POSITEK LIMITED

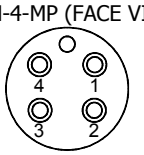
Installation Information

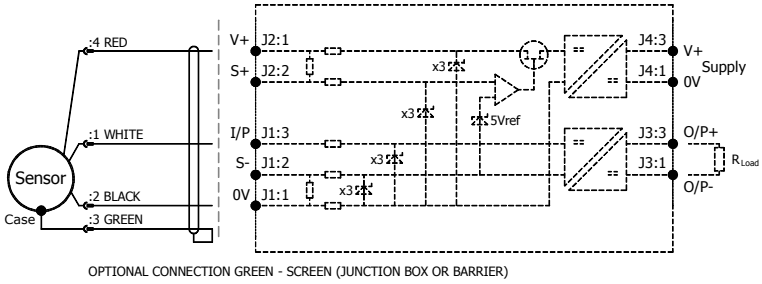
TIPS® X623 LARGE ANGLE SUBMERSIBLE TILT SENSOR

ATEX /IECEx Qualified to Intrinsic Safety Standard Certificate numbers SIRA 13ATEX2371X IECEx SIR 13.0154X			Ex II 1G Ex ia IIC T4 Ga (Ta = -40°C to +80°C)
Electronics Version	**Output Description:**	**Supply Voltage:** V_s (tolerance)	**Load resistance:**
EX07	0.5 - 4.5V (ratiometric with supply) [Output code 'A']	+5V (4.5 - 5.5V)	5kΩ min

Connector Pin Layout:

MICRO MINI WETMATE
MCBH-4-MP (FACE VIEW)





OPTIONAL CONNECTION GREEN - SCREEN (JUNCTION BOX OR BARRIER)

Putting Into Service: The sensor must be used with a galvanic isolation barrier designed to supply the sensor with a nominal 5V and to transmit the sensor output to a safe area. The barrier parameters must not exceed:-

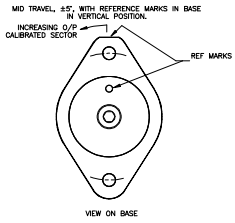
Ui = 11.4V **Ii = 0.20A** **Pi = 0.51W**
Ci = 1.36µF* **Li = 860µH*** ('Ixx' or 'Lxx' options) *Figures for 1km cable where: Ci = 200pF/m & Li = 810nH/m
Ci = 1.16µF **Li = 50µH** ('J' or 'K' options)

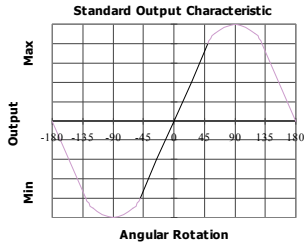
The sensor is certified to be used with up to **1000m** of cable, cable characteristics must not exceed:-
Capacitance: ≤ 200 pF/m for max. total of: 200 nF
Inductance: ≤ 810 nH/m for max. total of: 810 µH

Approval only applies to specified ambient temperature range and atmospheric conditions in the range: 0.80 to 1.10 Bar, oxygen ≤ 21%.

The performance of the sensor may be affected by voltage drops associated with long cable lengths; For cable lengths exceeding 10 metres a five wire connection is recommended to eliminate errors introduced by cable resistance and associated temperature coefficients.

N.b. sensors supplied with cable, the free end must be appropriately terminated.





Use: The sensor is designed to measure Rotary displacement and provide an analogue output signal.

Assembly and Dismantling: The unit is not to be serviced or dismantled and re-assembled by the user.

Maintenance: No maintenance is required. Any cleaning must be done with a damp cloth.

Mechanical Mounting: Flange mounted, flange Holes are 5.5mm diameter on a 54mm pitch. The mid point of the calibrated range is set with the flange holes in the vertical plane, mechanical mid point adjustment is achieved by loosening two M4 grub screws in the edge of the flange and rotating the sensor body.
Note: the sensor should be mounted on a vertical face.
It is suitable for submersion to 350 Bar water pressure.

Output Characteristic: The sensor has full rotational freedom and two sectors, 180° apart, over which linear response can be achieved. At the mid point of the calibrated range the output signal will be half full scale deflection, and the mounting flanges will be vertical. In the calibrated range the output increases as the sensor is rotated in an anti-clockwise direction viewed from the flange face- see drawing above. The calibrated output is factory set to be between 15 and 160°.

Warning -
Cable must be terminated in a manor appropriate to the use so as to prevent water ingress into the cable.

Incorrect Connection Protection levels:- The sensor is **not** protected against either reverse polarity or over-voltage. The risk of damage should be minimal where the supply current is limited to less than 50mA.

For further information please contact:
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