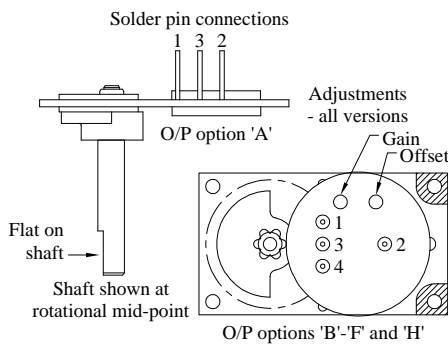


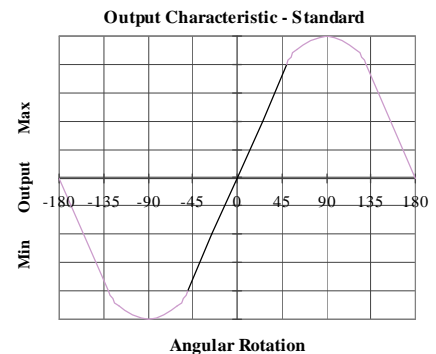
Installation Information

RIPS® P503 FLAT ROTARY SENSOR ASSEMBLY

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



- 1: +V supply
- 2: O/P
- 3: 0V
- 4: -V supply options 'B' or 'D'



Gain and Offset Adjustment: (Typically ± 10% Min available)

To adjust the gain or offset use a small potentiometer adjuster or screwdriver 2mm across. Do not apply too much force on the potentiometers. The offset is set at mid span at the mid point, within ±5°, of rotation.

Mechanical Mounting: By four 3.2 mm diameter holes in the printed circuit board. The sensor should be mounted with minimal axial and radial loading on the shaft for optimum life. It is recommended that the shaft is coupled to the drive using a flexible coupling. Tests indicate that, with a suitable bearing system, a life in excess of 16 million cycles can be achieved with 1kg side and end load. The radial position of the shaft must be controlled by the customer; the end float is set by the sensor and should not be controlled by the customer.

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 flat on the shaft is as shown. In the calibrated range the output increases as the shaft is rotated in an anti-clockwise direction viewed from the shaft. The calibrated output is factory set to be between 20 and 160°.

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.