

Series

82

Robust and attractive.

www.eao.com



Series 82

Robust and attractive.

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 CO² 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

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

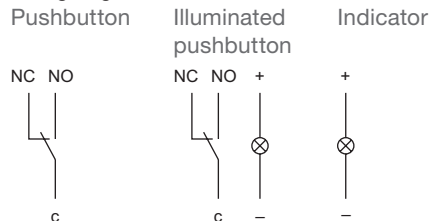
Switching system

- 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:
 $\leq 50 \text{ m}\Omega$, according to IEC 60512-2
- Isolation resistance:
 $> 1000 \text{ M}\Omega$, according to IEC 60512-3
- Dielectric strength:
1500 VAC, according to IEC 60947-5

Wiring diagram



Properties and illuminations.

Electrical characteristics

- Rated insulation voltage 250 VAC
- Conventional thermal current:
I_{TH} 5A, according to CB
- Electrical life: > 50 000 cycles (full load)
- Switching capacity: AC-15 (cosφ0.3) and DC-13 (according to IEC 60947-5-1)

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

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.

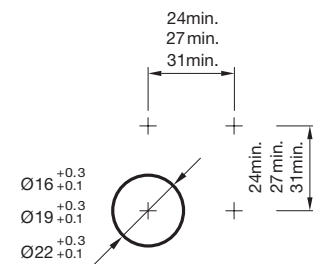
Voltage	Tolerance	Current	Consumption
6 VAC/DC	± 10 %	15 mA	0.10 W
12 VAC/DC	± 10 %	14 mA	0.17 W
24 VAC/DC	± 10 %	10 mA	0.24 W
110 VAC	± 10 %	2 mA	0.22 W
230 VAC	± 10 %	1.3 mA	0.29 W



Dimensions, mounting and terminals.

Mounting cut-outs

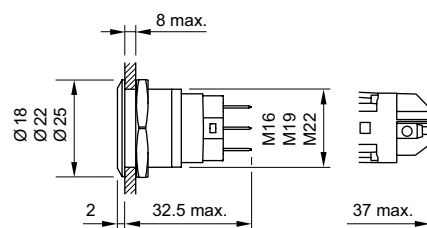
Ø 16 mm, Ø 19 mm, Ø 22 mm



Dimensions

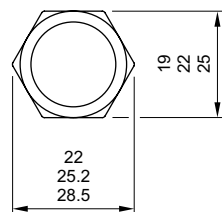
Side view

Solder/plug-in terminal | Screw terminal

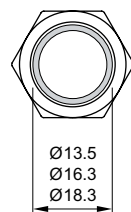


Front view

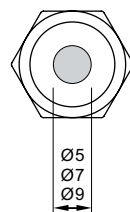
Non-illuminated



Ring illuminated

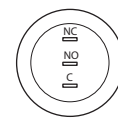


Central dot illuminated

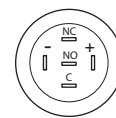


Solder/plug-in terminal

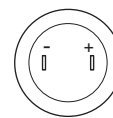
Pushbutton



Illuminated pushbutton

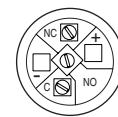


Indicator

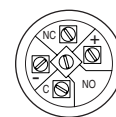


Screw terminal

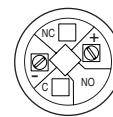
Pushbutton



Illuminated pushbutton



Indicator



Front ring | Lens | Illumination

flat/flush

flat/raised

flat/convex

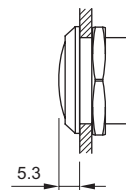
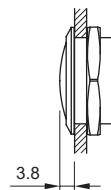
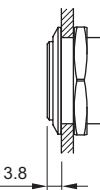
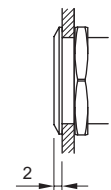
raised/convex

ring/dot

ring

ring

—



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.

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

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

Expert manufacturers. EAO creates possibilities since 1947.



Founding year: 1947

Number of employees: 600

Headquarters: Olten, Switzerland

Manufacturing Companies: Switzerland,
Germany, North America, China

Sales Companies: 11

Distribution countries: 50

Core markets: Transportation, Automotive,
Heavy Duty & Special Vehicles, Machinery

EAO AG, a Swiss, family-owned company founded in 1947, has developed into one of the world's leading manufacturers of high-quality industrial switches, complete custom HMI panels and interface systems, and specialised automotive switch systems.

Efficient and modern development processes, effective global supply chains and skilled project and consultation management represent additional services that we offer our customers and business partners around the world.

Your solution-focused expert and partner

We do much more than just manufacture individual control elements. As a solution-focused partner, we provide the option of technically and mechanically customizing existing HMI Components in line with our customers' individual requirements. From simple control elements through to sophisticated HMI Systems, from serial production through to installation – we offer the entire range of HMI services and inspire the confidence of our customers.

EAO Contact.

Your centre of excellence.

Headquarters

EAO Holding AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
info@eao.com

Manufacturing Companies

Switzerland
EAO AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
info@eao.com

EAO Systems AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
sales.esy@eao.com

China
EAO (Guangzhou) Ltd.
3/F, Block G4, Guangzhou
South China New Materials
Innovation Park
31 Kefeng Road,
Guangzhou Science City
CN-Guangzhou, PRC
Telephone +86 20 322 903 90
sales.ecn@eao.com

Germany
EAO Automotive GmbH & Co. KG
Richard-Wagner-Straße 3
DE-08209 Auerbach/Vogtland
Telephone +49 3744 8264 0
sales.esa@eao.com

North America
EAO Corporation
One Parrott Drive
Shelton,
US-CT 06484
Telephone +1 203 951 4600
sales.eus@eao.com

Sales Companies

China
EAO (Guangzhou) Ltd.
Rm. 403, Block 5#,
CIFI Century Square, Lane 28,
NO. 21, Danba Road,
Putuo District
CN-Shanghai PRC
Telephone +86 21 6095 0717
sales.ecn@eao.com

France
EAO France SAS
5, rue Henri François
FR-77330 Ozoir-la-Ferrière
Telephone +33 1 64 43 37 37
sales.efr@eao.com

**Germany, Austria,
Poland, Czech Republic**
EAO GmbH
Langenberger Straße 570
DE-45277 Essen
Telephone +49 201 8587 0
sales.ede@eao.com

Hong Kong (Asia Pacific)
EAO (Far East) Ltd.
Unit A1, 1/F, Block A
Tin On Industrial Building
777 Cheung Sha Wan Road
Lai Chi Kok, Kln
HK-Hong Kong
Telephone +852 27 86 91 41
sales.ehk@eao.com

Italy
EAO Italia S.r.l.
Centro Direzionale Summit –
Plazzo D1
Via Brescia, 28
IT-20063 Cernusco sul Naviglio (MI)
Telephone +39 029 247 1934
sales.eit@eao.com

Japan
EAO Japan Co. Ltd.
Net 1 Mita Bldg. 3F
3-1-4 Mita Minato-ku
JP-Tokyo 108-0073
Telephone +81 3 5444 5411
sales.esj@eao.com

Netherlands, Belgium
EAO Benelux B.V.
Kamerlingh Onnesweg 46
Postbus 544
NL-3300 AM Dordrecht
Telephone +31 78 653 17 00
sales.enl@eao.com

North America
EAO Corporation
One Parrott Drive
Shelton,
US-CT 06484
Telephone +1 203 951 4600
sales.eus@eao.com

Sweden
EAO Svenska AB
Slakthusgatan 9
SE-121 62 Johanneshov
Telephone +46 8 683 86 60
sales.esw@eao.se

Switzerland
EAO Schweiz AG
Tannwaldstrasse 86
CH-4600 Olten
Telephone +41 62 286 95 00
sales.ech@eao.com

United Kingdom
EAO Ltd.
Highland House
Albert Drive
Burgess Hill,
GB-West Sussex RH15 9TN
Telephone +44 1444 236 000
sales.euk@eao.com