TN 12.019 Installation Notes

Technical Support

SAFETY

Be sure to calculate and specify the dimensions of all mounting and structural elements to accommodate sufficient overload capacity for the design loads. For upright vessels in particular take into consideration overturning due to winds, earthquake or unforeseen impacts.

Satisfy life requirements when there is vibration and cyclical loading, in regards to both the load cell and mountings. If vibration is high or fatigue is a consideration it is better to err on the cautious side of design parameters.

Corrosion can reduce the strength of load cells, fixtures and support structures. As for all high strength steels, fixings and load cells are subject to a form of strength reduction due to corrosion. Stainless steels can corrode when oxygen can not form a protective oxide layer as in the crevice between bolted surfaces or when it is in contact with other metals, even ordinary steel.

In the event that an environmental or loading condition has not been fully anticipated or routine maintenance has not ensured integrity there could be a sudden failure of load support (load cell or mounting) that could pose a threat to health and/or safety. Diligent design should consider the event of load cell fracture and determine if in this event integral or additional safety devices are a necessity. **Do not use the load cell and fittings as a fail safe device**.

INSTALLATION

For best accuracy in multiple load cell installations the load should be equalized so that each load cell carries a similar load. The load should vary its distribution as little as possible and the load cells should be sized to carry the highest expected uneven load. Off axis loads can reduce accuracy and should be minimized.

The load cell mounting surface should be clean and flat.

Bolt sizing, strength and tightening are critical to the mounting of the load cells. Any departure from specification must be carefully considered.

Care is required when tightening fittings in the loading end of the load cell. Precautions should be taken not to damage the load cell by application of torque.

Welding in the vicinity of the load cell can cause damage. Do not allow welding currents to pass through the load cell, disconnect the load cell cable when welding.

WIRING

PT load cells are manufactured with either 4 core cables or 6 core cables. Compensation for temperature characteristics of 4 core cables is built into the load cell and cutting these cables reduces accuracy. 6 core cables sense the voltage at the load cell and may be cut or extended without affecting accuracy. If installing a 6 core cable in a 4 core installation connect Sense +ve to Excitation +ve and Sense -ve to Excitation -ve to minimize errors. PT load cells have the following wiring colour code;

Excitation +ve	Red	Signal +ve	Green	Sense +ve	Brown
Excitation -ve	Black	Signal -ve	White	Sense -ve	Blue

INFORMATION

For the most up to date information visit the PT web site. Check under the product type, the specific part and in the download centre to view all documents.