

Series

82

Attractively tough.

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Series 82

Attractively tough.

With the Series 82, EAO offers the optimal pushbutton for vandal resistant, attractive HMI controls used in harsh industrial environments, rugged commercial applications, and public use areas.

EAO, the expert partner for Human Machine Interfaces (HMIs), offers the attractively designed, sealed, and vandal resistant Series 82 pushbuttons that are ideal for use in harsh environments.

With durable stainless steel, brass, or anodized aluminum housings, these innovatively designed switches are protected to a level of IK10 impact resistance and IP67 sealing requirements – thus making them ideal for use in machinery and packaging equipment, industrial automation, specialty vehicles, and public use applications including access control, help kiosks, and emergency call boxes.

These switches are available in either momentary or maintained actions along with illuminated or non-illuminated varieties. Evenly dispersed lens illumination is provided by LED and is offered in ring or central dot adaptations.

The switching elements are offered in silver alloyed or gold plated contacts. For switching low voltages and currents reliably, gold plated contacts are recommended.

Typical applications

- Exposed public areas
Ticketing and vending machines
- Industrial automation
Machinery, packaging and factory equipment
- Lifting and moving
Elevators and people movers
- Access control
Security and intercom systems
- Audio and video equipment
- Medical equipment

Laser Markings







Using a CO² laser it is possible to engrave symbols or text in any language onto the stainless steel versions of the Series 82 products.

Laser markings are precise, highly resilient, do not fade, and last for an extraordinarily long time – ideal conditions for the applications and environments these vandal resistant indicators, pushbuttons and illuminated pushbuttons are often found within.

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 IP65 and IP67
- Gold-plated silver contacts available for low voltage and current applications
- 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

Operating data switching element*

Silver Contacts

	Minimum Values	Maximum Values
Voltage	17 VAC/DC	240V
Current	50 mA AC/DC	3 A
Power	1 W (1 VA)	720 W (720 VA)

Gold plated Silver Contacts

	Minimum Values	Maximum Values
Voltage	1 VAC/DC	24V
Current	5 mA AC/DC	200 mA
Power	5 mW (5 mVA)	5 W (5 VA)

* according to DIN EN 60947-5-4, methods of assessing the performance of low-voltage contacts.

For specifications of the minimal switching capacity see details in the online catalogue.

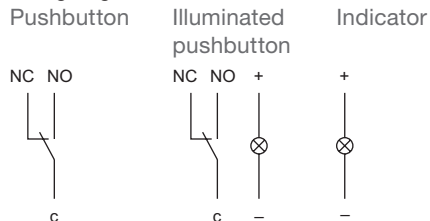
Switching system

- 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 230 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)

	24V	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.

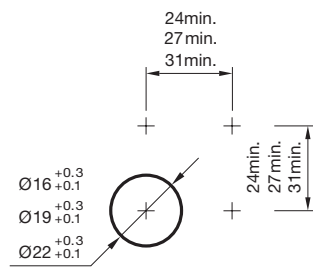
Voltage	Tolerance	Current
6 VAC/DC	± 10 %	7 mA
12 VAC/DC	± 10 %	7 mA
24 VAC/DC	± 10 %	7 mA
110 VAC	± 10 %	2 mA
230 VAC	± 10 %	1.5 mA



Dimensions, mounting and terminals.

Mounting cut-outs

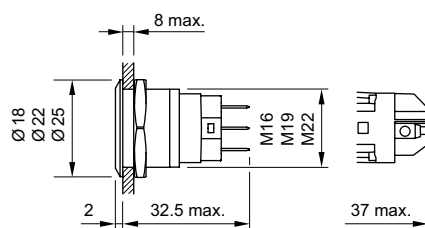
Ø 16 mm, Ø 19 mm, Ø 22 mm



Dimensions

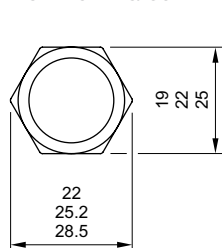
Side view

Solder/plug-in terminal | Screw terminal

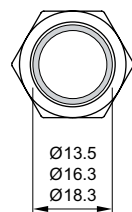


Front view

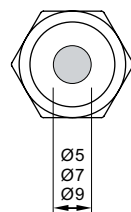
Non-illuminated



Ring illuminated

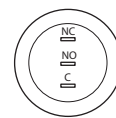


Central dot illuminated

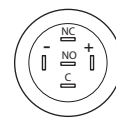


Solder/plug-in terminal

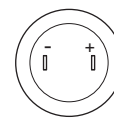
Pushbutton



Illuminated pushbutton

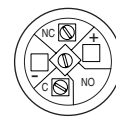


Indicator lamps



Screw terminal

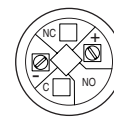
Pushbutton



Illuminated pushbutton



Indicator



Front ring | Lens | Illumination

flat/flush

flat/raised

flat/convex

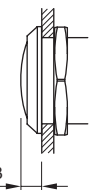
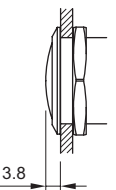
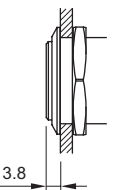
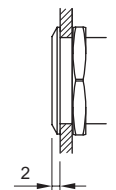
raised/convex

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	Light										
																			5	Aluminium natural anodized	8	raised/convex	4	Screw/Gold plated	3	green	4	24VAC/DC	B004	Information
																													4	yellow
	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 center of excellence.

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