



HZ58 Zero Power Non-Contact Rotary Position Sensor

- Patented true non-contact position sensing
 - 0.5" (12mm) gap between sensor and application
 - 0.10" (2.5mm) center alignment
 - 30° planar tilt
- Zero power technology
- Totally sealed IP69K (connector dependent)
- LED indicators for power and output feedback
- Incremental or Absolute position
- Outputs: Quadrature, Step and Direction, SSI, PWM, Analog, Modicon MODBUS, & J1939 Can Bus
- Detects rotation through non-ferrous barriers; Special applications include use in explosion proof housings, high PSI zone separation, and enclosed rotational measurement

ELECTRICAL

Outputs	K-1939 : J1939 13 bit @ 1000 positions A-MOD1 : Modicon MODBUS @ 8192 positions A-CAN1 : CANopen 13 bit @ 1000 positions
Input Power	6 to 30 VDC at approx 60 mA max, not including output loads
Electrical Protection	Over-voltage, reverse-voltage, output short-circuit protected
LED Indicators	Power and output channels
Connections	M12, M12 Pigtail, Flying Lead Cable, Shielded Cable, Deutsch (4 or 6 pin)
Resolution	0.3°
Repeatability	0.30%
Nonlinearity	< 1%

MECHANICAL

* Non-contact tolerances rated using MAG-RING 1/4x20 magnet accessory.

Housing Diameter	58mm
Housing Material	Black Delrin (standard) or White Delrin (HP58SE Red Aluminum)
Housing Height	0.75" body; 1.5" w/ M12 connector
Mounting	60.128 mounting holes
Weight	2.6 oz
Magnet / sensor gap*	Standard 12MM; Custom Mag Assembly > 30mm
Rated planar tilt / axial gap*	Planar 30° (Max 45°) / Axial 0.1" (2.5mm)(Max 0.16" [4mm])

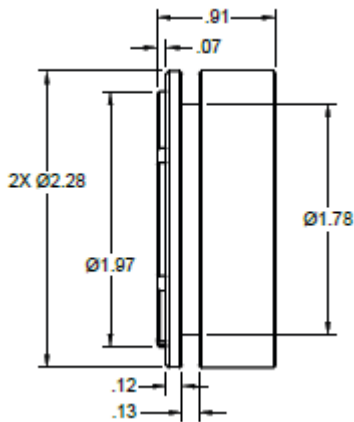
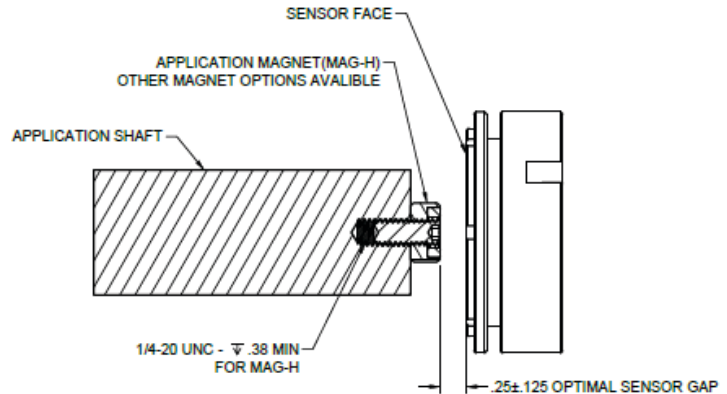
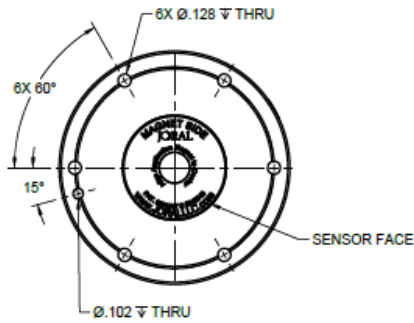
ENVIRONMENTAL

Operating Temperature	-30° to +80° C
Storage Temperature	-40° to +90° C
Humidity	100%
Shock	400g/6ms (MIL STD 202)
Vibration	5 to 3000 Hz, 20g (MIL STD 202)
Rating	IP69K (connection dependent), CE

Code 1: Housing Style	Code 2: MagElec		Code 3: Connection		Code 4: Modifiers	
HZ58 'Zero Power' Functionality	K - 1939 13 bit J1939 @ 1000 counts	M12 M12 male	31	Side (housing wall)		
			M12P	M12 male on 18' pigtail	32	Front (magnet side)
	A - MOD1 Modicon MODBUS @ 8192 positions	CXX Flying Lead Cable (enter XX as inches)	SCXX Shielded Cable (enter XX as inches)	33	Back (epoxy side)	
				50	White Delrin	
	A - CAN1 CANopen 13 bit @ 8192 positions	CSP Cable with custom end	51	Red aluminum		
			DE4	DT04 - 4 pin male Deutsch	52	Black Delrin
			DE6	DT06 - 6 pin male Deutsch	71	No spindle
*More outputs available, contact Joral if desired output not shown				72	Spindle	
				90	13 bit @ 8192 counts per rotation	
				91	13 bit @ 1000 counts per rotation	

SPECIAL PART NUMBER INFORMATION

Code 1: Housing Style			
<ul style="list-style-type: none"> HZ58 = Black Delrin / Handles ALL back exit connections and CABLE ONLY side exit connections. For side exit cable on HP58 append part number with special code 31 (available cable connection codes M12P, CXX, SCXX, DE4, & DE6). 			
Code 2: MagElec			
(A-___-SEPP) or (A-___-DIPP) <ul style="list-style-type: none"> Enter quadrature PPR in place of ___ A = 13 bit PPR Available 13 PPR: 0008, 0010, 0016, 0020, 0025, 0032, 0040, 0050, 0064, 0080, 0100, 0125, 0128, 0200, 0250, 0256, 0400, 0500, 0512, 1024, 2048 	K-1939 <ul style="list-style-type: none"> Standard J1939 output is 1000 positions For 8192 positions (max resolution) add special code 90 to the end of HZ58 P/N 	A-Mod1 <ul style="list-style-type: none"> Standard MOD1 output is 8192 positions For 1000 positions (max resolution) add special code 91 to the end of HP58 P/N 	V1, V2, I1 (Analog MagElec P/N Guide) <ul style="list-style-type: none"> First select MagElec code (V1, V2, or I1) then Angle Range (A1-A2), Voltage Range (V1-V2) and Signal Direction (Clockwise [CW] or Counterclockwise [CCW]) Formula Example (MagElec)-(A1-A2)-[V1-V2]-(CW or CCW) Exact Part Number Example HP58-V1-0-360-.5-4.5-CW-C72 HP58-V2-0-180-270-0-5-CCW-DE4 HP58-I1-0-180-4-20-CW-M12
Code 3: Connections			
<ul style="list-style-type: none"> All Outputs, All Connections - Connector exit standard is BACK EXIT (sensor epoxy side) for housing HZ58 J1939 Output Addressing via varying value resistor in connection requires at least five conductors (M12, DE6, and Cable connections are resistor addressing compatible) All Outputs - DE4 and DE6 Deutsch connectors add \$20 to HP58 list 			



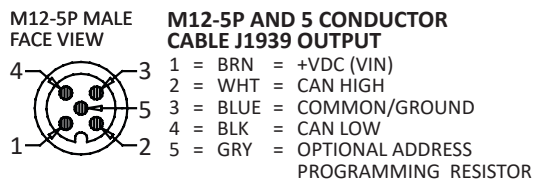
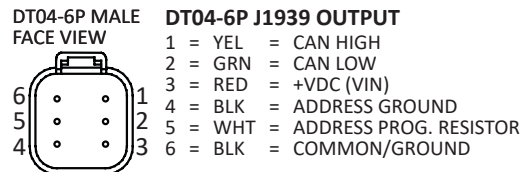
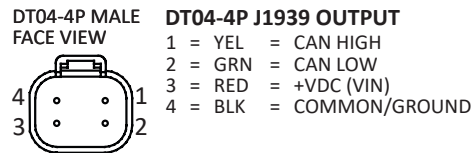
INTERFACE DETAILS AND NOTES:

1. APPLICATION SHAFT Ø.375" MINIMUM WHEN USING MAG-H APPLICATION MAGNET. TAP 1/4-20 A MINIMUM DEPTH OF .375".
2. 0.25" SENSOR GAP DISTANCE IS OPTIMAL FOR NORMAL INSTALLATION. THIS IS DEPENDENT ON MOUNT AND MATERIALS.

GENERAL PIN OUTS



FRONT DETAIL VIEW



*Dimensions informative only
For most recent dimensions please consult factory*