



## SIGNAL LAMPS

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# SIGNAL LAMPS

## GENERAL INFORMATION

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### 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.

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### 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 M $\Omega$  1/4 W, can be used.

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## Signal lamps

with integrated LED

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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.

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# SIGNAL LAMPS

## SIGNAL LAMPS WITH INTEGRATED LED

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3

integr.  
LED

# SIGNAL LAMPS WITH INTEGRATED LED 5 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
Overall height	see order block
Mounting depth	see order block
Mounting hole	5 mm

### → Mechanical design

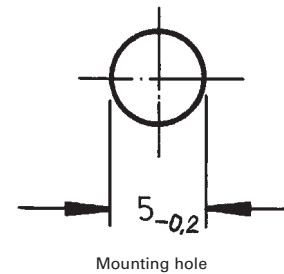
Mounting	pressing into hole
Terminals	solder terminals
Lamp socket	no
Lamp	see order block

### → Electrical characteristics

Operating voltage $U_B$	see order block
Integrated current 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 $\mu$ A
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  $\Omega$  0.25 W
- for 12 - 16 V = 1.1 k $\Omega$  0.25 W
- for 24 - 28 V = 2.4 k $\Omega$  0.5 W

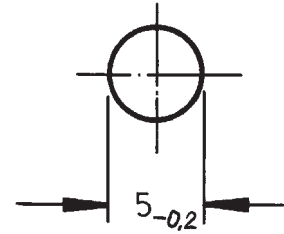
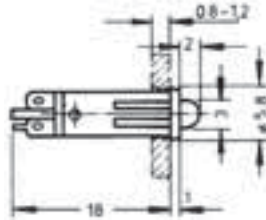
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 5 MM, SOLDER TERMINALS



## 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

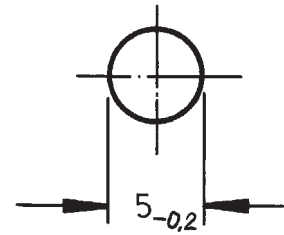
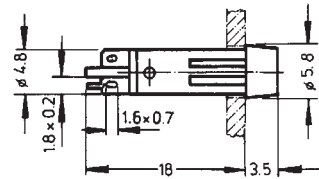
3

Long terminal is anode.



## Signal lamp with integrated LED 5 mm, round protruding lens

Technical data see page 3 - 5



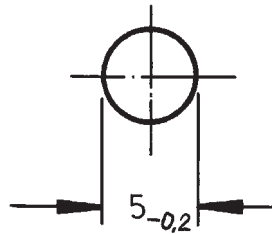
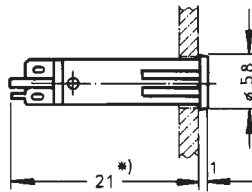
Mounting hole

→ 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



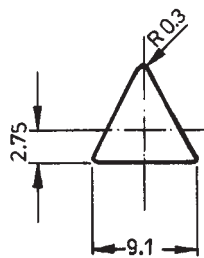
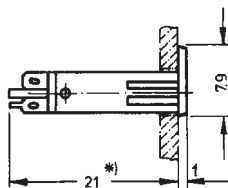
→ Color of lens	Lamp	Integrated currency resistor	Operating voltage $U_B$	Forward current, $I_F$ at 25 °C	Order no.
transparent red	LED red	yes	24 - 28 V	8 - 12 mA	1.69.508.864/1301
transparent red	LED super bright red	yes	24 - 28 V	8 - 12 mA	1.69.508.865/1300
transparent yellow	LED yellow	yes	24 - 28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

# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 5 MM, SOLDER TERMINALS

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– Table (continued) –

**Signal lamps with integrated LED - 5 mm, triangular flush lens**

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Long terminal is anode.

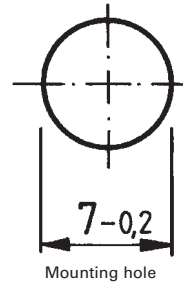
\* Without series resistor, mounting depth = 18 mm

3

integr.  
LED



# SIGNAL LAMPS WITH INTEGRATED LED 7.0 mm



## 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 $\mu$ A
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

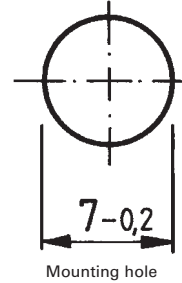
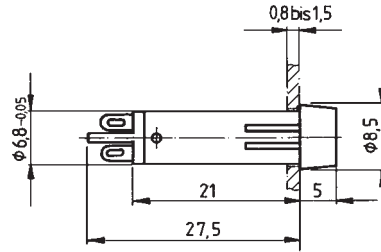
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 7 MM, SOLDER TERMINALS



## 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

3

integr.  
LED

# SIGNAL LAMPS WITH INTEGRATED LED 9.1 mm



## 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

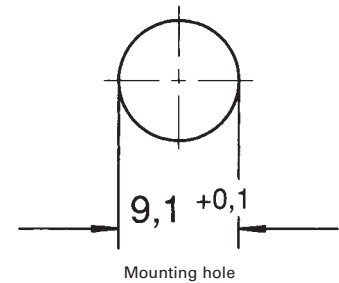
Mounting	ring nut
Terminals	solder terminals
Lamp socket	T 4.6
Lamp	LED

### → 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



3

integr.  
LED

## 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

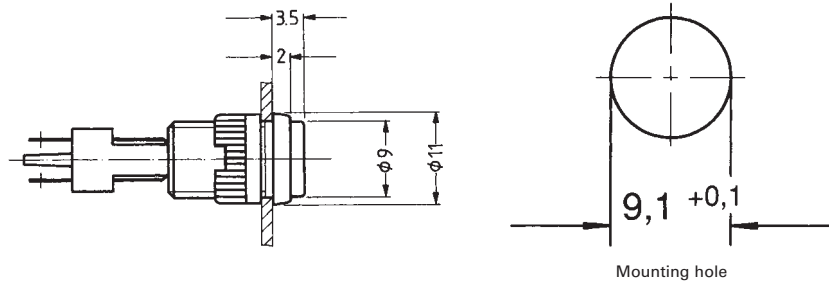
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 9.1 MM, SOLDER TERMINALS



## Signal lamp with integrated LED 9.1 mm, round flat lens

Technical data see page 3 - 11



→ 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

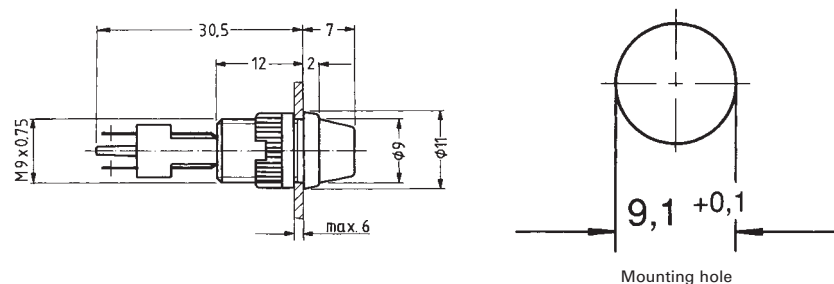
3

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



→ 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.

integr.  
LED

# SIGNAL LAMPS WITH INTEGRATED LED 10 mm



## 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

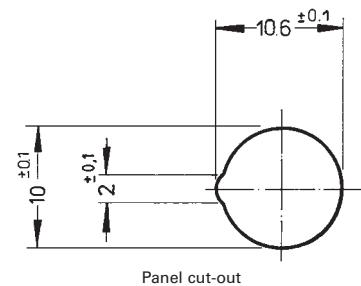
Mounting	pressing into hole
Terminals	quick connector 2.8 x 0.8 mm
Lamp socket	no
Lamp	see order block

### → Electrical characteristics

Operating voltage $U_B$	see order block
Integrated currenty 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 $\mu$ A
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



3

integr.  
LED

**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  $\Omega$  0.25 W
- for 12 - 16 V = 680 k $\Omega$  0.5 W
- for 24 - 28 V = 1500 k $\Omega$  1 W

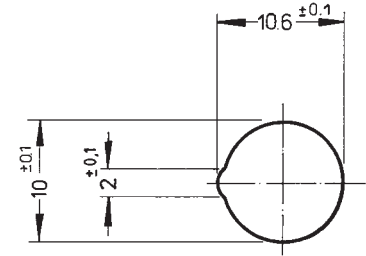
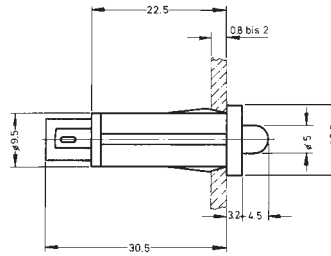
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 10 MM, QUICK-CONNECT TERMINAL



## Signal lamp with integrated LED 10 mm, protruding LED

Technical data see page 3 - 13



Panel cut-out

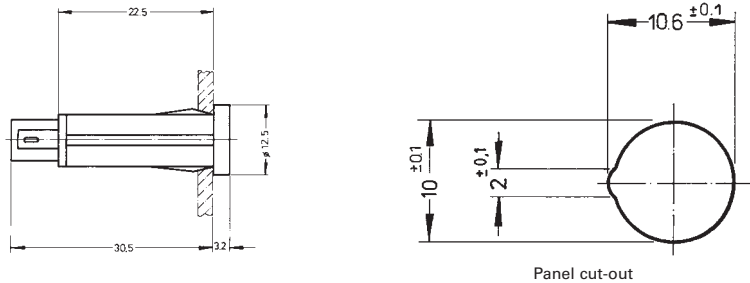
→ Color of lens	Operating voltage $U_B$	Integrated currency resistor	Protecting diode	Forward current, $I_F$	Light intensity	Order no.
red	24 - 28 V	yes	yes	15 - 20 mA	200 mcd	1.69.525.054/0000
red	24 - 28 V	yes	no	15 - 20 mA	200 mcd	1.69.525.004/0000
red	according to series resistor 6 - 28 V	no	yes	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

3

integr.  
LED

## Signal lamp with integrated LED 10 mm, round flat lens

Technical data see page 3 - 13

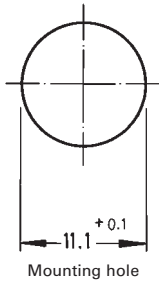


→ Color of lens	Operating voltage $U_B$	Integrated currency resistor	Protecting diode	Forward current, $I_F$	Light intensity	Order no.
red	24 - 28 V	yes	yes	15 - 20 mA	200 mcd	1.69.525.255/1300
red	24 - 28 V	yes	no	15 - 20 mA	200 mcd	1.69.525.205/1300
yellow	24 - 28 V	yes	yes	13 - 18.5 mA	200 mcd	1.69.525.265/1400
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.

# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 11.1 MM, SOLDER TERMINALS



# 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

3

integr.  
LED

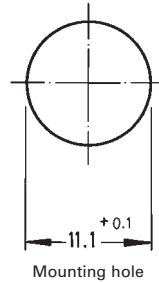
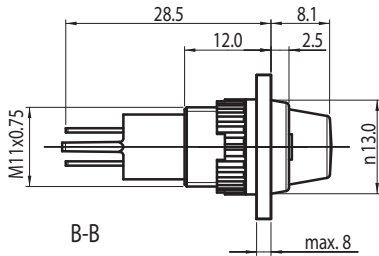
## Accessories Signal lamps with integrated LED - 11.1 mm

→ 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



→ 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

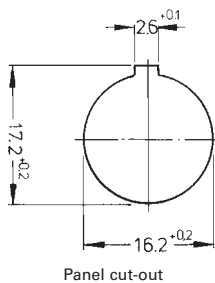
With integrated series resistor. Other voltages on request.

# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 16.2 MM, QUICK-CONNECT TERMINAL



## 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

3

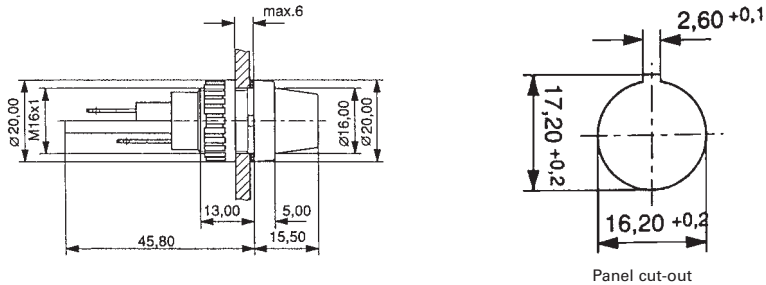
integr.  
LED

### 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

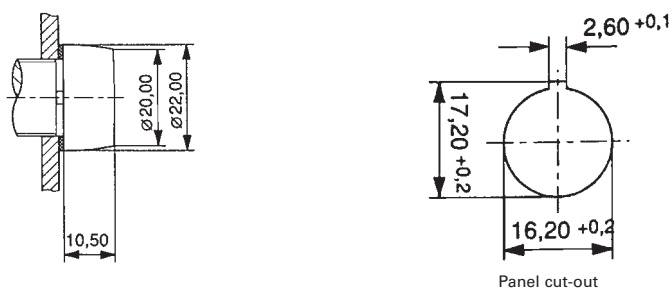


→ Color of lens	Lamp	Operating voltage $U_B$	Order no.
translucent red	LED	24 - 28 V	1.63.004.011/1300
translucent yellow	LED	24 - 28 V	1.63.004.011/1400
translucent green	LED	24 - 28 V	1.63.004.011/1500
translucent blue	LED	24 - 28 V	1.63.004.011/1600
translucent white	LED	24 - 28 V	1.63.004.011/1000

With integrated series resistor. Other voltages on request.

## Signal lamp with integrated LED 16.2 mm, lens round

Technical data see page 3 - 18



→ 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

SIGNAL LAMPS WITH INTEGRATED LED - 16.2 MM, SCREW TERMINALS



## 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

3

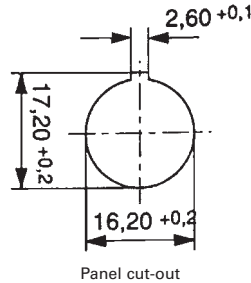
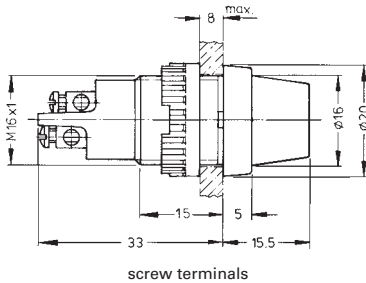
integr.  
LED

### 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

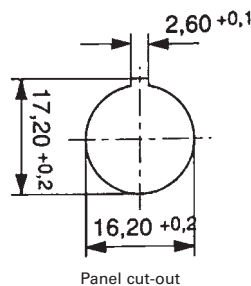
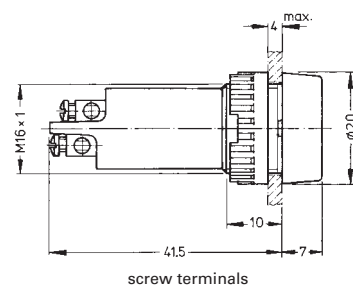


→ Color of lens	Lamp	Operating voltage $U_B$	Order no.
translucent red	LED	24 - 28 V	1.60.502.162/1300
translucent yellow	LED	24 - 28 V	1.60.502.162/1400
translucent green	LED	24 - 28 V	1.60.502.162/1500
translucent blue	LED	24 - 28 V	1.60.502.162/1600
translucent white	LED	24 - 28 V	1.60.502.162/1000

With integrated series resistor. Other voltages on request.

## Signal lamp with integrated LED 16.2 mm, round lens

Technical data see page 3 - 20



→ 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.

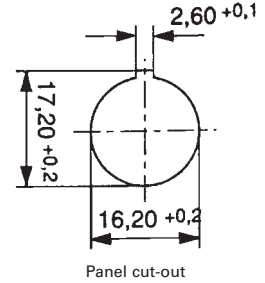
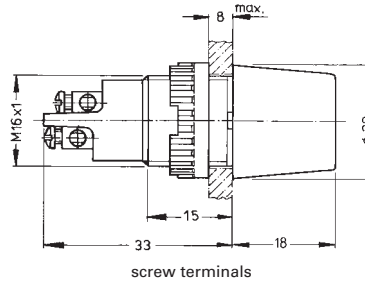
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 16.2 MM, SCREW TERMINALS



## Signal lamp with integrated LED 16.2 mm, lens round high

Technical data see page 3 - 20



→ 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.

3

integr.  
LED

# 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

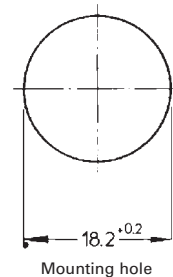
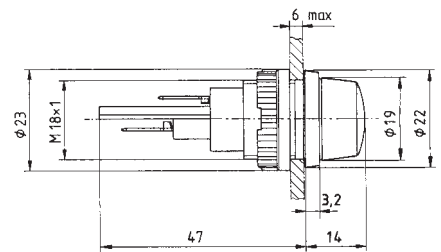
Mounting	ring nut
Terminals	solder terminals
Lamp socket	-
Lamp	LED

### → 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



3

integr.  
LED

## Approvals



VDE 0710, T120°

## Accessories Signal lamps with integrated LED - 18,2 mm

### → Description

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

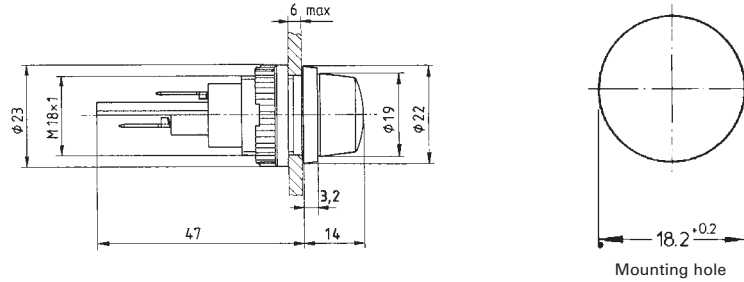
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 18,2 MM, QUICK-CONNECT TERMINAL



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

Technical data see page 3 - 23



→ 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.

3

integr.  
LED



# 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

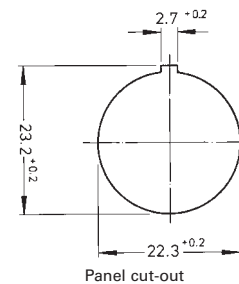
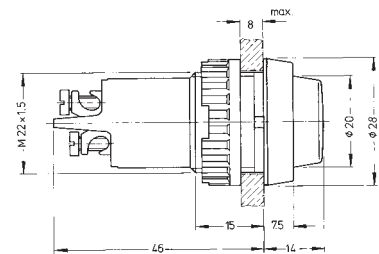
Mounting	ring nut
Terminals	screw terminals brass nickel-plated
Lamp socket	-
Lamp	LED

### → 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



3

integr.  
LED

## 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

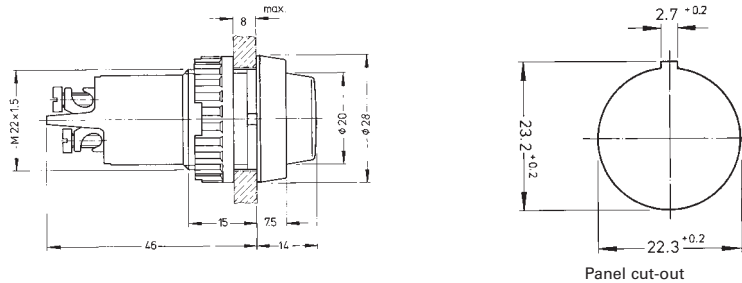
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 22.3 MM, SCREW TERMINALS



## 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

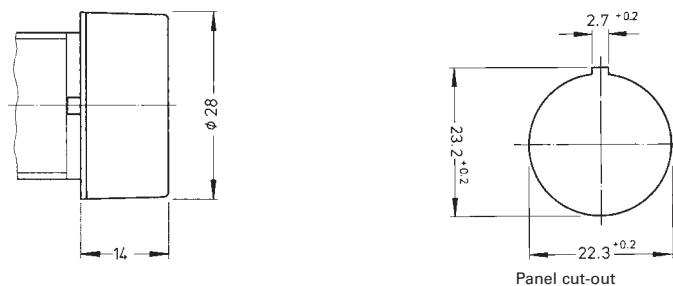
3

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.

integr.  
LED

# SIGNAL LAMPS WITH INTEGRATED LED 30.5 mm



## 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 <sup>+0,5</sup> 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

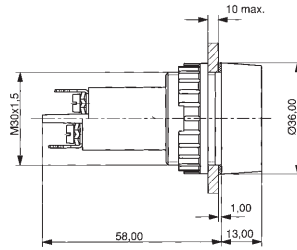
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 30.5 MM, QUICK CONNECTOR

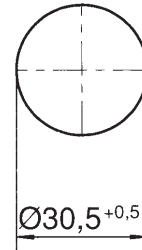


## Signal lamp with integrated LED 30.5 mm, lens round

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	110 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	110 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	110 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	110 V	6 mA	1.63.521.003/1000
translucent white	230 V	5 mA	1.63.521.024/1000

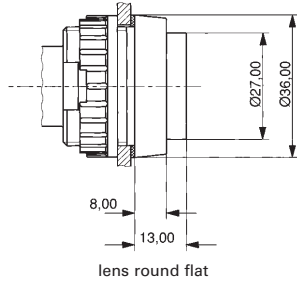
With integrated series resistor.

3

integr.  
LED

## Signal lamp with integrated LED 30.5 mm, lens round flat

Technical data see page 3 - 27



→ 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	110 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	110 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	110 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	110 V	6 mA	1.63.521.006/1000
translucent white	230 V	5 mA	1.63.521.007/1000

With integrated series resistor.

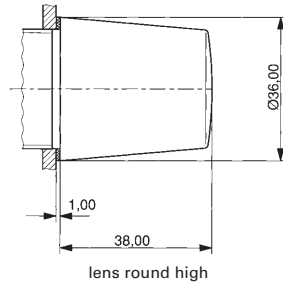
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED LED - 30.5 MM, QUICK CONNECTOR



## Signal lamp with integrated LED 30.5 mm, lens round high

Technical data see page 3 - 27



→ 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	110 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	110 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	110 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	110 V	6 mA	1.63.521.013/1000
translucent white	230 V	5 mA	1.63.521.014/1000

With integrated series resistor.

3

integr.  
LED



## Signal lamps

with integrated lamp

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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.

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# SIGNAL LAMPS

## SIGNAL LAMPS WITH INTEGRATED LAMP

---

### Content

<b>Signal lamps with integrated neon lamp 7 mm</b>	<b>3 - 33</b>
Signal lamp with integrated filament/neon lamp 7 mm, solder terminals	3 - 33
<b>Signal lamps with integrated neon lamp 10 mm</b>	<b>3 - 35</b>
Signal lamp with integrated neon lamp 10 mm, round lens	3 - 35
<b>Signal lamps with integrated neon lamp 10 mm</b>	<b>3 - 37</b>
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
<b>Signal lamps with integrated neon lamp 14 mm</b>	<b>3 - 40</b>
Signal lamp with integrated neon lamp 14 mm, round lens, 230 V	3 - 40

3

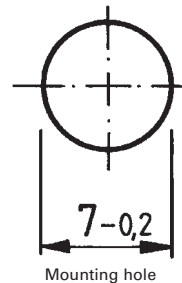
integr.  
Lamp



## SIGNAL LAMPS WITH INTEGRATED NEON LAMP 7 mm

### Technical Data

→ <b>General information</b>	
Form of lens	round
Color of lens	see order block
Diameter of collar	8.5
→ <b>Dimensions</b>	
Overall height	5 mm
Mounting depth	see order block
Mounting hole	7 mm
→ <b>Mechanical design</b>	
Mounting	pressing into hole
Terminals	see order block
Lamp socket	no
Lamp	see order block
→ <b>Electrical characteristics</b>	
Voltage limit max.	see order block
→ <b>Other specifications</b>	
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



### Approvals



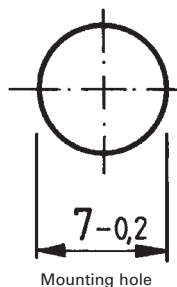
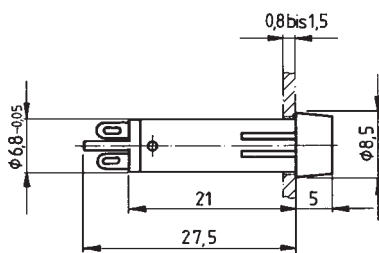
VDE T85° (only version with neon lamp)

3

integr.  
Lamp

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

Technical data see page 3 - 33



# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED NEON LAMP - 7 MM, SOLDER TERMINALS

– 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.

3

integr.  
Lamp

# 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

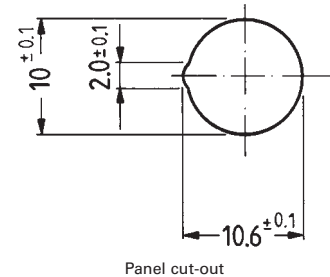
Mounting	pressing into hole
Terminals	quick connector 2.8 x 0.8 mm
Lamp socket	no
Lamp	see order block

### → 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



## Approvals



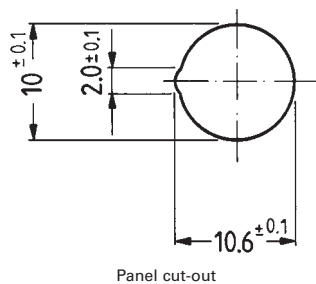
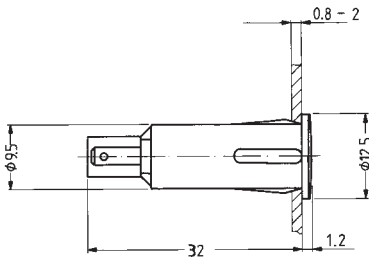
VDE T85° (only version with neon lamp)

3

integr.  
Lamp

# Signal lamp with integrated neon lamp 10 mm, round lens

Technical data see page 3 - 35



# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED NEON LAMP - 10 MM, QUICK-CONNECT TERMINAL

– 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

3

integr.  
Lamp

# 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

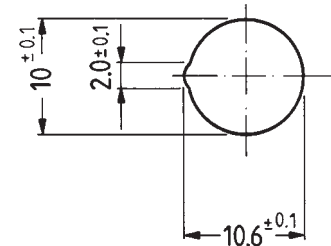
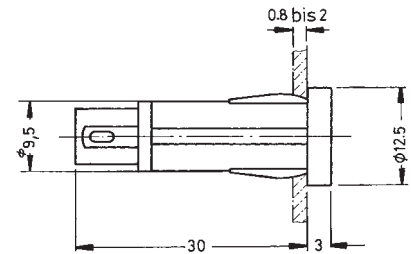
Mounting	pressing into hole
Terminals	see order block
Lamp socket	no
Lamp	see order block

### → 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

3

integr.  
Lamp

## Approvals



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

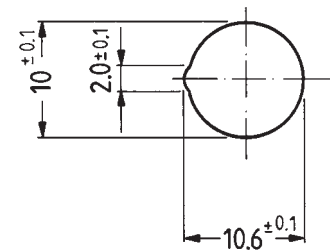
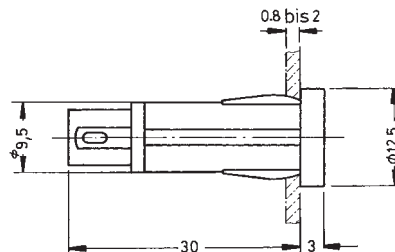
# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED NEON LAMP - 10 MM, QUICK-CONNECT TERMINAL



## Signal lamp with integrated neon lamp 10 mm, round lens

Technical data see page 3 - 37



Panel cut-out

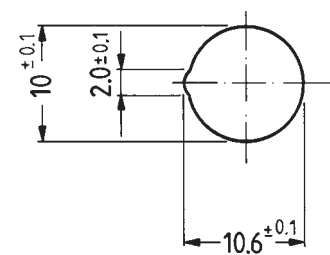
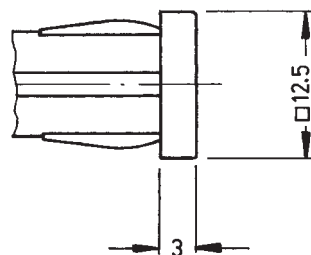
→ Color of lens	Lamp	Voltage limit max.	Terminals	Order no.
transparent red	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.117/1301
transparent yellow	neon lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.117/1402
transparent green	neon glow lamp	230 V	quick connector 2.8 x 0.8 mm	1.69.507.118/1502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

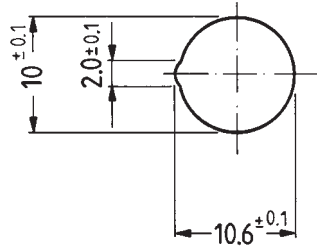
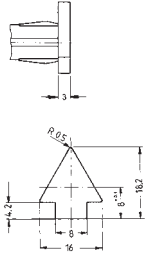
Other voltages and versions with connection cable on request.

3

integr.  
Lamp

## 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.

# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED NEON LAMP - 14 MM, QUICK-CONNECT TERMINAL



## 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

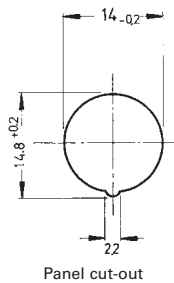
Mounting	pressing into hole
Terminals	see order block
Lamp socket	no
Lamp	see order block

#### → Electrical characteristics

Voltage limit max.	see order block
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#### → Other specifications

Degree of protection from front side	IP40 (DIN EN 60529)
Weight	5 g
ROHS compliant	yes
REACH compliant	yes



### Approvals



VDE T85° (only version with neon lamp)

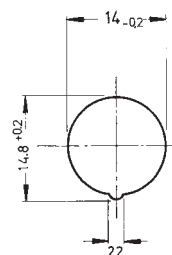
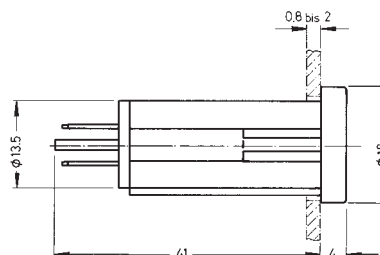
3

integr.  
Lamp



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

Technical data see page 3 - 40





# SIGNAL LAMPS

SIGNAL LAMPS WITH INTEGRATED NEON LAMP - 14 MM, QUICK-CONNECT TERMINAL

– 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

3

integr.  
Lamp

