Generic Installation Information

H SERIES SENSORS

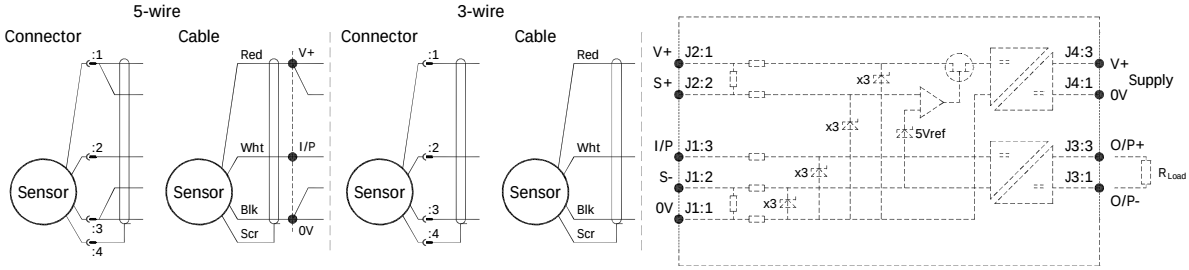
INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR & DUST ATMOSPHERES

CSA Qualified Intrinsically Safe Device Certificate number 13.2588225			Class I, Zone 0 Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia IIC T4 / Ex ia IIC T4(Ta = -40°C to +80°C) AEx ia D IIIC T93°C (Ta = -40°C to +80°C)
Electronics Option	**Output Description:**	**Supply Voltage:** V_s (tolerance)	**Load resistance:**
A	0.5 - 4.5V (ratiometric with supply)	+5V (4.5 - 5.5V)	5kΩ min

Connector Pin Layout:

DIN 43650 C

IEC 60947-5-2



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 = 710µH*** (with maximum length integral cable)
Ci = 1.16µF **Li = 50µH** (without integral cable)

*Figures for 1km cable where: Ci = 200pF/m & Li = 660nH/m

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: ≤ 660 nH/m for max. total of: 660 µH

Use:

The sensor is designed to measure Linear or 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.

WARNING: Substitution of components may impair intrinsic safety
AVERTISSEMENT: La substitution de composants peut altérer la sécurité intrinsèque

Maintenance:

Accumulated dust layer must not exceed a depth of 50mm.

For further information please contact:
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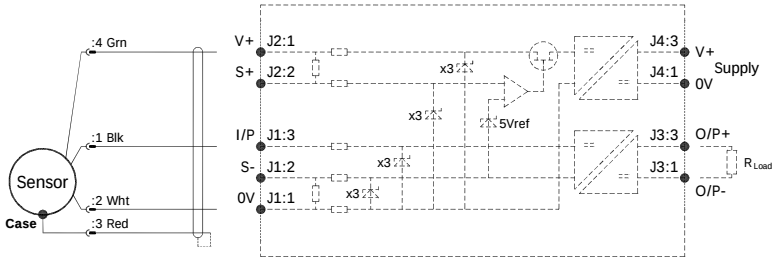
Issue B

Installation Information

TIPS® H623 LARGE ANGLE SUBMERSIBLE TILT SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS DUST ATMOSPHERES

Connector Pin Layout:
MC BH 4 M (face view)



Optional connection red- screen (junction box or barrier)

NOTE! Connection details above supersede those shown on the Generic Installation Information sheet.

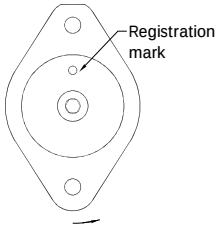
Approval only applies to specified ambient temperature range and atmospheric conditions in the range: 0.80 to 1.10 Bar, oxygen ≤ 21%.

The H623 is supplied with a wet-mate MC BH-4-M connector.

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.

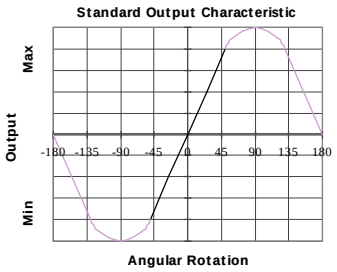
Cable; 50cm of 20AWG 4 core screened cable with moulded MC IL-4-F connector. N.b. Cable free end must be appropriately terminated, including preventing water ingress into the cable. The sensor is sealed to IP68 350 Bar.

Mechanical Mounting: Flange mounted, flange holes are 5.5mm diameter on a 54mm pitch. As shipped, the sensor calibrated mid-point will be obtained with the flange in the vertical plane, as shown. Mechanical adjustment of the mid point can be 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.



Direction of increasing output in calibrated sector

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°.



Incorrect Connection Protection levels: Not protected – 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.

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