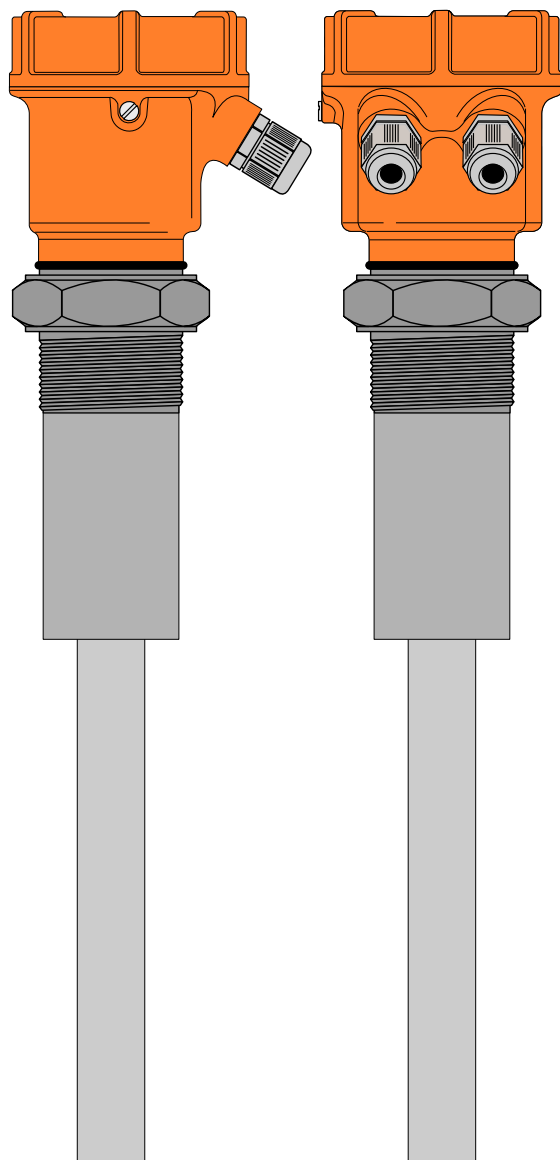


LSVR:
Vibrating Rod
Level Limit Switch for Solids



Instruction Manual

Introduction

- controls & indicators
- connection terminals
- configuration switches

Delay Setting

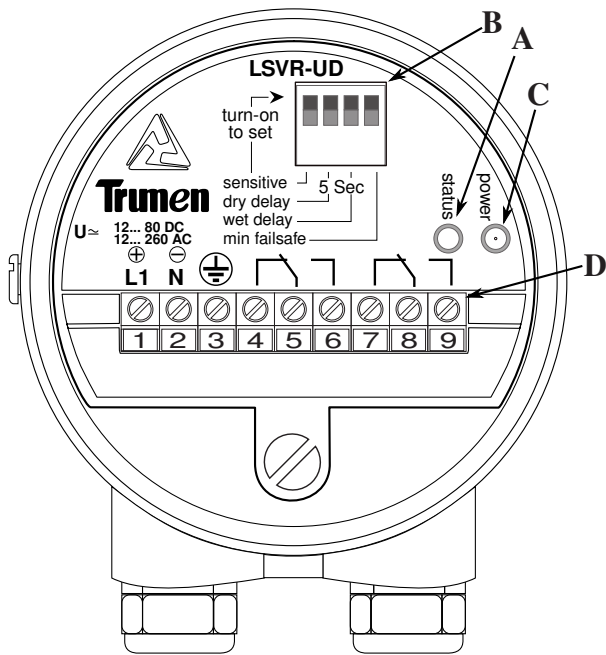
- controls & indicators
- dry (uncovered) delay setting
- wet (covered) delay setting

Failsafe Installation

- failsafe selection
- electrical connections (AC)
- electrical connections (DC)

Do's and Don'ts

Introduction



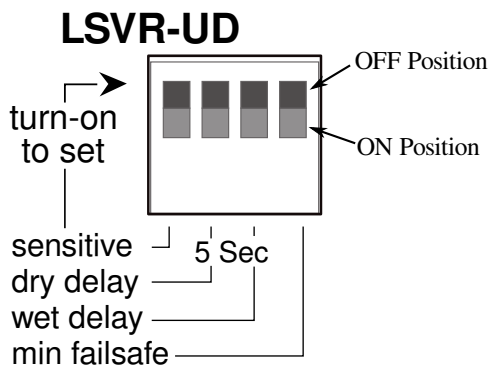
controls & indicators

- A Alarm Indicating LED
- B Configuration Switches
- C Power ON LED Indicator
- D Connecting Terminals

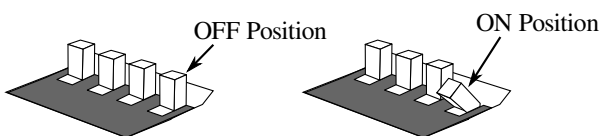
connection terminals

- 1 + of DC or Live of AC Supply input
 - 2 - of DC or Neutral of AC Supply input
- Supply:
12 to 80VDC or 12 to 260VAC 50/60Hz
- 3 Earth terminal for safety
 - 4 Normally connected terminal of contact 1
 - 5 Common terminal of contact 1
 - 6 Normally open terminal of contact 1
 - 7 Normally connected terminal of contact 2
 - 8 Common terminal of contact 2
 - 9 Normally open terminal of contact 2

configuration switches



- 1 sensitivity control
sensitive setting for low density materials (turn-on for fluffy/low density powders etc) (keep turned-off for normal density materials)
- 2 “dry” (or uncovered) delay (5 second delay)
(turn-on when 5 second more time is needed for fork out of solid confirmation)
- 3 “wet” (or covered) delay (5 second delay)
(turn-on when 5 second more time is needed for fork touching the material, confirmation)
- 4 minimum failsafe select
Failsafe means alarm is same as power failure.
Failsafe=high (maximum) for overflow detection
Failsafe=low (minimum) for underflow detection



Example of Switch in On and Off Positions

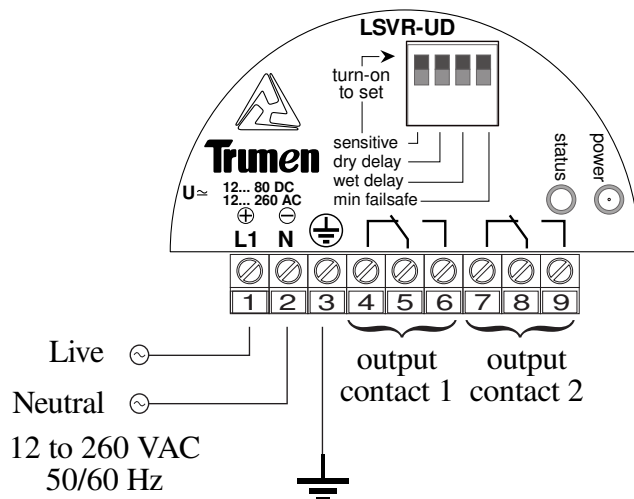
Failsafe Installation

failsafe selection

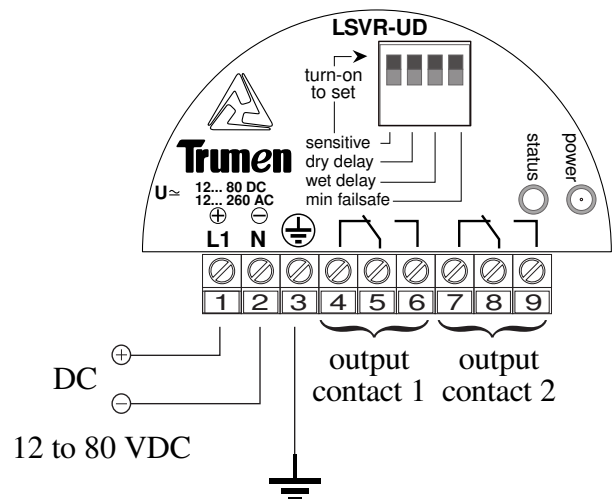
Failsafe defines that the alarm and power failure / device failure conditions are same to the external system. Failsafe operation is best understood with the type of installation.

| Material & installation | failsafe setting | alarm LED | Alarm | DPDT relay contacts |
|-------------------------|------------------|-----------|--------|---------------------|
| | min failsafe | Off | Normal | 4 5 6 7 8 9 |
| | min failsafe | On | Alarm | 4 5 6 7 8 9 |
| | min failsafe | On | Alarm | 4 5 6 7 8 9 |
| | min failsafe | Off | Normal | 4 5 6 7 8 9 |

electrical connections (AC)



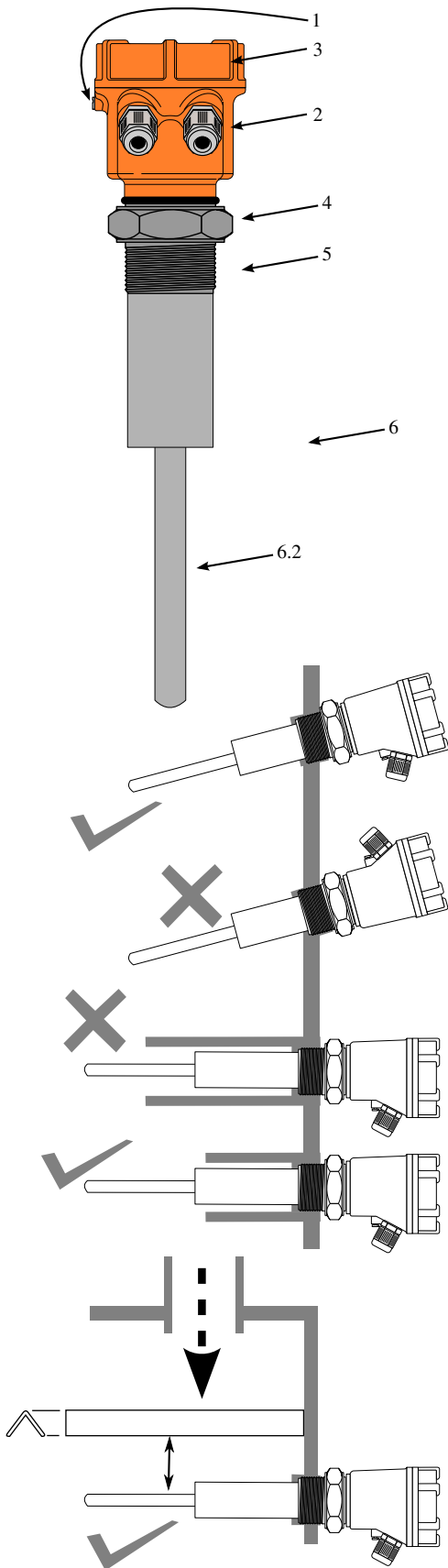
electrical connections (DC)



Proper connection to supply earth terminal (3) and the external earth terminal (screw) is must.

Do's & Dont's

installation precautions



1. Always connect the "Earth" to the external "Earthing" screw
2. Tighten the cable entries & glands properly
3. Secure the top aluminum cover at its place properly once the electrical connections and other settings are completed
4. Always tighten the process connection using proper wrench never try to tight by rorating the aluminum housing
5. Make sure process connection is same as that in hooper/tank
6. Vibrating rod probe
 - 6.1 Should never be bent
 - 6.2 Should never be held from thin part
 - 6.3 Should never be cut or machined in any way
 - 6.4 Should never be extended by welding or machining
7. Cable entries must face downwards only
8. Nozzles should never be longer than the probe extension.
 8. If mounted directly under the material entry, always install a cannopy of suitable strength at proper height from the probe
9. Never climb either by gripping or stepping over either the probe or its aluminum housing
10. Observe personnel and other equipment safety precautions as per safety manuals and standards at the place of installation