

SRS 880 SUBMERSIBLE ROTARY SENSOR

PERFORMANCE

ELECTRICAL

Electrical angle ± 2	$^{\circ}$	10 to 350 in 10° increments
Resistance $\pm 20\%$	Ω	14.3 per degree
Hysteresis (repeatability)	$^{\circ}$	Less than 0.03
Accuracy		< 1 degree (e.g. $\pm 0.3\%$ over 330° , $\pm 1\%$ over 100°)
Power dissipation at 20°C	W	0.003 per angular degree
Applied voltage maximum	Vdc	0.2 per angular degree
Resolution		Virtually infinite
Output smoothness		To MIL-R-39023 grade C 0.1%
Insulation resistance		Greater than $100\text{M}\Omega$ at 500Vdc
Operating mode		Voltage divider only - see Circuit Recommendation below
Wiper circuit impedance		Minimum of $100 \times$ track resistance or $0.5\text{M}\Omega$ (whichever is greater)

MECHANICAL

Mechanical angle	$^{\circ}$	360, continuous
Mounting		Use 3 x M6 threaded holes in front face or 3 x M6 clearance holes through the body. See dimensions for details
Operating torque max	gm cm	1000
Shaft velocity max	$^{\circ}/\text{sec}$	3000
Weight	g	500
Phasing		When through hole in shaft (and shaft flat) are 90° from scribed mark on front face, wiper is at mid travel, $\pm 3^{\circ}$

ENVIRONMENTAL

Sealing		IP68M
Shaft seal life		> 20 million operations (10×10^6 cycles) of $\pm 75^{\circ}$
Operational temperature	$^{\circ}\text{C}$	-40 to +130 (continuous - sensor only)
Vibration		RTCA-DO160D, 10Hz to 2000Hz (random), 12.61g rms - all axes
Shock		Survival to 2500g - all axes
Explosive atmospheres		Classed as 'simple apparatus' under BS EN 60079-14:1997

CIRCUIT RECOMMENDATION

Hybrid track potentiometers feature a high wiper contact resistance, therefore operational checks should be carried out only in the voltage divider mode. Hybrid track potentiometers should be used only as voltage dividers, with a minimum wiper circuit impedance of $100 \times$ track resistance or $0.5\text{M}\Omega$ (whichever is greater). Operation with wiper circuits of lower impedance will degrade the output smoothness and affect the linearity.

OPTIONS

Electrical angle	Can be supplied from 10° to 350° in 10° increments
Cabled socket	2m or 5m cabled socket assemblies available (rated -25 to $+90^{\circ}\text{C}$ only)
Operating levers	Operating levers 155 or 230mm. See details on page 7
Body material	Available with anodised aluminium or corrosion resistant stainless steel housing
Flameproof enclosure	Please contact our sales team for details on our capabilities.

AVAILABILITY

All configurations can be supplied within ten days from the factory

ORDERING CODES

SRS880/...../...../.....

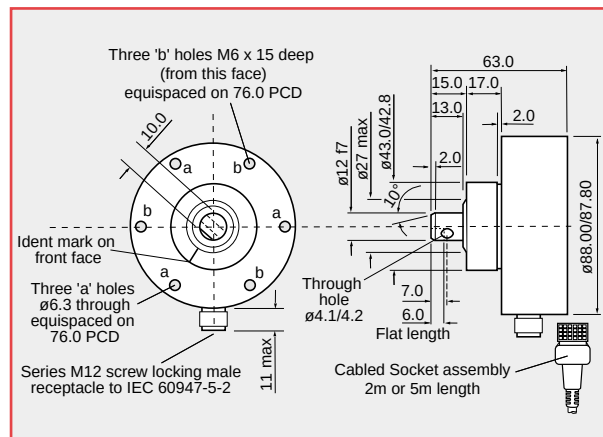
Electrical angle

Body material
AL = Aluminium
SS = Stainless steel

Cabled socket
00 = None
02 = 2m
05 = 5m

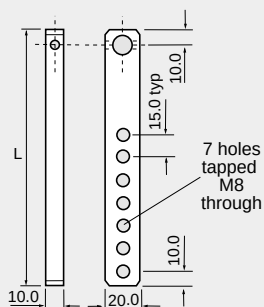
DIMENSIONS

Note: drawings not to scale



LEVER OPTIONS

Accessories (order separately)
Lever SA202195/MK1 L = 155
Lever SA202195/MK2 L = 230

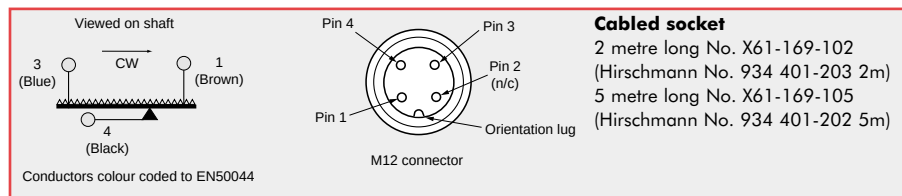


ELECTRICAL CONNECTIONS

Straight cabled socket

E Series M12 to IEC 60947-5-2,
PUR jacket

Conforms to VDE 0472 part 804
-25° to +90°C temperature range[†]



[†]Higher temperature rated versions are available.

Please consult with our sales team or contact Hirschmann.