Single side pushbutton 56 Universal

Equipment consisting of (schematic overview)


Front bezel Page 39

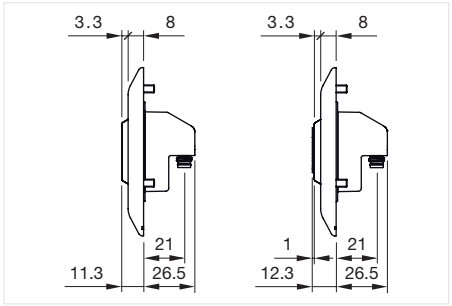

Screws


Lens


Switching unit

Each Part Number listed below includes all the black components shown in the 3D-drawing.

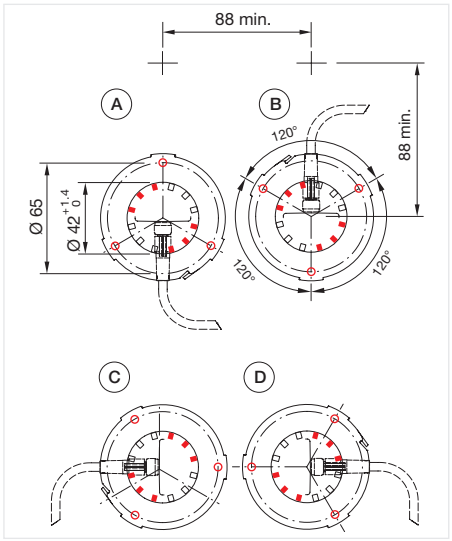
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



The preview is based on a sample product. This can differ from your current configuration.



Mounting cut-outs [mm]
A = Cable exit bottom
B = Cable exit top
C = Cable exit left
D = Cable exit right

Additional information

- Laser engraving on lens possible
- 14 standard symbols
- ISO 7000 symbols on request
- Other symbols available on request (minimum order quantity 50 pcs.)
- Standard device plug M8×1, 6-pole
- User-friendly, large Ø 33 mm actuating surface
- Highly visible LED illumination green/red
- Operating voltage 10–30 VDC
- Scope of delivery without cable
- Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at www.eao.com/downloads



Switching unit, without lens, without front bezel

Housing colour	Housing material	Part No.	Wiring diagram	Component layout
☐ Black	Plastic	56-1520.0000	441	106

56 Front mounting

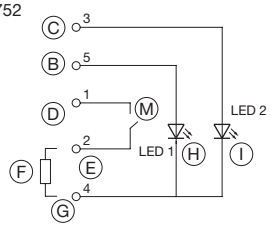
Lens aluminium	Artikel-No.
☐ without symbol	56-4.00001

☐ with symbol, black, laser engraved						
	 ☐ Part No. 56-6.00001	 ☐ Part No. 56-6.00002	 ☐ Part No. 56-6.00003	 ☐ Part No. 56-6.00004	 ☐ Part No. 56-6.00005	 ☐ Part No. 56-6.00006
	 ☐ Part No. 56-6.00007	 ☐ Part No. 56-6.00008	 ☐ Part No. 56-6.00009	 ☐ Part No. 56-6.00010	 ☐ Part No. 56-6.00011	 ☐ Part No. 56-6.00012
	 ☐ Part No. 56-6.00013	 ☐ Part No. 56-6.00014				

☐ with symbol plastic, black raised						
	 ☐ Part No. 56-1.00001	 ☐ Part No. 56-2.00001	 ☐ Part No. 56-3.00001			

Wiring diagrams

VDC = 10 – 30VDC
EN 14752

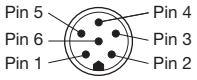


Wiring diagram 441

Legend

B = VDC illumination green
C = VDC illumination red
D = VDC
E = Switch (not potential-free)
F = Load (max. 250 mA)
G = 0 V
H = Illumination green
I = Illumination red
M = High Side Switch

Component layouts



Component layout 106

Pin Assignment
Front View
M8 male A-Coding 6 Pin
according to EN 61076-2-104

Pushbutton 56 Universal

Single side pushbutton with M8×1 connector, 6-pin

Switching system

The Series 56 Universal pushbutton is equipped with an electronic high side switch, is short circuit proof and overload protected. In case of over current the switch opens automatically (protection against destruction). The pushbutton is not potential-free.

Material

Lens
Aluminium, Symbol Plastic

Front bezel
Plastic

Switch housing
Plastic

Mechanical characteristics

Terminals
Device plug M8×1, 6-pin (according to EN 61076-2-104)
For locking the cable plug connection, the
thread ring “hand-tight” (approx. 0.5 Nm) tightened.
Suitable for screw locking (cable side),
Snap-in locking (cable side) with reduced IP protection class.

Cable recommendation
6-pole with coupling socket M8×1 straight
(according to EN 61076-2-104)

Fixing screws
Single side pushbutton for front mounting M4 × 8 mm

Tightening torque
Screws for one-sided button for
front mounting 0.8...1 Nm

Key (mounting and dismantling)
Inside 6-kt Width across flats 2.5 mm

Actuating force
max. 15 N

Actuating travel
~0.5 mm

Mechanical life
>5 million switching cycles

Electrical characteristics

Illumination
Standby, 6 lighting points green
6 lighting points red
Optical switching indicator (wiring diagram according to EN 14752)
Operating voltage 24 VDC
Tolerance range –30 % ... +25 %
Current consumption <50 mA

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination.

Devices correspond
EN 50155
EN 14752
EN 45545
EN 61373

EMV
EN 61000-6-2
EN 61000-6-3
EN 50121-3-2
ESD according to EN 61000-4-2 ±20 kV
Regulation No. EMV 06 (radio compatibility of Deutsche Bahn)

Operating voltage
10–30 VDC

Switching current
max. 250 mA
min. 10 µA

Quiescent current
<10 µA @24 VDC
Note: Only pin 1 (VDC) and pin 4 (0 V) connected

Electric strength
4000 VAC, 50 Hz, 1 minute, between all terminals and
mounting plate/front element

Ambient conditions

Storage temperature
–45 °C … +90 °C

Operating temperature
–45 °C … +85 °C

Protection degree
IP66, IP67 front side
IP65 rear side with device plug M8×1 straight, 6-pin with snap-in locking (cable side)
IP67 rear side with device plug M8×1 straight, 6-pin with screw locking (cable side)

Impact resistance
IK07

Climate resistance
Damp heat, cyclic
48 hours, +25 °C/97 %, +55 °C/93 % relative humidity,
according to EN IEC 60068-2-30

Damp heat, state
56 days, +40 °C/93 % relative humidity,
according to EN IEC 60068-2-78

Rapid change of temperature
5 cycles, –45 °C…+90 °C, according to EN IEC 60068-2-14

Shock resistance
Semi-sinusoidal
500 m/s², pulse width 11 ms, 6 shocks/axis, according to
DIN EN 60068-2-27

Vibration strength
(sinusoidal)
max. 100 m/s² from 10 Hz ... 500 Hz, according to
EN IEC 60068-2-6

Broad band noise according to EN 61373 class 1B
7.9 m/s² 5 h per axis, according to EN IEC 60068-2-6

Approvals

Conformities
CE
2014/30/EU (EMC)
1300/2014/EU (TSI PRM)
2011/65/EU (RoHS)