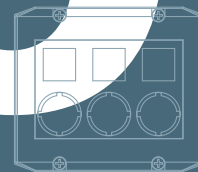


5

ACCESSORIES



Accessories Luminous elements

LED
Filament/neon lamps

5 - 3

5 - 5

5 - 9

Other accessories

Housing
Emergency stop labels
Blanking caps
Tools
Connection
Protection & Sealing
Spacers

5 - 17

5 - 19

5 - 21

5 - 22

5 - 25

5 - 28

5 - 30

5 - 32

LUMINOUS ELEMENTS

GENERAL INFORMATION / CE-CONFORMITY

General information

When selecting lamps, the button/lens color of the device should be taken into account.

transparent colors	Suitable for		
	Filament lamps	Neon lamps	LED
colorless	limited	good	good
red	good	good	good
yellow	good	good	good
green	good	limited	limited
blue	limited	limited	good

transparent = clear, grooved on inside for better light diffusion

translucent = translucent but not clear

Operating life specifications of lamps refer to AC operation. For DC operation, these values are reduced by approximately 40%. (Operating life specifications: when not mounted).

Neon lamps: rated current tolerance +/- 30%

We recommend to combine colored lenses with the corresponding LED colors in order to achieve a really intensive color.

On the other hand, when combining e. g. a white LED with a colored lens, this will produce a dim color.

LED Protective Diode

LED may be damaged when anode and cathode are connected in a wrong way. An integrated protective diode protects the LED against wrong polarization.

LED brightness classes

LEDs are subject to production-related variations in brightness over which we have no control with the manufacturers. It is therefore not possible to arrange a delivery in a specific brightness class, and deviations accordingly do not constitute grounds for complaint regarding our products.

The majority of the LEDs we use are delivered from our suppliers in selected brightness classes. In this case, the brightness class is shown on a label on the switch's rack packaging.

Where the lighting is required to have a uniform brightness – for aesthetic reasons, for example – this can be achieved in the system by means of the circuitry (with a series resistance, for example).

CE-Conformity

Illumination like lamps and LED displays are exchangeable, overall available as merchandise and not steadily connected with the network – thus, the Low-voltage Directive 73/23/EWG does not apply.

EMC

The components of this catalogue are within the meaning of the law concerning the electromagnetic conformity (= EMC) "basic components as f. ex. switches, signal lamps or like" and, therefore, do not all within the scope of the EMC.

Declarations of Conformity

Declarations of conformity for lamps are not available.



Accessories

Luminous elements

Luminous elements

ACCESSORIES

ACCESSORIES - LUMINOUS ELEMENTS

Content

LED

Socket W 2 x 4.6d, LED superbright	5 - 5
Socket Bi-Pin T 1, LED	5 - 6
Socket Bi-Pin T 1, LED superbright	5 - 6
Socket T 4.5, LED	5 - 7
Socket T 4.5, LED superbright	5 - 7
Socket BA 9s (MBC/MCC), LED superbright	5 - 8
THT LED 3 mm, without base	5 - 8

Filament/ neon lamps

Wedge base W 2 x 4.6d, filament lamp, DIN 49846	5 - 9
Bi-Pin T 1 base, filament lamp	5 - 10
Bi-Pin T ¼ base, filament lamp	5 - 10
T 4.5 base, filament lamp	5 - 10
T 4.6 base, filament lamp	5 - 11
BA 9s base (MBC/MCC), filament lamp, shape G, DIN 72601	5 - 11
BA 9s base (MBC/MCC), filament lamp, shape A, DIN 49851	5 - 11
BA 9s base (MBC/MCC), neon lamp	5 - 12
BA 9s base (MBC/MCC), neon lamp, DIN 49850	5 - 12
BA 15d base, filament lamp, DIN 49850	5 - 12
BA 15d base, filament lamp, DIN 49852	5 - 13
BA 15d base, filament lamp	5 - 13
E 10 (MES) base, filament lamp	5 - 13
E 10 (MES) base, neon lamp	5 - 14
E 14 base, shape B, filament lamp, DIN 49850	5 - 14
E 14 base, filament lamp shape A, DIN 49852	5 - 14
E 14 base, filament lamp	5 - 15
E 14 base, neon lamp, shape B	5 - 15
Tubular lamp, S 8.5 base, filament lamp, shape L, DIN 72601	5 - 15
Tubular lamp, S 8.5 base, filament lamp, shape K, DIN 72601	5 - 16

LED



Socket W 2 x 4.6d, LED superbright



→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
W 2 x 4.6d	red	24	12 mA	70 mcd	1.90.690.361/0000
W 2 x 4.6d	yellow	24	12 mA	80 mcd	1.90.690.363/0000
W 2 x 4.6d	green	24	12 mA	600 mcd	1.90.690.362/0000
W 2 x 4.6d	blue	24	12 mA	300 mcd	1.90.690.364/0000
W 2 x 4.6d	white	24	12 mA	400 mcd	1.90.690.365/0000

All LEDs are provided with a protective diode. Operating temperature - 30 °C ... + 65 °C.

For more intensive colors, please combine colored lenses with suitable LED colors.

Accessoires:

Lamp extractor for lamp diameter 5 mm: 1.90.900.003/0000

ACCESSORIES

LED



Socket Bi-Pin T 1, LED

→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
Bi-Pin T 1	red	2	10 mA	26-52 mcd	1.90.691.026/0000
Bi-Pin T 1	yellow	2	10 mA	26-52 mcd	1.90.691.028/0000
Bi-Pin T 1	green	2	10 mA	9-33 mcd	1.90.691.027/0000

Voltage U_B : External resistor: $R_V = (U_B - U_F) / I_F$

A suitable series resistor must be fitted externally.

Recommended resistor ratings:

- for 5 - 7 V = 270 Ω 0.25 W

- for 12 - 14 V = 680 Ω 0.50 W

- for 24 - 28 V = 1500 Ω 1.00 W

Forward voltage U_F : 2 V (3 V max.)

Reverse voltage U_R : 5 V

Reverse current I_R : 100 μ A.

Forward current: 10 mA

Operating temperature: -20°C ... +60°C

Storage temperature: -30°C ... +80°C

Operating life: 100,000 h at $T_U = 25^\circ\text{C}$

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.001/0000



Socket Bi-Pin T 1, LED superbright

→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
Bi-Pin T 1	red	24	11 mA	70 mcd	1.90.690.351/0000
Bi-Pin T 1	yellow	24	11 mA	80 mcd	1.90.690.353/0000
Bi-Pin T 1	green	24	11 mA	600 mcd	1.90.690.352/0000
Bi-Pin T 1	blue	24	11 mA	300 mcd	1.90.690.354/0000
Bi-Pin T 1	white	24	11 mA	400 mcd	1.90.690.355/0000

All LEDs are provided with a protective diode. Operating temperature - 30 °C ... + 65 °C.

For more intensive colors, please combine colored lenses with suitable LED colors.

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.001/0000

5

Lamps

Socket T 4.5, LED



→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
T 4.5	red	2 - 3 V	10 mA	26-52 mcd	1.90.692.001/0000
T 4.5	yellow	2 - 3 V	10 mA	26-52 mcd	1.90.692.003/0000
T 4.5	green	2 - 3 V	10 mA	9-33 mcd	1.90.692.002/0000

Voltage U_B : External resistor: $R_V = (U_B - U_F) : I_F$

A suitable series resistor must be fitted externally.

Recommended resistor ratings:

- for 5 - 7 V = 270 Ω 0.25 W

- for 12 - 14 V = 680 Ω 0.50 W

- for 24 - 28 V = 1500 Ω 1.00 W

Forward voltage U_F : 2 V (3 V max.)

Reverse voltage U_R : 5 V

Reverse current I_R : 100 μ A.

Forward current: 10 mA

Operating temperature: -20°C ... +60°C

Storage temperature: -30°C ... +80°C

Operating life: 100,000 h at $T_U = 25^\circ\text{C}$

Socket T 4.5, LED superbright



→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
T 4.5	red	24	13 mA	90 mcd	1.90.690.331/0000
T 4.5	yellow	24	13 mA	100 mcd	1.90.690.333/0000
T 4.5	green	24	13 mA	700 mcd	1.90.690.332/0000
T 4.5	blue	24	13 mA	380 mcd	1.90.690.334/0000
T 4.5	white	24	13 mA	500 mcd	1.90.690.335/0000

All LEDs are provided with a protective diode. Operating temperature - 30 °C ... + 65 °C.

For more intensive colors, please combine colored lenses with suitable LED colors.

Accessoires:

Lamp extractor for lamp diameter 5-6 mm: 1.90.900.004/0000

ACCESSORIES

LED



Socket BA 9s (MBC/MCC), LED superbright

→ Socket	Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Light intensity	Order no.
BA 9 s	red	24	15 mA	250 mcd	1.90.690.341/0000
BA 9 s	yellow	24	15 mA	250 mcd	1.90.690.343/0000
BA 9 s	green	24	15 mA	1000 mcd	1.90.690.342/0000
BA 9 s	blue	24	15 mA	450 mcd	1.90.690.344/0000
BA 9 s	white	24	15 mA	600 mcd	1.90.690.345/0000

All LEDs are provided with a protective diode. Operating temperature - 30 °C ... + 65 °C.

For more intensive colors, please combine colored lenses with suitable LED colors.

Accessoires:

Lamp extractor for lamp diameter 11 mm: 1.90.900.007/0000



THT LED 3 mm, without base

→ Color	Forward voltage typ. U_F at I_F	Max. current, I_F	Order no.
red	1,6 V / 1 mA	30 mA	1.90.690.228/0000
red	1.9 V / 20 mA	50 mA	1.90.690.269/0000
yellow	1.9 V / 20 mA	50 mA	1.90.690.267/0000
green	3.5 V / 20 mA	30 mA	1.90.690.285/0000
blue	3,6 V / 20 mA	30 mA	1.90.690.282/0000
white	3,6 V / 20 mA	30 mA	1.90.690.295/0000

FILAMENT/ NEON LAMPS



Wedge base W 2 x 4.6d, filament lamp, DIN 49846



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 V	0.08 A	1.2 W	5 mm	20 mm	15,000 h	1.90.120.012/0000
24 - 30 V	0.04 A	1 W	5 mm	20 mm	1000 h	1.90.120.005/0000
24 V	0.04 A	1.2 W	5 mm	20 mm	7000 h	1.90.120.011/0000
48 V	0.025 A	1.2 W	5 mm	19 mm	2500 h	1.90.120.010/0000
60 V	0.02 A	1.2 W	5 mm	19 mm	3300 h	1.90.120.009/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

The lamps up to 30 V are provided with glass sockets, the other ones with plastic sockets.

Accessoires:

Lamp extractor for lamp diameter 5 mm: 1.90.900.003/0000

ACCESSORIES

FILAMENT/NEON LAMPS



Bi-Pin T 1 base, filament lamp

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 - 28 V	0.016 A	0.4 - 0.56 W	-	-	5000 h	1.90.180.473/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.001/0000



Bi-Pin T 1/4 base, filament lamp

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 V	0.06 A	0.72 W	4.3 mm	10.5 mm	10,000 h	1.90.180.474/0000
28 V	0.03 A	0.84 W	4.3 mm	10.5 mm	5000 h	1.90.180.475/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.002/0000



T 4.5 base, filament lamp

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 V	0.04 A	0.48 W	4.2 mm	16.5 mm	10,000 h	1.90.100.022/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.002/0000

T 4.6 base, filament lamp



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 V	0.04 A	0.3 W	4 mm	22 mm	5000 h	1.90.100.012/0000
24 V	0.02 A	0.5 W	4 mm	22 mm	5000 h	1.90.100.013/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 4 mm: 1.90.900.002/0000

BA 9s base (MBC/MCC), filament lamp, shape G, DIN 72601



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 - 15 V	0.12 A	1.2 W	9 mm	24 mm	10,000 h	1.90.060.003/0000
24 - 30 V	0.04 A	1.2 W	9 mm	24 mm	7000 h	1.90.060.014/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 10.4 mm: 1.90.900.006/0000

BA 9s base (MBC/MCC), filament lamp, shape A, DIN 49851



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 - 15 V	0.166 A	2 W	11 mm	29 mm	10,000 h	1.90.060.132/0000
24 - 30 V	0.083 A	2 W	11 mm	29 mm	10,000 h	1.90.060.133/0000
110 - 130 V	0.018 A	2 W	11 mm	30 mm	25,000 h	1.90.060.137/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 11 mm: 1.90.900.007/0000

ACCESSORIES

FILAMENT/NEON LAMPS



BA 9s base (MBC/MCC), neon lamp

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
220 AC V	0.0015 - 0.0018 A	-	10 mm	24 mm	1500 h	1.90.560.002/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 11 mm: 1.90.900.007/0000



BA 9s base (MBC/MCC), neon lamp, DIN 49850

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
AC 220 V	0.0015 - 0.0018 A	-	10 mm	28 mm	-	1.90.560.102/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 11 mm: 1.90.900.007/0000



BA 15d base, filament lamp, DIN 49850

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
12 - 15 V	0.12 A	2 W	15.2/12.5 mm	31 mm	1000 h	1.90.070.003/0000
24 - 30 V	0.08 A	2 W	15.2/12.5 mm	31 mm	1000 h	1.90.070.004/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 14 mm: 1.90.900.008/0000

BA 15d base, filament lamp, DIN 49852



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 - 30 V	0.165 A	4 W	17 mm	57 mm	2000 h	1.90.070.105/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 16-17 mm: 1.90.900.009/0000

BA 15d base, filament lamp



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 V	0.2 A	5 W	16 mm	36 mm	2000 h	1.90.070.053/0000
220 - 260 V	0.02 - 0.03 A	5 - 7 W	16 mm	36 mm	1000 h	1.90.070.061/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 16-17 mm: 1.90.900.009/0000

E 10 (MES) base, filament lamp



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 - 30 V	0.083 A	2 W	11 mm	29 mm	1000 h	1.90.010.033/0000
110 - 130 V	0.018 A	2 W	11 mm	30 mm	1000 h	1.90.010.037/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 11 mm: 1.90.900.007/0000

ACCESSORIES

FILAMENT/NEON LAMPS



E 10 (MES) base, neon lamp

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
220 AC V	0.0015 - 0.0018 A	-	10.4 mm	28 mm	-	1.90.510.012/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 10.4 mm: 1.90.900.006/0000



E 14 base, shape B, filament lamp, DIN 49850

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 - 30 V	0.083 A	2 W	14/12.5 mm	31 mm	1000 h	1.90.020.033/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 14 mm: 1.90.900.008/0000



E 14 base, filament lamp shape A, DIN 49852

→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 - 30 V	0.165 A	4 W	17 mm	57 mm	1000 h	1.90.020.105/0000
220 - 260 V	0.023 A	5 W	17 mm	57 mm	1000 h	1.90.020.115/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 16-17 mm: 1.90.900.009/0000

E 14 base, filament lamp



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
220 - 260 V	0.02 - 0.03 A	5 - 7 W	16 mm	36 mm	1000 h	1.90.020.061/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 16-17 mm: 1.90.900.009/0000

E 14 base, neon lamp, shape B



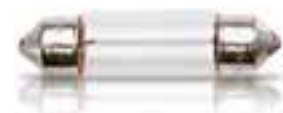
→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
220 AC V	0.0014 - 0.0026 A	-	14.1/11.5 mm	31 mm	-	1.90.520.002/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

Accessoires:

Lamp extractor for lamp diameter 14 mm: 1.90.900.008/0000

Tubular lamp, S 8.5 base, filament lamp, shape L, DIN 72601



→ Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
24 V	-	3 W	11.5 mm	39 mm	200 h	1.90.111.003/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.

ACCESSORIES

FILAMENT/NEON LAMPS



Tubular lamp, S 8.5 base, filament lamp, shape K, DIN 72601

→	Rated voltage	Rated current	Rated power	Diameter max.	Length	Medium operating life AC	Order no.
	24 V	-	5 W	15.5 mm	44 mm	200 h	1.90.111.103/0000

Ratings and operating life specifications generally refer to the lower rated voltage value. Operating life specifications of lamps refer to AC operation. With DC operation, these are reduced by about 40%.



Other accessories

Other accessories

ACCESSORIES

OTHER ACCESSORIES

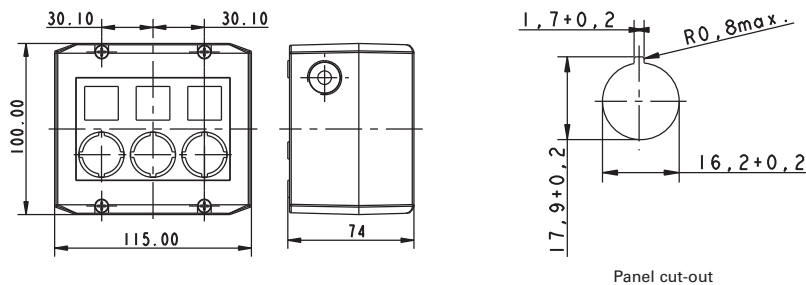
Content

Accessories	5 - 19
RAFIX Insulating housing, Ø 16.2 mm	5 - 19
RAFIX Insulating housing IP65, Ø 22.3 mm	5 - 20
Emergency stop label, PVC adhesive, Ø 16.3 mm	5 - 21
Emergency stop label, Ø 22.3 mm	5 - 21
LUMOTAST 75 IP40/65 Blanking cap, black, Ø 16.2 mm	5 - 22
RAFIX 16 Blanking cap with sealing and threaded ring, Ø 16.2 mm	5 - 23
RAFIX 16 F Blanking cap	5 - 23
RAFIX 22 QR Blanking cap, Ø 22.3 mm	5 - 24
RAFIX 22 FS Blanking cap, Ø 22.3 mm	5 - 24
Fixing spanner	5 - 25
Fixing spanner for ring nut and front ring	5 - 25
Fixing spanner for hexagon nut	5 - 26
Lamp extractor	5 - 26
Disassembly tool	5 - 27
Female quick-connect terminal DIN 46340-B 2.8-1-MS	5 - 27
Plug distributor	5 - 27
LUMOTAST FK/25 Flat ribbon cable, 4-wire, length 1 m	5 - 28
LUMOTAST FK/25 Plug-in socket for PCB	5 - 28
LUMOTAST FK/25 Socket connector, 4-pin	5 - 28
LUMOTAST FK/25 Flat ribbon cable, 10 cm, with socket connector and AMP 4-pin male quick connector	5 - 29
LUMOTAST 75 IP40 Protective cap	5 - 29
LUMOTAST 75 IP40 Sealing cap for protection class IP 65	5 - 30
Signal lamp Ø 22.3 mm Sealing ring for IP 65	5 - 30
O-ring	5 - 31
Pushbuttons 16.2 mm Protection against contact	5 - 31
Signal lamps Protection against contact	5 - 31
Spacers, round	5 - 32
Spacers, triangular	5 - 33
RK 90 Spacer M 4	5 - 34

ACCESSORIES



RAFIX Insulating housing, Ø 16.2 mm



Panel cut-out

→ Description	Number of cut-outs	Ø	Dimensions	Order no.
RAFIX - Insulating housing, Ø 16.2 mm, IP65, 1-module, light grey/dark grey	1	16,2 mm	100x55x74 mm	1.20.810.001/0000
RAFIX - Insulating housing, Ø 16.2 mm, IP65, 1-module, yellow/yellow	1	16,2 mm	100x55x74 mm	1.20.810.002/0000
RAFIX - Insulating housing, Ø 16.2 mm, IP65, 2-module, light grey/dark grey	2	16,2 mm	100x115x74 mm	1.20.820.001/0000
RAFIX - Insulating housing, Ø 16.2 mm, IP65, 3-module, light grey/dark grey	3	16,2 mm	100x115x74 mm	1.20.830.001/0000
RAFIX - Insulating housing, Ø 16.2 mm, IP65, 4-module, light grey/dark grey	4	16,2 mm	100x145x74 mm	1.20.840.001/0000

- Attractive plastic housing to accommodate up to 4 control components
- 2 cable entries prepared: 1-,2-,3-part: M20x1.5, 4-part: M25x1.5
- Degree of protection IP65 to DIN EN 60529
- All grey housings with overlay, legending possible with legend inserts
- Wall mounting with 2 screws through housing bottom prepared
- Dimensions (feature 1) x 100 mm x 74 mm
- Accessories: 50 pre-perforated legend inserts on a DIN A4 sheet
- Housings with other features, e.g. RAFIX 16F, on request.

ACCESSORIES

HOUSING

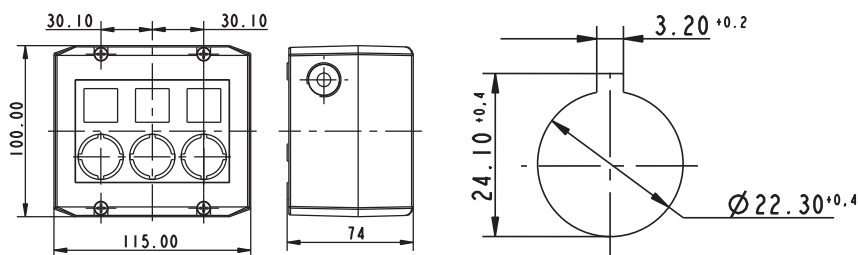
– Table (continued) –
RAFIX - Insulating housing, Ø 16.2 mm

Accessoires:

Label sheet for housing (50 foil legend inserts): 5.40.451.283/0000



RAFIX Insulating housing IP65, Ø 22.3 mm



Panel cut-out to IEC 60947-5-1

→ Description	Number of cut-outs	Ø	Dimensions	Order no.
RAFIX - Insulating housing, Ø 22.3 mm, IP65, 1-module, light grey/dark grey	1	22,3 mm	100x55x74 mm	1.20.810.201/0000
RAFIX - Insulating housing, Ø 22.3 mm, IP65, 1-module, yellow/yellow	1	22,3 mm	100x55x74 mm	1.20.810.202/0000
RAFIX - Insulating housing, Ø 22.3 mm, IP65, 2-module, light grey/dark grey	2	22,3 mm	100x115x74 mm	1.20.820.201/0000
RAFIX - Insulating housing, Ø 22.3 mm, IP65, 3-module, light grey/dark grey	3	22,3 mm	100x115x74 mm	1.20.830.201/0000
RAFIX - Insulating housing, Ø 22.3 mm, IP65, 4-module, light grey/dark grey	4	22,3 mm	100x145x74 mm	1.20.840.201/0000

- Plastic housing to accommodate up to 4 control components
- 2 cable entries prepared: 1-,2-,3-part: M20x1.5, 4-part: M25x1.5
- Degree of protection IP65 to DIN EN 60529
- All grey housings with overlay, legending possible with legend inserts
- Wall mounting with 2 screws through housing bottom prepared
- Dimensions: (feature 1) x 100 mm x 74 mm
- Accessories: 50 pre-perforated legend inserts on a DIN A4 sheet

Accessoires:

Label sheet for housing (50 foil legend inserts): 5.40.451.283/0000

5

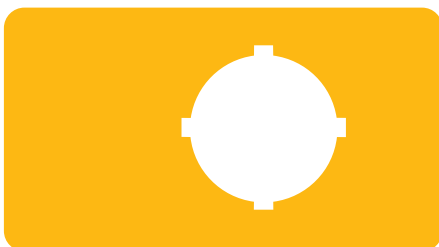
Others

Emergency stop label, PVC adhesive, Ø 16.3 mm



→ Dimensions	inside Ø	Label	Order no.
Ø 40 mm	16.3 mm	„NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“	5.76.204.114/0400
Ø 40 mm	16.3 mm	4 x „NOT-HALT“	5.76.204.116/0400
Ø 40 mm	16.3 mm	4 x „NOT-AUS“	5.76.204.118/0400
Ø 40 mm	16.3 mm	4 x „EMERGENCY STOP“	5.76.204.120/0400
Ø 60 mm	16.3 mm	-	5.76.204.400/0400
Ø 60 mm	16.3 mm	1 x „NOT-AUS“	5.76.204.401/0400
Ø 60 mm	16.3 mm	1 x „EMERGENCY STOP“	5.76.204.403/0400
Ø 60 mm	16.3 mm	„NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“	5.76.204.106/0400
Ø 60 mm	16.3 mm	4 x „NOT-HALT“	5.76.204.108/0400
Ø 60 mm	16.3 mm	4 x „NOT-AUS“	5.76.204.110/0400
Ø 60 mm	16.3 mm	4 x „EMERGENCY STOP“	5.76.204.112/0400

Emergency stop label, Ø 22.3 mm



→ Dimensions	inside Ø	Label	Order no.
36 x 64 mm	22.3 mm	-	5.76.205.011/0400
Ø 40 mm	22.3 mm	„NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“	5.76.204.115/0400
Ø 40 mm	22.3 mm	4 x „NOT-HALT“	5.76.204.117/0400

ACCESSORIES

EMERGENCY STOP LABELS / BLANKING CAPS

– Table (continued) –
Emergency stop label, Ø 22.3 mm

→ Dimensions	inside Ø	Label	Order no.
Ø 40 mm	22.3 mm	4 x „NOT-AUS“	5.76.204.119/0400
Ø 40 mm	22.3 mm	4 x „EMERGENCY STOP“	5.76.204.121/0400
Ø 60 mm	22.3 mm	1 x „NOT-AUS“	5.76.207.001/0400
Ø 60 mm	22.3 mm	„EMERGENCY-STOP / ARRET D'URGENCE“	5.76.207.002/0400
Ø 60 mm	22.3 mm	1 x „NOT-AUS“	5.76.204.101/0400
Ø 60 mm	22.3 mm	1 x „ARRET D'URGENCE“	5.76.204.102/0400
Ø 60 mm	22.3 mm	1 x „EMERGENCY STOP“	5.76.204.103/0400
Ø 60 mm	22.3 mm	„NOT-HALT, EMERGENCY STOP, ARRET D'URGENCE, EMERGENZA“	5.76.204.107/0400
Ø 60 mm	22.3 mm	4 x „NOT-HALT“	5.76.204.109/0400
Ø 60 mm	22.3 mm	4 x „NOT-AUS“	5.76.204.111/0400
Ø 60 mm	22.3 mm	4 x „EMERGENCY STOP“	5.76.204.113/0400



LUMOTAST 75 IP40/65 Blanking cap, black, Ø 16.2 mm



→ Installation dimensions	Dimenions	Color	Order no.
Ø 16,2 mm	18 x 18	black	5.52.006.020/0103
Ø 16,2 mm	18 x 24	black	5.52.006.021/0100
Ø 16,2 mm	Ø 18	black	5.52.006.022/0100

5

Others

RAFIX 16

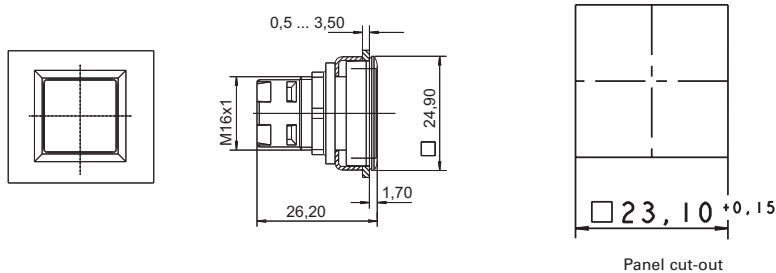
Blanking cap with sealing and threaded ring, Ø 16.2 mm



→ Description	Order no.
Blanking cap complete with sealing disc and ring nut, square	5.05.800.049/0100
Blanking cap complete with sealing disc and ring nut, round	5.05.800.050/0100
Blanking cap complete with sealing disc and ring nut, square, alignable without gaps	5.05.800.051/0100

RAFIX 16 F

Blanking cap



→ Installation dimensions	Dimenions	Color	Order no.
23,1 x 23,1 mm	24,9 x 24,9	black	5.05.800.063/0000

ACCESSORIES

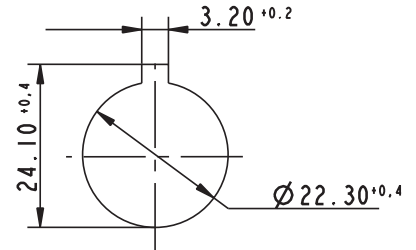
BLANKING CAPS



RAFIX 22 QR Blanking cap, Ø 22.3 mm



round blanking cap

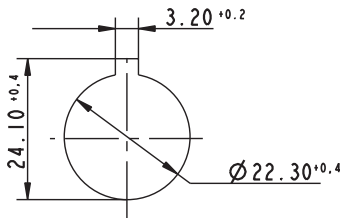


Panel cut-out to IEC 60947-5-1

→ Description	Order no.
Blanking cap IP65, ring nut, square, slate grey	5.05.800.065/0000
Blanking cap IP65, ring nut, round, slate grey	5.05.800.064/0000

Protection acc. to DIN EN 60529

RAFIX 22 FS Blanking cap, Ø 22.3 mm



Panel cut-out to IEC 60947-5-1



round, high version



square blanking cap

→ Description	Form	Overall height	Order no.
Blanking cap IP65, ring nut, round, slate grey, flat	round	flush	5.05.800.067/0000
Blanking cap IP65, ring nut, round, high version, can be used for covering mounted PCB contact blocks.	round	high	5.05.200.025/0000
Blanking cap IP65, ring nut, square, slate grey, flat	square	flush	5.05.800.068/0000
Blanking cap IP65, ring nut, square, high version, can be used for covering mounted PCB contact blocks.	square	high	5.05.200.026/0000

Fixing spanner



→ Fitting for	Order no.
M 8	5.58.002.027/7705
M 9, M 10	5.58.002.025/0105
M 11, M 13	5.58.002.026/0105
M 15, M 16	5.58.002.019/0105
M 18, M 19	5.58.002.017/0105
M 20, M 22	5.58.002.018/0105
M 25, M 30	5.58.002.020/0105

Fixing spanner for ring nut and front ring



→ Description	Fitting for	Order no.
Fixing spanner for ring nut	RAFIX 22 QR/FS	5.05.800.062/0000

Fixing spanner for hexagon nut



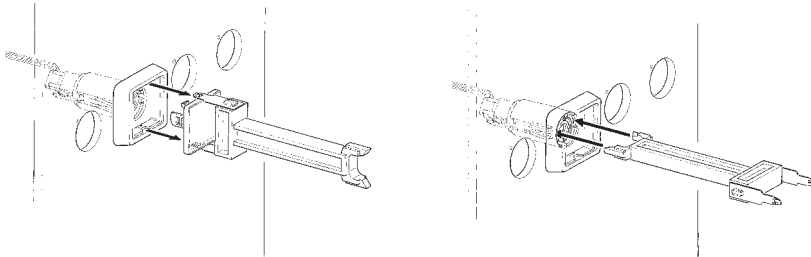
→ Fitting for	Order no.
RAFIX 16	5.58.002.034/0000

Lamp extractor



→ Lamp diameter	Order no.
4 mm	1.90.900.001/0000
4 mm	1.90.900.002/0000
5 mm	1.90.900.003/0000
5 - 6 mm	1.90.900.004/0000
7 mm	1.90.900.005/0000
10.4 mm	1.90.900.006/0000
11 mm	1.90.900.007/0000
14 mm	1.90.900.008/0000
16-17 mm	1.90.900.009/0000

Disassembly tool



→ Fitting for	Order no.
LUMOTAST FK	5.05.800.041/0000
LUMOTAST 25, RAFIX 16	5.05.800.042/0000

Female quick-connect terminal DIN 46340-B 2.8-1-MS



→ Description	Order no.
Female quick-connect terminal DIN 46340-B 2.8-1-MS	5.37.540.024/8622

With latching detent for mating with a multipole connector.

Plug distributor



→ Description	Order no.
Plug distributor	5.37.540.029/6000

For mounting on the quick-connect terminals of contact blocks. The double number of contacts facilitates loop-through.



LUMOTAST FK/25

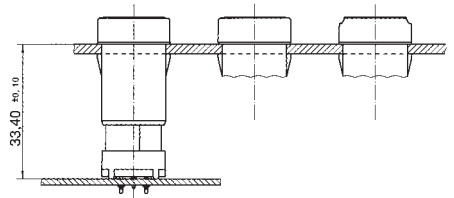
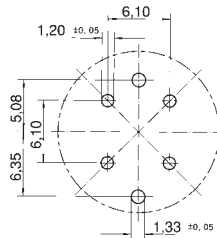
Flat ribbon cable, 4-wire, length 1 m

→ Description	Order no.
Flat ribbon cable, 4-wire, 1 m long	5.37.700.124/0000



LUMOTAST FK/25

Plug-in socket for PCB



with plug-in socket for PCB

→ Description	Order no.
Plug-in socket for PCB	5.00.645.036/0000



LUMOTAST FK/25

Socket connector, 4-pin

→ Description	Order no.
Socket connector, 4-pin	5.92.025.368/0000

LUMOTAST FK/25

Flat ribbon cable, 10 cm, with socket connector and AMP 4-pin male quick connector



→ Description	Order no.
Cable (flat ribbon cable 10 cm with socket connector and male quick connector, AMP 4-pin)	5.03.771.306/0000

LUMOTAST 75 IP40

Protective cap



→ Description	Order no.
LUMOTAST 75 IP40 - Protective cap for 18 x 24 collar	5.05.800.027/0000
LUMOTAST 75 IP40 - Protective cap for 18 x 18 collar	5.05.800.030/0000



LUMOTAST 75 IP40 Sealing cap for protection class IP 65



→ Description	Order no.
LUMOTAST 75 IP40 - Sealing cap for protection class IP65, for 18 x 24 collar	5.05.200.008/0000
LUMOTAST 75 IP40 - Sealing cap for protection class IP 65, for 18 x 18 collar	5.05.200.009/0000



Signal lamp Ø 22.3 mm Sealing ring for IP 65

→ Description	Order no.
Sealing ring for IP65	5.30.075.010/0100

O-ring



→ Description	Order no.
O-ring, black, for blocking the operating stroke	5.30.120.009/0100
O-ring for keylock switch	5.30.120.015/0100
O-ring, black, 17.0 x 1.5, for blocking RF 19H keys	5.30.125.003/0100
O-ring, black, 16.0 x 1, for blocking RF 19H keys	5.30.125.007/0100

Pushbuttons 16.2 mm Protection against contact



→ Description	Order no.
Protection against contact to VBG 4	5.55.101.715/0200

Signal lamps Protection against contact



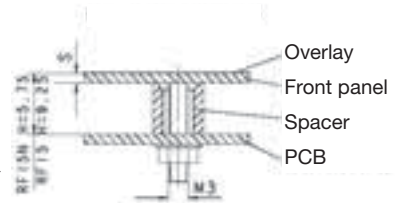
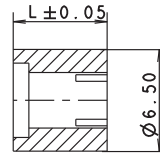
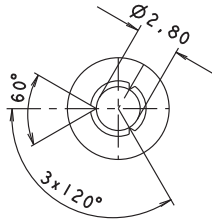
→ Description	Order no.
Protection against contact to VBG 4	5.50.240.063/0209
Protection against contact to VBG 5	5.50.240.065/0200

ACCESSORIES

SPACERS



Spacers, round



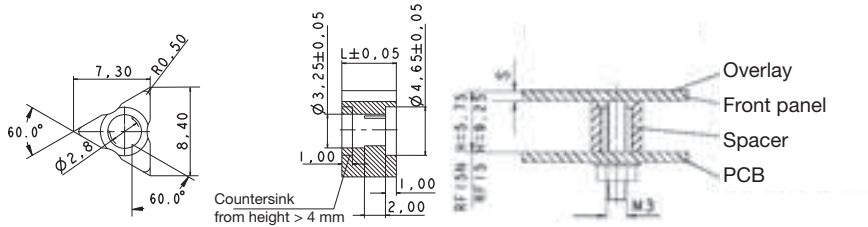
→ Length L	Color	Order no.
3.50 mm	blue transparent	5.30.759.023/0000
4.75 mm	blue transparent	5.30.759.028/0000
5.25 mm	yellow orange transparent	5.30.759.030/0000
4.50 mm	red	5.30.759.027/0000
5.50 mm	yellow	5.30.759.031/0000
4 mm	green	5.30.759.025/0000
5.75 mm	green	5.30.759.032/0000
6.2 mm	blue	5.30.759.251/0000
4.25 mm	blue	5.30.759.026/0000
6 mm	blue	5.30.759.033/0000
5 mm	black	5.30.759.029/0000
10.00 mm	black	5.30.759.043/0104
6.25 mm	red	5.30.759.034/0000
6.50 mm	blue transparent	5.30.759.035/0000
6.75 mm	black	5.30.759.036/0000
7 mm	yellow orange transparent	5.30.759.037/0000
7.25 mm	yellow	5.30.759.038/0000
7.50 mm	green	5.30.759.039/0000
7.75 mm	blue	5.30.759.040/0000
8 mm	red	5.30.759.041/0000
8.25 mm	blue transparent	5.30.759.042/0000

Required spacer length

For keyboards: Overall height of key - front panel thickness - 0.5 mm (area embossing).

For RAFIX 22 FS: 9.25 mm - front panel thickness - thickness of overlay, if existing

Spacers, triangular



triangular version

→ Length L	Order no.
2.50 mm	5.30.759.094/0000
2.75 mm	5.30.759.095/0000
3 mm	5.30.759.096/0000
3.25 mm	5.30.759.097/0000
3.50 mm	5.30.759.098/0000
3.75 mm	5.30.759.099/0000
4 mm	5.30.759.100/0000
4.25 mm	5.30.759.101/0000
4.50 mm	5.30.759.102/0000
4.75 mm	5.30.759.103/0000
5 mm	5.30.759.104/0000
5.25 mm	5.30.759.105/0000
5.50 mm	5.30.759.106/0000
5.75 mm	5.30.759.107/0000
6 mm	5.30.759.108/0000
6.2 mm	5.30.759.253/0000
10.00 mm	5.30.759.124/0000
10.25 mm	5.30.759.125/0000
6.25 mm	5.30.759.109/0000
6.50 mm	5.30.759.110/0000
6.75 mm	5.30.759.111/0000
7 mm	5.30.759.112/0000
7.25 mm	5.30.759.113/0000
7.50 mm	5.30.759.114/0000
7.75 mm	5.30.759.115/0000
8 mm	5.30.759.116/0000
8.25 mm	5.30.759.117/0000
9 mm	5.30.759.254/0000

ACCESSORIES

SPACERS

– Table (continued) – Spacers, triangular

Required spacer length = Overall height of key - front panel thickness - 0.5 mm (area embossing).



RK 90 Spacer M 4

→ Length L	Color	Order no.
12.5 mm overall height for RF 15 mm	-	5.30.764.040/0000
9.25 mm overall height, for RF 15 mm	-	5.30.764.027/0000
5.5 mm overall height, for RF15 N mm	-	5.30.764.010/0000
7.5 mm overall height for RACON 8/12 mm	-	5.30.764.018/0000
4.25 mm overall height, for RACON 8/12 mm	-	5.30.764.005/0000

Mounting from front (1 pc. per stud)