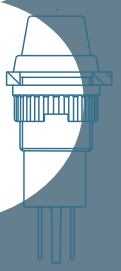
3



SIGNAL LAMPS

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SIGNAL LAMPS
GENERAL INFORMATION

Signal Lamps with integral lamps/LED
The soldered lamps/LED without base cannot be replaced.

Signal Lamps with lamp socket
An integral lamp socket allows replacement of lamps/LED of the appropriate type.

Filament operating life
Operating life specifications refer to AC voltage operation. If operated with DC voltage, these values are reduced by 40%.

Color and lenses
transparent = clear, grooved on inner surface for better light diffusion
opaque **= translucent** but not clear

Standard mounting dimensions
We recommend use of mounting hole diameters 16, 22 and 30 mm, as these comply with international standard recommendations and DIN standards.

Limit values
The voltage specified as the limit value is the standard insulating voltage for the signal lamps. The permitted ambient temperatures are always specified in conjunction with the maximum power of the lamps used, and the signal lamp should be located outside of the space subject to increased temperature.

Neon lamps
Neon lamps may glow on a short time after having been switched off, for example in combination with long wires. To avoid this, a parallel resistor with 1,2 MΩ 1/4 W, can be used.

Signal lamps

with integrated LED

Signal lamps with integral LED.
The mm specification in the product name indicates the appropriate mounting hole diameter of the signal lamps.
• All products are RoHS compliant.

SIGNAL LAMPS
SIGNAL LAMPS WITH INTEGRATED LED

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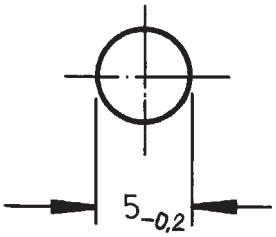
SIGNAL LAMPS WITH INTEGRATED LED 5 mm



Mounting hole

Technical Data

→ General information	
Form of lens	see order block
Color of lens	see order block
Diameter of collar	see order block
→ Dimensions	
Length of collar	see order block
Overall height	see order block
Mounting depth	see order block
Mounting hole	5 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	solder terminals
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Operating voltage U_B	see order block
Integrated currency resistor	see order block
Forward voltage U_F at 25 °C	at 10 mA forward current 2.2 V
Reverse voltage U_R at 25 °C	3 V
Forward current, I_F at 25 °C	see order block
Reverse current I_R at 25 °C	100 µA
Power dissipation P_{tot} at 25 °C	max. 120 mW
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	0.35 g
ROHS compliant	yes
REACH compliant	yes

Operating voltage U_B: DC voltage from 5 to 28 V

A suitable series resistor is installed in the unit; versions without series resistor must be fitted with an external one.

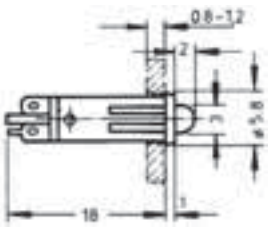
External resistor: $R_V = (U_B - U_F):I_F$

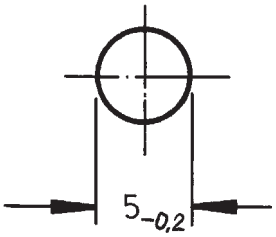
Recommended ratings of external resistors:

- for 5 - 7 V = 330 Ω 0.25 W
- for 12 - 16 V = 1.1 kΩ 0.25 W
- for 24 - 28 V = 2.4 kΩ 0.5 W

Signal lamp with integrated LED 5 mm, protruding LED

Technical data see page 3 - 5





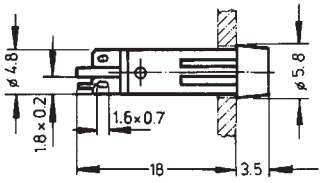
Mounting hole

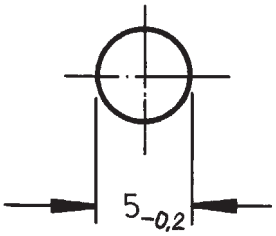
→ Color of lens	Lamp	Integrated currency resistor	Operating voltage U_B	Forward current, I_F at 25 °C	Order no.
transparent red	LED red	yes	24 - 28 V	8 - 12 mA	1.69.508.804/0000
transparent yellow	LED yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.816/0000
transparent green	LED green	yes	24 - 28 V	8 - 12 mA	1.69.508.810/0000

Long terminal is anode.

Signal lamp with integrated LED 5 mm, round protruding lens

Technical data see page 3 - 5





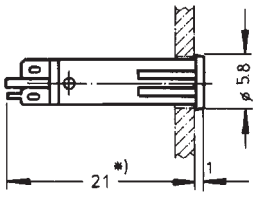
Mounting hole

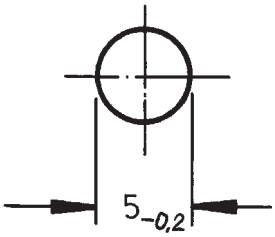
→ Color of lens	Lamp	Integrated currency resistor	Operating voltage U_B	Forward current, I_F at 25 °C	Order no.
transparent red	LED red	yes	24 - 28 V	8 - 12 mA	1.69.508.834/1301
transparent red	LED super bright red	yes	24 - 28 V	8 - 12 mA	1.69.508.835/1300
transparent yellow	LED yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.846/1402
transparent yellow	LED super bright yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.847/1400
transparent green	LED green	yes	24 - 28 V	8 - 12 mA	1.69.508.840/1503

Long terminal is anode.

Signal lamp with integrated LED 5 mm, round flush lens

Technical data see page 3 - 5





Mounting hole

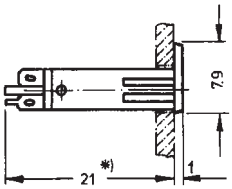
→	Color of lens	Lamp	Integrated currency resistor	Operating voltage U_B	Forward current, I_F at 25 °C	Order no.
	transparent red	LED red	yes	24 - 28 V	8 - 12 mA	1.69.508.864/1301
	transparent red	LED super bright red	yes	24 - 28 V	8 - 12 mA	1.69.508.865/1300
	transparent yellow	LED yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.876/1402
	transparent yellow	LED super bright yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.877/1400
	transparent green	LED green	yes	24 - 28 V	8 - 12 mA	1.69.508.870/1503

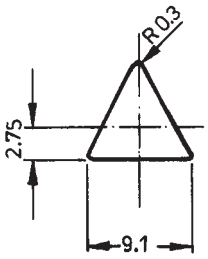
Long terminal is anode.

* Without series resistor, mounting depth = 18 mm

Signal lamp with integrated LED 5 mm, triangular flush lens

Technical data see page 3 - 5





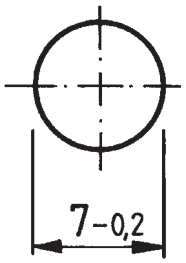
→	Color of lens	Lamp	Integrated currency resistor	Operating voltage U_B	Forward current, I_F at 25 °C	Order no.
	transparent red	LED red	yes	24 - 28 V	8 - 12 mA	1.69.508.934/1301
	transparent red	LED super bright red	yes	24 - 28 V	8 - 12 mA	1.69.508.935/1300
	transparent yellow	LED yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.946/1402
	transparent yellow	LED super bright yellow	yes	24 - 28 V	8 - 12 mA	1.69.508.947/1400
	transparent green	LED green	yes	24 - 28 V	8 - 12 mA	1.69.508.940/1503

– Table (continued) –
Signal lamps with integrated LED - 5 mm, triangular flush lens

Long terminal is anode.

* Without series resistor, mounting depth = 18 mm

SIGNAL LAMPS WITH INTEGRATED LED 7.0 mm



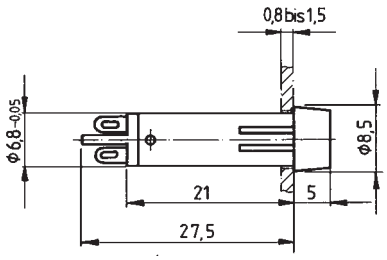
Mounting hole

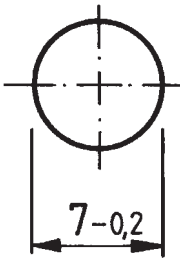
Technical Data

→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	8.5 mm
→ Dimensions	
Overall height	5 mm
Mounting depth	27.5 mm
Mounting hole	7.0 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	solder terminals
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Forward voltage U_F at 25 °C	at 20 mA forward current 2.4 V
Reverse current I_R at 25 °C	3 V
Forward current, I_F	max. 20 mA
Reverse current I_R at 25 °C	100 µA
Power dissipation P_{tot} at 25 °C	max. 120 mW
Light intensity	see order block
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
ROHS compliant	yes
REACH compliant	yes

Signal lamp with integrated LED 7.0 mm, round protruding lens

Technical data see page 3 - 9

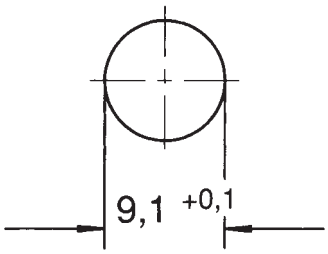




Mounting hole

→ Color of lens	Lamp	Operating voltage U_B	Forward current, I_F	Light intensity	Order no.
transparent red	LED red	24 - 28 V	max. 20 mA	200 mcd	1.69.511.102/1300
transparent yellow	LED yellow	24 - 28 V	max. 20 mA	200 mcd	1.69.511.103/1400
transparent green	LED green	24 - 28 V	max. 20 mA	1000 mcd	1.69.511.104/1500
transparent blue	LED blue	24 - 28 V	max. 20 mA	300 mcd	1.69.511.105/1600
transparent colorless	LED white	24 - 28 V	max. 20 mA	400 mcd	1.69.511.101/1000

SIGNAL LAMPS WITH INTEGRATED LED 9.1 mm



Mounting hole

Technical Data

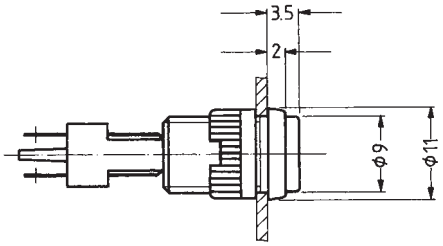
→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	11 mm
→ Dimensions	
Overall height	see order block
Mounting depth	30.5 mm
Mounting hole	9.1 mm
→ Mechanical design	
Mounting	ring nut
Terminals	solder terminals
Lamp socket	T 4.6
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	15 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	2 g
ROHS compliant	yes
REACH compliant	yes

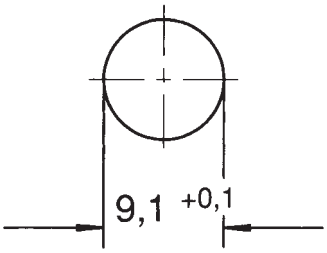
Accessories Signal lamps with integrated LED - 9.1 mm

→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 9, M 10		5.58.002.025/0105	5 - 25

Signal lamp with integrated LED 9.1 mm, round flat lens

Technical data see page 3 - 11





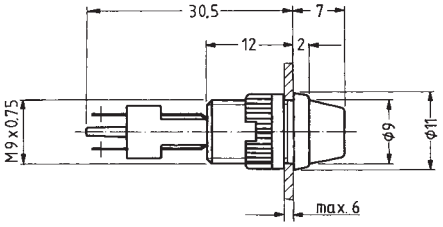
Mounting hole

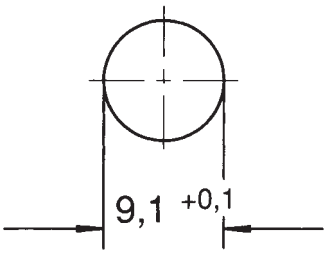
→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.02.157.201/1300
translucent yellow	LED	24 - 28 V	1.02.157.201/1400
translucent green	LED	24 - 28 V	1.02.157.201/1500
translucent white	LED	24 - 28 V	1.02.157.201/1000

With integrated series resistor. Other voltages on request.

Signal lamp with integrated LED 9.1 mm, round protruding lens

Technical data see page 3 - 11



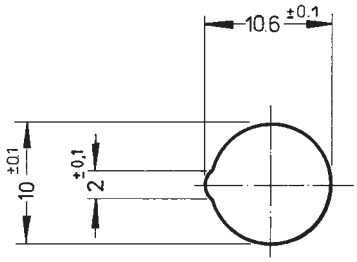


Mounting hole

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.02.157.211/1300
translucent yellow	LED	24 - 28 V	1.02.157.211/1400
translucent green	LED	24 - 28 V	1.02.157.211/1500
translucent white	LED	24 - 28 V	1.02.157.211/1000

With integrated series resistor. Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED LED 10 mm



Panel cut-out

Technical Data

→ General information	
Form of lens	see order block
Color of lens	see order block
Diameter of collar	12.5 mm
→ Dimensions	
Overall height	see order block
Mounting depth	30.5 mm
Mounting hole	10 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	quick connector 2.8 x 0.8 mm
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Operating voltage U_B	see order block
Integrated currency resistor	see order block
Forward voltage U_F at 25 °C	at 20 mA forward current 2.4 V
Reverse voltage U_R at 25 °C	3 V
Forward current, I_F	see order block
Reverse current I_R at 25 °C	100 µA
Power dissipation P_{tot} at 25 °C	max. 120 mW
Light intensity	see order block
Protecting diode	see order block
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	2.44 g
ROHS compliant	yes
REACH compliant	yes

Operating voltage U_B: DC voltage from 6 to 28 V

A suitable series resistor is installed in the unit; versions without series resistor must be fitted with an external one.
A version with an additional protective diode is available to protect the LED against any voltage peaks.

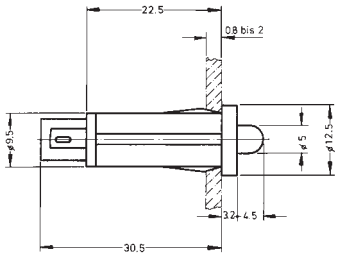
External resistor: $R_V = (U_B - U_F):I_F$

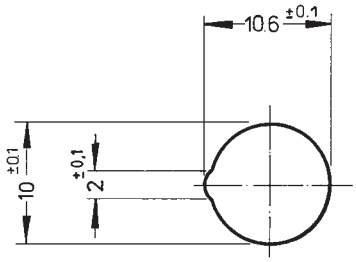
Recommended ratings of external resistors:

- for 6 - 7 V = 330 Ω 0.25 W
- for 12 - 16 V = 680 kΩ 0.5 W
- for 24 - 28 V = 1500 kΩ 1 W

Signal lamp with integrated LED 10 mm, protruding LED

Technical data see page 3 - 13



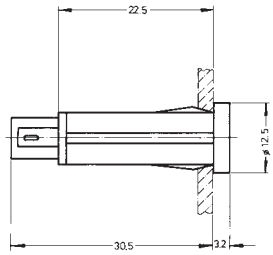


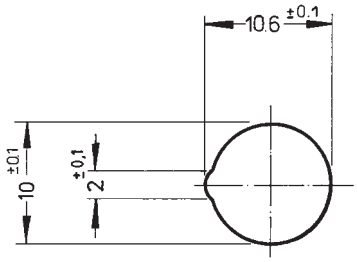
Panel cut-out

→	Color of lens	Operating voltage U_B	Integrated currency resistor	Protecting diode	Forward current, I_F	Light intensity	Order no.
	red	24 - 28 V	yes	yes	15 - 20 mA	200 mcd	1.69.525.054/0000
	red	24 - 28 V	yes	no	15 - 20 mA	200 mcd	1.69.525.004/0000
	red	according to series resistor 6 - 28 V	no	yes	max. 20 mA	1000 mcd	1.69.525.051/0000
	red	according to series resistor 6 - 28 V	no	no	max. 20 mA	200 mcd	1.69.525.001/0000
	yellow	24 - 28 V	yes	yes	13 - 18.5 mA	200 mcd	1.69.525.064/0000
	yellow	24 - 28 V	yes	no	13 - 18.5 mA	200 mcd	1.69.525.014/0000
	yellow	according to series resistor 6 - 28 V	no	yes	max. 20 mA	200 mcd	1.69.525.061/0000
	yellow	according to series resistor 6 - 28 V	no	no	max. 20 mA	200 mcd	1.69.525.011/0000
	green	24 - 28 V	yes	yes	13 - 18.5 mA	1000 mcd	1.69.525.059/0000
	green	24 - 28 V	yes	no	13 - 18.5 mA	1000 mcd	1.69.525.009/0000
	green	according to series resistor 6 - 28 V	no	yes	max. 20 mA	1000 mcd	1.69.525.056/0000
	green	according to series resistor 6 - 28 V	no	no	max. 20 mA	1000 mcd	1.69.525.006/0000

Signal lamp with integrated LED 10 mm, round flat lens

Technical data see page 3 - 13

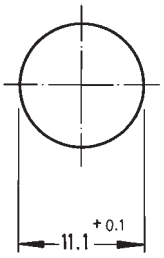




Panel cut-out

→ Color of lens	Operating voltage U_B	Integrated currency resistor	Protecting diode	Forward current, I_F	Light intensity	Order no.
red	24 - 28 V	yes	yes	15 - 20 mA	200 mcd	1.69.525.255/1300
red	24 - 28 V	yes	no	15 - 20 mA	200 mcd	1.69.525.205/1300
yellow	24 - 28 V	yes	yes	13 - 18.5 mA	200 mcd	1.69.525.265/1400
yellow	24 - 28 V	yes	no	13 - 18.5 mA	200 mcd	1.69.525.215/1400
green	24 - 28 V	yes	yes	13 - 18.5 mA	1000 mcd	1.69.525.260/1500
green	24 - 28 V	yes	no	13 - 18.5 mA	1000 mcd	1.69.525.210/1500
blue	24 - 28 V	yes	yes	-	300 mcd	1.69.525.266/1600
blue	24 - 28 V	yes	no	-	300 mcd	1.69.525.216/1600
white	24 - 28 V	yes	yes	-	400 mcd	1.69.525.271/1000
white	24 - 28 V	yes	no	-	400 mcd	1.69.525.221/1000

Other voltages on request.



Mounting hole

SIGNAL LAMPS WITH INTEGRATED LED 11.1 mm

Technical Data

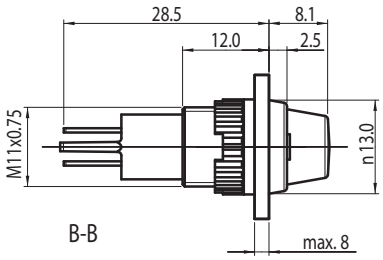
→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	13 mm
→ Dimensions	
Overall height	see order block
Mounting depth	30.5 mm
Mounting hole	11.1 mm
→ Mechanical design	
Mounting	ring nut
Terminals	solder terminals
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	14 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	3 g
ROHS compliant	yes
REACH compliant	yes

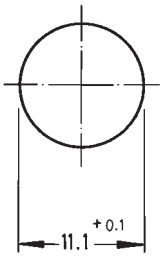
Accessories Signal lamps with integrated LED - 11.1 mm

→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 11, M 13		5.58.002.026/0105	5 - 25

Signal lamp with integrated LED 11.1 mm, round flat lens

Technical data see page 3 - 16

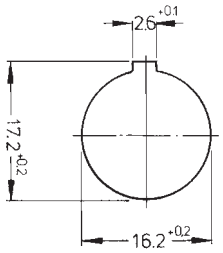




Mounting hole

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.66.003.081/1300
translucent yellow	LED	24 - 28 V	1.66.003.081/1400
translucent green	LED	24 - 28 V	1.66.003.081/1500
translucent blue	LED	24 - 28 V	1.66.003.081/1600
translucent white	LED	24 - 28 V	1.66.003.081/1000

With integrated series resistor. Other voltages on request.



Panel cut-out

SIGNAL LAMPS WITH INTEGRATED LED 16.2 mm, quick-connect terminal

Technical Data

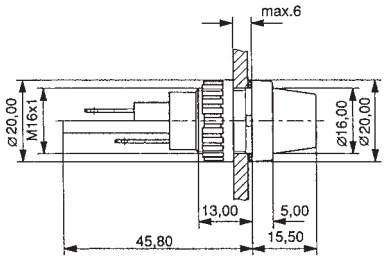
→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	20 mm
→ Dimensions	
Overall height	see order block
Mounting depth	45.8 mm
Mounting hole	16.2 mm
→ Mechanical design	
Mounting	ring nut
Terminals	quick connector for 6.3 x 0.8 mm or 2x 2.8 x 0.8 mm
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	20 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	12 g
ROHS compliant	yes
REACH compliant	yes

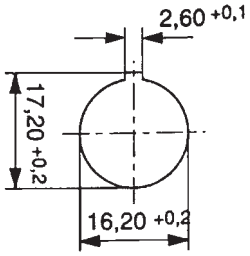
Accessories Signal lamps with integrated LED - 16.2 mm, quick-connect terminal

→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

Signal lamp with integrated LED 16.2 mm, lens round protruding

Technical data see page 3 - 18





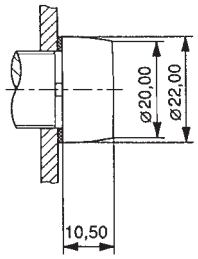
Panel cut-out

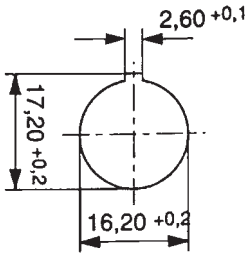
→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.63.004.011/1300
translucent yellow	LED	24 - 28 V	1.63.004.011/1400
translucent green	LED	24 - 28 V	1.63.004.011/1500
translucent blue	LED	24 - 28 V	1.63.004.011/1600
translucent white	LED	24 - 28 V	1.63.004.011/1000

With integrated series resistor. Other voltages on request.

Signal lamp with integrated LED 16.2 mm, lens round

Technical data see page 3 - 18





Panel cut-out

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.63.004.020/1300
translucent yellow	LED	24 - 28 V	1.63.004.020/1400
translucent green	LED	24 - 28 V	1.63.004.020/1500
translucent blue	LED	24 - 28 V	1.63.004.020/1600
translucent white	LED	24 - 28 V	1.63.004.020/1000

With integrated series resistor. Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED LED 16.2 mm, screw terminals

Technical Data

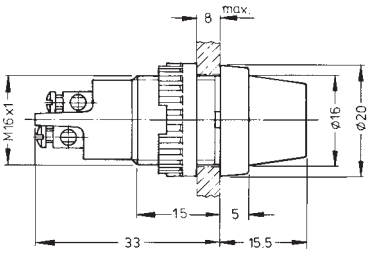
→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	20 mm
→ Dimensions	
Overall height	see order block
Mounting depth	see order block
Mounting hole	16.2 mm
→ Mechanical design	
Mounting	ring nut
Terminals	screw terminals
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	20 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	12 g
ROHS compliant	yes
REACH compliant	yes

Accessories Signal lamps with integrated LED - 16.2 mm, screw terminals

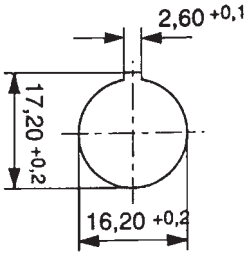
→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 15, M 16		5.58.002.019/0105	5 - 25

Signal lamp with integrated LED 16.2 mm, lens round protruding

Technical data see page 3 - 20



screw terminals



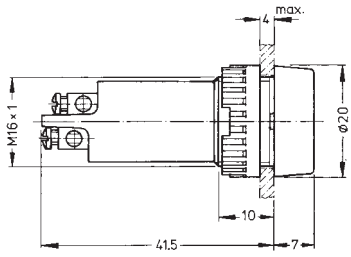
Panel cut-out

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.60.502.162/1300
translucent yellow	LED	24 - 28 V	1.60.502.162/1400
translucent green	LED	24 - 28 V	1.60.502.162/1500
translucent blue	LED	24 - 28 V	1.60.502.162/1600
translucent white	LED	24 - 28 V	1.60.502.162/1000

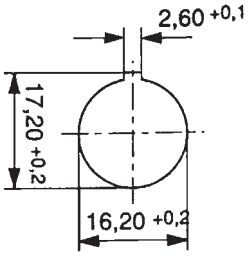
With integrated series resistor. Other voltages on request.

Signal lamp with integrated LED 16.2 mm, round lens

Technical data see page 3 - 20



screw terminals



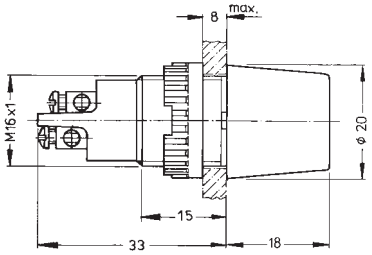
Panel cut-out

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.60.502.152/1300
translucent yellow	LED	24 - 28 V	1.60.502.152/1400
translucent green	LED	24 - 28 V	1.60.502.152/1500
translucent blue	LED	24 - 28 V	1.60.502.152/1600
translucent white	LED	24 - 28 V	1.60.502.152/1000

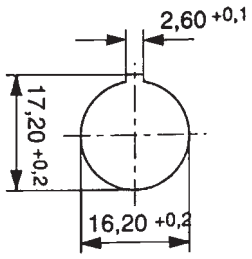
With integrated series resistor. Other voltages on request.

Signal lamp with integrated LED 16.2 mm, lens round high

Technical data see page 3 - 20



screw terminals



Panel cut-out

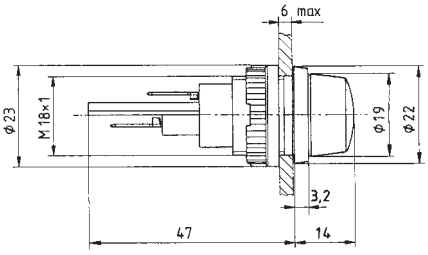
→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.60.502.151/1300
translucent yellow	LED	24 - 28 V	1.60.502.151/1400
translucent green	LED	24 - 28 V	1.60.502.151/1500
translucent blue	LED	24 - 28 V	1.60.502.151/1600
translucent white	LED	24 - 28 V	1.60.502.151/1000

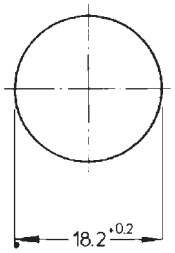
With integrated series resistor. Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED LED 18,2 mm

Technical Data

→ General information	
Form of lens	round protruding
Color of lens	see order block
Diameter of collar	22 mm
→ Dimensions	
Overall height	14 mm
Mounting depth	47 mm
Mounting hole	18.2 mm
→ Mechanical design	
Mounting	ring nut
Terminals	solder terminals
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	20 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	15 g
ROHS compliant	yes
REACH compliant	yes





Mounting hole

Approvals

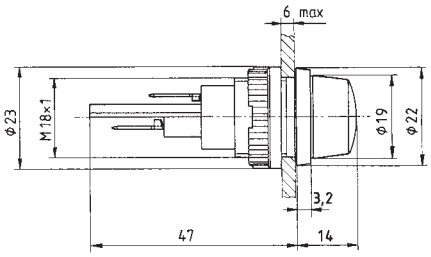
VDE 0710, T120°

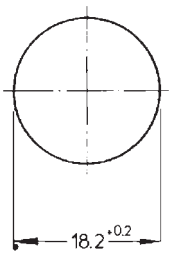
Accessories Signal lamps with integrated LED - 18,2 mm

→ Description	Photo	Order no.	Additional accessories see page
Protective sleeve for terminals made of Buna N (NBR)		5.52.011.027/0100	-

Signal lamp with integrated LED 18,2 mm, lens round protruding, ring chrome

Technical data see page 3 - 23





Mounting hole

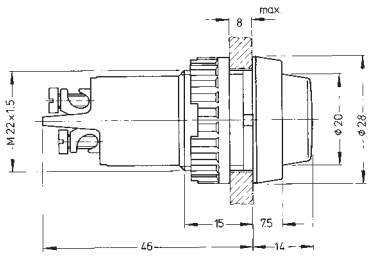
→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.63.018.011/1300
translucent yellow	LED	24 - 28 V	1.63.018.011/1400
translucent green	LED	24 - 28 V	1.63.018.011/1500
translucent blue	LED	24 - 28 V	1.63.018.011/1600
translucent white	LED	24 - 28 V	1.63.018.011/1000

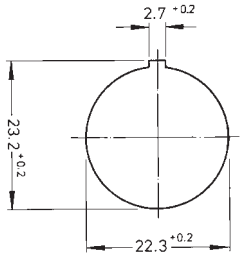
With integrated series resistor. Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED LED 22,3 mm

Technical Data

→ General information	
Form of lens	round
Color of lens	see order block
Diameter of collar	28 mm
→ Dimensions	
Overall height	14 mm
Mounting depth	46 mm
Mounting hole	22.3 mm
→ Mechanical design	
Mounting	ring nut
Terminals	screw terminals brass nickel-plated
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	24 - 28 V
Input current I_{CC} type.	16 mA
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	24 g
ROHS compliant	yes
REACH compliant	yes





Panel cut-out

Approvals

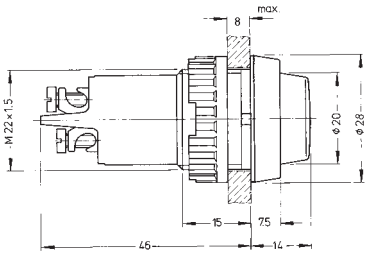
VDE 85°

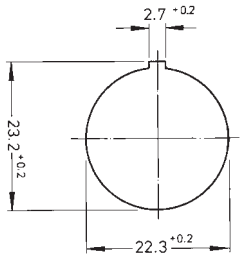
Accessories Signal lamps with integrated LED - 22,3 mm

→ Description	Photo	Order no.	Additional accessories see page
Sealing ring for IP65		5.30.075.010/0100	5 - 30
Protection against contact to VBG 4		5.50.240.063/0209	5 - 31
Protective sleeve for terminals made of Buna N (NBR)		5.52.011.029/0100	-
Fixing spanner M 20, M 22, for ring nut		5.58.002.018/0105	5 - 25

Signal lamp with integrated LED 22.3 mm, lens round

Technical data see page 3 - 25





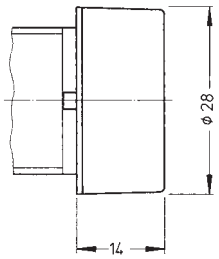
Panel cut-out

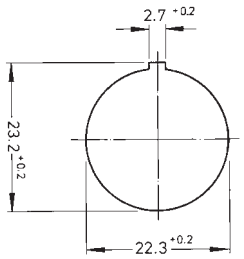
→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.61.012.015/1300
translucent yellow	LED	24 - 28 V	1.61.012.015/1400
translucent green	LED	24 - 28 V	1.61.012.015/1500
translucent white	LED	24 - 28 V	1.61.012.015/1000

With integrated series resistor. Other voltages on request.

Signal lamp with integrated LED 22.3 mm, lens round flat

Technical data see page 3 - 25



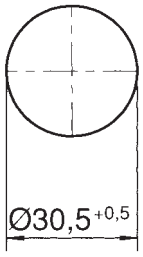


Panel cut-out

→ Color of lens	Lamp	Operating voltage U_B	Order no.
translucent red	LED	24 - 28 V	1.61.012.062/1300
translucent yellow	LED	24 - 28 V	1.61.012.062/1400
translucent green	LED	24 - 28 V	1.61.012.062/1500
translucent white	LED	24 - 28 V	1.61.012.062/1000

With integrated series resistor. Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED LED 30.5 mm



Mounting hole

Technical Data

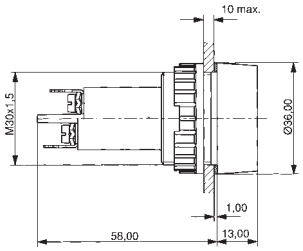
→ General information	
Form of lens	round
Color of lens	see order block
Diameter of collar	36 mm
→ Dimensions	
Overall height	see order block
Mounting depth	58 mm
Mounting hole	$30,5^{+0.5}$ mm
→ Mechanical design	
Mounting	ring nut
Terminals	quick connector for 2 x 2.8 x 0.8 mm
Lamp socket	-
Lamp	LED
→ Electrical characteristics	
Operating voltage U_B	see order block
Input current I_{CC} type.	see order block
→ Other specifications	
Degree of protection from front side	see order block
Weight	38 g
ROHS compliant	yes
REACH compliant	yes

Accessories Signal lamps with integrated LED - 30.5 mm

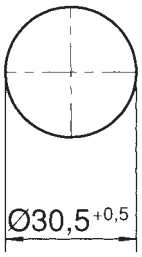
→ Description	Photo	Order no.	Additional accessories see page
Fixing spanner M 25, M 30		5.58.002.020/0105	5 - 25

Signal lamp with integrated LED 30.5 mm, lens round

Technical data see page 3 - 27



with lens round



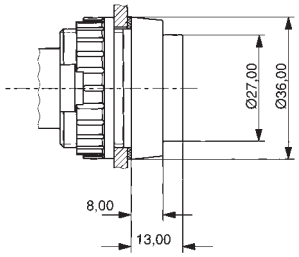
Mounting hole

→ Color of lens	Operating voltage U_B	Input current I_{CC} type.	Order no.
translucent red	24-28 V	16 mA	1.63.521.002/1300
translucent red	130 V	6 mA	1.63.521.003/1300
translucent red	230 V	5 mA	1.63.521.024/1300
translucent yellow	24-28 V	16 mA	1.63.521.002/1400
translucent yellow	130 V	6 mA	1.63.521.003/1400
translucent yellow	230 V	5 mA	1.63.521.024/1400
translucent green	24-28 V	16 mA	1.63.521.002/1500
translucent green	130 V	6 mA	1.63.521.003/1500
translucent green	230 V	5 mA	1.63.521.024/1500
translucent white	24-28 V	16 mA	1.63.521.002/1000
translucent white	130 V	6 mA	1.63.521.003/1000
translucent white	230 V	5 mA	1.63.521.024/1000

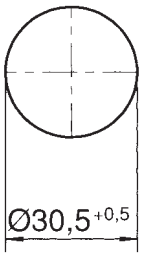
With integrated series resistor.

Signal lamp with integrated LED 30.5 mm, lens round flat

Technical data see page 3 - 27



lens round flat



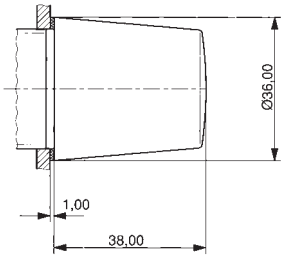
Mounting hole

→ Color of lens	Operating voltage U_B	Input current I_{CC} type.	Order no.
translucent red	24-28 V	16 mA	1.63.521.005/1300
translucent red	130 V	6 mA	1.63.521.006/1300
translucent red	230 V	5 mA	1.63.521.007/1300
translucent yellow	24-28 V	16 mA	1.63.521.005/1400
translucent yellow	130 V	6 mA	1.63.521.006/1400
translucent yellow	230 V	5 mA	1.63.521.007/1400
translucent green	24-28 V	16 mA	1.63.521.005/1500
translucent green	130 V	6 mA	1.63.521.006/1500
translucent green	230 V	5 mA	1.63.521.007/1500
translucent white	24-28 V	16 mA	1.63.521.005/1000
translucent white	130 V	6 mA	1.63.521.006/1000
translucent white	230 V	5 mA	1.63.521.007/1000

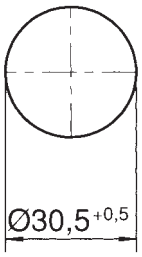
With integrated series resistor.

Signal lamp with integrated LED 30.5 mm, lens round high

Technical data see page 3 - 27



lens round high



Mounting hole

→ Color of lens	Operating voltage U_B	Input current I_{CC} type.	Order no.
translucent red	24-28 V	16 mA	1.63.521.012/1300
translucent red	130 V	6 mA	1.63.521.013/1300
translucent red	230 V	5 mA	1.63.521.014/1300
translucent yellow	24-28 V	16 mA	1.63.521.012/1400
translucent yellow	130 V	6 mA	1.63.521.013/1400
translucent yellow	230 V	5 mA	1.63.521.014/1400
translucent green	24-28 V	16 mA	1.63.521.012/1500
translucent green	130 V	6 mA	1.63.521.013/1500
translucent green	230 V	5 mA	1.63.521.014/1500
translucent white	24-28 V	16 mA	1.63.521.012/1000
translucent white	130 V	6 mA	1.63.521.013/1000
translucent white	230 V	5 mA	1.63.521.014/1000

With integrated series resistor.

Signal lamps

with integrated lamp

Signal lamps with integral neon lamp or neon glow lamp.
The mm specification in the product name indicates the appropriate mounting hole diameter of the signal lamps.
• All products are RoHS compliant.

SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LAMP

Content

Signal lamps with integrated neon lamp 7 mm **3 - 33**
Signal lamp with integrated filament/neon lamp 7 mm, solder terminals 3 - 33

Signal lamps with integrated neon lamp 10 mm **3 - 35**
Signal lamp with integrated neon lamp 10 mm, round lens 3 - 35

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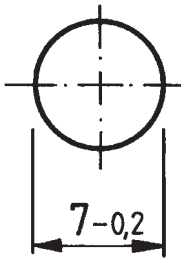
Signal lamp with integrated neon lamp 10 mm, round lens 3 - 38
Signal lamp with integrated neon lamp 10 mm, square lens 3 - 38
Signal lamp with integrated neon lamp 10 mm, lens in arrow shape 3 - 39

Signal lamps with integrated neon lamp 14 mm **3 - 40**
Signal lamp with integrated neon lamp 14 mm, round lens, 230 V 3 - 40

SIGNAL LAMPS WITH INTEGRATED NEON LAMP 7 mm

Technical Data

→	**General information**	
	Form of lens	round
	Color of lens	see order block
	Diameter of collar	8.5
→	**Dimensions**	
	Overall height	5 mm
	Mounting depth	see order block
	Mounting hole	7 mm
→	**Mechanical design**	
	Mounting	pressing into hole
	Terminals	see order block
	Lamp socket	no
	Lamp	see order block
→	**Electrical characteristics**	
	Voltage limit max.	see order block
→	**Other specifications**	
	Operating life	see order block
	Degree of protection from front side	IP40 (DIN EN 60529)
	Weight	0.87 g
	ROHS compliant	yes
	REACH compliant	yes



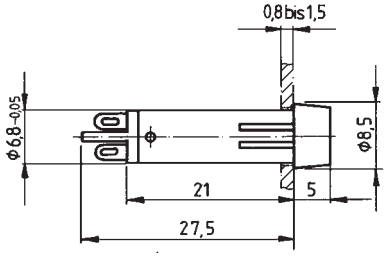
Mounting hole

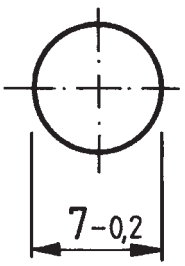
Approvals

VDE T85° (only version with neon lamp)

Signal lamp with integrated filament/neon lamp 7 mm, solder terminals

Technical data see page 3 - 33





Mounting hole

– Table (continued) –
Signal lamps with integrated filament/neon lamp - 7 mm, solder terminals

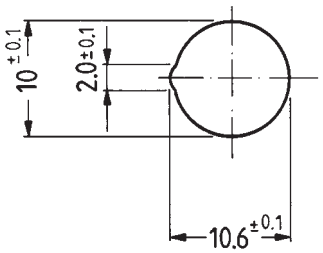
→	Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
	transparent red	neon lamp	230 V	solder terminals	1.69.511.059/1301
	transparent yellow	neon lamp	230 V	solder terminals	1.69.511.059/1402
	transparent colorless	neon lamp	230 V	solder terminals	1.69.511.059/1002

Other voltages on request.

SIGNAL LAMPS WITH INTEGRATED NEON LAMP 10 mm

Technical Data

→ General information	
Form of lens	see order block
Color of lens	see order block
Diameter of collar	see order block
→ Dimensions	
Length of collar	see order block
Width of collar	see order block
Overall height	1.2 mm
Mounting depth	32 mm
Mounting hole	10 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	quick connector 2.8 x 0.8 mm
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Voltage limit max.	see order block
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	2.5 g
ROHS compliant	yes
REACH compliant	yes



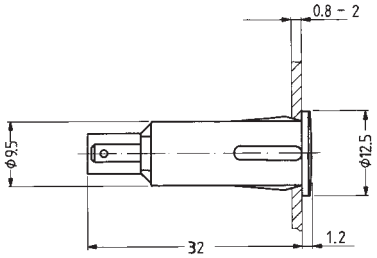
Panel cut-out

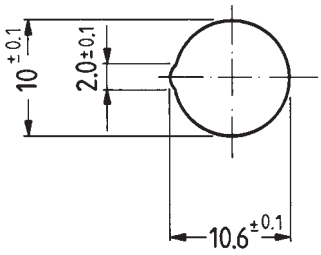
Approvals

VDE T85° (only version with neon lamp)

Signal lamp with integrated neon lamp 10 mm, round lens

Technical data see page 3 - 35





Panel cut-out

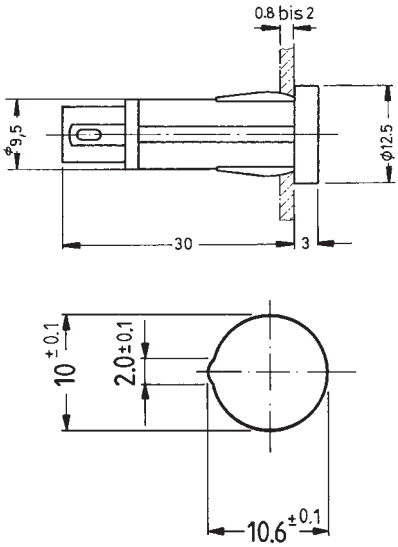
– Table (continued) –
Signal lamps with integrated neon lamp - 10 mm, round lens

→	Color of lens	Lamp	Voltage limit max.	Order no.
	transparent red	neon lamp	230 V	1.69.527.104/1301
	transparent yellow	neon lamp	230 V	1.69.527.104/1402
	transparent colorless	neon lamp	230 V	1.69.527.104/1002

SIGNAL LAMPS WITH INTEGRATED NEON LAMP 10 mm

Technical Data

→ General information	
Form of lens	see order block
Color of lens	see order block
Diameter of collar	see order block
→ Dimensions	
Length of collar	see order block
Width of collar	see order block
Overall height	3 mm
Mounting depth	30 mm
Mounting hole	10 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	see order block
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Voltage limit max.	see order block
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	2.5 g
ROHS compliant	yes
REACH compliant	yes



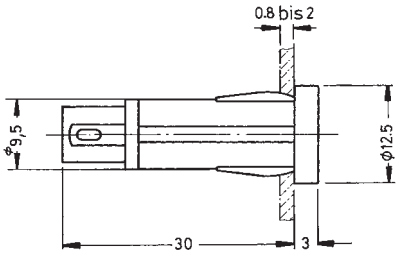
Panel cut-out

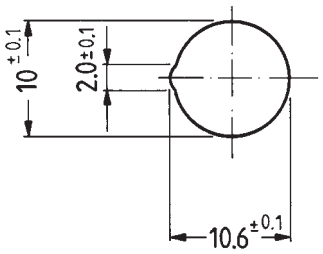
Approvals

VDE 0710 (T85° for filament and T120° for neon lamp versions)

Signal lamp with integrated neon lamp 10 mm, round lens

Technical data see page 3 - 37





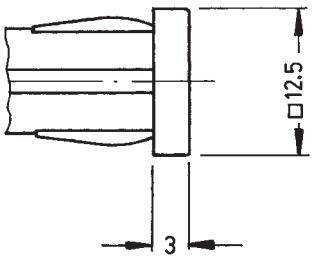
Panel cut-out

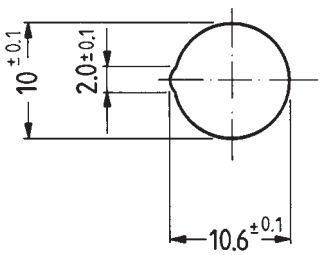
→ Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
transparent red	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.117/1301
transparent yellow	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.117/1402
transparent green	neon glow lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.118/1502
transparent colorless	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.117/1002

Other voltages and versions with connection cable on request.

Signal lamp with integrated neon lamp 10 mm, square lens

Technical data see page 3 - 37





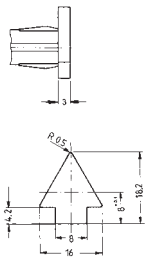
Panel cut-out

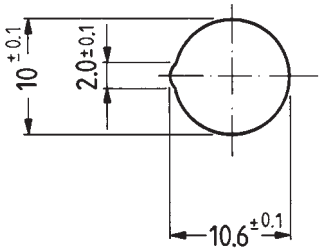
→ Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
transparent red	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.137/1301
transparent yellow	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.137/1402
transparent green	neon glow lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.138/1502
transparent colorless	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.137/1002

Other voltages and versions with connection cable on request.

Signal lamp with integrated neon lamp 10 mm, lens in arrow shape

Technical data see page 3 - 37

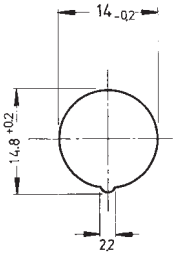




Panel cut-out

→ Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
transparent red	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.157/1301
transparent yellow	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.157/1402
transparent green	neon glow lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.158/1502
transparent colorless	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.157/1002

Other voltages and versions with connection cable on request.



Panel cut-out

Approvals

VDE T85° (only version with neon lamp)

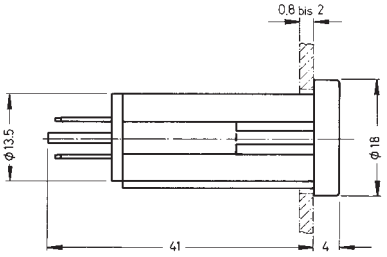
SIGNAL LAMPS WITH INTEGRATED NEON LAMP 14 mm

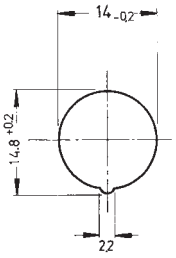
Technical Data

→ General information	
Form of lens	see order block
Color of lens	see order block
→ Dimensions	
Dimensions of collar	see order block
Overall height	4 mm
Mounting depth	see order block
Mounting hole	14 mm
→ Mechanical design	
Mounting	pressing into hole
Terminals	see order block
Lamp socket	no
Lamp	see order block
→ Electrical characteristics	
Voltage limit max.	see order block
→ Other specifications	
Degree of protection from front side	IP40 (DIN EN 60529)
Weight	5 g
ROHS compliant	yes
REACH compliant	yes

Signal lamp with integrated neon lamp 14 mm, round lens, 230 V

Technical data see page 3 - 40





Panel cut-out

– Table (continued) –
Signal lamps with integrated neon lamp - 14 mm, round lens, 230 V

→	Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
	transparent red	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.02.614.502/1301
	transparent yellow	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.02.614.502/1402
	transparent green	neon glow lamp	230 V	quick connector 2.8 x 0.8 mm	1.02.614.503/1502
	transparent colorless	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.02.614.502/1002