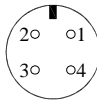


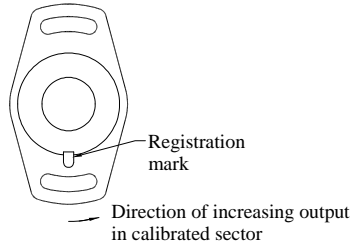
# Installation Information

## TIPS<sup>®</sup> P603 LARGE ANGLE TILT SENSOR

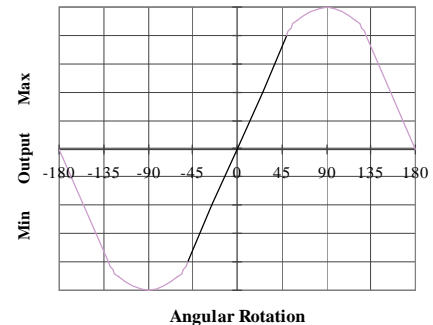
Electronics Option	Output Description:	Supply Voltage: (Vs)	Output:	Load resistance: (include leads for 4 to 20mA O/Ps)	Load connected to:
A	Voltage (ratiometric with supply)	5±0.5V	0.5 to 4.5V	2kΩ min	0V
B	Voltage	±9 to 28V	±5V	2kΩ min	0V
C	Voltage	13 to 28V	0.5 to 9.5V	5kΩ min	0V
D	Voltage	±13.5 to 28V	±10V	5kΩ min	0V
E	2 wire Current Loop	18 to 28V	4 to 20mA	$R_L = V_s - 18/20mA$ 300Ω @ 24V	In supply lead
F	3 wire Current Loop - Sink	13 to 28V	4 to 20mA	$R_L = V_s - 5/20mA$ 950Ω @ 24V	Vs
G	Voltage	9 to 28V	0.5 to 4.5V	2kΩ min	0V
H	3 wire Current Loop - Source	13 to 28V	4 to 20mA	300Ω max	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'
- \* Option 'E'; Load in supply, no connection Pin 2.



**Output Characteristic - Standard**



### Mechanical Mounting:

Flange mounted, flange slots are 4.5mm by 30 degrees wide on a 48mm pitch.

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

### 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 20 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 to 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 & G Supply leads diode protected. Output must not be taken outside 0 to 12V.
- E, F & H Protected against any misconnection within the rated voltage.