

Quadrature Speed and Direction Sensors, SNG-Q Series

Table 3. Environmental Specifications

Characteristic	Condition	Parameter	
		SNG-QPLA-000 SNG-QPCA-001 SNG-QPRA-000 (Available Now)	SNG-QPMB-000 (Coming Soon)
EMI: radiated immunity bulk current injection ESD	ISO 11452-2, 400 MHz to 1 GHz ISO 11452-4, 1 MHz to 400 MHz ISO 10605, Section 9 conforms to CE Mark standards EN60947-5-2:2007 and EN 60947-5-2/A1:2012	100 V/m 100 mA ±8 kV contact, ±15 kV air	100 V/m 100 mA ±8 kV contact, ±15 kV air
Operating temperature	—	-40 °C to 150 °C [-40 °F to 302 °F]	-40 °C to 150 °C [-40 °F to 302 °F]
Thermal shock, air to air	-40 °C to 150 °C [-40 °F to 302 °F], 60 min. soak. <3 s transfer	500 cycles	500 cycles
Humidity	95% humidity at 38 °C [100 °F]	240 hr	240 hr
Salt fog	5% salt solution by mass at 35 °C [95 °F]	96 hr	96 hr
Thermal saline dunk	100 °C to 25 °C [212 °F to 77 °F] air to liquid, 5% saline	10 cycles	10 cycles
High temperature exposure with power	150 °C [302 °F], 13.5 Vdc, 1 kOhm load	500 hr	500 hr
Vibration	3 perpendicular axes, 48 hr per axis	29.28 GMS, 50 Hz to 2000 Hz MIL-STD-202-214	29.28 GMS, 50 Hz to 2000 Hz MIL-STD-202-214
Sensor degree of protection	—	IP69K	IP69K
Resistance to fluids	—	general under-the-hood automotive fluids	general under-the-hood automotive fluids

Table 4. Mechanical Specifications

Character- istic	Parameter	
	SNG-QPLA-000 SNG-QPRA-000 SNG-QPCA-001 (Available Now)	SNG-QPMB-000 (Coming Soon)
Sensing air gap	0,0 mm to 2,0 mm [0.0 in to 0.08 in]	0,0 mm to 2,0 mm [0.0 in to 0.08 in]
Target:		
width ¹	>5,0 mm [0.20 in] recommended; 12,7 mm [0.5 in] typ.	>5,0 mm [0.20 in] recommended; 12,7 mm [0.5 in] typ.
slot width ²	2,0 mm [0.08 in] min.	2,0 mm [0.08 in] min.
tooth width ²	2,0 mm [0.08 in] min.	2,0 mm [0.08 in] min.
tooth height ³	>3,0 mm [0.12 in] recommended; 5,0 mm [0.20 in] typ.	>3,0 mm [0.12 in] recommended; 5,0 mm [0.20 in] typ.
Materials:		
housing	PBT	PBT
bushing	brass	brass
O-ring	fluorocarbon with PTFE coating, Ø11,8 mm [Ø0.47 in] OD x Ø1,80 mm [Ø0.07 in] CS	fluorocarbon with PTFE coating, ø11,8 mm [Ø0.47 in] OD x Ø1,80 mm [Ø0.07 in] CS
cable ⁵	EVA, four conductor, 36 AWG, 28 strand, Ø5,2 mm [Ø0.20 in] jacket	EVA, four conductor, 36 AWG, 28 strand, Ø5,2 mm [Ø0.20 in] jacket
Mounting:		
bore size ⁴	Ø15,15 mm to Ø15,40 mm [Ø0.60 in to Ø0.61 in]	Ø15,15 mm to Ø15,40 mm [Ø0.60 in to Ø0.61 in]
torque	10 N m [88.5 in-lb] max. with M6 X 1.0 bolt	10 N m [88.5 in-lb] max. with M6 X 1.0 bolt

¹Narrower targets may limit axial offsets.

²Other geometry may be suitable.

³Shorter tooth heights may limit maximum air gap performance.

⁴Application dependent.

⁵Applies to SNG-QPLA-001, SNG-QPCA-001, SNG-QPMB-001.

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Figure 1. Sensor Output (All catalog listings)

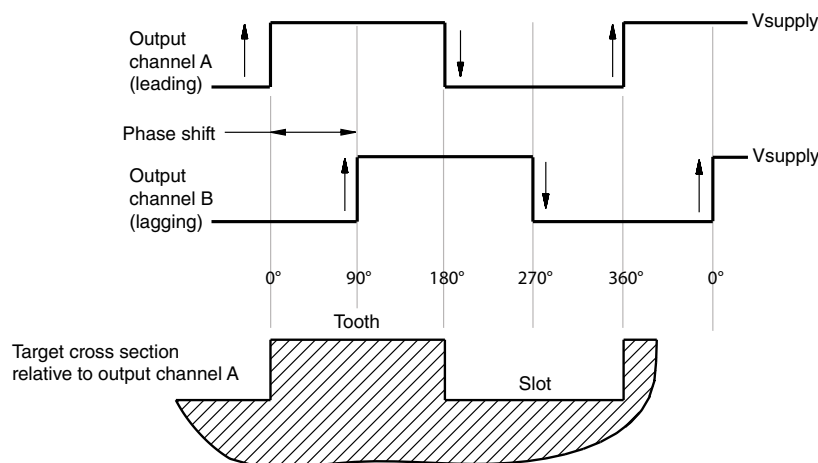


Figure 2. SNG-QPLA-000 Mounting Dimensions (For reference only: mm/[in.]) (Available now.)

