



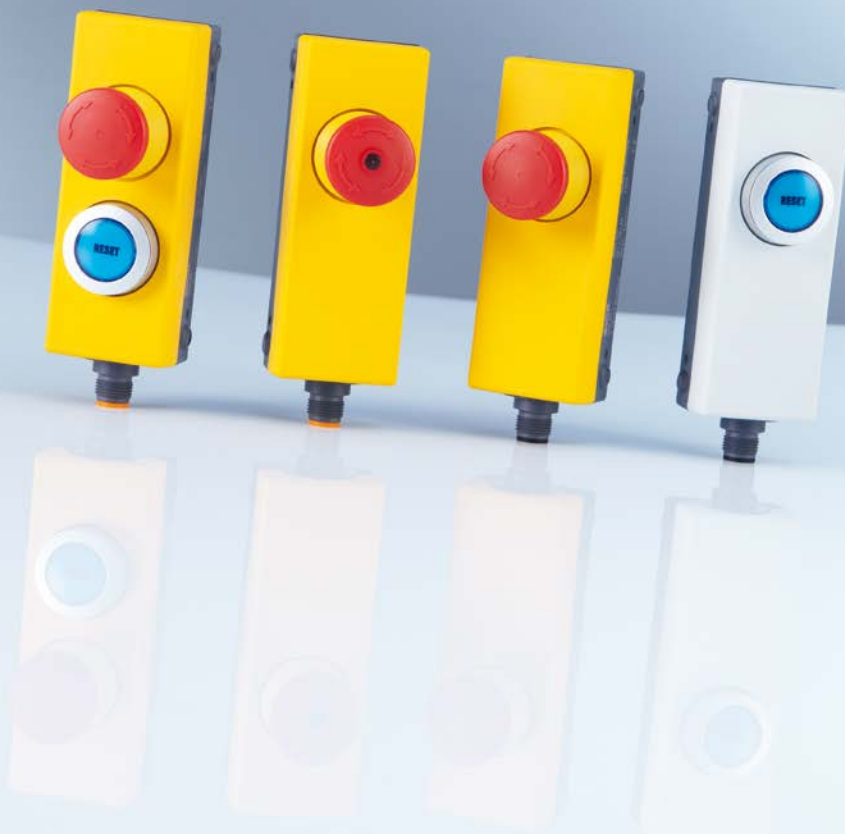
## ES11 and ER12:

RELIABLE AND SAFE WITH EMERGENCY  
STOP PUSHBUTTON AND RESET PUSHBUTTON

Safety command devices

**SICK**  
Sensor Intelligence.

# SAFETY MADE EASY: ES11 AND ER12 FROM SICK



Safety command devices from SICK ensure that dangerous movements are stopped safely or critical machine functions are reliably initiated. With its wide range of emergency stop pushbuttons, reset buttons, rope pull switches, and enabling switches, SICK provides safety solutions – with customized functionality and performance – that meet a broad range of application requirements.

With the ES 11 emergency stop pushbutton and the ER12 reset button, SICK offers two new solutions for your safety application that allow for easy installation, fast replacement and thus a minimum machine downtime. These new safety solutions are perfect for use on packaging machines and electronics and solar machines. Depending on the variant,

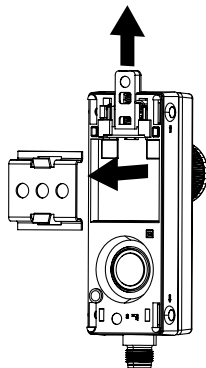
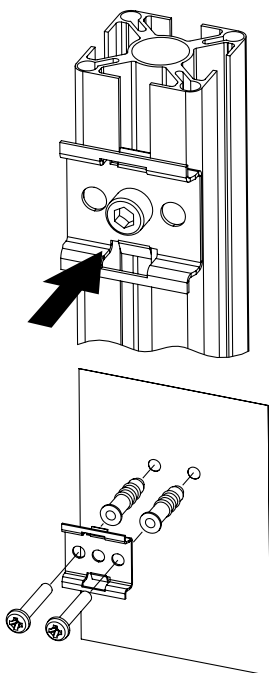
the ES11 emergency stop pushbuttons are also equipped with reset pushbuttons. The ES11 is simple, safe and custom tailored to your needs. The ES11 and ER12 are ideal for Flexi Loop integration, which is a cost-efficient, cascadable solution that provides intelligent diagnostics and evaluation.

## Attach safety quickly: Mounting and device replacement

The new ES11 and ER12 safety command devices from SICK are easy to mount. The modern housing design with a concealed bracket enables seamless integration into machines and systems.

### Easy mounting

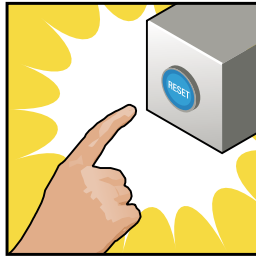
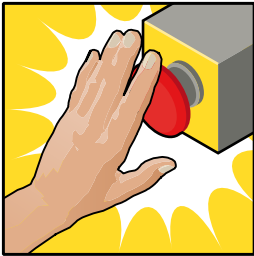
The narrow housing (40 mm wide) is well suited for aluminum profiles. The innovative bracket allows the ES11 and ER12 to be mounted quickly to an aluminum profile with one screw or to a flat surface with two screws.



### Fast commissioning and device replacement

The ES11 and ER12 feature a quick disconnect with an M12 plug – ideal for fast commissioning. For fast device replacement and a minimum downtime: Simply disconnect the plug connections, remove the device from the bracket, insert the new device, connect the line to the connector and the process is complete.

# SAFE STOP AND SAFE START: THE SAFETY REQUIREMENTS...



Emergency stop pushbuttons and reset buttons are used for solving two different safety tasks on all kinds of machines and systems: Safe stop and safe start. The use of these devices is legally required and follows specific standards and directives. Depending on the task, this also places certain requirements on the safety solutions used:



## Safe Stop

A safe stop (emergency stop) is designed to stop a machine in the event of an emergency. It is an additional safety measure and not a primary means of reducing risk.

The emergency stop pushbuttons must be easy to reach since the emergency stop command has priority over all other functions in all operating modes. The ES11 is also available with an illuminated LED or an illuminated reset button: This allows the status to be clearly indicated in conjunction with the controller.



## Safe Start

After triggering a safety-related stop function, the machine may not be started up again as long as people are located in the hazardous area. To prevent this, certain precautions must be taken, such as manually resetting the protective devices. This is carried out using reset buttons. The position of the reset button must be selected outside of the hazardous area so that the entire hazardous area can be viewed. The illuminated LED reset button clearly indicates the status of "reset required" from a distance.

# ES11 AND THE INTELLIGENT EVALUATION

SICK offers various products that work together to provide intelligent and safe solutions. Adhere to safety requirements efficiently and economically with SICK safety sensors and safety command devices.

The ES11 and ER12 can be wired and evaluated in different ways:

- Conventionally: individually wired with a UE43 or UE48 safety relay
- Economically: in conjunction with the Flexi Soft and Flexi Classic safety controllers
- Optional diagnostics: via a safe Flexi Loop sensor cascade from SICK (ES11)

## ES11 and Flexi Loop: The cost-saving, safe sensor cascade with intelligent diagnostics

Flexi Loop from SICK fulfills the requirements for cost-effectively cascading safety switches and sensors within a machine module. Flexi Loop allows up to 32 safety sensors to be cascaded while maintaining the highest levels of safety. With Flexi Loop, safety switches and safety sensors are used together. Flexi Loop also provides a comprehensive diagnostic check of all doors, emergency stop pushbuttons and sensors.

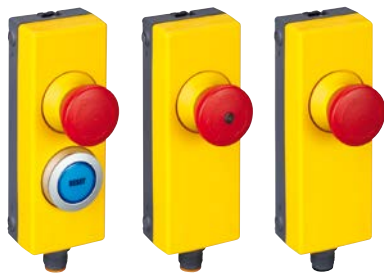
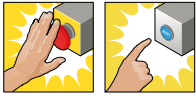
The advantage of this:

The M12 plug allows the ES11 to be integrated easily into the safety sensor cascade via plug-and-play – including power supply. Since both the input and output are evaluated, the following functions are possible with only one device (ES11 with a reset button):

- Monitoring of the emergency stop pushbutton
- Monitoring of the reset
- Activation of the illumination for the reset



# RELIABLE AND SAFE WITH EMERGENCY STOP PUSHBUTTON AND RESET PUSHBUTTON



### Additional information

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### Product description

ES11 emergency stop pushbuttons are essential in automated machines and plants. They make it possible for someone to stop a machine or a system immediately in case of an emergency. Depending on the variant, the emergen-

cy stop pushbuttons are also equipped with reset pushbuttons. Reset pushbuttons are used to manually reset the protective device and thus restore the machine to a safe state for restart.

### At a glance

- Slim plastic housing with quick disconnect mounting clip
- Available as an emergency stop pushbutton or as a combined emergency stop/reset unit
- Emergency stop pushbutton with optional LED illumination
- Illuminated reset pushbutton
- Flexi Loop-compatible M12 plug connector

### Your benefits

- Easy installation with quick disconnect mounting clip
- Quick commissioning and easy replacement with an M12 plug connector
- User-friendly status indication
- Flexi Loop now enables a safe series connection with enhanced diagnostics capabilities and minimal wiring effort.

→ [www.mysick.com/en/ES11](http://www.mysick.com/en/ES11)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

You can find more detailed data in the operating instructions. Download at [www.mysick.com](http://www.mysick.com).

## Safety-related parameters

<b>B<sub>10d</sub> parameter</b>	2.5 x 10 <sup>5</sup> switching cycles
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## Performance

	ES11-SA1A4	ES11-SA2B8	ES11-SC4D8
Number of positive action N/C contacts	2		
Number of N/O contacts	0		1
Emergency stop button (illuminable)	-	✓	-
Reset button (illuminable)	-		✓
Dimensions (W x H x D)	40 mm x 123 mm x 52 mm		

## Interfaces

	ES11-SA1A4	ES11-SA2B8	ES11-SC4D8
Connection type	Plug connector, M12, 4-pin	Plug connector, M12, 8-pin	
Flexi Loop-compatible plug connector	✓		

## Electrical data

### Operating data

	ES11-SA1A4	ES11-SA2B8	ES11-SC4D8
Protection class	III		
Switching principle	Slow action switching element		
Number of positive action N/C contacts	2		
Number of N/O contacts	0		1
Usage category	DC-13 (EN 60947-5-1)	-	
Rated operating current (voltage)	2 A (24 V DC)		
Switching voltage	-	1 V DC ... 30 V DC	
Operating current	-	1 mA ... 100 mA	
Switching power	-	≤ 250 mW	
Electrical life			
Emergency stop button	5 x 10 <sup>4</sup> switching cycles		
Reset button	-		1 x 10 <sup>5</sup> switching cycles
Contact material	AgNi	AgNi, 5 µm gold plated	

### Illumination

	ES11-SA1A4	ES11-SA2B8	ES11-SC4D8
Supply voltage V <sub>s</sub>	-	30 V AC/DC	
Operating current	-	4 mA (24 V DC)	14 mA (24 V DC)

## Mechanical data

	ES11-SA1A4	ES11-SA2B8	ES11-SC4D8
Weight	112 g	115 g	121 g
Housing material	PBT		
Mechanical life			
Emergency stop button	5 x 10 <sup>4</sup> switching cycles		
Reset button	-		1 x 10 <sup>5</sup> switching cycles

Ambient data

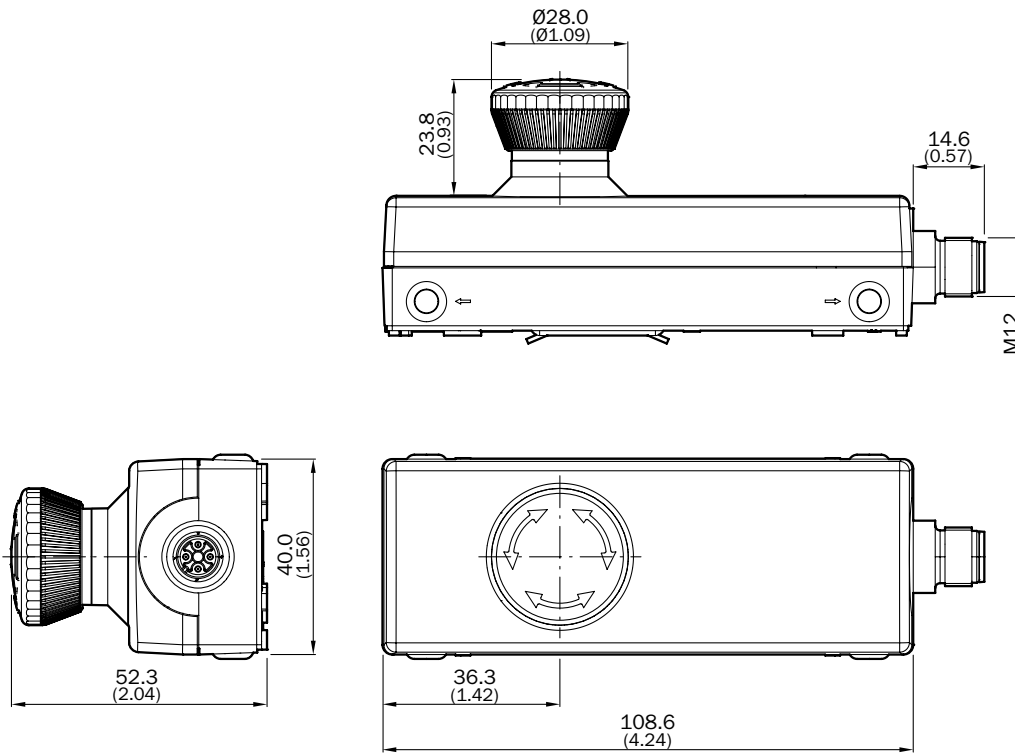
Enclosure rating	IP 65
Ambient operating temperature	-25 °C ... +70 °C
Storage temperature	-25 °C ... +80 °C

Ordering information

Number of positive action N/C contacts	Number of N/O contacts	Emergency stop button (illuminable)	Reset button (illuminable)	Model name	Part no.
2	0	-	-	ES11-SA1A4	6051327
		✓	-	ES11-SA2B8	6051328
	1	-	✓	ES11-SC4D8	6051329

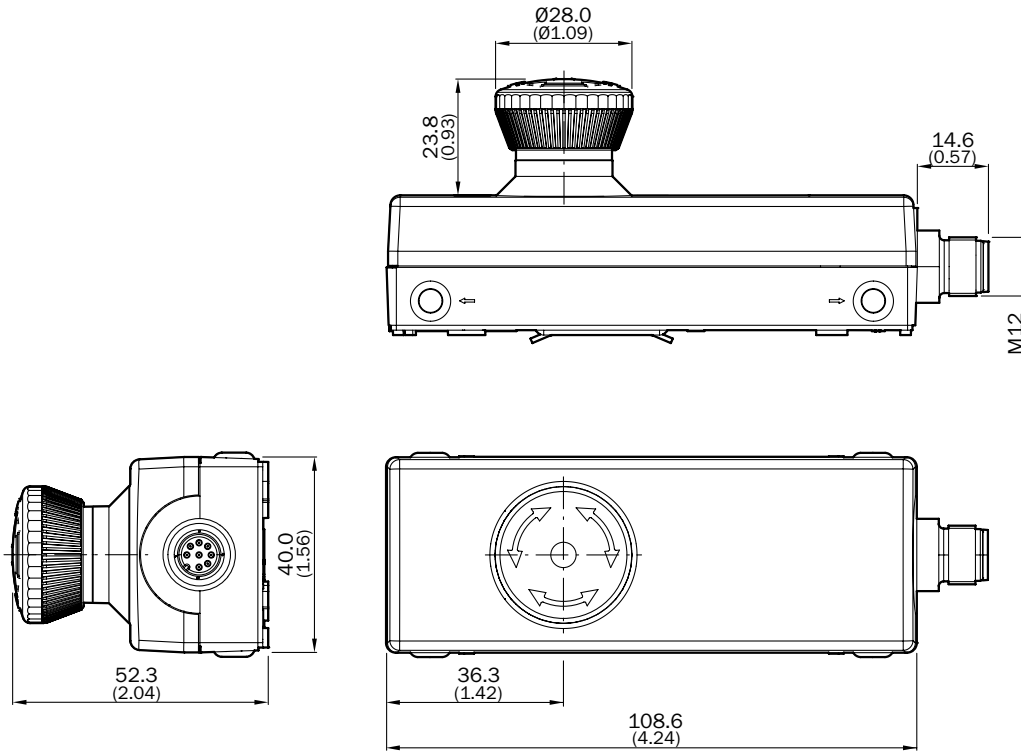
Dimensional drawings (Dimensions in mm (inch))

ES11-SA1A4

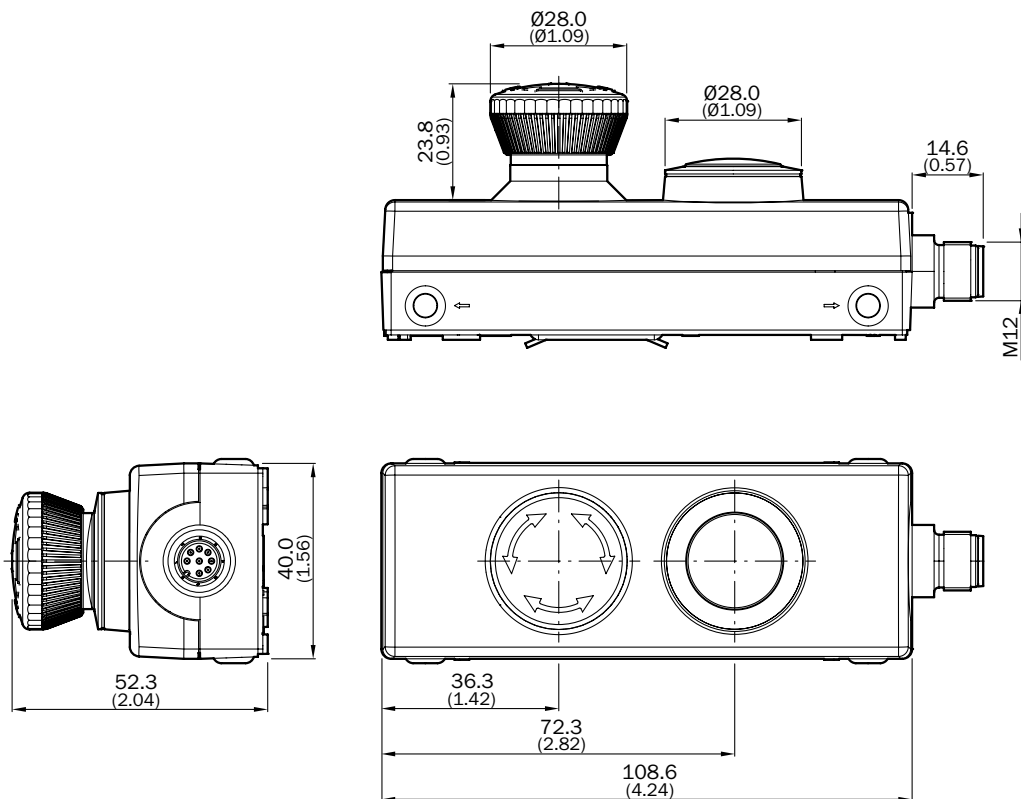




ES11-SA2B8

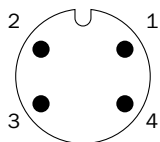


ES11-SC4D8



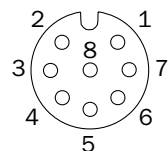
Connection diagram

ES11-SA1A4



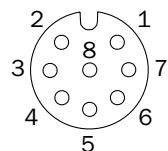
1	N/C contact
2	N/C contact
3	N/C contact
4	N/C contact

ES11-SA2B8



3	N/C contact
4	N/C contact
7	N/C contact
8	N/C contact
5	LED + (E-Stop)
6	LED - (E-Stop)
1	not connected
2	

ES11-SC4D8



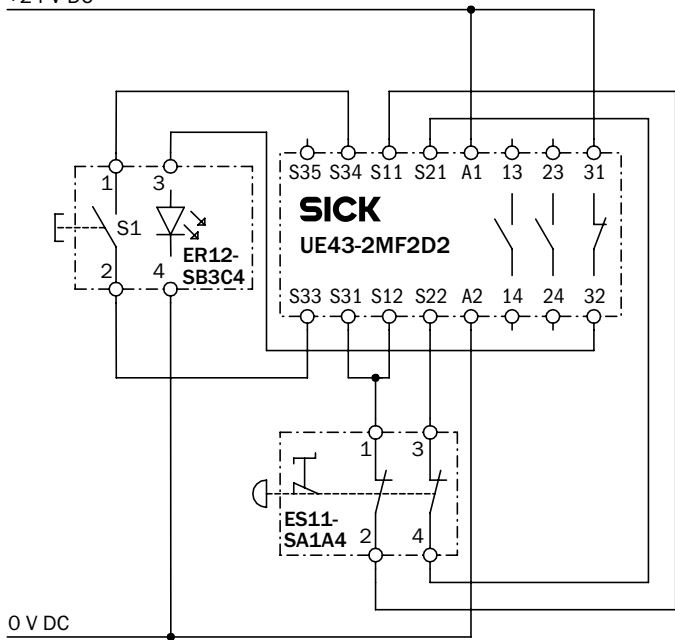
3	N/C contact
4	N/C contact
7	N/C contact
8	N/C contact
5	LED + (reset)
6	LED - (reset)
1	N/O contact (reset)
2	

Connection diagrams

You can find more connection diagrams at [www.mysick.com](http://www.mysick.com).

ER12 reset pushbutton and ES11 emergency stop pushbutton connected to UE43 safety relay

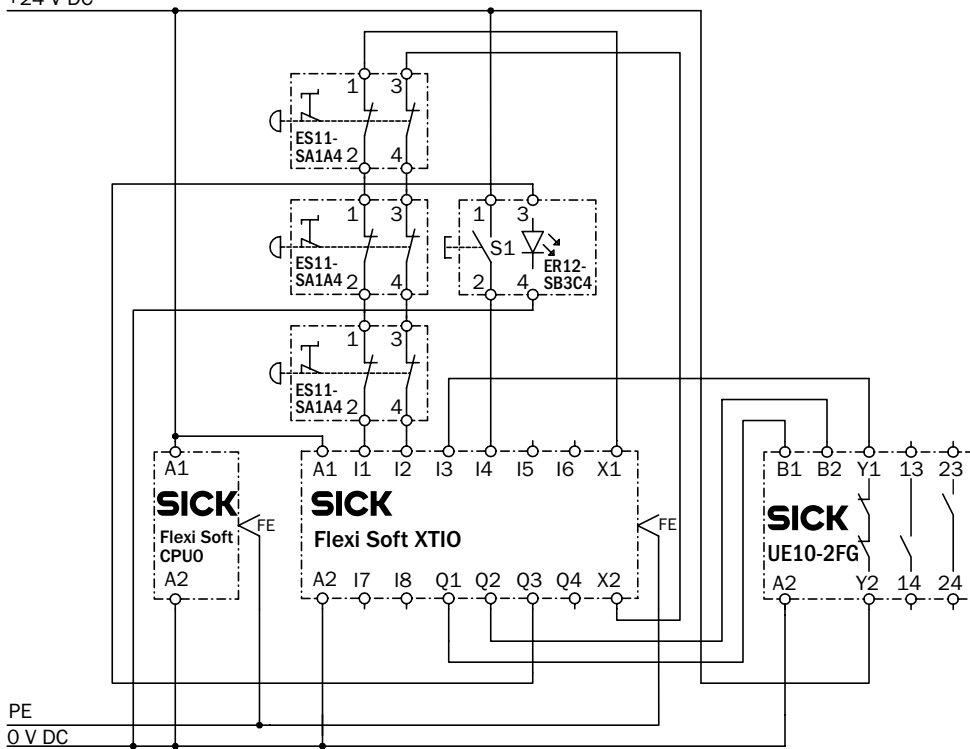
+24 V DC



E102175/00/2013-07-30

ER12 reset pushbutton and series connection of three ES11 emergency stop pushbuttons on a Flexi Soft safety controller

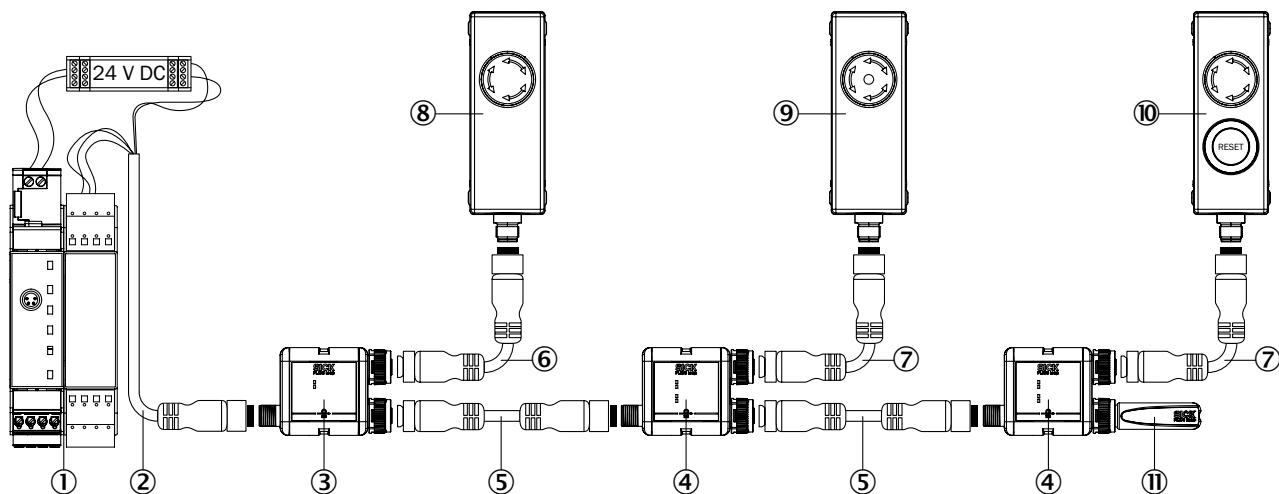
+24 V DC



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## Series connection

Series connection of three ES11 emergency stop pushbuttons on a Flexi Loop safe sensor cascade




- ① Flexi Soft safety controller
- ② Connecting cable with female connector M12, 4-pin and open conductor heads (e.g., DOL-1204-xxxx)
- ③ FLN-EMSS0000105 Flexi Loop node
- ④ FLN-EMSS1100108 Flexi Loop node
- ⑤ Connection cable with female connector M12, 5-pin and male connector M12, 5-pin (e.g., DSL-1205-xxxx)
- ⑥ Connection cable with female connector M12, 4-pin and male connector M12, 4-pin (e.g., DSL-1204-xxxx)
- ⑦ Connection cable with female connector M12, 8-pin and male connector M12, 8-pin (e.g., DSL-1208-xxxxxx)
- ⑧ ES11-SA1A4 emergency stop pushbutton
- ⑨ ES11-SA2B8 emergency stop pushbutton
- ⑩ ES11-SC4D8 emergency stop pushbutton
- ⑪ FLT-TERM00001 Flexi Loop termination element

## Accessories



### Terminal and alignment brackets

#### Alignment brackets



Figure	Packing unit	Type	Part no.
	10 pieces	Holding clamp	5326274

### Plug connectors and cables

#### Connecting cable (female connector-open)

Figure	Connection type head A	Connection type head B	Model	Cable length	Type	Part no.
	Female connector, M12, 4-pin, straight	Cable	Drag chain use, PUR, halogen-free, unshielded	5 m	DOL-1204-G05MC	6025901
				10 m	DOL-1204-G10MC	6025902
				15 m	DOL-1204-G15MC	6034749
				20 m	DOL-1204-G20MC	6034750
	Female connector, M12, 8-pin, straight	Cable	PVC, shielded	5 m	DOL-1208-G05MA	6020993
				10 m	DOL-1208-G10MA	6022152
				15 m	DOL-1208-G15MA	6022153
				30 m	DOL-1208-G30MA	6022242

#### Connection cable (male-female connector)

Figure	Connection type head A	Connection type head B	Model	Cable diameter	Cable length	Type	Part no.
	Female connector, M12, 4-pin, straight	Connector, M12, 4-pin, straight	PVC, unshielded	5 mm	0.6 m	DSL-1204-G0M6	6022565
					1.5 m	DSL-1204-G1M5	6034822
					2 m	DSL-1204-G02M	6022567
					5 m	DSL-1204-G05M	6022569
					10 m	DSL-1204-G10M	6034406
					20 m	DSL-1204-G20M	6034407
	Female connector, M12, 8-pin, straight	Connector, M12, 8-pin, straight	Drag chain use, PUR, halogen-free, shielded	7.7 mm	1 m	DSL-1208-G01MAC	6026625
			PUR, halogen-free, unshielded		7.7 mm	2 m	DSL-1208-G02MAC
			PUR, halogen-free, unshielded	7.7 mm		5 m	DSL-1208-G05MAC
					10 m	DSL-1208-G10MAC	6034901

# RELIABLE AND SAFE START WITH A RESET BUTTON



## Additional information

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## Product description

ER12 reset pushbuttons are used when the protective device initiates a stop function. In some cases, people might be in the hazardous area without being detected by the protective device. Before restarting the machine, the

protective device must be reset. The reset pushbutton must be placed near the hazardous area so that personnel can ensure the area is clear prior to pushing the reset button.

## At a glance

- Slim plastic housing with quick disconnect mounting clip
- Illuminated reset pushbutton
- 1 NO
- 4-pin M12 plug connector

## Your benefits

- Easy installation with quick disconnect mounting clip
- Quick commissioning and easy replacement with an M12 plug connector
- User-friendly status indication

→ [www.mysick.com/en/ER12](http://www.mysick.com/en/ER12)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

You can find more detailed data in the operating instructions. Download at [www.mysick.com](http://www.mysick.com).

### Safety-related parameters

<b>B<sub>10d</sub> parameter</b>	1 x 10 <sup>6</sup> switching cycles
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### Performance

<b>Number of N/O contacts</b>	1
<b>Reset button (illuminable)</b>	✓
<b>Dimensions (W x H x D)</b>	40 mm x 123 mm x 36 mm

### Interfaces

<b>Connection type</b>	Plug connector, M12, 4-pin
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### Electrical data

#### Operating data

<b>Protection class</b>	III
<b>Switching principle</b>	Slow action switching element
<b>Number of N/O contacts</b>	1
<b>Usage category</b>	DC-13 (EN 60947-5-1)
<b>Rated operating current (voltage)</b>	2 A (24 V DC)
<b>Electrical life</b>	1 x 10 <sup>6</sup> switching cycles
<b>Contact material</b>	AgNi

#### Illumination

<b>Supply voltage V<sub>s</sub></b>	30 V AC/DC
<b>Operating current</b>	14 mA (24 V)

### Mechanical data

<b>Weight</b>	106 g
<b>Housing material</b>	PBT
<b>Mechanical life</b>	1 x 10 <sup>6</sup> switching cycles

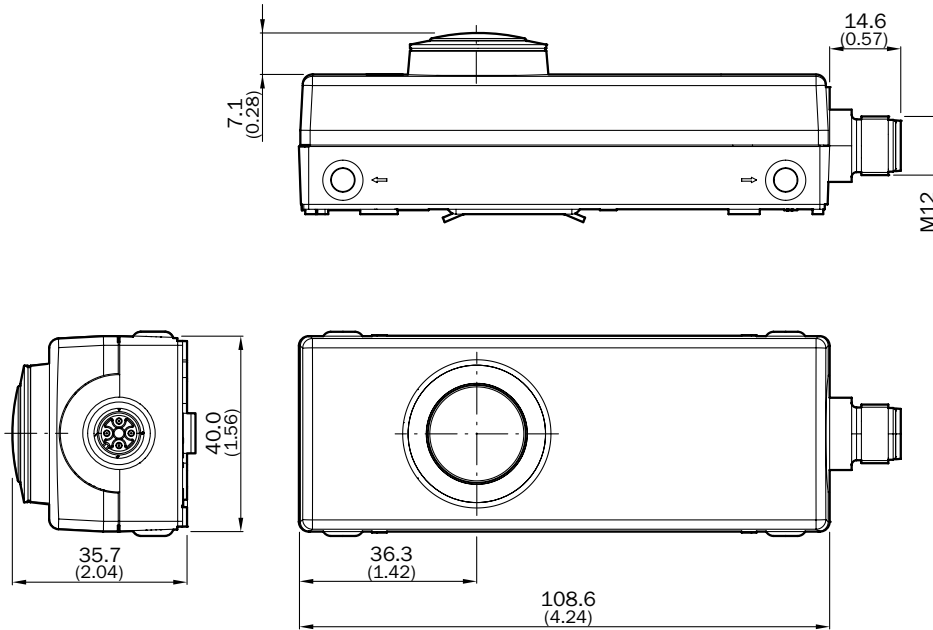
### Ambient data

<b>Enclosure rating</b>	IP 65
<b>Ambient operating temperature</b>	-25 °C ... +70 °C
<b>Storage temperature</b>	-25 °C ... +80 °C

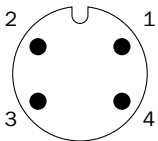
Ordering information

Number of N/O contacts	Reset button (illuminable)	Model name	Part no.
1	✓	ER12-SB3C4	6051330

Dimensional drawings (Dimensions in mm (inch))



Connection diagram



1	N/O contact
2	N/O contact
3	LED +
4	LED -

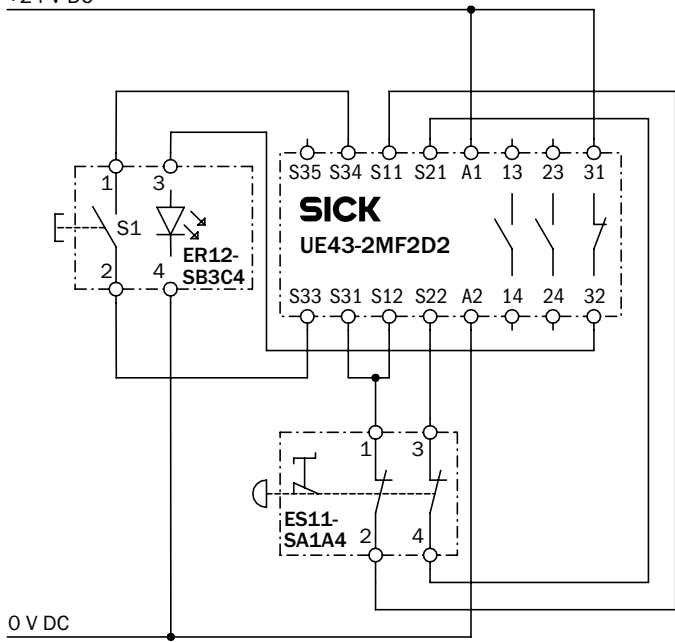


Connection diagrams

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ER12 reset pushbutton and ES11 emergency stop pushbutton connected to UE43 safety relay

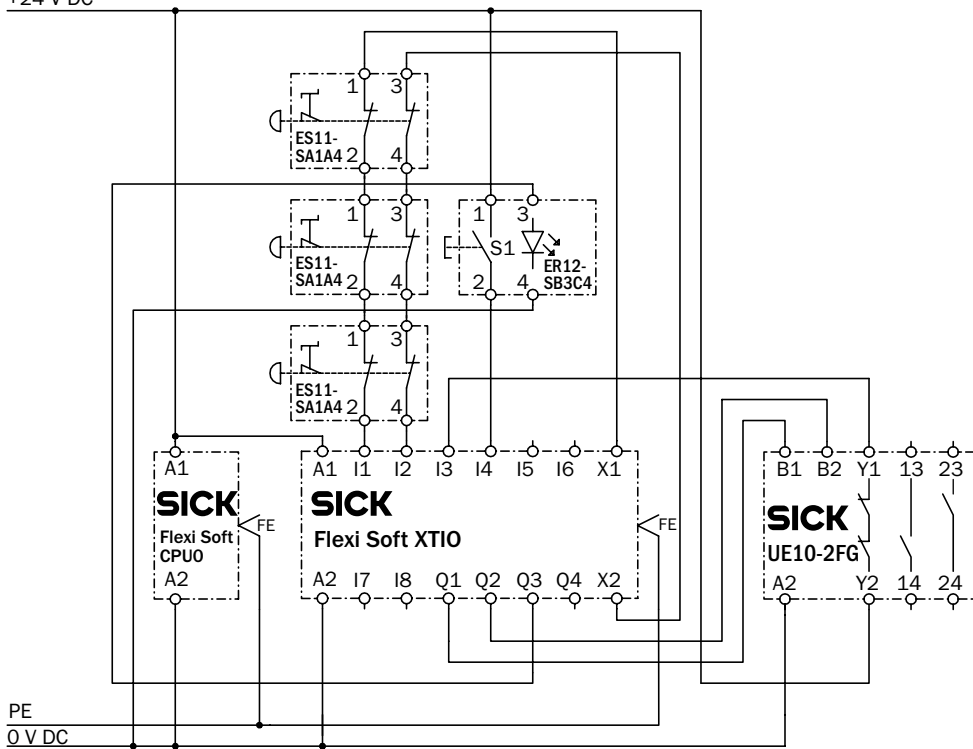
+24 V DC



E102175/00/2013-07-30

ER12 reset pushbutton and series connection of three ES11 emergency stop pushbuttons on a Flexi Soft safety controller

+24 V DC




E102174/00/2013-07-30

Accessories


Terminal and alignment brackets

Alignment brackets


Figure	Packing unit	Type	Part no.
	10 pieces	Holding clamp	5326274

Plug connectors and cables

Connecting cable (female connector-open)

Figure	Connection type head A	Connection type head B	Model	Cable length	Type	Part no.
	Female connector, M12, 4-pin, straight	Cable	Drag chain use, PUR, halogen-free, unshielded	5 m	DOL-1204-G05MC	6025901
				10 m	DOL-1204-G10MC	6025902
				15 m	DOL-1204-G15MC	6034749
				20 m	DOL-1204-G20MC	6034750

Connection cable (male-female connector)

Figure	Connection type head A	Connection type head B	Model	Cable diameter	Cable length	Type	Part no.
	Female connector, M12, 4-pin, straight	Connector, M12, 4-pin, straight	PVC, unshielded	5 mm	0.6 m	DSL-1204-G0M6	6022565
					1.5 m	DSL-1204-G1M5	6034822
					2 m	DSL-1204-G02M	6022567
					5 m	DSL-1204-G05M	6022569
					10 m	DSL-1204-G10M	6034406
					20 m	DSL-1204-G20M	6034407



## SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for factory, logistics, and process automation. With more than 6,000 employees and over 40 subsidiaries worldwide, we are always close our customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in various industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services round out our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

### **Worldwide presence:**

Australia, Belgium/Luxembourg, Brasil, Česká Republika, Canada, China, Danmark, Deutschland, España, France, Great Britain, India, Israel, Italia, Japan, México, Nederland, Norge, Österreich, Polska, România, Russia, Schweiz, Singapore, Slovenija, South Africa, South Korea, Suomi, Sverige, Taiwan, Türkiye, United Arab Emirates, USA.

Please find detailed addresses and additional representatives and agencies in all major industrial nations at: [www.sick.com](http://www.sick.com)