

Installation Information

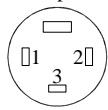
RIPS[®] 502 Small Angle Rotary Sensor



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

Connector pin layout:

Wide pin '4'



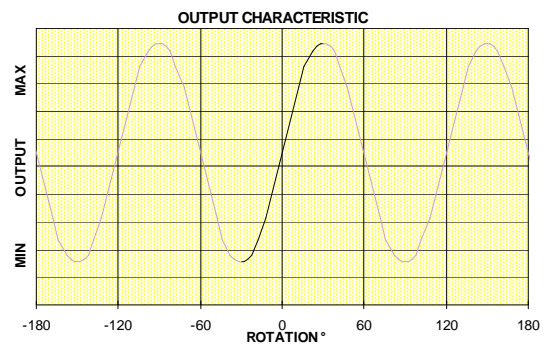
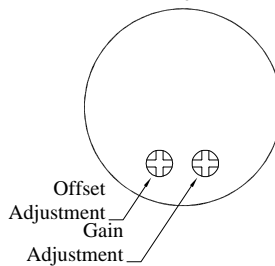
- 1: +V supply
- 2: O/P
- 3: 0V
- 4: Sensor body 'A','C','E-H',
-V supply options 'B' or 'D'

Cable conductor colours:

- Red: +V supply
- White/Blue: O/P
- Black/Green: 0V
- Yellow: -V supply options 'B' or 'D'
- Screen: Sensor body



Sensor Adjustments



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

To adjust the gain or offset remove the taprite screw from the cover and insert a small potentiometer adjuster or screwdriver 2mm across, 30mm long. The trim potentiometers are accessed through holes in the cover; the other electronics are protected from damage by a inner lid. 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 slots in flange option or appropriate clips for servo mount option. 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 life in excess of 16 million cycles can be achieved with 1kg side and end load.

Output Characteristic:

The sensor has full rotational freedom and six sectors, 60° 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 aligned with the registration mark in the base of the sensor. 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 5 and 20°.

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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