

# Installation Information

## TIPS® 603 Large Angle Tilt Sensor



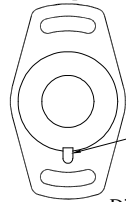
Electronics Option	A	B	C	D	E	F	H
<b>Output Description:</b>	Voltage ratiometric with supply	Voltage	Voltage	Voltage	2 wire 4 to 20mA	3 wire 4 to 20mA Sink	3 wire 4 to 20mA Source
<b>Supply Voltage (Vs):</b>	5±0.5V	±13 to 17V	13 to 28V	±13 to 17V	18 to 28V	13 to 28V	13 to 28V
<b>Output:</b>	0.5 to 4.5V	±5V	0.5 to 9.5V	±10V	4 to 20mA	4 to 20mA	4 to 20mA
<b>Load resistance: (inclusive of leads for 4 to 20mA versions)</b>	2kΩ min	1kΩ min	5kΩ min	5kΩ min	R <sub>L</sub> = V <sub>s</sub> -18/20mA 300Ω @ 24V	R <sub>L</sub> = V <sub>s</sub> -5/20mA 950Ω @ 24V	300Ω max
<b>Load connected to:</b>	0V	0V	0V	0V	In supply lead	V <sub>s</sub>	0V

### Connector pin layout:



- 1: +V supply
- 2: O/P
- 3: 0V
- 4: Sensor body 'A','C','E-H',  
-V supply options 'B' or 'D'

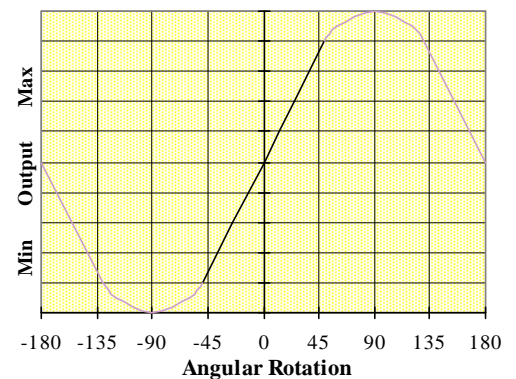
2 slots for M4 fixing  
48mm pitch



Registration mark

Direction of increasing output in calibrated sector

### Typical Output Characteristic



### Mechanical Mounting:

By slots in flange, the sensor should be mounted on a vertical face. The calibrated mid point is set with the flange slots in the vertical plane, mechanical mid point adjustment is achieved by rotating the sensor in the flange slots.

### 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 30 and 160°.

**Warning - the connector can be rotated for purposes of convenient orientation of the connector and cable, however rotating the connector more than one complete revolution is not recommended. Repeated rotation of the connector will lead damage to the internal wiring.**

### Incorrect Connection Protection levels:-

- A **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.
- B & D Supply leads diode protected. Output must not be taken outside ± 12V.
- C Supply leads diode protected. Output must not be taken outside 0 to 12V.
- E, F & H Protected against any misconnection within the rated voltage.

### For more information, please contact:

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REGISTERED IN ENGLAND NUMBER: 2746707

