Series

82

Robust and attractive.

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With Series 82, EAO offers the optimal pushbutton for vandal-resistant, stylish HMI controls *used in harsh industrial environments, public areas and building management.*

EAO, the expert and partner for Human Machine Interfaces (HMIs), offers pushbuttons that are both resistant to vandalism and visually attractive in the form of the Series 82, for use in harsh environments.

With their robust stainless steel, brass or anodised aluminium housings, these innovatively designed switches are protected to IK10 impact resistance and IP67 sealing requirements, which makes them ideal for use in exposed public buildings and areas.

The switches are available with momentary or maintained action, and with or without LED illumination, with a choice in turn of central dot or ring illumination. The ring illumination is particularly striking and attractive.

The switching elements are offered either with silver alloyed or in addition gold-plated contacts for reliably switching low voltages and currents.

Typical applications
- Exposed public areas:
  e.g. ticketing and vending machines
- Industrial:
  Machinery and factory equipment
- Lifting and moving:
  Elevators and people movers
- Building management:
  Access control and security systems
- Audio and video equipment
- Medical equipment

Laser Markings
Using a CO_2 laser it is possible to engrave practically any symbol or text in any language onto the stainless steel versions of the Series 82 products.

Laser markings are highly resilient, do not fade and last for an extraordinarily long time – ideal conditions for these vandal resistant indicators, pushbuttons and illuminated pushbuttons.

Standard symbols
Various standard symbols are available.
Here are a number of examples:

On/Off	Standby	Info

Light	Bell	Door open

For Info: www.switchesunlimited.com ☐ sales@switchesunlimited.com
Phone: 800-221-0487 ☐ Fax: 718-672-6370

Advantages.

- Vandal-resistant: Impact resistant to IK10, front protection up to IP67
- Gold-plated silver contacts available for low voltages and currents
- Optional illumination and laser markings
- Excellent tactile feedback
- Long service life: >1 million cycles of operation

Materials
- Stainless steel SUS 304
- Stainless steel chrome coloured
- Brass gold coloured
- Aluminium (natural anodised), other colours on request

Mechanical characteristics
- Mechanical lifetime:
  >1 million cycles of operation
- Actuation force: 4 N to 7 N
- Terminals: Soldering / plug-in terminals 2.8 x 0.5 mm or screw terminal

Minimum operating data
- Switching element with silver contact:
  24 VAC/DC 50 mA
- Switching element with gold-plated silver contact: 5 VDC/10 mA

Switching system
- Switching element:
  Snap-action switching element
- Contact arrangement:
  NO / NC contact (changeover)
- Switching action:
  Momentary or maintained
- Contact materials:
  Silver alloy or gold-plated silver alloy

Switching element
- Contact resistance:
  ≤50 mΩ, according to IEC 60512-2
- Isolation resistance:
  >1000 MΩ, according to IEC 60512-3
- Dielectric strength:
  1500 VAC, according to IEC 60947-5

Wiring diagram

Pushbutton	Illuminated pushbutton	Indicator
NC NO	NC NO +	+
c	c –	–
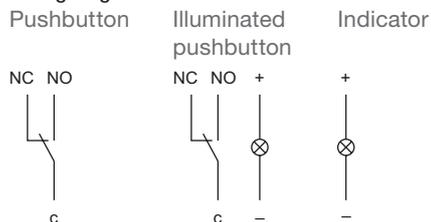
Properties and illuminations.

Electrical characteristics
- Rated insulation voltage 250 VAC
- Conventional thermal current:
  I_{TH} 5 A, according to CB
- Electrical life: > 50 000 cycles (full load)
- Switching capacity: AC-15 (cos φ 0.3) and
  DC-13 (according to IEC 60947-5-1)

	24 V	110 V	220 V
AC-15	1.0 A	1.0 A	0.5 A
DC-13	0.7 A	0.2 A	0.1 A

Ambient conditions
- Temperature
  – Storage temperature −40 °C to +80 °C
  – Operating temperature −30 °C to +70 °C
- Operating humidity: 45 % to 85 % RH
  (no condensation)
- Front protection:
  IP65, IP67, according IEC 60529
- Impact resistance:
  IK10, according to IEC 62262
- Approvals: CE, CB, UL, C UL, CCC

LED illumination
- Red
- Green
- Yellow
- Blue
- White

LED, series resistor and polarity protection
are built in.

Voltage	Tolerance	Current	Consumption
6 VAC/DC	±10 %	15 mA	0.10 W
12 VAC/DC	±10 %	14 mA	0.17 W
24 VAC/DC	±10 %	10 mA	0.24 W
110 VAC	±10 %	2 mA	0.22 W
230 VAC	±10 %	1.3 mA	0.29 W

Dimensions, mounting and terminals.

Mounting cut-outs
Ø 16 mm, Ø 19 mm, Ø 22 mm

24 min.
27 min.
31 min.

Ø16 +0.3 +0.1
Ø19 +0.3 +0.1
Ø22 +0.3 +0.1

24 min. 27 min. 31 min.
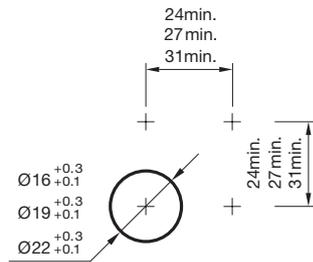
Dimensions
Side view
Solder / plug-in terminal | Screw terminal

8 max.

Ø 18
Ø 22
Ø 25

M16
M19
M22

2   32.5 max.   37 max.
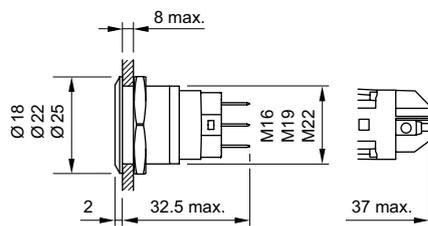
Front view

Non-illuminated
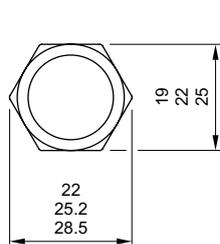
Ring illuminated

Central dot illuminated

19
22
25

22
25.2
28.5

Ø13.5
Ø16.3
Ø18.3

Ø5
Ø7
Ø9
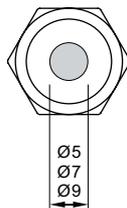
Solder / plug-in terminal

Pushbutton   Illuminated pushbutton   Indicator

NC
NO
C
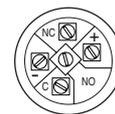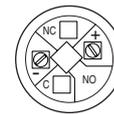
– NC NO + C

– +
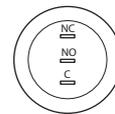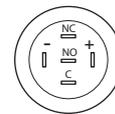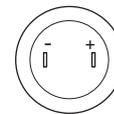
Screw terminal

Pushbutton   Illuminated pushbutton   Indicator

NC   +
C   NO

NC   +
C   NO

NC   +
C   NO
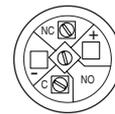
Front ring | Lens | Illumination

flat/flush   flat/raised   flat/convex   raised/ convex –
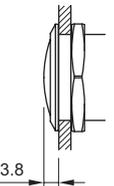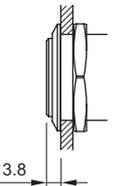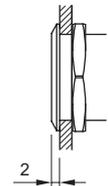
ring/dot   ring   ring

2   3.8   3.8   5.3
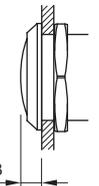
Reliable assembly. Short delivery times.

Thanks to our international production sites and our global delivery and support centres, we offer you efficient, sustainable logistics and can optimise your supply chain.

With four value-creating partners in Europe, Asia and North America, as well as other strong partnerships around the world, we are able to offer the following:

- Qualified vendors worldwide
- Consistent multi-location processes
- Integrated quality measures throughout the supply chain

To us, speedy assembly, short delivery times and secure processing are all part of good customer service.

Part number system

Series	–	Diameter		Material		Bezel/Lens		Connection/ SE Contacts		.	Switching action		Illumination		LED colour		LED voltage		.	Laser Engraving	
82		4	16mm	1	Stainless steel	5	flush/ flat	1	Solder/ Silver		0	Indicator	0	no LED	0	no LED	0	no LED		B001	On/Off
		5	19mm	2	Chrome colour	6	flush/ raised flat	2	Srew/ Silver		1	Momentary	1	Ring	1	red	2	6VAC/DC		B002	Stand By
		6	22mm	3	Gold colour	7	flush/ convex	3	Solder/ Gold plated		2	Maintained	2	Dot	2	blue	3	12VAC/DC		B003	Information
				5	Aluminium natural anodized	8	raised/ convex	4	Screw/ Gold plated						3	green	4	24VAC/DC		B004	Light
															4	yellow	5	110VAC		B005	Bell
															5	white	6	230VAC		B006	Door open
																				BXXX	Any other symbol