

# General information

## 1

### Concepts

- 1. Momentary pushbuttons** are switching elements which are used for making or breaking contact while they are being pressed.
- 2. Latching pushbutton** are used for making or breaking contact until they are returned to their initial position by being pressed again.
- 3. Illuminated pushbuttons** have the same functions as described for (1) and (2) and feature an additional lamp socket for accommodating a filament, neon lamp or LED.
- 4. Pushbuttons** with degree of protection IP 65 are provided with a special sealing, which guarantees reliable and long-lasting protection.
- 5. Legending** can be effected using legend inserts, by engraving or hot stamping. Grooved transparent lenses are not suitable for legending.

### CE-Conformity

The products of the Chapter "Pushbuttons" can – relating to the CE-conformity according to the Low-Voltage Directive 73/23/EWG – be divided into the following groups:

#### **Emergency-stop components with an operating voltage < 50 V**

F. ex. LUMOTAST 25 emergency-stop. For this pushbutton the Machine Directive 89/392/EWG applies.

#### **All products with an operating voltage > 50 V**

For these elements the Low-Voltage Directive 72/23/EWG applies.

#### **All products with an operating voltage < 50 V**

For these products no directive applies.

#### **Single parts, accessories and illumination**

For these products no directive applies.

#### **EMC-Law**

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

#### **Declarations of Conformity**

Declarations of conformity for all concerned products are available and can be delivered upon request. Please always state the exact order reference of the respective product.

#### **Marking**

The marking will be corresponding to the Low-Voltage Directive 73/23/EWG resp. the Directive "CE-Marking 93/68/EWG" either on the packing or on the product itself.



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8 mm

**General data**

Illuminable pushbuttons and signal lamps with lamp socket for a mounting hole diameter of 8.1 mm; 42 V, 250 mA max. Please order lamps/LEDs separately.

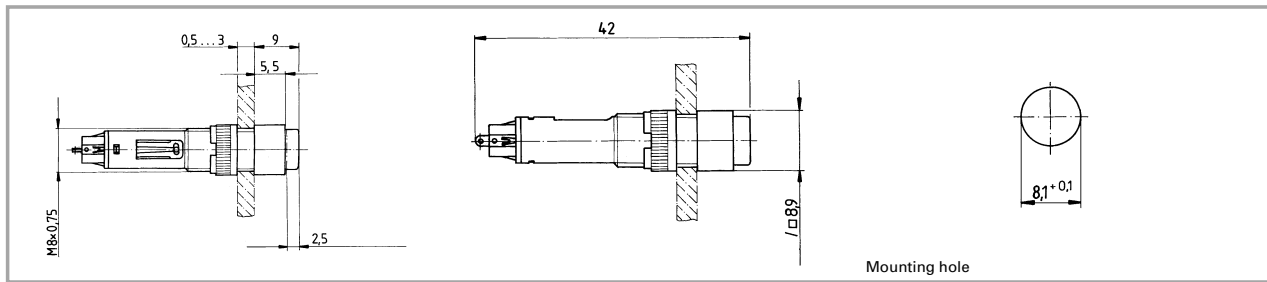
**Content**

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### 8 mm Series, illuminated pushbutton, 42 V/250 mA



### Technical data

#### General information

Form of lens	protruding lens
Colour of lens	see order block
Form of collar	see order block

#### Dimensions

Length of collar	see order block
Diameter of collar	see order block
Width of collar	see order block
Overall height	9 mm
Mounting depth	31 mm
Mounting hole	8.1 mm

#### Mechanical design

Mounting	ring nut
Terminals	solder terminals, tin-plated
Contact system	2 plate springs
Contact function	see order block
Contact arrangement	1 NO
Contact materials	Au
Illuminability	yes
Lamp socket	Bi-Pin T 1

#### Mechanical characteristics

Operating force max.	2.6 N
Operating travel	2.7 mm
Switching travel NO	1 mm
Robustness	100 N

#### Electrical characteristics

Rated voltage AC/DC max.	42 V
Rated voltage AC/DC min.	0.02 V
Rated current AC/DC max.	250 mA
Rated current AC/DC min.	0.01 mA
Contact resistance max.	100 mΩ
Bouncing time max.	10 ms

#### Other specifications

Operating life (operations)	1000000 (momentary), 100000 (latching)
Degree of protection from front side	IP40
Ambient temp. operating min.	-25 °C
Ambient temp. operating max. without lamp /LED	+70 °C
Ambient temp. operating max. with lamp /LED	+55 °C
Storage temperature min.	-40 °C
Storage temperature max.	+80 °C
Resistance to constant environment	according to IEC 600 68-2-3 and 2-30
Resistance at variable environment	according to IEC 600 68-2-14 and 2-33
Weight	2 g
Soldering time max.	3 sec.
Soldering temperature max.	350 °C

### Accessories 8 mm Series, illuminated pushbutton, 42 V/250 mA

Description	Photo	Order no.	Page
Filament lamp, Bi-Pin T 1 base, 24 - 28 V		<b>1.90.180.473/0000</b>	5 - 5
LED Bi-Pin T 1, red, 3 V		<b>1.90.691.026/0000</b>	5 - 17
LED Bi-Pin T 1, green, 3 V		<b>1.90.691.027/0000</b>	5 - 17

## 8 mm Series

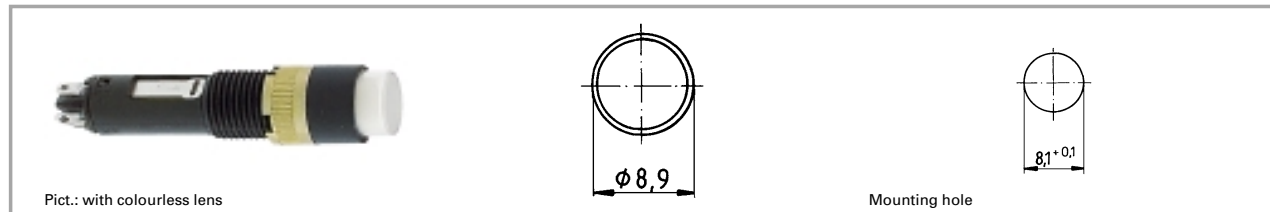
### Accessories 8 mm Series, illuminated pushbutton, 42 V/250 mA

Description	Photo	Order no.	Page
LED Bi-Pin T 1, yellow, 3 V		1.90.691.028/0000	5 - 17
Fixing spanner M 8		5.58.002.027/7705	5 - 25

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8 mm

### 8 mm Series, illuminated pushbutton, round collar, 42 V/250 mA



Contact arrangement	Contact function	Lamp socket	Order no. without lens	Note
1 NO	momentary	Bi-Pin T 1	1.15.116.001/0000	Please include the desired lens in your order.
1 NO	latching	Bi-Pin T 1	1.15.116.011/0000	Please include the desired lens in your order.

Technical data see page 1 - 4

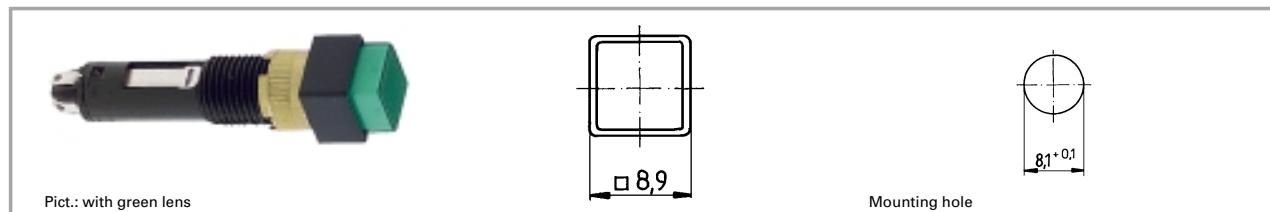
Lens, transparent colourless: 5.05.510.470/1002

Lens, transparent red: 5.05.510.470/1303

Lens, transparent yellow: 5.05.510.470/1402

Lens, transparent green: 5.05.510.470/1502

### 8 mm Series, illuminated pushbutton, square collar, 42 V/250 mA



Contact arrangement	Contact function	Lamp socket	Order no. without lens	Note
1 NO	momentary	Bi-Pin T 1	1.15.116.021/0000	Please include the desired lens in your order.
1 NO	latching	Bi-Pin T 1	1.15.116.031/0000	Please include the desired lens in your order.

Technical data see page 1 - 4

Lens, transparent colourless: 5.05.510.471/1002

Lens, transparent red: 5.05.510.471/1303

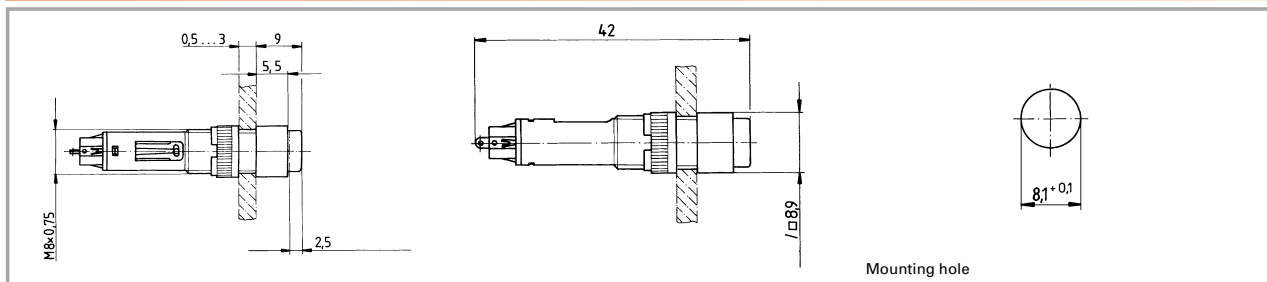
Lens, transparent yellow: 5.05.510.471/1402

Lens, transparent green: 5.05.510.471/1502

# 1

8 mm

### 8 mm Series, signal lamp



### Technical data

#### General information

Form of lens protruding lens  
 Colour of lens see order block  
 Form of collar see order block

#### Dimensions

Length of collar 8.9 mm  
 Width of collar 8.9 mm  
 Diameter of collar see order block  
 Overall height 9 mm  
 Mounting depth 31 mm  
 Mounting hole 8.1 mm

#### Mechanical design

Mounting ring nut  
 Terminals solder terminals, tin-plated  
 Lamp socket Bi-Pin T 1  
 Lamp filament lamp / LED

#### Electrical characteristics

Voltage limit max. 24 V  
 Power limit max. 0.4 W

#### Other specifications

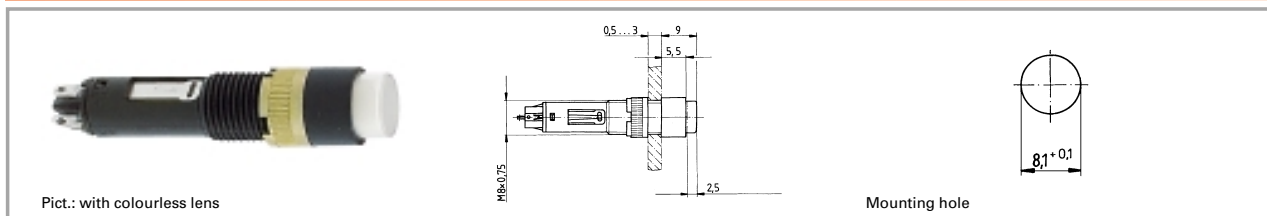
Degree of protection from front side IP40  
 Weight 2  
 Ambient temp. operating min. -25 °C  
 Ambient temp. operating max. +55 °C  
 Storage temperature min. -40 °C  
 Storage temperature max. +80 °C  
 Resistance to constant environment according to IEC 600 68-2-3 and 2-30  
 Resistance at variable environment according to IEC 600 68-2-14 and 2-33  
 Soldering time max. 3 sec.  
 Soldering temperature max. 350 °C

### Accessories 8 mm Series, signal lamp

Description	Photo	Order no.	Page
Filament lamp, Bi-Pin T 1 base, 24 - 28 V		<b>1.90.180.473/0000</b>	5 - 5
LED Bi-Pin T 1, red, 3 V		<b>1.90.691.026/0000</b>	5 - 17
LED Bi-Pin T 1, green, 3 V		<b>1.90.691.027/0000</b>	5 - 17
LED Bi-Pin T 1, yellow, 3 V		<b>1.90.691.028/0000</b>	5 - 17
Fixing spanner M 8		<b>5.58.002.027/7705</b>	5 - 25

## 8 mm Series

### 8 mm Series, signal lamp, round collar



Voltage limit max.	Power limit max.	Lamp socket	Colour of lens	Order no. without lens	Note
24 V	0,4 W	Bi-Pin T 1		1.65.120.001/0000	Please include the desired lens in your order.

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Lens, transparent colourless: 5.05.510.359/1002

Lens, transparent red: 5.05.510.359/1303

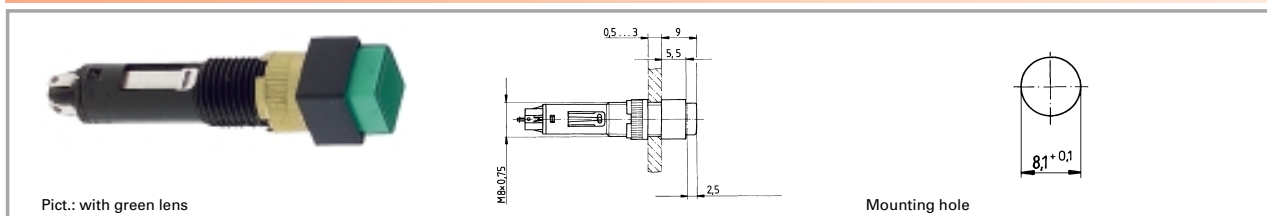
Lens, transparent yellow: 5.05.510.359/1402

Lens, transparent green: 5.05.510.359/1502

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8 mm

### 8 mm Series, signal lamp, square collar



Voltage limit max.	Power limit max.	Lamp socket	Colour of lens	Order no. without lens	Note
24 V	0,4 W	Bi-Pin T 1		1.65.120.011/0000	Please include the desired lens in your order.

Technical data see page 1 - 6

Lens, transparent colourless: 5.05.510.360/1002

Lens, transparent red: 5.05.510.360/1303

Lens, transparent yellow: 5.05.510.360/1402

Lens, transparent green: 5.05.510.360/1502