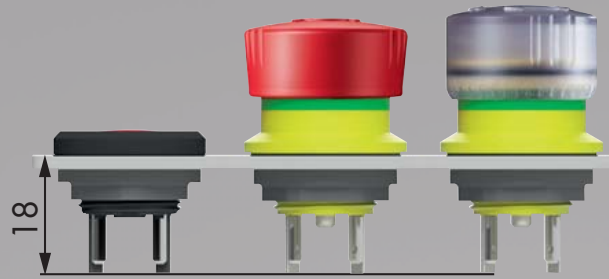


→ Configurator





➔ **Mounting depth dimensions** **Mounting depth dimensions**




		Pushbutton	Emergency-stop
IEC/EN 60947-5-1 **	AC	35 V / 0.1 A	35 V / 5 A
	DC	35 V / 0.1 A	35 V / 2 A
Connection type		Faston	Faston

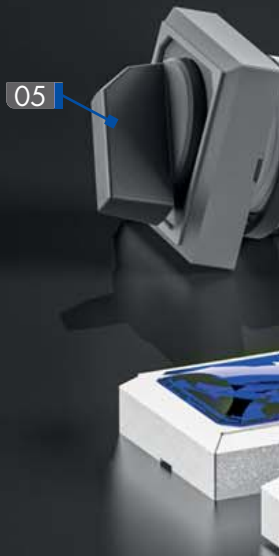
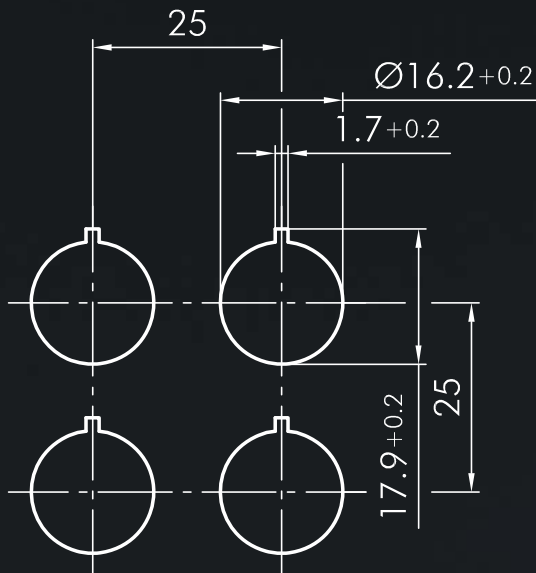
\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



- 01 Pushbuttons
- 02 Emergency-stops
- 03 Emergency-stops active / inactive

\* individual degree of protection, depending on the respective type

Front dimension: 25 x 25 mm  
Panel cut-out: Ø 16.2 mm  
Front bezel height: 7.5 mm  
Travel: 3 mm  
Degree of protection\*: IP65  
IP65/IP67 (Emergency-stop)  
Front bezel colours: 

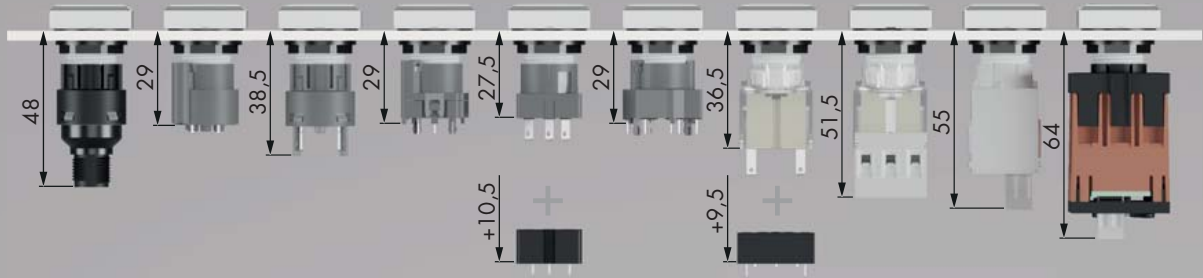


→ Configurator





➔ Mounting depth dimensions



	FRT...C...	FRTP...	FRTF...	CTP...485	CT.../CTF...	CZ...	B...	B...K	ASI	ASI_SAW
IEC/EN 60947-5-1	AC 35 V / 4 A	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 1.5 A	240 V / 1.5 A	-	-
**	DC 35 V / 2 A	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	24 V / 2 A	26.5 - 31.6 V	26.5 - 31.6 V
Connection type	M12	PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	Screw	AS-Interface	AS-Interface

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



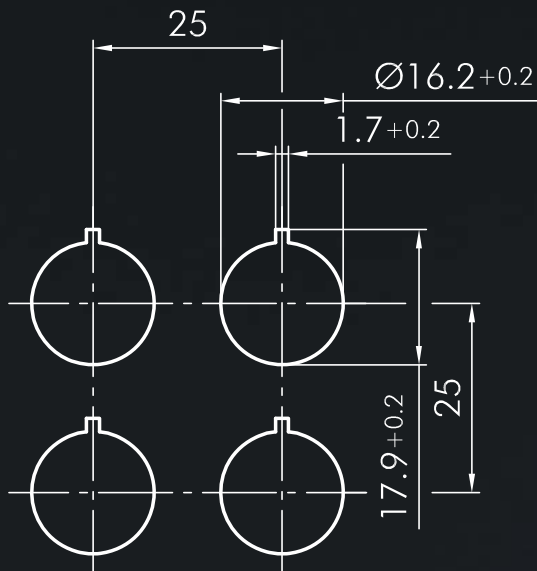
- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for potentiometer
- 05 Selector heads

- 06 Key actuator heads
- 07 Buzzers
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → OKTRON®-R

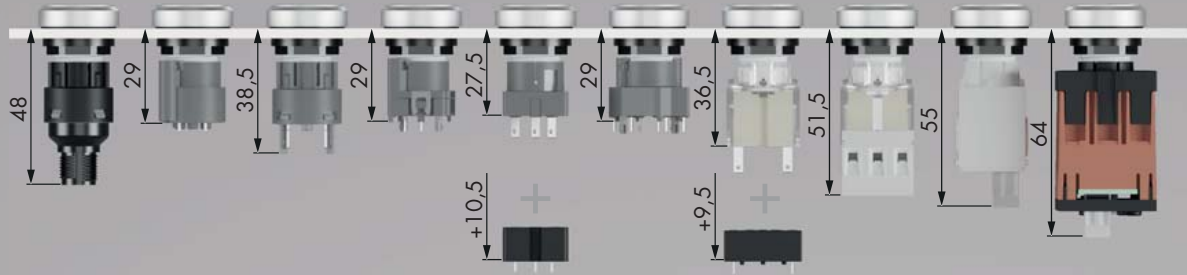
Front dimension:	Ø 25 mm
Panel cut-out:	Ø 16.2 mm
Front bezel height:	7 mm
Travel:	3 mm
Degree of protection*:	IP65 IP65/IP67 (Emergency-stop)
Front bezel colours:	



→ Configurator



➔ Mounting depth dimensions



	FRT...C...	F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	B...	B...K	ASI	ASI_SAW
IEC/EN 60947-5-1	AC 35 V / 4 A	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 1.5 A	240 V / 1.5 A	-	-
**	DC 35 V / 2 A	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	24 V / 2 A	26.5 - 31.6 V	26.5 - 31.6 V
Connection type	M12	PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	Screw	AS-Interface	AS-Interface

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



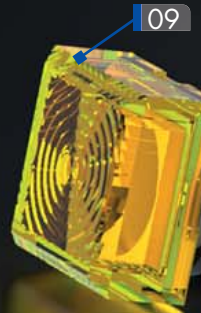
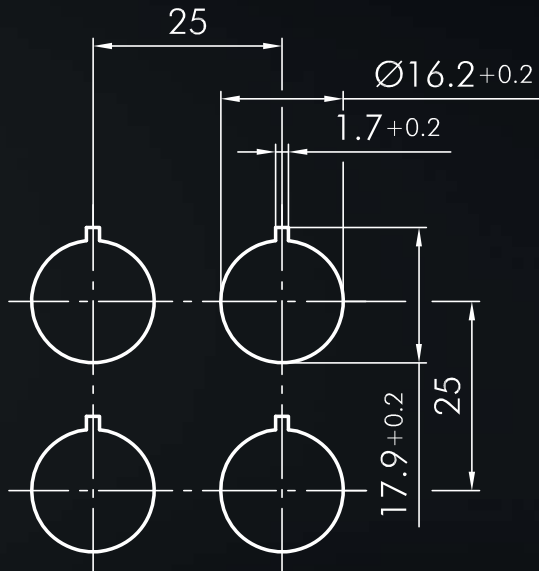
- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for potentiometer
- 05 Selector heads

- 06 Key actuator heads
- 07 Buzzers
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → QUARTRON®

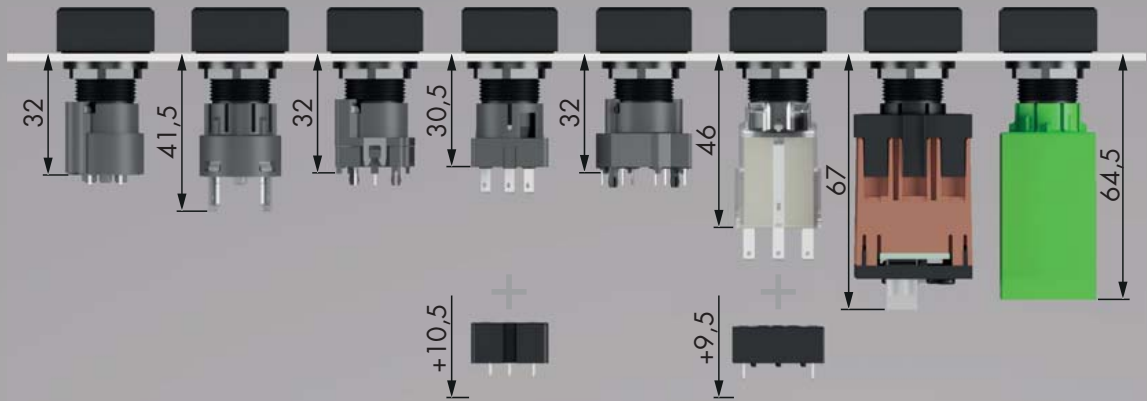
Front dimension: 25 x 25 mm  
Panel cut-out: Ø 16.2 mm  
Front bezel height: 12 mm  
Travel: 6 mm  
Degree of protection\*: IP65/IP67  
Front bezel colours: 



→ Configurator



➔ Mounting depth dimensions



		F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	A...	ASI_SAW...	DFA16
IEC/EN 60947-5-1 **	AC	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 3 A	-	-
	DC	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	26.5 - 31.6 V	-
Connection type		PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for rotary switches / potentiometers
- 05 Selector heads

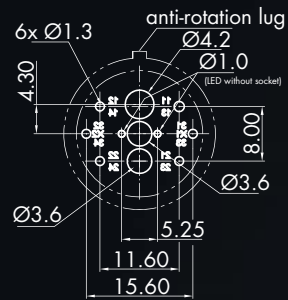
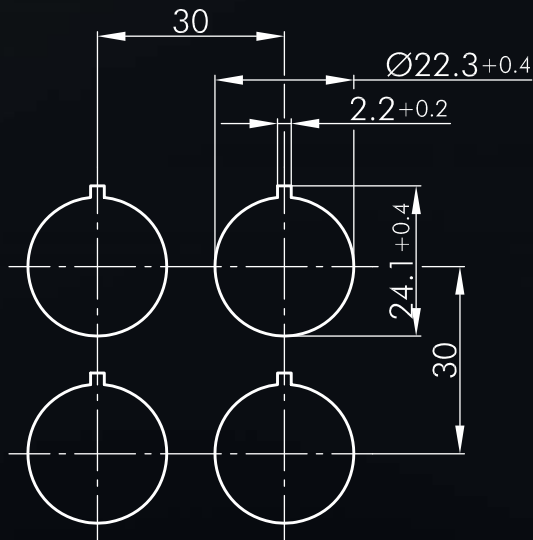
- 06 Toggle heads
- 07 Key actuator heads
- 08 Buzzers
- 09 Pilot light head / pilot light

\* individual degree of protection, depending on the respective type



# → SHORTRON®

- Front dimension:  $\varnothing 28$  mm
- Panel cut-out:  $\varnothing 22.3$  mm
- Front bezel height: 2 mm
- Travel: 2.3 mm/1.8 mm
- Degree of protection\*: IP65/IP66/IP67/IP69K
- Front bezel colours: 



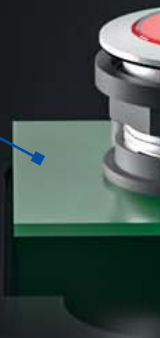
Component side view

Contact assignment: see wiring scheme of the relevant types

PCT...



08



02

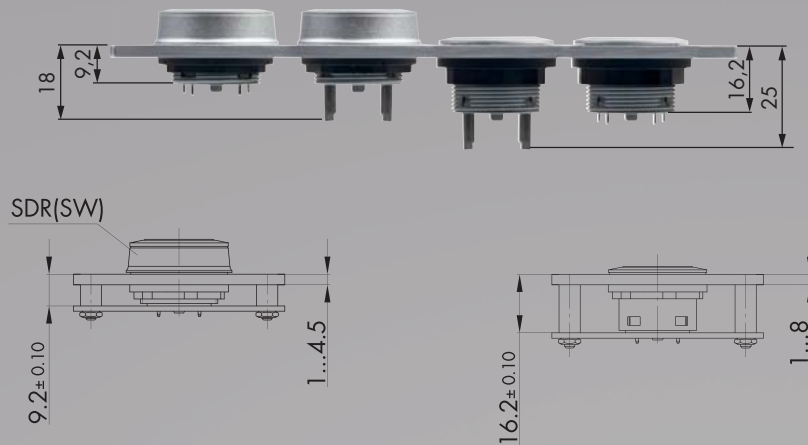


→ Configurator





## → Mounting depth dimensions



		Emergency-stop	Pushbutton
IEC/EN 60947-5-1 **	AC	240 V / 1.5 A	240 V / 1.5 A
	DC	24 V / 2 A	24 V / 2 A
Connection type	Faston / PCB-mount terminals		

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



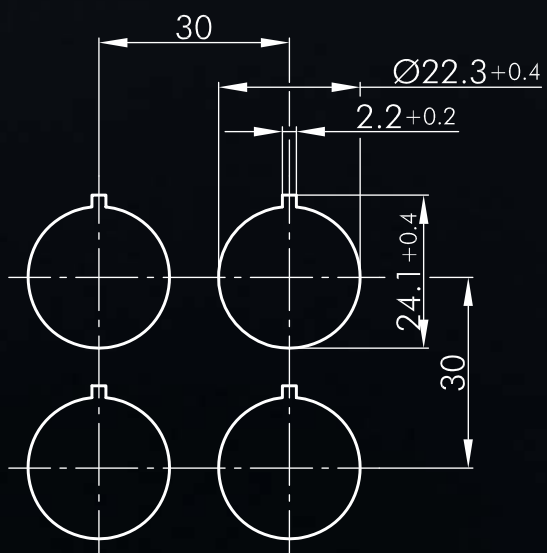
- 01 Pushbuttons (ring illumination), tactile pushbuttons
- 02 Membrane pushbuttons
- 03 Emergency-stops
- 04 Selector switches

- 05 Key switches
- 06 Buzzers
- 07 Pilot lights
- 08 Locking system for base-plate mounting

\* individual degree of protection, depending on the respective type

# → SHORTRON® connect

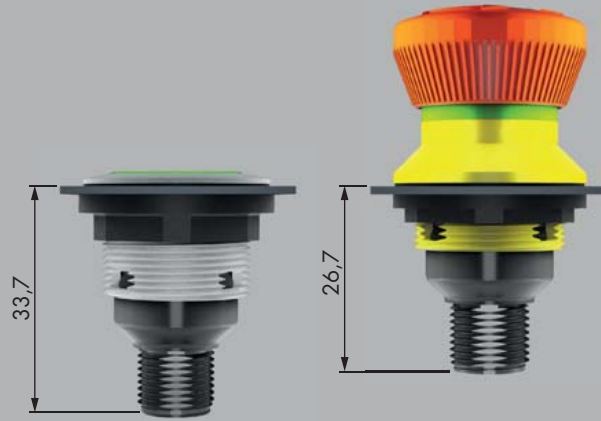
Front dimension:	Ø 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	2 mm
Travel:	2.3 mm
Degree of protection*:	IP65/IP67 (front) IP65/IP67 (rear)
Front bezel colours:	



→ Configurator



➔ Mounting depth dimensions



IEC/EN 60947-5-1 **	Pushbutton		Emergency-stop
	AC	35 V / 4 A	35 V / 4 A
DC	35 V / 2 A	35 V / 2 A	
Connection type	M12		

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections




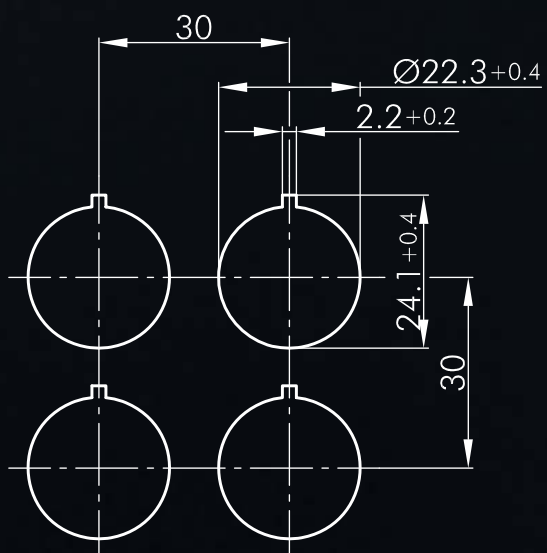
- 01 Pushbuttons (ring illumination)
- 02 Emergency-stops
- 03 Selector switches
- 04 Key switches
- 05 Pilot lights

- 06 Enabling switches
- 07 Potentiometers
- 08 Mounting brackets

\* individual degree of protection, depending on the respective type

# → SHORTRON® M12

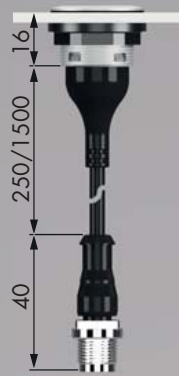
Front dimension:	Ø 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	2 mm
Travel:	2.3 mm
Degree of protection*:	IP65/IP67 (front) IP65 (rear)
Front bezel colour:	



→ Configurator



➔ **Mounting depth dimensions**



IEC/EN 60947-5-1 **	AC	Emergency-stop 35 V / 4 A	Pushbutton 35 V / 4 A
	DC	35 V / 2 A	35 V / 2 A
Connection type		M12	

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections

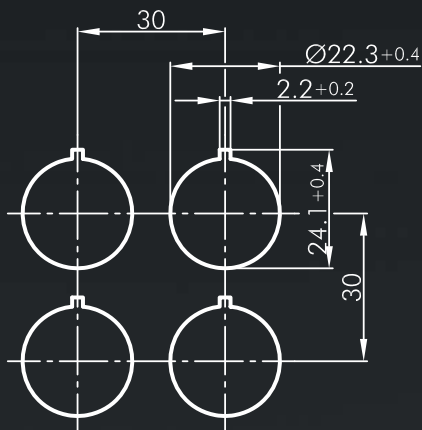


- 01 Pushbuttons
- 02 Emergency-stops
- 03 Selector switches
- 04 Key switches
- 05 Pilot lights

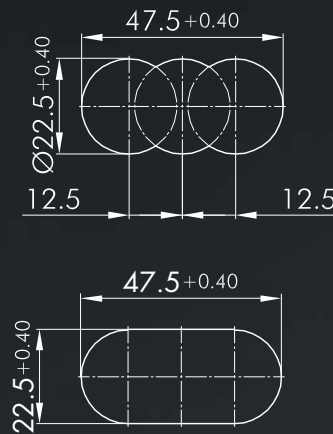
\* individual degree of protection, depending on the respective type

# → RONTRON-R-JUWEL

Front dimension:  $\varnothing 28 \text{ mm}$   
 Panel cut-out:  $\varnothing 22.3 \text{ mm}$   
 Front bezel height:  $2 \text{ mm}$   
 Travel:  $3 \text{ mm}$   
 Degree of protection\*: IP65/IP66/IP67/IP69K  
 Front bezel colours: 



## RRJDTLR

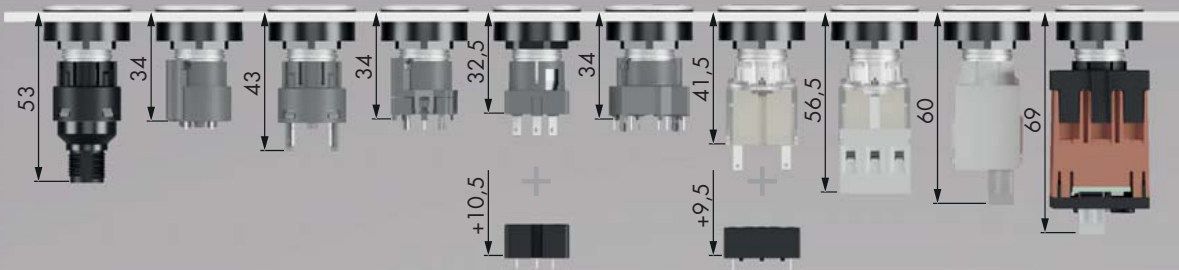


→ Configurator





➔ Mounting depth dimensions



	FRT...C...	F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	B...	B...K	ASI	ASI_SAW
IEC/EN 60947-5-1 **	AC 35 V / 4 A	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 1.5 A	240 V / 1.5 A	-	-
	DC 35 V / 2 A	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	24 V / 2 A	26.5 - 31.6 V	26.5 - 31.6 V
Connection type	M12	PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	Screw	AS-Interface	AS-Interface

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



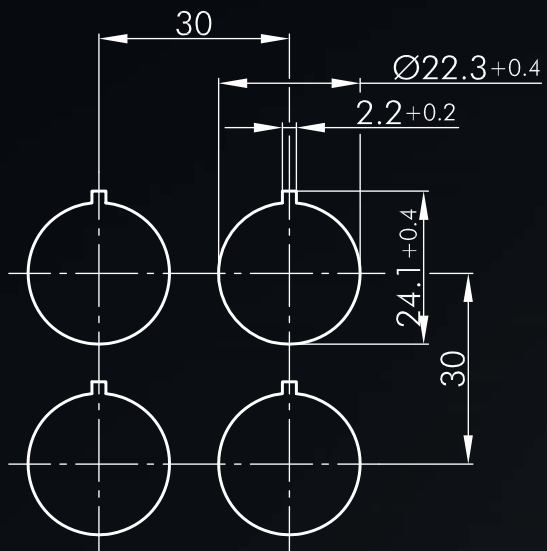
- 01 (Membrane) pushbutton heads (ring illumination)
- 02 Emergency-stop heads
- 03 Knob set for potentiometers
- 04 Selector heads

- 05 Key actuator heads
- 06 Buzzers
- 07 Panel mount jacks
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → RONTRON-Q-JUWEL

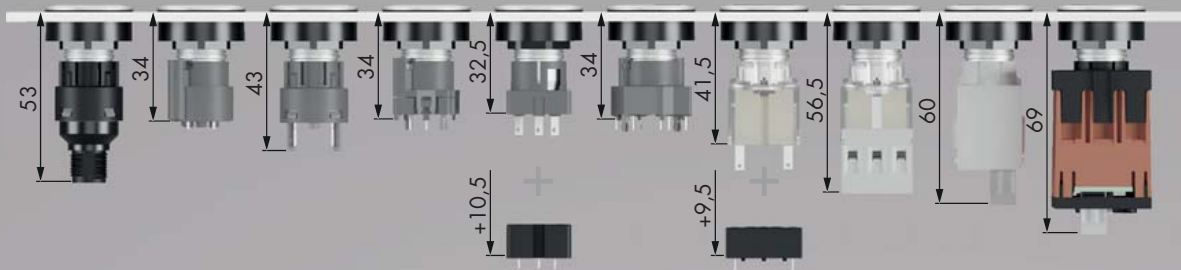
Front dimension:	28 x 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	2 mm
Travel:	3 mm
Degree of protection*:	IP65
Front bezel colour:	



→ Configurator



➔ **Mounting depth dimensions**



	FRT...C...	F RTP...	FRTF...	CTP...485	CT.../CTF...	CZ...	B...	B...K	ASI	ASI_SAW
IEC/EN 60947-5-1 **	AC 35 V / 4 A	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 1.5 A	240 V / 1.5 A	-	-
	DC 35 V / 2 A	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	24 V / 2 A	26.5 - 31.6 V	26.5 - 31.6 V
Connection type	M12	PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	Screw	AS-Interface	AS-Interface

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections




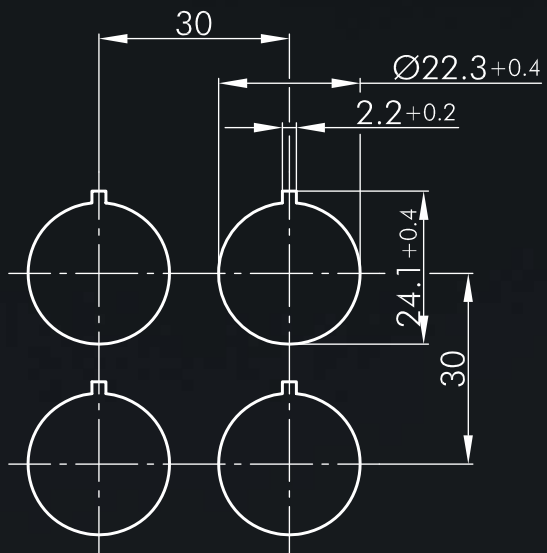
- 01 Pushbutton heads (ring illumination)
- 02 Emergency-stop heads
- 03 Knob set for potentiometers
- 04 Selector heads
- 05 Key actuator heads

- 06 Buzzers
- 07 Panel mount jacks
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective

# → RX-JUWEL

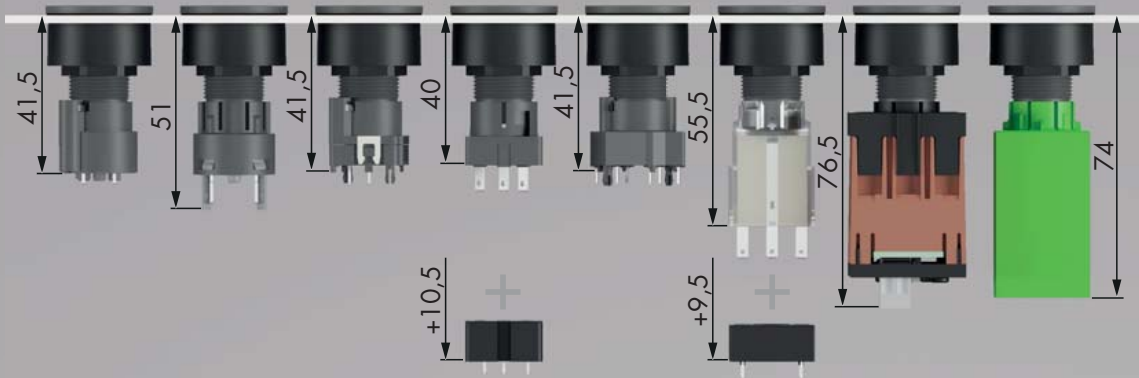
Front dimension:	Ø 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	2.6 mm
Travel:	6 mm
Degree of protection*:	IP65/IP67
Front bezel colour:	



→ Configurator



➔ Mounting depth dimensions



		F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	A...	ASI_SAW...	DFA16
IEC/EN 60947-5-1 **	AC	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 3 A	-	-
	DC	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	26.5 - 31.6 V	-
Connection type		PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



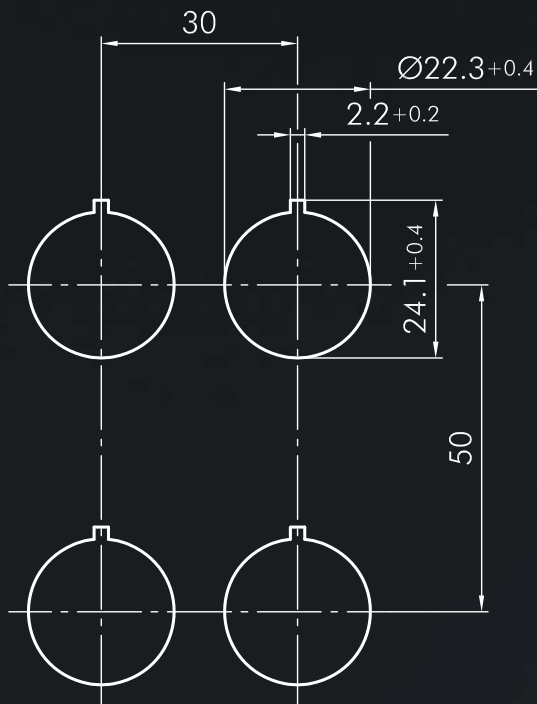
- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Knob set for potentiometers
- 04 Selector heads

- 05 Key actuator heads
- 06 Buzzers
- 07 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → RONDEX-JUWEL®

Front dimension:	Ø 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	2 mm
Travel:	6 mm
Degree of protection*:	IP65/IP67 IP65/IP67/IP69K (Emergency-stop)
Front bezel colours:	

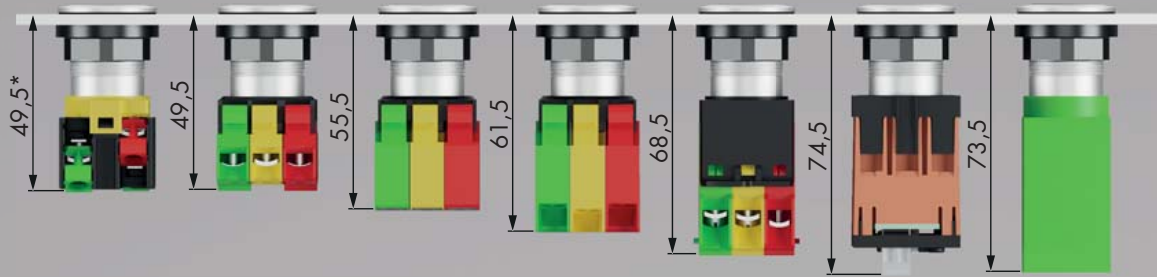


→ Configurator





➔ Mounting depth dimensions



\* ETR2 70.5mm, ETLR 59.5mm, EL9R 45.5mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Spring-Cage	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



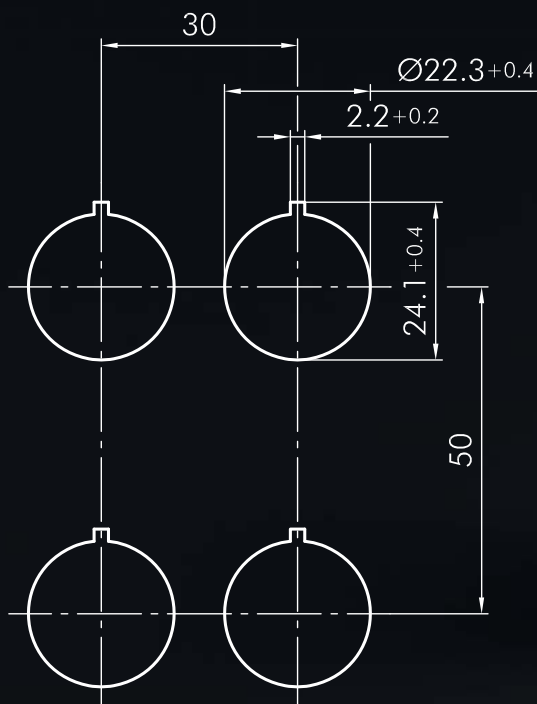
- 01 Pushbutton heads (ring illumination)
- 02 Emergency-stop heads
- 03 Selector heads
- 04 Key actuator heads

- 05 Panel mount jacks
- 06 Pilot light heads

\* individual degree of protection, depending on the respective type

# → RONDEX-M

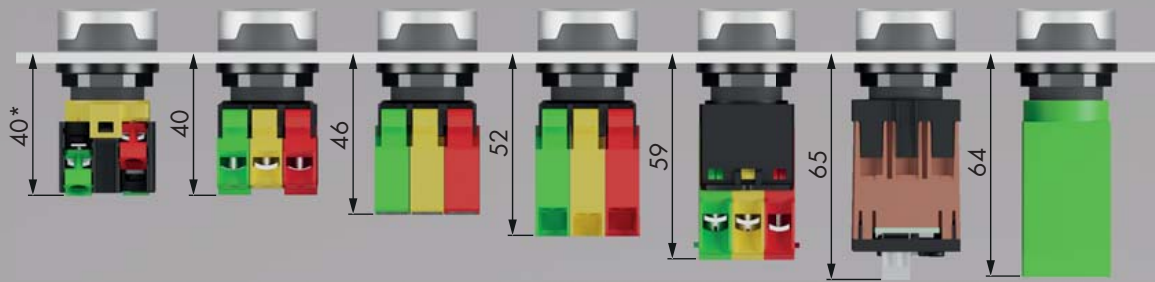
Front dimension:	Ø 28 mm
Panel cut-out:	Ø 22.3 mm
Front bezel height:	12 mm
Travel:	6 mm
Degree of protection*:	IP65/IP67
Front bezel colour:	



→ Configurator



➔ Mounting depth dimensions



\* ETR2 61 mm, ETLR 50 mm, EL9R 36 mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Spring-Cage	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



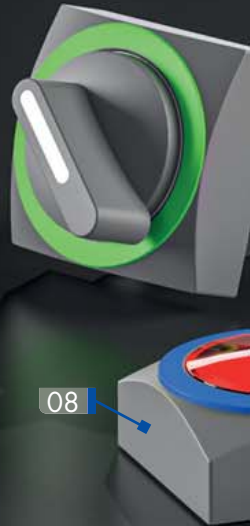
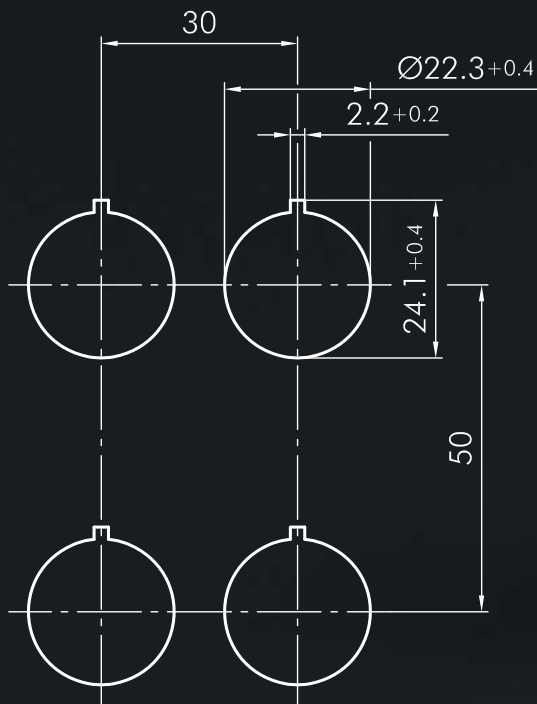
- 01 Pushbutton heads (ring illumination)
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for potentiometers
- 05 Selector heads

- 06 Toggle heads
- 07 Key actuator heads
- 08 Buzzers
- 09 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → QUARTEX®-R

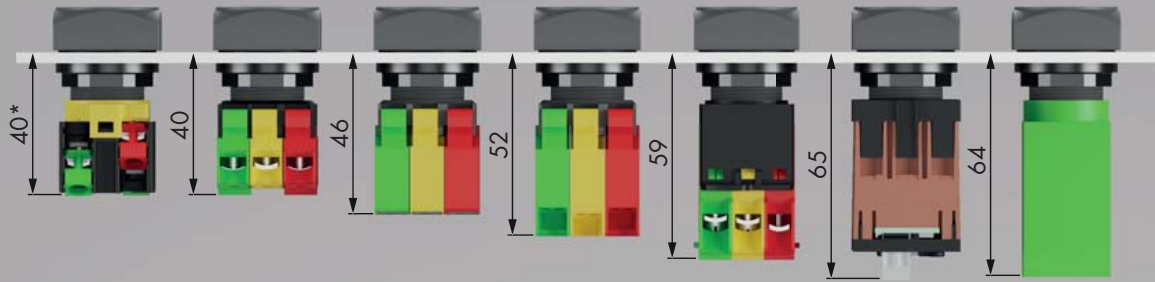
Front dimension: 30 x 30 mm  
Panel cut-out: Ø 22.3 mm  
Front bezel height: 12 mm  
Travel: 6 mm  
Degree of protection\*: IP65/IP67  
Front bezel colour: 



→ Configurator



➔ **Mounting depth dimensions**



\* ETR2 61 mm, ETLR 50 mm, EL9R 36mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Screw	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for potentiometers
- 05 Selector heads / knob set for rotary switches

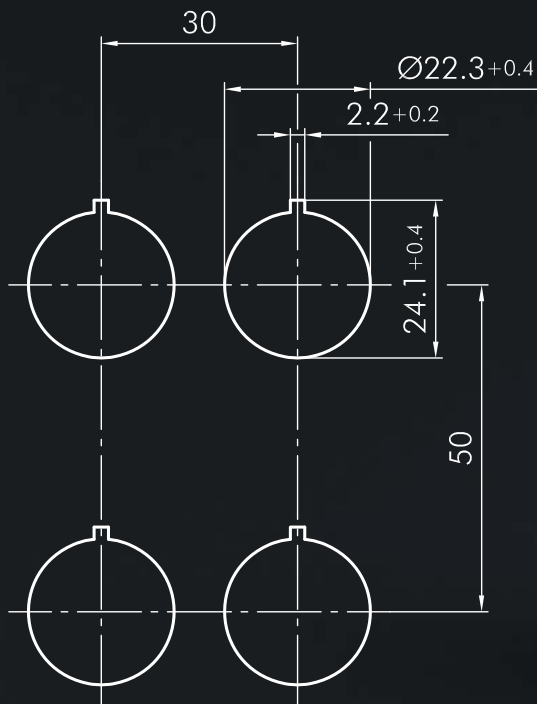
- 06 Toggle heads
- 07 Key actuator heads
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type



# → RVA

Front dimension:  $\varnothing 28$  mm  
Panel cut-out:  $\varnothing 22.3$  mm  
Front bezel height: 12 mm  
Travel: 6 mm  
Degree of protection\*: IP65/IP69K  
Front bezel colour: 



→ Configurator

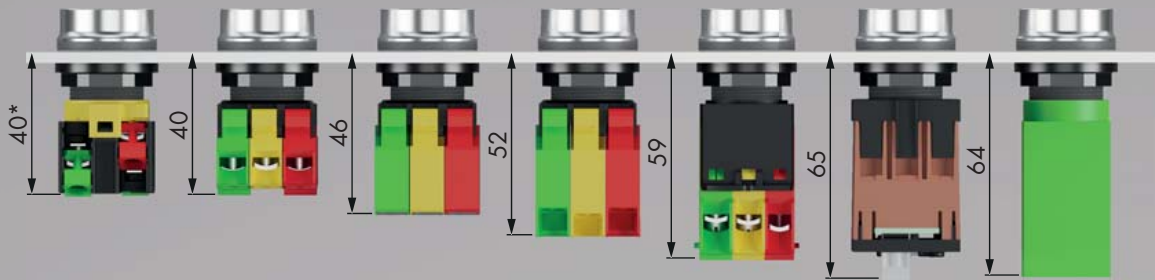


Design Award Winner 2000

excellent! Design Center Stuttgart



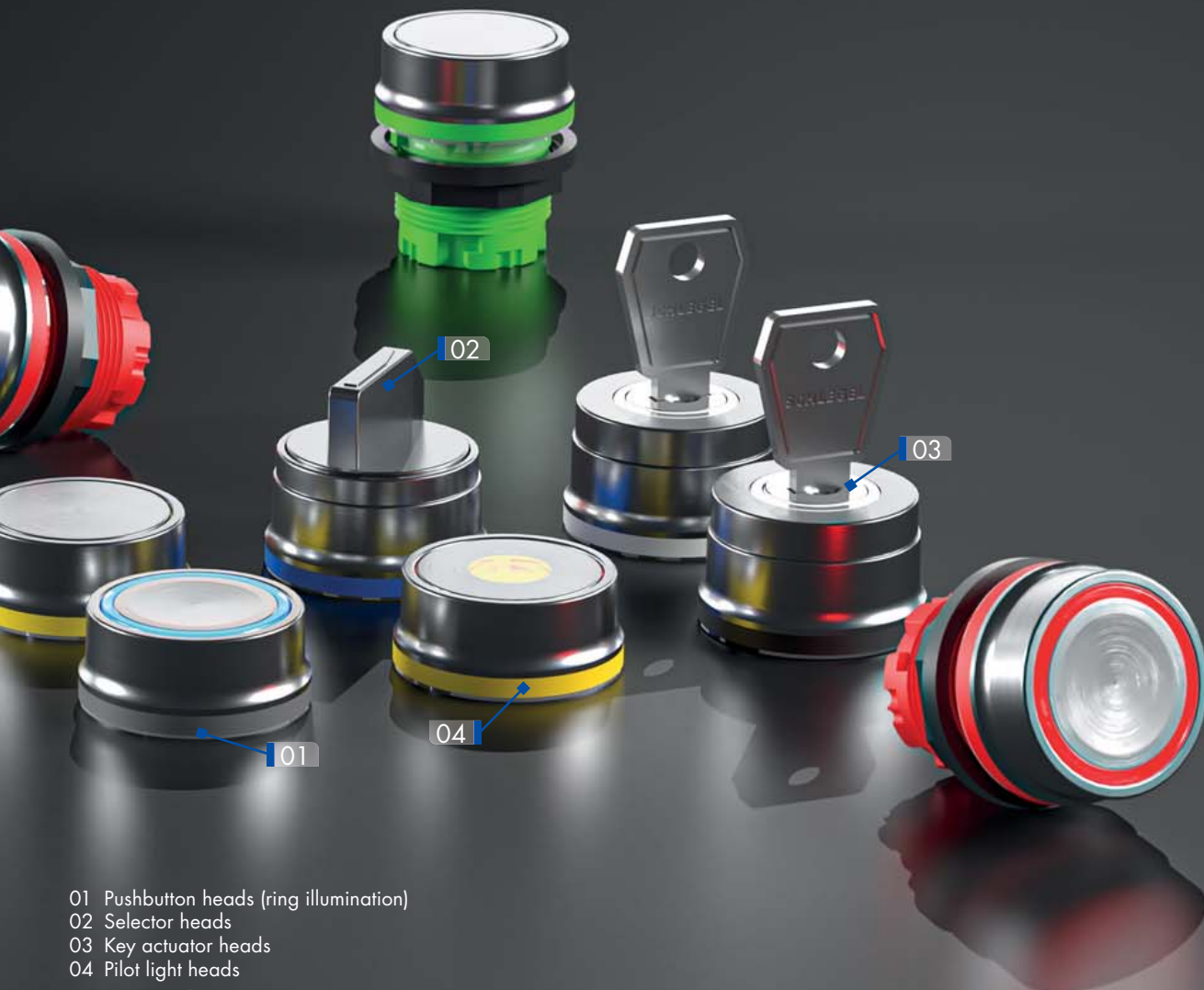
➔ Mounting depth dimensions



\* ETR2 61 mm, ETLR 50 mm, EL9R 36 mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Spring-Cage	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections

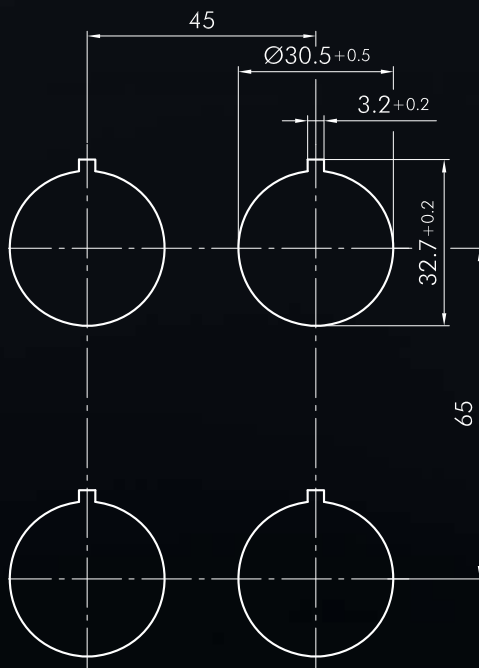


- 01 Pushbutton heads (ring illumination)
- 02 Selector heads
- 03 Key actuator heads
- 04 Pilot light heads

\* individual degree of protection, depending on the respective type

# → KOMBITAST<sup>®</sup>-R-JUWEL

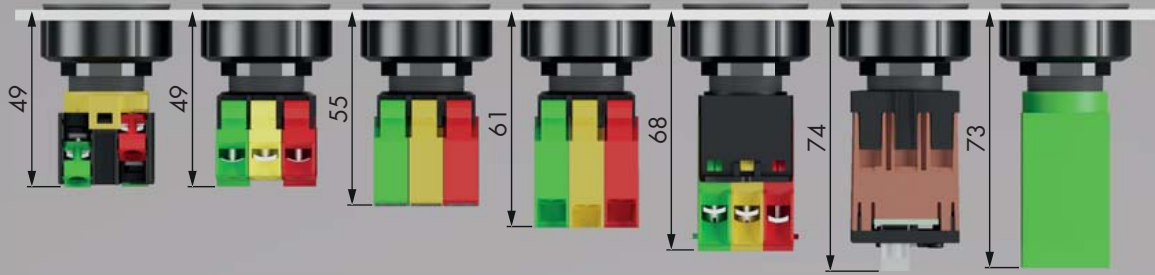
Front dimension:	Ø 36 mm
Panel cut-out:	Ø 30.5 mm
Front bezel height:	2.7 mm
Travel:	6 mm
Degree of protection*:	IP65/IP67/IP69K
Front bezel colour:	



→ Configurator



➔ Mounting depth dimensions



\* ETR2 69 mm, ETLR 58 mm, EL9R 44 mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Spring-Cage	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



- 01 Pushbutton heads (ring illumination)
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for rotary switches / potentiometers
- 05 Selector heads

- 06 Taggle heads
- 07 Key actuator heads
- 08 Panel mount jacks
- 09 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → OKTRON®-JUWEL

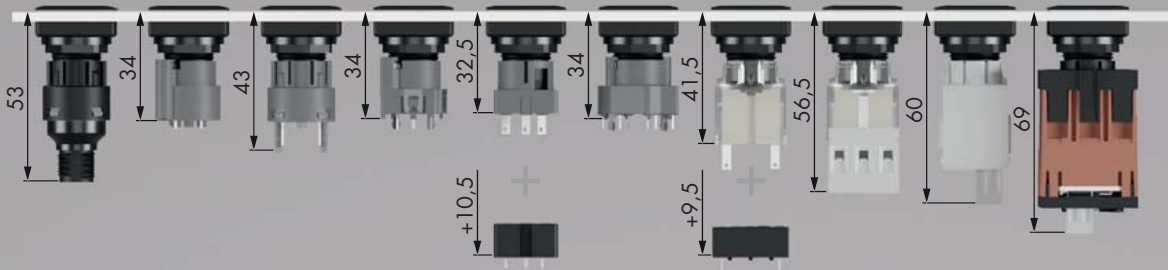
Front dimension:	25 x 25 mm
Panel cut-out:	23.1 x 23.1 mm
Front bezel height:	2 mm
Travel:	3 mm
Degree of protection*:	IP65/IP66/IP67/IP69K
Front bezel colour:	



→ Configurator



➔ Mounting depth dimensions



		FRT...C...	F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	B...	B...K	ASI	ASI_SAW
IEC/EN 60947-5-1 **	AC	35 V / 4 A	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 1.5 A	240 V / 1.5 A	-	-
	DC	35 V / 2 A	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	24 V / 2 A	26.5 - 31.6 V	26.5 - 31.6 V
Connection type		M12	PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	Screw	AS-Interface	AS-Interface

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



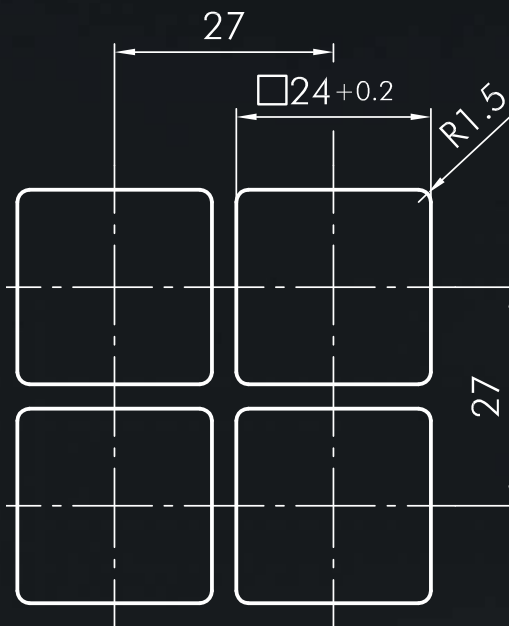
- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Knob set for potentiometers
- 04 Selector heads
- 05 Key actuator heads

- 06 Buzzers
- 07 Panel mount jacks
- 08 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → QUARTRON-JUWEL®

Front dimension:	27 x 27 mm
Panel cut-out:	24 x 24 mm
Front bezel height:	2.5 mm
Travel:	6 mm
Degree of protection*:	IP65/IP66/IP67
Front bezel colour:	

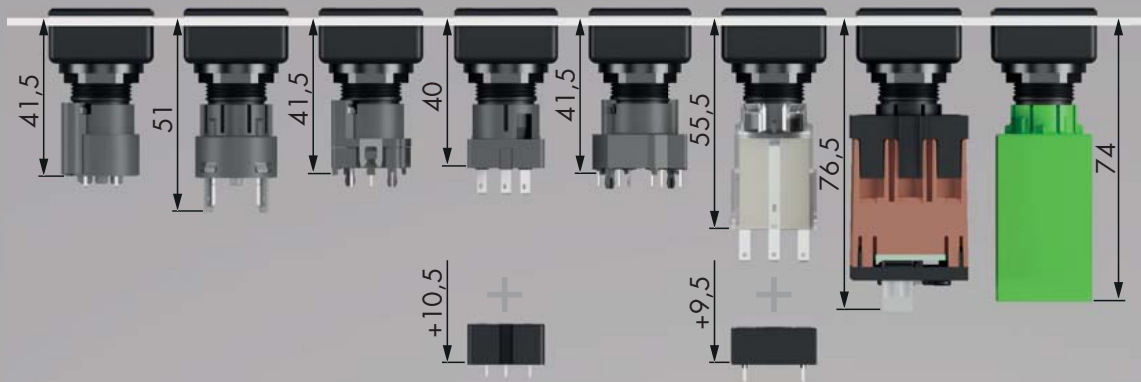


→ Configurator





➔ Mounting depth dimensions



		F RTP...	F RTF...	CTP...485	CT.../CTF...	CZ...	A...	ASI_SAW...	DFAT6
IEC/EN 60947-5-1 **	AC	240 V / 1.5 A	240 V / 1.5 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	240 V / 3 A	-	-
	DC	24 V / 2 A	24 V / 2 A	48 V / 0.1 A	48 V / 0.1 A	48 V / 0.1 A	24 V / 2 A	26.5 - 31.6 V	-
Connection type		PCB-mount terminals	Faston	PCB-mount terminals	Faston	PCB-mount terminals	Faston	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



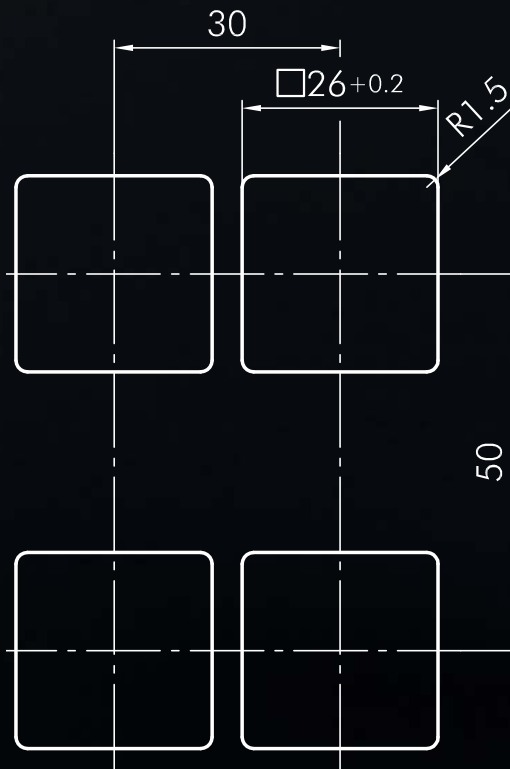
- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Mushroom heads
- 04 Knob set for potentiometers
- 05 Selector heads

- 06 Toggle heads
- 07 Key actuator heads
- 08 Buzzers
- 09 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

# → QUARTEX®-R-JUWEL

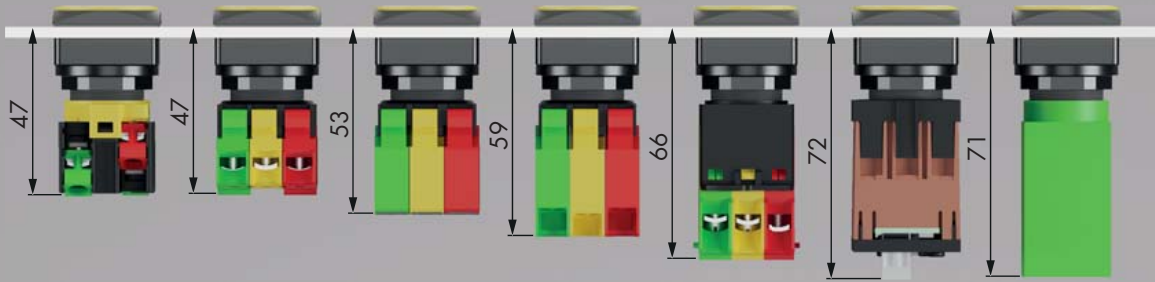
Front dimension:	30 x 30 mm
Panel cut-out:	26 x 26 mm
Front bezel height:	6 mm
Travel:	6 mm
Degree of protection*:	IP65/IP67
Front bezel colour:	



→ Configurator



➔ **Mounting depth dimensions**



\* ETR2 68 mm, ETLR 57 mm, EL9R 43 mm

		ET...	MK...	DS...	DT...	M...	ASI_SAW22...	DFA22
IEC/EN 60947-5-1 **	AC	400 V / 3 A	480 V / 1.5 A	380V / 1.9 A	380V / 1.9 A	440 V / 1.6 A	-	-
	DC	24 V / 2 A	24 V / 2A	24 V / 2A	24 V / 2A	24 V / 2A	26.5 - 31.6 V	-
Connection type		Screw	Screw	Spring-Cage	Spring-Cage	Screw	AS-Interface	Wireless

\*\* maximum voltage or current values, depending on the type they may also be lower, e.g. for gold-plated contacts or depending on the number of connections



- 01 Pushbutton heads
- 02 Emergency-stop heads
- 03 Knob set for potentiometers
- 04 Selector heads / knob set for rotary switches

- 05 Toggle heads
- 06 Key actuator heads
- 07 Pilot light heads / pilot lights

\* individual degree of protection, depending on the respective type

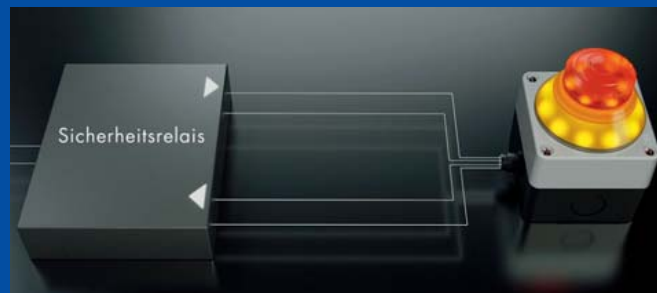
# → EMERGENCY-STOP

## Emergency-stops with illuminated status indication active/inactive

The active/inactive emergency-stop of SCHLEGEL offers an additional plus in safety. The active/inactive emergency-stop indicates the functionality via the illumination: If the emergency-stop is active, it lights up clearly; if it is not connected to the system it is non-illuminated and thus cannot be identified as an emergency-stop. This prevents an inactive emergency-stop from being accidentally pushed in the event of danger. In the field of active/inactive emergency-stops, SCHLEGEL also offers different variants and has developed an emergency-stop with diagnostic unit which constantly monitors the status of the illumination.

These are the characteristics of the **active/inactive emergency-stops** of SCHLEGEL:

- A mix-up of active and inactive emergency-stops can be excluded
- Very good visibility, even in case of poor light conditions
- It is no longer necessary to cover or to lock away inactive emergency-stops



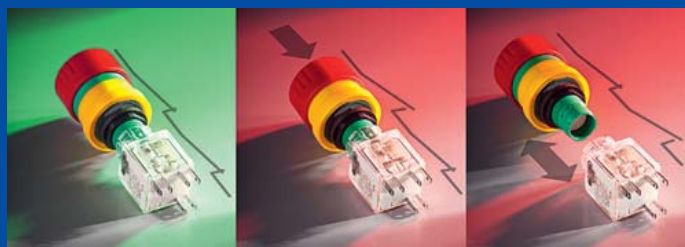
Emergency-stop control station SIL\_QRBDUVOOM125 with diagnostic unit connected to a safety relay



Quick perceptibility in active condition

## Safe and optically appealing emergency-stop buttons

The user can choose from a wide range of TÜV certified emergency-stop buttons of SCHLEGEL for panel cut-outs of different shapes and dimensions (16.2 mm, 22.3 mm, 30.5 mm ...) which can be combined with both the standard and ASi contact blocks. The emergency-stop buttons are well-known for their modern and attractive design combining mechanical robustness and outstanding functionality, featuring e.g. a clearly visible switching position indicator, a twist release (in either direction) or pull release and tightness from IP65 up to IP69K, depending on the model.



Automatic switch off on separation of the contact block from the emergency-stop button

## These are the characteristics of the emergency-stops of SCHLEGEL:

- The emergency-stops are TÜV certified and comply to the norms EN 13850 and EN60947-5-5
- Panel cut-outs: Ø 16.2 mm, Ø 22.3 mm, Ø 30.5 mm as well as 23 x 23 mm, 24 x 24 mm, 26 x 26 mm
- Clearly visible switching position indicator
- Twist to release (in both directions) or release by pulling
- Degree of protection is IP65 to IP69K, depending on the type
- Contact blocks with positive opening acc. to EN60947-5-1, one or two channel versions are available
- Even low currents (5 mA at 24 V or less) can be switched reliably
- Available for standard contact blocks as well as for AS-Interface (Safety@Work)





# → PANEL MOUNT JACKS

Creating connection: The interface technology of panel mount jacks enables us to cross technical barriers easily to get access to machines. Panel mount jacks connect separate systems and enable data to be exchanged across system boundaries.

SCHLEGEL offers a broad variety of panel mount jacks with a variety of connection types for different panel cut-outs and also variants with low mounting depth to be able to meet a wide range of customer requirements.



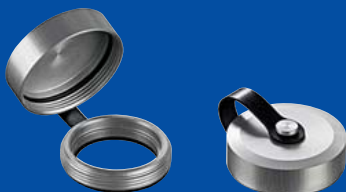
→ protective lid made of TPE (IP67)



→ protective **lid sealable** (IP67)



→ **robust** protective **lid sealable** (IP65/IP67)



→ **robust** protective lid

**degree of protection IP69K**



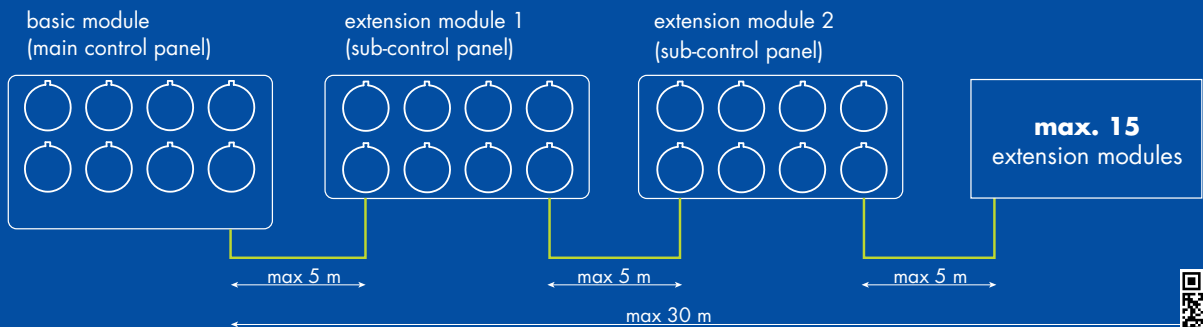
## These are the characteristics of the panel mount jacks of SCHLEGEL:

- Many connection types: USB, RJ45, HDMI, M12, LWL
- Panel mount jacks for 4 series (Rontron-R-Juwel, Rontron-Q-Juwel, Oktron-Juwel, Quartron-Juwel, Kombitast-R-Juwel)
- For panel cut-out 22.3 mm, 23 x 23 mm, 24 x 48 mm, adapter plate for 30.5 mm panel cut-out available (depending on series)
- With cable or direct connection
- Less mounting depth
- Suitable accessories



# → INDUSTRIAL NETWORKS

Fieldbus systems, industrial Ethernet and also IO-Link are already part of the industrialised field. Thus, SCHLEGEL has developed a modular bus system (MBS) that can be integrated universally in many networks. The MBS allows to control and operate up to 128 command points, for example pushbuttons, selector or key switches, pilot lights etc. With the MBS, operator panels or control devices can be equipped quickly, flexibly and with less cabling effort.



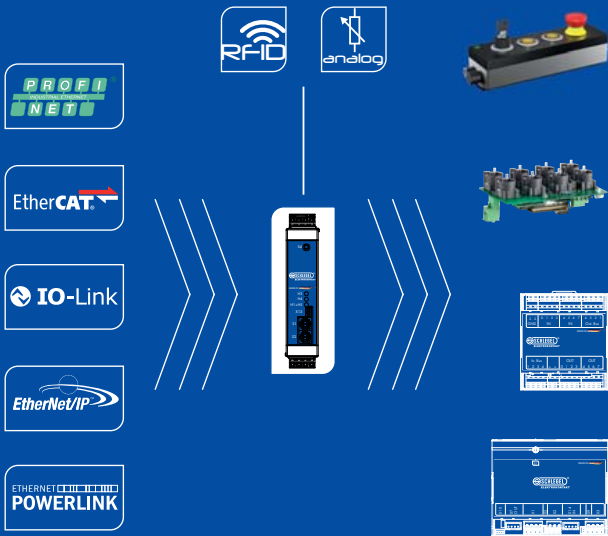
## These are the characteristics of the modular bus system of SCHLEGEL:

- Direct integration of pushbuttons, pilot lights and switches in industrial networks
- Only one connection for up to 128 pushbuttons, pilot lights and switches
- Basic module can be extended by up to 15 bus independent I/O modules
- Minimum wiring effort, saving time and money
- Higher flexibility: individual adaption by customised modules
- Easy and cost-effective change of the bus system by exchanging the basic module
- SCHLEGEL offers standardised modules suitable to the individual series in a grid of 25 x 25 mm / 27 x 27 mm / 30 x 30 mm
- No rigid system: if the requirements change, the MBS can be expanded at any time
- Versatile: thanks to its structure, the MBS is suitable for many fields of application

## The SCHLEGEL MBS is available for the following systems:

- AS-Interface
- Profinet I/O
- CANopen
- Ethernet IP
- Profibus
- IO-Link
- EtherCAT
- Powerlink





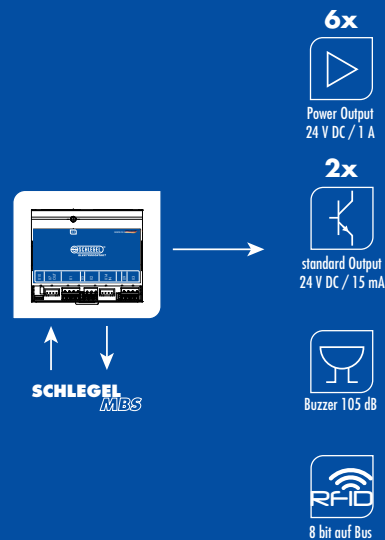
## Compact gateway for Industrial Ethernet

For the use of Industrial Ethernet systems like Profinet, Ethernet/IP, EtherCAT or Powerlink SCHLEGEL has developed a gateway with an internal 2-port switch that includes an RFID interface and AD converter in addition to the bus node. Additional advantage of the gateway: It is very compact and therefore can be placed wherever it suits to fulfil functions like RFID user management or to connect a potentiometer. The RFID control inside the gateway is based on the transponder management system (TMS) of SCHLEGEL.



## Extension module with RFID control

The extension modules for the Industrial Ethernet systems also have an integrated RFID controller that works in a similar way as the gateway. An RFID reader can be connected to the 8 inputs. The data read from the transponder and processed by the RFID control are directly transmitted to the connected Industrial Ethernet. The 8 I/Os can be used to add further control or operating elements. 2 I/Os are for the control of the illumination ring of the RFID reader, 6 I/Os for high loads, e.g. industrial lamps or valve terminals, in total up to 1 A.



# → RFID SYSTEMS

With a SCHLEGEL RFID system, processes can be controlled easily and securely or access authorisations can be managed. The wear-free RFID technology (Radio Frequency Identification), which is based on the principle of contactless communication via radio waves, opens up a wide range of possible applications: time recording, driver identification, ticket recording, access control, machine control, charging stations, customer or goods identification, product protection, data acquisition, key switch replacement, object acquisition/management.

An RFID system consists of a control, a reading device and a transponder (so-called tag) with an integrated microchip for data storage. This allows transmitting and analysing person- or product-specific information.

## These are the features of the RFID systems of SCHLEGEL:

- **Reliable:** wear-free, very robust and insensitive to environmental influences
- **Simple:** fast integration into processes and systems
- **Flexible:** extensive application possibilities in industrial environments and other fields
- **Safe:** thanks to a contactless communication via a globally unique transponder UID
- **Minimised safety risk in case of loss:** the transponder (key) is being removed from the system and replaced by a new one
- **Uncomplicated and flexible** to manage
- You will find the suitable system for you: SCHLEGEL offers 3 variants of RFID systems



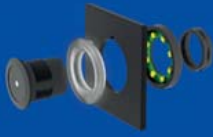
## 3 system variants

RFID-System					
Features	Standard	SKS		TMS	
Variant	-	TRA	TCA	TRA	TCA
Field of application	for individual, special requirements, flexibly and freely configurable	for a simple and fast integration into existing operating environments		for a flexible application in fields with complex requirements, with software for managing the transponders	
Individual programming	✓	✗	✗	✗	✗
Own evaluation electronics	✗	✓	✓	✓	✓
Required interface	USB / RS232	none	none	none	none
Outputs	via PLC / industrial PC	3 relays	5 open collectors	3 relays	8 open collectors
Number of transponders*	unlimited	25	25	unlimited	unlimited
Number of authorisations*	unlimited	7	25	7	255
Group authorisations	✓	✓	✗	✓	✓
Operating modes (reading mode)	cyclic / single	cyclic / single	cyclic	cyclic	cyclic
Integration into fieldbus systems**	via PLC / industrial PC	✗	✓	✗	✓
Management software	✗	✗	✗	✓	✓

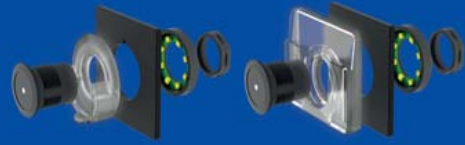
\* in theory, an unlimited number is possible

\*\* via the modular operating concept of Schlegel for the following fieldbus systems: Profibus, Profinet, CANopen, Ethernet IP, EtherCAT, Powerlink, IO-Link and AS-Interface

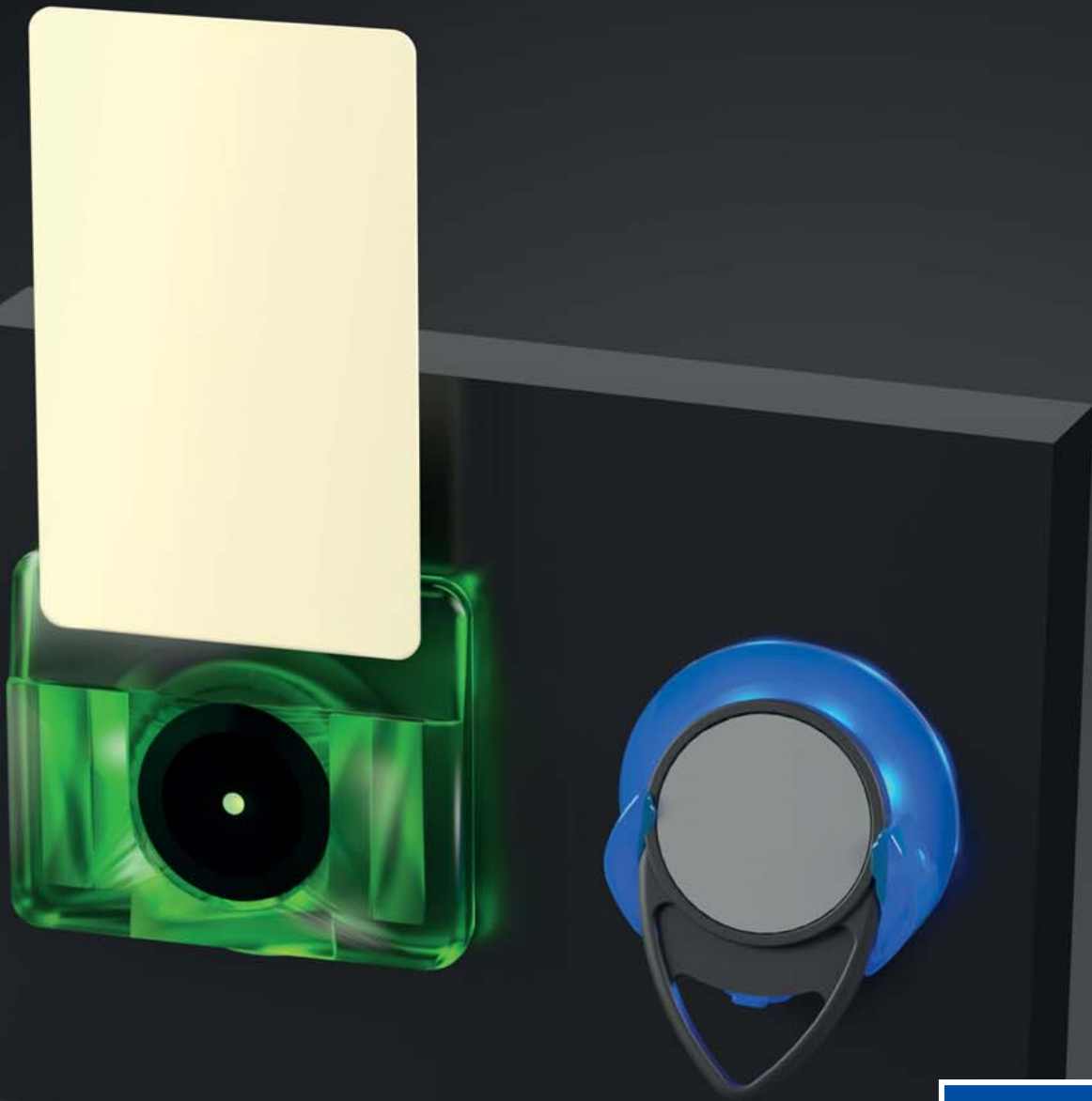
## Available accessory for SCHLEGEL RFID systems



Illuminated rings



Illuminated holders for drop-shaped or card-type transponders to display the status of the system clearly and instantly



# → ENCLOSURES

SCHLEGEL offers high-quality enclosures made of **stainless steel** and **plastic**. Our enclosures offer plenty of space inside and best protection against external influences. SCHLEGEL enclosures have a degree of protection from IP65 to IP69K.

Our new enclosure series proboxx, which has been awarded with several design prizes, convinces as a miracle of flexibility. The assembled enclosures are available for four different systems: conventional wiring, IO-Link, AS-Interface and wireless. All systems are equipped with two M12 connectors. The proboxx is designed for up to 4 pushbuttons and switches and is also supplied as an empty enclosure.



Insulated plastic enclosures (SIL...)



Emergency-stop control stations (SIL...)



Insulated enclosures (proboxx)



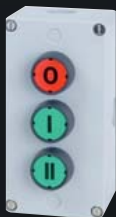
Stainless steel enclosures (S4...)



Compact enclosures



AS-Interface emergency-stop enclosures (SIL...)



Equipped insulated enclosures (IRF..., IRL...)



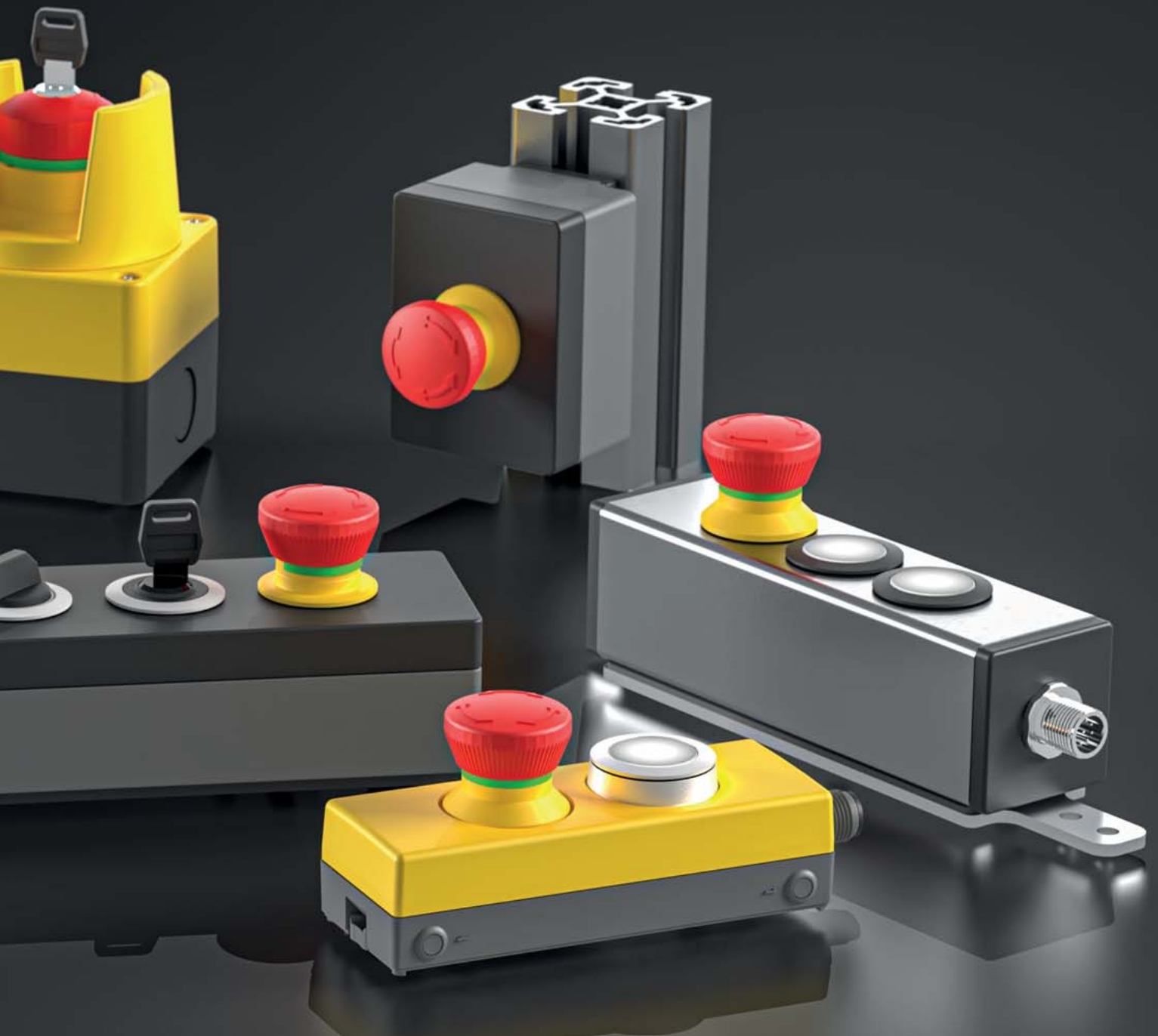
Insulated enclosures (DIRL...)





## These are the characteristics of the enclosures of SCHLEGEL:

- Large variety of materials, suitable for every application
- Enclosures available for panel cut-out 16.2 mm, 22.3 mm, 30.5 mm, 23 x 23 mm, 24 x 24 mm or 26 x 26 mm
- For up to 8 pushbuttons or switches
- Degree of protection from IP65 to IP69K, depending on the enclosure series
- Depending on the series various types of connections are possible: cable feed-through, M12, bus system, wireless
- Available as empty or equipped enclosure in various sizes: from compact to robust



# → WIRELESS SYSTEMS

## Battery-free wireless pushbuttons and switches

The wireless pushbuttons and switches of SCHLEGEL, which are based on the EnOcean technology, do not require any batteries at all. The energy needed for the transmission of the signal is generated by the switching operation itself (energy harvesting). Thus the modules are self-sustaining and of low-maintenance.

The battery-free wireless pushbuttons and switches are reliably working in the building technology, the industrial automation, the automotive industry and many others. The tactile feedback clearly confirms the switching operation.

The radio signal is transmitted at 868 MHz (approved for Europe). The battery-free wireless modules (DFA16 / DFA22) are suitable for all pushbuttons and switches with an operating travel of 6 mm.

## These are the characteristics of the battery-free wireless pushbuttons and switches of SCHLEGEL:

- No external power supply necessary
- No additional wiring is required
- Range of up to 300 m (open field)
- Easy programming
- Operating temperature from -20° C to 65° C
- EnOcean licensed
- Combinable with pushbuttons and 2-position selector and key actuator heads
- In accordance with the directives R&TTE 1999/5EC, 89/336/EC



## proboxx

In working environments where cable connections are undesirable or not possible, a wireless solution is the technology of choice. Therefore the new proboxx enclosure series is also offered as a wireless version with a radio interface in order to control machines or operate devices. The wireless solution is uncomplicated to use and also safe even in case longer distances have to be bridged.

The radio system consists of a transmitting unit and a receiving unit based on Steute's well-established sWave technology. The transmitter electronics is operated with a long-life battery. The successful switching is indicated by a status LED.

### These are the characteristics of the proboxx wireless solution:

- Frequency range 868 MHz (approved for the EU and China)
- Range of up to 450 m in the open field and up to 40 m indoors
- Up to 40 transmitter units (pushbuttons, switches) can be managed with one receiver
- LEDs for status indication (battery monitoring)
- Receiver with 4 potential-free relay outputs (NO)
- Learning mode (assignment of outputs)



## → PEDAL SWITCHES

Robust light metal enclosures with extreme durability characterise the pedal switches of SCHLEGEL. Pedal switches are used as alternative operating devices on systems and machines where a manual operation of the button is not possible or makes no sense.

### These are the characteristics of the pedal switches of SCHLEGEL:

- Red pedal covering the whole switch, with anti-slip crosswise ribbing
- Equipped with an oil and chemical resistant rubber membrane which is protectively placed
- Tightness against dust and humidity as well as hose water acc. to IP65
- With stroke limitation to protect against mechanical overload
- Protection class: II (protective insulation)
- Usable in extreme temperatures from -30 °C to 70 °C
- Mechanical lifetime: 1 million switching cycles
- Electrical lifetime (rated load): 1 million at 250 V/10(6) A





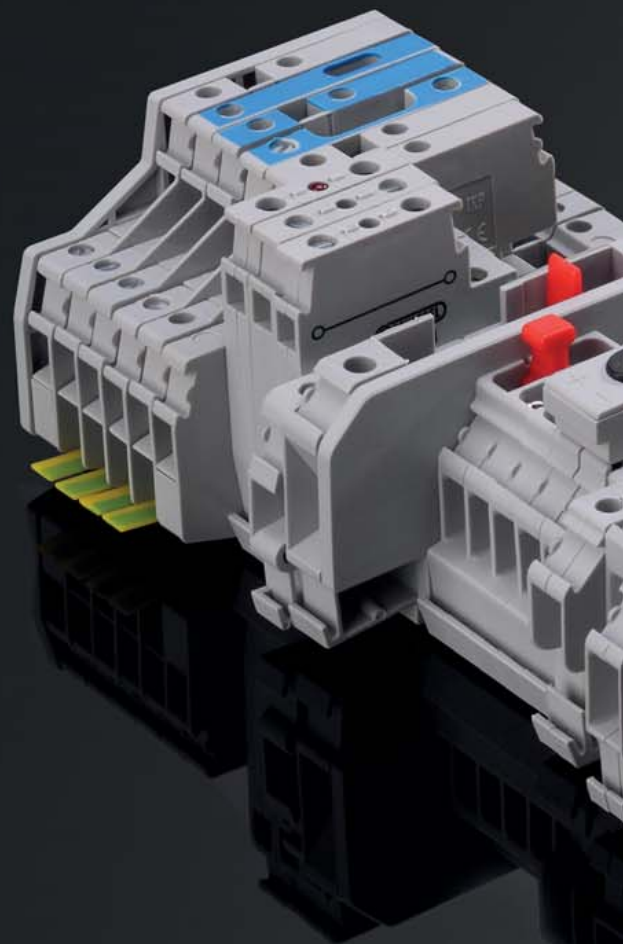
# → TERMINAL BLOCKS

SCHLEGEL terminal blocks are made of high-quality materials and can be installed easily, quickly and in a space-saving manner. They are preferably used in electrical machine controls, in switching, distribution and measuring systems as well as in elevator and in the apparatus construction.

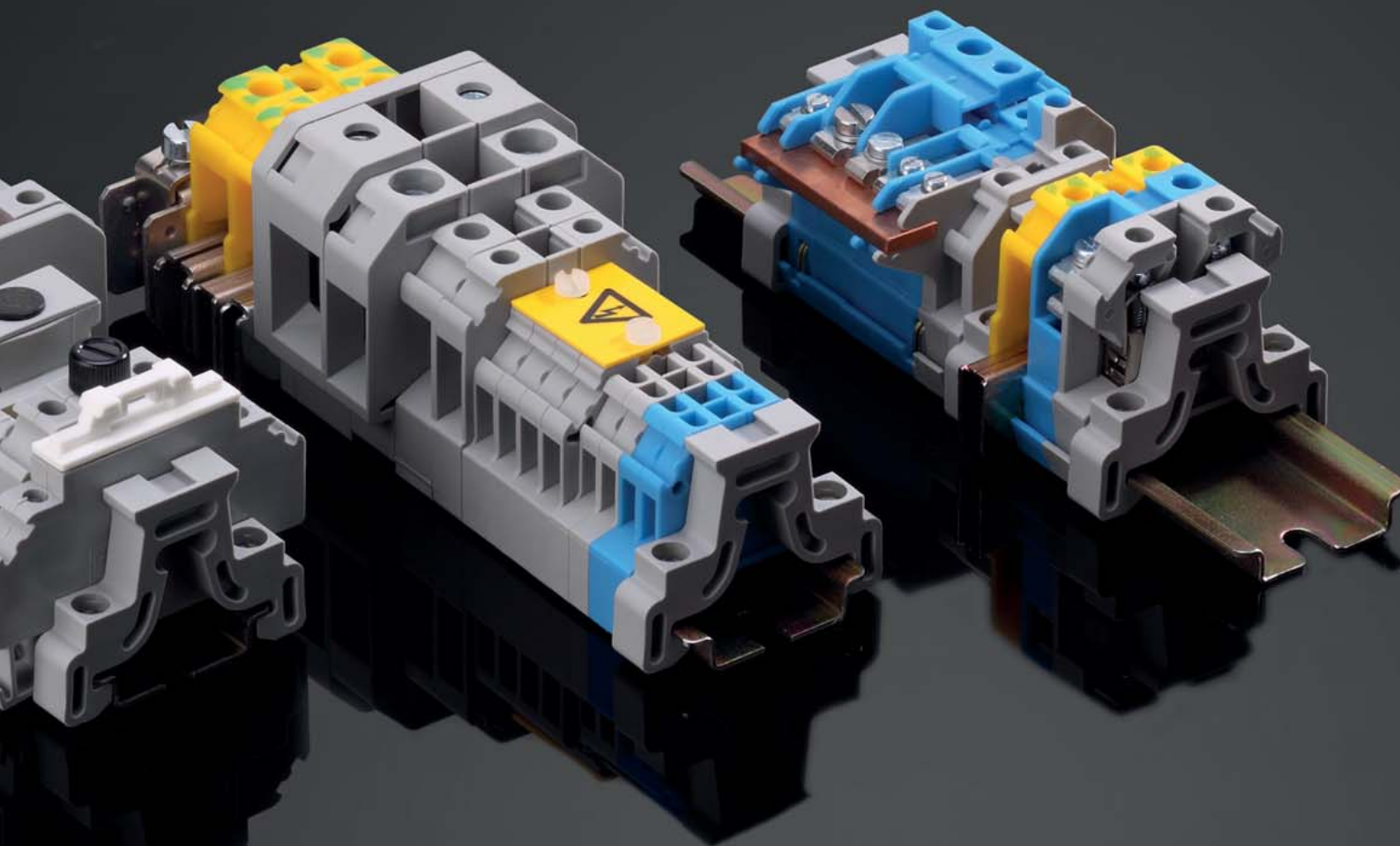
Our extensive range of terminal blocks includes standard terminals blocks with screw connection for all common rated cross sections.

## These are the characteristics of the terminal blocks of SCHLEGEL:

- Wide range of feed-through terminals (also for railless mounting), disconnecting terminals, combined terminals, initiator terminals, distribution terminals, fuse terminals, earth conductor terminals, pick-a-back terminals
- Suitable for high and low current and for direct and alternate current
- Versions for mounting on DIN rails, for screw mounting and with PCB-mount terminals
- Available with diodes
- Partially including fuseholder
- Extensive range of accessories







# → CUSTOMISED SOLUTIONS

Does your control panel or control station have special requirements in terms of design and functionality? If standard products do not fit, our R&D will be involved. Do not hesitate to approach us with tricky challenges: With our extensive experience as a manufacturer of electrical controls and the know-how gained from numerous successfully implemented projects, we are your competent partner. We develop your individual solution together with you - from a unique contact assembly to a completely in-house manufactured plug-and-play product.

Our development staff work closely with the customer to find solutions. Based on our extensive range of pushbuttons and switches, we can implement tailor-made, customer-specific variants.

Tailor-made SCHLEGEL control desks, mobile panels or control panels are used in a number of industries - in mechanical engineering as well as in medical technology, vehicle construction or for controlling ships.

## **SCHLEGEL offers these advantages:**

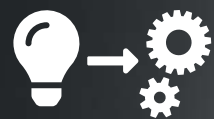
- Extensive SCHLEGEL portfolio of pushbuttons and switches as a basis
- Products individually manufactured according to customer requirements
- Many individual components are possible
- Panel solutions can also be realised with different bus systems
- The connection on the pushbutton or switch can be provided with a connecting system or interface according to customer's request
- All from a single source



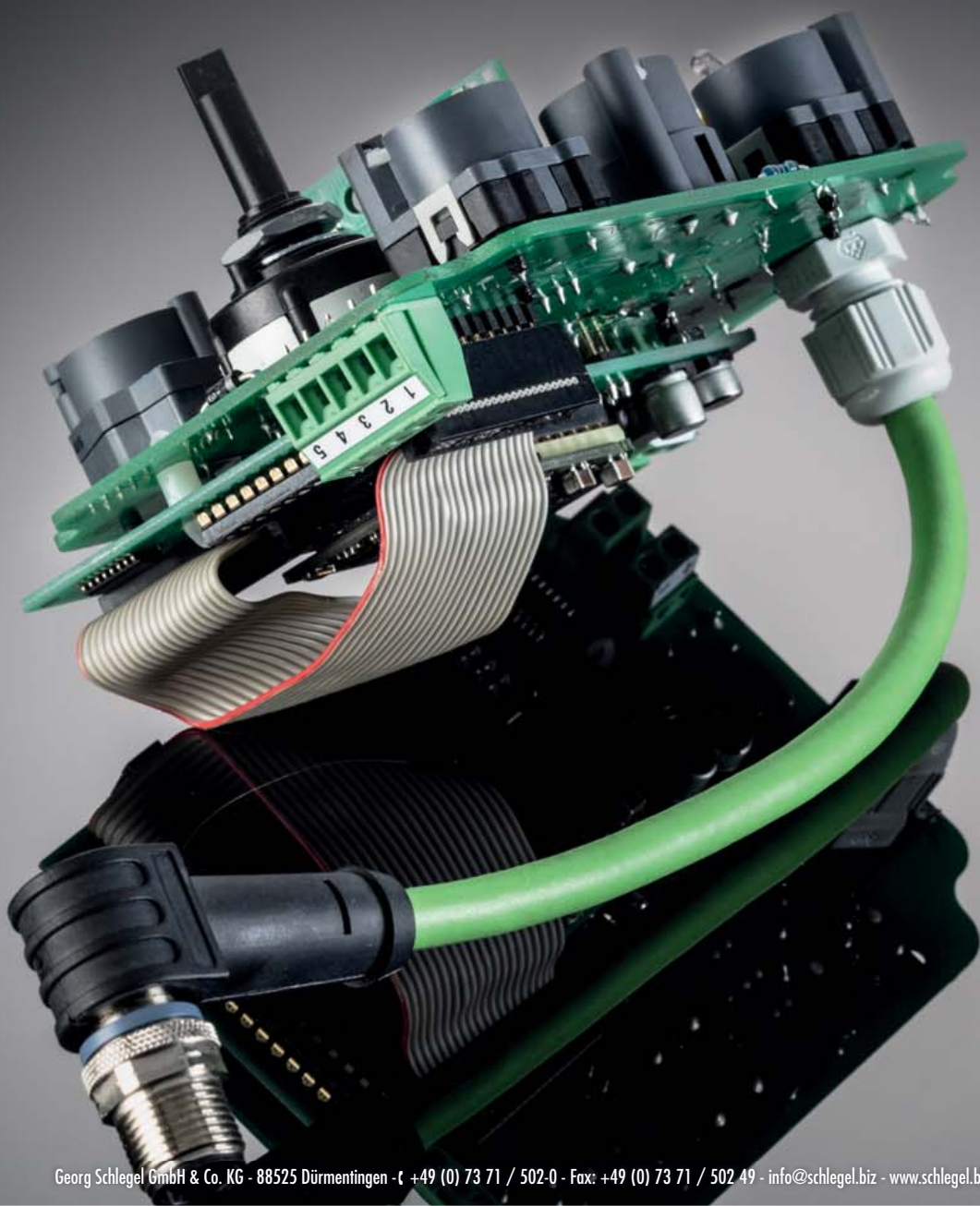
Get in touch with us



We will advise you in detail  
and without obligation



Together with you we will find a  
suitable solution to achieve the  
best result





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