

- Angles from 10 to 350° in 10° increments
- Crush-proof mounting flange with steel inserts
- Choice of three shaft attachments
- Duplex-shaft bearing support system
- Integrally moulded sheathed cable assembly
- Cable length 0.5m or 2m
- Sealed to IP50 or IP68



The SRS280 sealed rotary sensor has been specially developed to meet the harsh requirements of today's automotive, motorsport and industrial position sensing applications. Interchangeable with the popular 38mm fixing centres format, several innovative features are included to increase reliability and performance over similar devices already in service.

The sensor housing is a high strength glass-filled engineering polymer that has the added feature of stainless steel inserts around the mounting screw area so preventing damage to the flange by over-tightening.

This permits the sensor to be re-used after installation and allows minute adjustments to be made.

The sensor rear housing has an integrally moulded cable fully sealed to IP68, effectively eliminating the need to over-fit a moulded boot to improve sealing, thus saving the user time and cost. To facilitate the addition of supplementary heat shrink sleeving over the cable, a small lip on the moulding assists attachment at the sensor housing. Cable lengths of 0.5m and 2m can be specified.

SPECIFICATIONS

ELECTRICAL

ELECTRICAL ANGLE ± 2	10 to 350 in 10° increments
RESISTANCE $\pm 20\%$	14.3 Ω per degree
HYSTERESIS (REPEATABILITY)	<0.03°
ACCURACY	<1° (e.g. $\pm 0.3\%$ over 330°, $\pm 1\%$ over 100°)
POWER DISSIPATION AT 20°C	0.003w per angular degree
APPLIED VOLTAGE MAXIMUM	0.2Vdc per angular degree
RESOLUTION	Virtually infinite
OUTPUT SMOOTHNESS	To MIL-R-39023 grade C 0.1%
INSULATION RESISTANCE	Greater than 100M Ω at 500Vdc
OPERATING MODE	Voltage divider only - see Circuit Recommendation below
WIPER CIRCUIT IMPEDANCE	Minimum of 100 x track resistance or 0.5M Ω (whichever is greater)

MECHANICAL

MECHANICAL ANGLE	360°, continuous
MOUNTING	Use 2 x M4 socket head cap screws and M4 washer - maximum tightening torque 2Nm
OPERATING TORQUE MAXIMUM	
UNSEALED SHAFT IP50	100 gm cm
SEALED SHAFT IP68	120 gm cm
SHAFT VELOCITY – MAXIMUM	3000°/sec
WEIGHT	32g (cable option A), 64g (cable option B)
PHASING	When shaft flat (or shaft ident mark) is facing the cable exit, wiper is at mid travel The sensor housing allows for $\pm 10^\circ$ adjustment via the mounting flange slots

ENVIRONMENTAL

LIFE	
UNSEALED SHAFT IP50	Exceeds 20 million operations (10 x10 ⁶ cycles) of $\pm 75^\circ$
SEALED SHAFT IP68	20 million operations (10 x10 ⁶ cycles) of $\pm 75^\circ$
DITHER LIFE	200 million operations (100 x 10 ⁶ cycles) of $\pm 3^\circ$, 60Hz
OPERATIONAL TEMPERATURE	-40°C to +130°C (continuous)
VIBRATION	RTCA-DO160D, 10Hz to 2000Hz (random), 12.61g rms - all axes
SHOCK	Survival to 2500g - all axes