

Series

84

Attractive, versatile and functional.

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With the comprehensive Series 84, EAO offers a modern product range suitable for a wide selection of industrial applications. *A flexible range of illumination options makes this series particularly appealing.*

The Series 84 combines design and functionality in a versatile manner. Combined with innovative illumination options and IP67 protection, this product range is ideal for challenging environments with high visual expectations.

The illumination is a highlight that makes this series particularly attractive. Multiple illuminations in a single switching element can allow for a consolidation of status indicators thus eliminating panel space and additional costs of extra actuators and Indicators.

Bi-colour illumination – Simplified status displays

This illumination system enables two status to be easily displayed using a single indicator in green/red and green/yellow.

Halo illumination – Simply attractive

Halo illumination is suitable where users require a simple and clearly visible status indicator. It makes simply every application an experience.

Multi-colour halo illumination – For maximum flexibility in PCB assembly

This illumination has been specially designed for SMD LEDs. In addition to the bi-colour LED in the centre, it is possible to display up to eight colours on a single indicator.

Visually appealing lens and actuators in a variety of colours, front designs and materials also highlight the modern appearance of the Series 84.

These high-grade products can be combined with either a 12VDC or 24VDC LED. Both versions switch low voltages and currents reliably – lasting up to 1 million cycles of operation. Soldered, plug, PCB and flat ribbon cable terminals are also available.

Typical applications

- Industrial machinery
- Measurement and control engineering
- Lifting and handling equipment
- Process automation
- Special vehicles
- Ticketing machines
- Medical equipment

Functions of the series

- Indicator
- Pushbuttons
- Illuminated pushbuttons

Switching system

Single break contact snap action switch with two independent contacts and a short travel tactile switching action. Guaranteed reliability in switching, even with low switch ratings. Contact features: One normally-open contact, momentary action.

Material

- Lens
 - Polycarbonate (PC), in accordance with UL 94 V2 or anodised aluminium
- Actuator housing
 - Polyetherimide (PEI) in accordance with UL 94 V0
- Connecting cable
 - Polyvinyl chloride (PVC), heat-resistant for a short period up to 105 °C
- Switching element
 - Thermoplastic polyester (PET, PBT), in accordance with UL 94 V0
 - Polyacetal (POM), in accordance with UL 94 HB
- Contact material
 - Gold-plated silver alloy

Mechanical characteristics

- Mounting cut-out: Diameter 22.3 mm
- Actuating force: 4.0 N ± 0.2 N
- Cycles of operation: 1 million
- Terminals
 - Plug-in terminals 2.8 x 0.8 mm (solderable)
 - Flat ribbon cable 0.5 mm²

Advantages.

- Attractive design and reliable operation
- IP67 front protection
- Powerful, consistent illumination with innovative technologies
- Reliable emergency stop switches and modern capacitive pushbuttons with IO-Link functionality
- Available with soldered, plug, PCB and flat ribbon cable terminals

Electrical properties

- Switching element operating data
 - Voltage 50 mVAC/DC to 42 VAC/DC
 - Current 10 µA to 100 mA
 - Power max. 2 W
- Operating data LED
 - Voltage 12 VDC oder 24 VDC
 - Current 10 mA
 - Illumination single chip LED, red, green, yellow, orange, blue and white
- Halo Compact operating data
 - Voltage 24 VDC ± 10 %
 - Current max. 100 mA
- Output
 - Integrated electronic switch for locking function with illuminated pushbuttons (high-side switch)

Ambient conditions

- Temperatur
 - Storage temperature –40 °C to +85 °C
 - Operating temperature –25 °C to +70 °C
- Resistance to shock (semi-sinusoidal)
 - max. 100 m/s², pulse width 11 ms, 3-axis, in accordance with EN IEC 60068-2-27

- Resistance to vibration (sinusoidal)
 - max. 50 m/s² from 10 Hz to 500 Hz, 10 cycles, 3-axis, in accordance with EN IEC 60068-2-6

Degree of protection

- IP67 front protection
- IP67 rear protection optional (full-mould version with mounted actuator)

Mounting

A robust mounting flange is used for easy mounting and secure attachment on printed circuit boards (PCBs).

Further information and the Online Product Configurator can be found at www.eao.com/84



Function	Series					
	14	45	61	71	82	84
Pushbutton	■	■	■	■	■	■
Illuminated pushbutton	■	■	■	■	■	■
Indicator	■	■	■	■	■	■
Selector switch	■	■	■	■		
Illuminated selector switch		■	■	■		
Keylock switch	■	■	■	■		
Emergency stop switch		■	■			■
Stop switch		■	■			
Buzzer	■		■			
Mushroom-head pushbutton	■	■	■	■		■
Potentiometer		■	■			
Capacitive sensor switch with IO-Link						■

Highlights.



Illuminated text and symbols

Series 84

Illuminated text and symbols help the user to operate functions intuitively. This is why the Series 84 lens range offers numerous illuminable ISO standard symbols such as “On/Off” or “Standby”, and features high-demand, versatile lenses with halo illumination. Symbols can be illuminated in red, green, yellow, orange, blue or white thanks to the corresponding LEDs.

The bi-colour LED version can also be used to display two different status using one and the same indicator.

EAO’s state-of-the-art laser engraving system enables just about any symbol and text to be reproduced at customer’s request in any language.

This Value Added Service makes each function attractive and also more intuitive to use.

Advantages

- Illuminated ISO standard symbols such as “On/Off” and “Standby” available
- Symbols in red, green, yellow, orange, blue, white or with a bi-colour version illuminable in red/green
- Long-lasting text and symbol markings
- Practically any symbol and any text possible



Capacitive sensor switch with IO-Link

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The freely configurable, bright and capacitive IO-Link Touch opens up many new HMI possibilities for harsh, industrial applications. Thanks to the IO-Link communication interface and programmable connection options, the HMIs can be connected to a modern machine system by means of an integrated M12 5-pin screw connection, making them Industry-4.0-compatible with a back panel depth of just 25.8 mm.

The static or flashing RGB LED illumination is very bright and, thanks to an environment-adaptive brightness sensor, the HMIs light up at the right intensity in any light. This feature also optimises power consumption by the HMI and the LEDs’ lifecycle. Four side openings in the front bezel make the status display highly visible from all angles. Combined with high-contrast and optionally illuminable standard or customer-specific symbols, the IO-Link Touch also integrates visually into any modern set-up.

Advantages

- Capacitive actuation with different actuation sensitivities
- Freely configurable HMIs with IO-Link interface (Industry 4.0)
- Optionally illuminated standard or custom symbols
- Ambient light adaptive RGB LED illumination in 16 million colours
- EAO Value Added Services and worldwide availability



Emergency stop switch.

Series 84

The intuitive Series 84 emergency stop and stop switches are particularly suitable for handheld and compact control units, where besides highest safety requirements also a very low back panel depth is critical and where the front of panel height as well as ergonomic styling are important design factors.

The compact design of the Series 84 emergency stop switches makes it ideal for use in industrial machinery, process automation, and robotics as well as lifting, moving and material handling equipment.

The robust mono-block construction and a choice of terminals allow easy mounting in modern safety control systems and help to meet the needs of industry standards for fail-safe actuation.

New and improved LED illumination results in greater visibility even in ambient light conditions. The integrated red LED is equipped with reverse polarity protection and a constant current source, all while maintaining a constant brightness at operating voltages from 5VDC to 30VDC.

Advantages

- Robust mono-block design
- Very low back panel depth
- Attractive, modern design and protection IP65, IP66, IP67
- Reliable and long service life
- Clearly visible illumination



Stop request switch

Series 84

Comfortable and reliable – Series 84 Stop Request Switches are ideal for use in buses and trams. The robust plastic housing can be colour-matched to the vehicle design and is suitable for pole diameters of 35 and 38 mm. They can also be fitted to smaller pole diameters of 25 to 30 mm using an adaptor.

The excellent tactile feedback that is typical of the Series 84 ensures intuitive operation, whilst the robust TSI-compliant aluminium lenses with raised symbols withstand the demands of intensive public use.

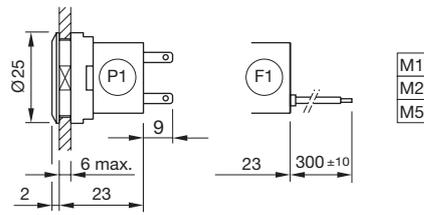
The halo ring illuminated in different colours provides clear status displays and supports the modern design. The Stop request switch can be supplied with different cable lengths and connection options – for maximum flexibility during installation.

Advantages

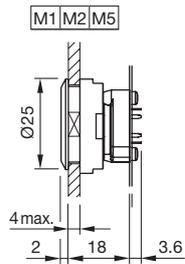
- Housing for pole diameters of 35 and 38 mm, with an adaptor for of 25 and 30mm poles
- Excellent tactile feedback
- Robust, TSI-compliant raised aluminium symbols
- Halo ring illuminated in a variety of colours
- Versatile cable lengths and plugs available on request

Dimensions and mounting cut-outs.

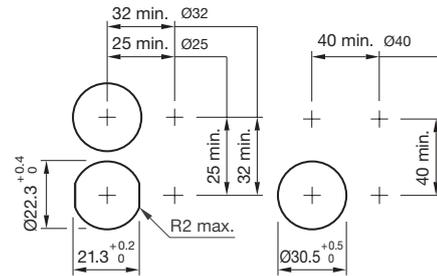
Dimensions Standard version



PCB version



Mounting cut-outs



Services.

Value Added Services

The EAO range of standard components is rounded off with our value added services, which offer the means to make the following customer-specific adjustments to the components:

- Labelling
- Illumination
- Mechanical adjustments
- Electronic adjustments
- Software
- Cable and plug mounting
- Complete product and/or kitting service

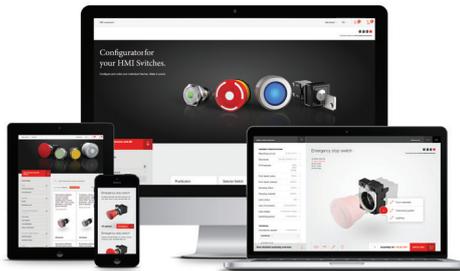


Online product configurator

Build your tailored product in the online product configuration system at www.eao.com and obtain technical specifications and 3D data at the same time.

EAO downloads

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