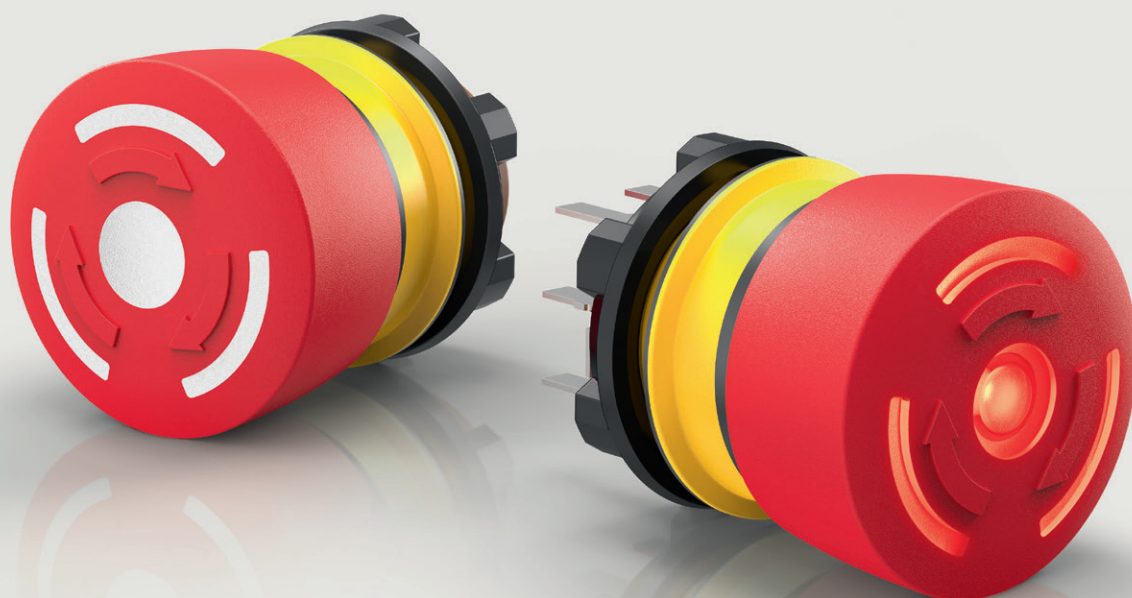


Series

84

*E-Stops and Stop Switches.*

[www.eao.com](http://www.eao.com)



# Series 84

## *E-Stops and Stop Switches.*

EAO offers intuitive, reliable and robust safety switches for the machinery industry: *The Series 84 emergency stop and stop switches have a compact, attractive design with a very low back panel depth.*

EAO, the expert partner for innovative, intuitive and reliable Human Machine Interfaces (HMIs), offers with the Series 84 emergency stop (E-Stop) and stop switches the most important safety control elements for machinery and industrial automation equipment with very low back panel depth (13.5 mm with cable connection) and an attractive design.

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.

Installed directly on the machine or in a handheld control unit, these switches reliably protect humans from injury and machines from damage.

The compact design of the Series 84 emergency stop and 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.

The actuation status of the switch is visible thanks to the green or black indication ring that is noticeable until actuated. LED illumination gives additional status information and can also be used to locate the switch, even in low ambient light conditions.

#### Typical applications

- Industrial or process automation equipment
- Machinery, in particular for handheld control units
- Robotics
- Material handling and lifting platforms
- Medical devices

#### Product range

All E-Stops and stop switches are available either with solder/plug-in terminal or flat ribbon cable (300 mm).

The switching element is available with a double break contact with either

- a normally closed contact (NC)
- two normally closed contacts (NC)
- a normally closed contact (NC) and a normally open contact (NO)

The normally closed contacts are force-operated according to EN IEC 60947-5-1 and can switch voltages and currents from 1 VAC/DC / 1 mA (1W) thanks to highly reliable, gold-plated silver contacts.

#### Mechanical characteristics

- Mounting cut-out 22.3 mm
- Operation force 17 N  $\pm$  4 N

#### Mechanical life

EAO tested: more than 250 000 cycles of operation

#### Illumination

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 5 VDC to 30 VDC.

#### Switching capacity

Alternating voltage with gold-plated silver contacts  
Utilisation category AC-15, according to EN IEC 60947-5-1

Voltage	120 VAC	240 VAC
Current	3 A	1.5 A

Direct voltage with silver contact (gold-plated)  
Utilisation category DC-13, according to EN IEC 60947-5-1 (inductive)

NO Contacts (48 VA)	NC Contacts (60 VA)	NO/NC Contacts
12 VDC / 2,0 A	12 VDC / 2,5 A	125 VDC / 0,22 A
24 VDC / 2,0 A	24 VDC / 2,5 A	250 VDC / 0,11 A
48 VDC / 1,0 A	48 VDC / 1,25 A	
60 VDC / 0,8 A	60 VDC / 1,0 A	

## 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

### Recommended operating data

	Minimum	Maximum
Voltage	1 VAC/DC	250 VAC/DC
Current	1 mA	0.27 A
Power	1 Watt	67.5 Watt

### Degree of protections

- IP65, IP66, IP67 front side
- IP20 cable version

### Temperatures

- Storage temperature  
–25 °C to +85 °C
- Operating temperature  
–25 °C to +70 °C

### Climate resistance

- Humid heat, cyclical  
96 hours, +25 °C/97%, +55 °C/93%  
relative humidity
- Humid heat, constant  
56 days, +40 °C/93% relative humidity
- Dry heat, 96 hours, +70 °C
- Cold, 96 hours, –40 °C
- Salt spray, 96 hours,  
+35 °C (in NaCl solution)

### Standards and directives

- Approvals
  - EN 60947-5-1 / EN 60947-5-5
  - DIN EN ISO 13850
  - EN IEC 60204
  - UL Cat NISD 508
  - CCC (pending)

### Conformities

- CE

### Mounting

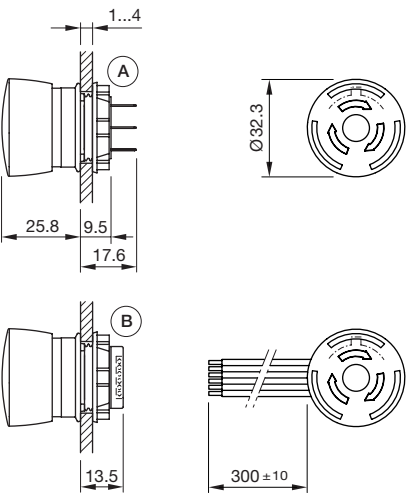
The mounting of the emergency stop and stop switch is performed on the front panel side with the aid of the fixing nut. The anti-rotation device is secured with a cam via its hole shape. The electrical connection takes place using plug-in terminal pairs, which can also be soldered on.

Further information and the Online Product Configurator are available under [www.eao.com/84-e-stop](http://www.eao.com/84-e-stop)

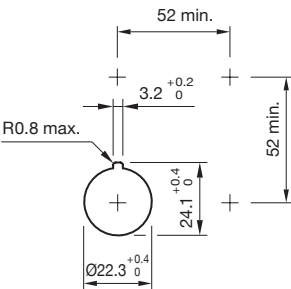


# Dimensions, mounting cut-outs, accessories.

Dimensions



Mounting cut-outs



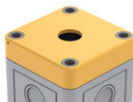
All dimensions in mm.

Accessories

Marking plate	Suitable for	Outer diameter	Text/symbol	Part No.
	S61	43 mm	Without	61-9970.0
	S61	43 mm	EMERGENCY STOP	61-9970.2
	S61	43 mm	Symbol IEC 60417-5638	61-9970.9
	S04, 45, 84	90 mm	EMERGENCY STOP	704.963.1
	S04, 45, 84	60 mm	EMERGENCY STOP	704.963.6
	S04, 45, 84	90 mm	Symbol IEC 60417-5638	704.963.4
	S04, 45, 84	60 mm	Symbol IEC 60417-5638	704.963.9
	S04, 45, 84	45 mm	Without	45-50K.1407
	S04, 45, 84	75 mm	Without	45-50J.1400

Protective shroud	Suitable for	Text/symbol	Part No.
	S04	EMERGENCY STOP	704.927.6B
	S04	Without	704.927.6
	S84	EMERGENCY STOP	84-902B
	S84	Without	84-902

Protective shroud	Suitable for	Diameter	Part No.
	S84	Ø 50 mm	84-906

Enclosure	Suitable for	Diameter	Part No.
	S61	L 65 mm x B 65 mm x H 57 mm	61-9480.5
	S45	L 85 mm x B 85 mm x H 64 mm	45-410.1401
	S04, 45, 84	L 94 mm x B 94 mm x H 81 mm	704.945.0
	S04, 45, 84	L 65 mm x B 65 mm x H 81 mm	704.945.7

PCB plug-in base	Suitable for	Part No.
	Series 84 emergency stop and stop switches with plug-in terminal	84-920

Montagewerkzeug	Suitable for	Part No.
	Series 84	84-996




# EAO Smart Box. Simple, compact and all-purpose.

The EAO Smart Box is a simple and customisable “snap-on, plug & play” solution for operator devices in industrial environments.

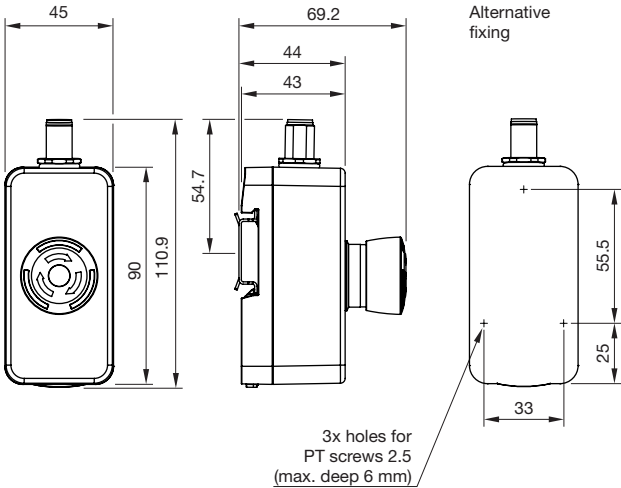
Thanks to the standardised M12 terminal, the Smart Box can be brought into service quickly and easily. The device can also be mounted on a standard top hat rail without the need for a mounting adapter.

### Advantages

- Simple snap-on mounting and M12 connection technology
- Flexible arrangement and robust, compact construction
- Ease of integration into the system thanks to bus connection or direct wiring
- Customisable front design and functionality
- Standard range available – customised solutions on request

Smart-Box	Description	Illumination	Part No.
	Yellow housing with M12	Yes	73-00002.2
	Series 84 emergency stop switch	No	73-00002.1

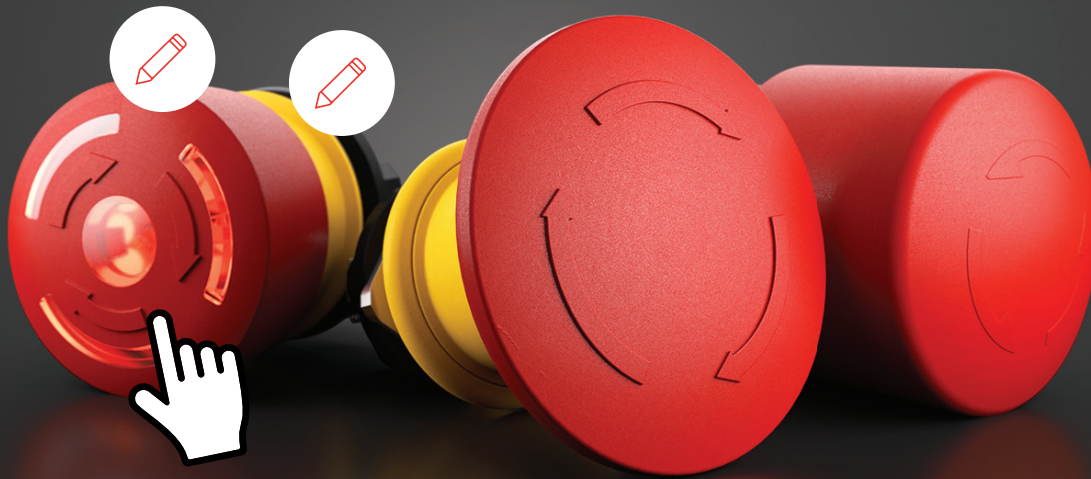
### Dimensions



All dimensions in mm.



# Online Product Configurator.

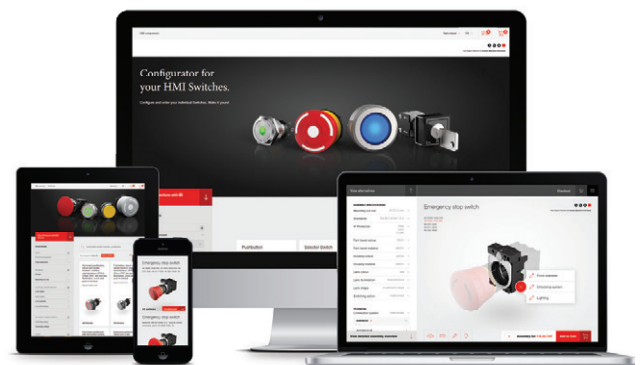


Configure your Emergency stop switch.  
*Quick and easy to your HMI Device.*

Discover more at [hmi.eao.com](https://hmi.eao.com)

- Intuitive use
- Numerous product combinations and variants
- Responsive user interface
- Compare function for multiple configurations
- 3D CAD data and datasheets
- 24 h ordering – fast delivery

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Make it yours!



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**eao**

Your Expert Partner for Human Machine Interfaces

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