



PSM INSTRUMENTATION LTD

TANKWATCH SERIES 600 SELF POWERED CONTENTS GAUGE USER MANUAL

Issue 2 date 3rd Feb '97

General Description

The Tankwatch 600 series gauge comprises of two elements, a sensor assembly containing a pressure sensitive diaphragm and an indicator graduated to suit the tank capacity and content. Between these is a flexible seamless copper capillary with a heavy duty flame retardant Polymer sheathing. The system is sealed and filled with inert gas at atmospheric pressure which acts as the pressure transfer medium between the sensors diaphragm, and the indicator head mechanism. The system is normally supplied fully assembled, but can be specified with the sensor disconnected and for final connection during installation, this enables the capillary to be passed through bulkheads or walls. In these cases protective caps are fitted to the sensor and capillary connections to seal the inert gas into the unit.

Sensor Installation

There are several basic sensor mountings:

- * Type ES or EP 3/4" BSP female running nut
- * Type IS top entry flange (standard DN 125 with either rigid sensor support pole or suspension wire
- * Type IM internal bracket mount with bulkhead type capillary exit
- * Type SM external flanged connection (standard DN80)

Flange Dimensions:

Flange	OD	PCD	Holes
DN80 PN16	200 mm	160 mm	8
DN125 PN16	250 mm	210 mm	8

In general it is preferable that the tank is empty throughout the installation process. **THIS IS IN ANY EVENT ESSENTIAL WHERE THE CAPILLARY IS SUPPLIED DETACHED.** Attempting to connect the capillary when there is liquid pressure on the sensor will result in

displacement of the diaphragm and loss of the gas filling. This will cause a low reading or no reading at all. It is recommended that for types ES/EP and SM sensors suitable tank isolation valves are fitted. For EP types which are designed to operated automatic non-return valves, ensure that the spigot piece which opens the valve is included as the sensor is mounted.

In general ensure that all joints are leak tight using sealant compatible with the process fluid as appropriate.

Refer to the following diagram for clarification of the mounting method for each sensor variant:



