

Operating Instructions

Correct Use / Function

ZStop are Emergency Stop Switches mounted on machines and sections of plant conveyors that cannot be protected by guards.

In combination with any dual channel safety relays or safety monitoring controllers, these switches can be used as emergency stop devices and monitored for up to Category 4/PLe to ISO13849-1.



Variants/ Types

Zander offers the following types:

- Compact plastic ZStop-S (3 pole)
- Compact Stainless Steel ZStop-SE (3pole)
- Stainless Steel ZStop-LE (4 pole)
- Stainless Steel ZStop-LEL (4 pole with LED)



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 then 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/ Contact

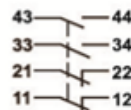
1. Installation of all switches must be in accordance with a risk assessment for the individual application and in accordance with local wiring regulations and EN60204-1. Installation must only be carried out by competent personnel and in accordance with these instructions.
2. M4 mounting bolts must 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.

Contact Block Options:

2 NC / 1 NO
ZStop-S, ZStop-SE



2 NC / 2 NO
ZStop-LE



3 NC / 1 NO
ZStop-LEL



Maintenance

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.

Every Month: Check correct operation of the control circuits and latching mechanism. Inspect for damage to the E Stop button or casing. Replace any switch displaying damage.

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 (only type ZStop-LEL)

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:

LED Red - Stopped
LED Green - Run



Operating Instructions

English translation
Errors and technical changes reserved

Techn. Data

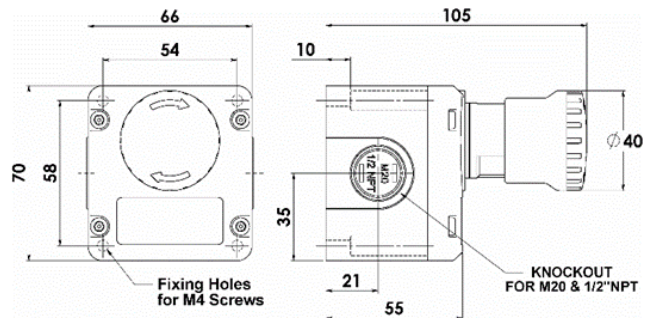
| | |
|-----------------------------------|--|
| Corresponds to the standards | EN ISO 13850; IEC 60947-5-5; UL508 |
| Approvals | UL |
| Safety Contact Type | IEC 60947-5-1 Double Break Type Zb |
| Contact material | Silber |
| Termination | Clamp up to 2.5 sq. mm conductors |
| Rating | Utilization Category: AC15 |
| Operational Rating | AC15 A300 240V. 3A/120V 6A ac |
| Thermal Current (Ith) | 10A |
| Rated Insulation Voltage (Ui) | 500V |
| Withstand Voltage | 2500V |
| Short Circuit Overload Protection | Fuse Externally 10A (FF) |
| Body material | Plastic (ZStop-S), Stainless steel 316 (ZStop SE, LE,LEL). |
| Dimensions | see next page |
| Protection | IP69K Stainless Steel (NEMA 6), IP67 Plastic |
| Temperature range | -25°C to +80°C |

Safety Classification and Reliability Data

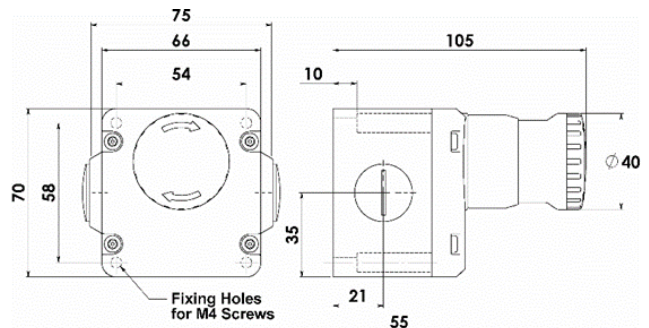
| | |
|-----------------------------|---|
| Mechanical Reliability B10d | 1.5 x 10 ⁶ operations at 100mA load |
| ISO 13849-1 | up to PLe depending on system architecture |
| EN 62061 | up to SIL3 depending on system architecture |
| Safety Data - Annual Use | 8 cycles per hour / 14 hours per day / 365 days |
| | MTTFd 214 years |

Dimension

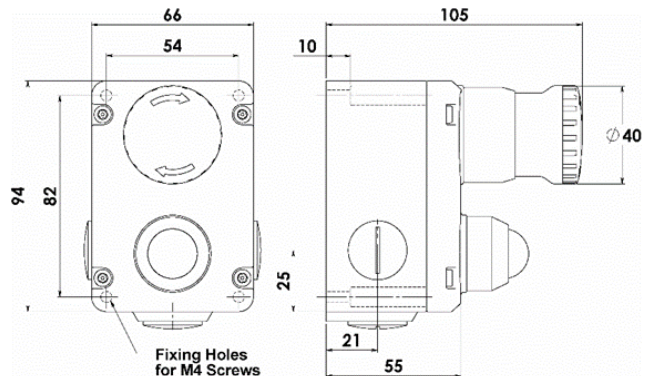
ZStop-S



ZStop-SE, ZStop-LE



ZStop-LEL



3D-CAD-Data available upon request (.step).

Operating Instructions

Attention

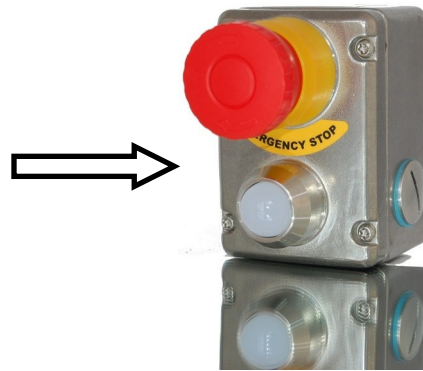


SPECIAL NOTE:

Where required by local regulations please affix the supplied yellow "EMERGENCY STOP" sticker as shown in the image.

WARNING: DO NOT DEFEAT, TAMPER, OR BYPASS THE SAFETY FUNCTION. FAILURE TO DO SO CAN RESULT IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT: NE PAS DESACTIVER, MODIFIER, RETIRER, OU CONTOURNER CETI INTERVERROUIL-LAGE IL PEUT EN RESULTER DES BLESSURES GRAVES DU PERSONNEL UTILISATEUR.



Variants & Accessories

| | |
|------------------|--------------------------------------|
| Order No. 941600 | ZStop-S (Plastic) |
| Order No. 941601 | ZStop-SE (Stainless Steel) |
| Order No. 941602 | ZStop-LE (Stainless Steel) |
| Order No. 941603 | ZStop-LEL (Stainless Steel with LED) |



Hersteller: H. ZANDER GmbH & Co. KG
Producer: Am Gut Wolf 15 • 52070 Aachen • Deutschland

Produktgruppe: Not-Halt Schalter
Product Group: Emergency Stop Switches

| Produkt Name Product Name | Zertifikats-Nr. UL No of Certificate UL |
|------------------------------|--|
| ZStop-S | E519491 |
| ZStop-SE | E519491 |
| ZStop-LE | E519491 |
| ZStop-LEL | E519491 |

Die Produkte stimmen mit den Vorschriften folgender Europäischer Richtlinien überein:
 The products conform with the essential protection requirements of the following European directives:

2006/42/EG : Maschinenrichtlinie
 2006/42/EC : Machinery directive

2011/65/EU: RoHS Richtlinie
 2011/65/EU: RoHS directive

2015/863/EU: Delegierte Richtlinie zu 2011/65/EU
 2015/863/EU: Delegated directive to 2011/65/EU

Die Übereinstimmung der bezeichneten Produkte mit den Vorschriften der o.a. Richtlinie wird, falls anwendbar, nachgewiesen durch die vollständige Einhaltung folgender Normen:
 If applicable, the conformity of the designated products is proved by full compliance with the following standards:

EN ISO 13850: 2015
EN ISO 14119: 2013

EN 60204-1: 2018
EN 60947-5-1: 2017

Gemäß Zertifikat der benannten Stelle:
 According to the certificate of the below mentioned organisation:

IEC 60947-5-5 1998: + A2:2017 (Part 5-5).
UL 508 & CSA-C22.2 No. 14

Benannte Stelle / designated organisation:
 UL Underwriters Laboratories

Dokumentationsbeauftragte/-r: Christiane Nitschalk
 Documentation manager

Aachen, den 16.03.2021

Dr.-Ing. Marco Zander
 Geschäftsleitung
 General Manager

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 Leiter CE-Konformitätsbewertung
 Manager for EC declaration of conformity

FT-3-0703

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