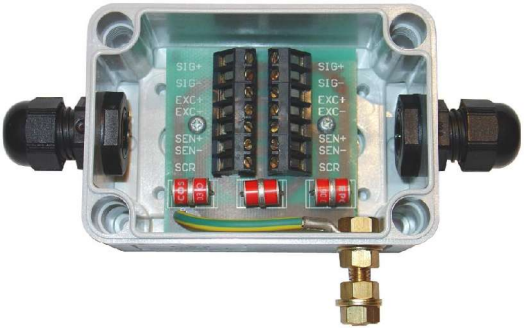
API 12.634 PT100SA Installation

Product Support.

Voltage spikes can originate from many causes, some of which could be electrical surges, lightening, welding, electrostatic build up and accidental mains connection as may happen with a damaged power tool. The damage to a load cell occurs when the voltage of the internal circuit is substantially different from the voltage of the body and insulation breaks down. Surge events may act in differing ways, for example a surge in a load cell cable raises the voltage in the cable above the voltage in the metal body of the load cell which is connected to the frame of the scale until the insulation breaks down. A lightening strike on a weigh bridge raises the potential of the load cell body to thousands of volts while the internal circuitry which is connected through the cable to an indicator some distance away may stay at normal potential. The PT100SA limits the voltage rise occurring in the cable connected through the PT100SA glands relative to the brass stud protruding from the case of the PT100SA and therefore connection of the brass earthing stud of the PT100SA is a crucial consideration as this affects the potential to which the voltage in the cables will rise. The PT100SA should be installed as close as practicable to the device being protected, whether it be a load cell or electronic display.



Open the case to reveal 4 holes for mounting, located under the lid fixing holes. The holes are 5 mm (3/16 “) diameter and suited for use of pan head screws with a head diameter up to 8 mm (5/16 “). As these holes are located outside the seal this enables fixing of the case without compromising the environmental protection. The PT100SA should ideally be mounted on a protected vertical surface with the stud facing down to aid fall off of liquids and debris. The PT100SA can be reliably mounted on or under a horizontal surface where this is more convenient. The mounting surface should be marked at the spacings indicated on the bottom of the case or carefully through the holes in the case with the PT100SA in position. The holes can be drilled for acceptance of screws suitable to hold the case firmly in place.
As stated above the earthing or grounding point is important to effective surge protection. The earth lug needs to be effectively bonded to the scale frame ground for load cell protection or indicator electrical ground for indicator protection.

- Mounting should be as close as practical (typically within 300 mm or1 ft) to the device to be protected.
- Cables should be stripped of the outer sheath for 75 mm (3”) and fitted through the glands with the sheath just protruding into the case. Tighten the glands firmly to hold and seal the cable.
- Strip and connect the wires into the clearly marked terminal blocks. Be sure to connect the screen or drain wire to the SCR terminal.
- Connected the brass earthing stud to the grounding point with at minimum 6 mm^2 copper cable and a 6mm (1/4”) terminal.

Use of earth straps across the load cell (top to bottom plates) is recommended if protection against lightening is to be effective.

Specifications:

Breakdown Voltage _____	90V ± 20%	Recovery Voltage_____	60V Peak
Current_____	5000A	Insulation Resistance _____	10,000 MΩ
Response Time _____	<0.2µS	Enclosure_____	Polycarbonate
Net Weight _____	0.175kg		