Emergency Stop Switches

Operating Instructions

Type ES-P (Plastic)
Knock-out for plastic version

Type ES-SS (Stainless Steel)
Mirror Polished Finish

Type ES-SS(P) (Stainless Steel)
With button protection
shroud with padlock holes for lock off during maintenance

Type ESL-SS (Stainless Steel)
With button protection
shroud with padlock holes for lock off during maintenance

Type ESL-SS(P) (Stainless Steel)
With button protection
shroud with padlock holes for lock off during maintenance

Type ESL-SS(L) (Stainless Steel)
With 2-colour LED

Type ESL-SS(LP) (Stainless Steel)
With 2-colour LED and button protection
shroud with padlock holes for lock off during maintenance

IMPORTANT NOTE:
Read and understand these instructions before installing, operating, or maintaining this equipment.
The product is designed to be a component of a customised safety orientated control system. It is the responsibility of each manufacturer to ensure the correct overall functionality of its systems and machines. IDEM, its subsidiaries and affiliates, are not in a position to guarantee all of the characteristics of a given system or product not designed by IDEM.

Application:
Emergency Stop Switches are mounted on machines and sections of plant conveyors that cannot be protected by guards.
In combination with any dual channel safety monitoring controllers these switches can be used as emergency stop devices and monitored for up to Category 4/PLe to ISO13849-1.

Operation:
All Emergency Stop Switches conform to European Standard EN ISO 13850 and IEC 60947-5-5. They have a positive mechanical linkage between the switch contacts and the E-Stop Button. The switches are mechanically latched and can only be returned to the operational condition by a pressing the reset button as required by EN ISO 13850 and IEC 60947-5-5.

Installation Guide:
1. Installation of all switches must be in accordance with a risk assessment for the individual application and in accordance with local wiring regulations and EN60204-1.
   Installation must only be carried out by competent personnel and in accordance with these instructions.

2. M4 mounting bolts must be used to fix the switches. Tightening torque for mounting bolts to ensure reliable fixing is 4 Nm. Tightening torque for the lid screws, conduit entry plugs and cable glands must be 1.5 Nm to ensure IP seal. Only use the correct size gland for the conduit entry and cable outside diameter.

3. Check operation of all switches and the control circuits by activating the switch (depress the Red Button) and resetting each switch by twisting the Red Button. Ensure each time that the switches latch off and require manual resetting.

4. For versions with the Protection Shroud ensure that the padlock size is suitable to prevent re-setting of the button.

Maintenance:

Every Week:
Check correct operation of the control circuits and latching mechanism. Inspect for damage to the E Stop button or casing.

Every 6 Months:
Isolate power and remove cover. Check screw terminal tightness and check for signs of moisture ingress. Never attempt to repair any switch.

LED Wiring examples (if fitted):
Black (or Terminal 2) is 0V (or Neutral for 110V and 230V ac versions). When power is applied to the Red wire (or Terminal 1), the LED will illuminate Red. When power is applied to the Green wire (or Terminal 3), the LED will illuminate Green.

LED has 2 colours
Recommended Colour Usage:
Flash or Steady Red – Stopped
LED Steady Green - Run

LED Steady Green: Run

Terminal 1 or Red
Terminal 2 or Black
Terminal 3 or Green

Wiring circuits for Explosion Proof Versions:

1 NC  1 NO  2 NC  2 NO

Optional Explosion Proof Contact Block:
Classification
Ex d IIC T6 (20C Ta 60C) Gb
Ex tb IBC T85C (-20C Ta 69C) Db

Rated Voltage
250V ac/dc
2 pole 4A
4 pole 2.5A

Safety Classification and Reliability Data:
Mechanical Reliability B10d
ISO 13849-1
EN 60981
Safety Data - Annual Usage
PFHd
Proof Test Interval (Life)
MTTf

1.5 x 10^6 operations at 100mA load
up to pLe depending upon system architecture
up to SIL3 depending upon system architecture
up to SIL3 depending upon system architecture

8 cycles per hour / 24 hours per day / 365 days
+1.0 x 10^7
21 years
214 years

INFORMATION WITH REGARD TO UL508:
Type 1 Enclosure
Contact Blocks A300 230V/3A 120V/4A
Wire range: 16AWG – 12AWG Copper Torque 7lb/in (0.8Nm)
LED powered by LVLC or Class 2 only.
**Emergency Stop Switches**

**DIMENSIONS:** ES-P

![Emergency Stop Switch Diagram](image1.png)

*Fixing Holes for M4 Screws*

**DIMENSIONS:** ES-SS

![Emergency Stop Switch Diagram](image2.png)

*Fixing Holes for M4 Screws*

**DIMENSIONS:** ESL-SS

![Emergency Stop Switch Diagram](image3.png)

*Fixing Holes for M4 Screws*

**SPECIAL NOTE:**
Where required by local regulations please affix the supplied yellow “EMERGENCY STOP” sticker as shown in the image.