

Installation Instructions for the RTY Series Hall-Effect Position Sensors

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GENERAL INFORMATION

The RTY Series uses a magnetically biased, Hall-effect integrated circuit (IC) to sense rotary movement of the actuator shaft over a set operating range. Rotation of the actuator shaft changes a magnet's position relative to the IC. The resulting flux density change is converted to a linear output.

MOUNTING INFORMATION

Mount the sensor using the two easily accessible mounting holes and non-magnetic stainless steel M5 screws with flat washers. Mounting screw tightening torque is 2,5 N m \pm 0,5 N m [22.1 in lb \pm 4.4 in lb]. In harsh applications, treat the screw threads with a suitable thread locking compound.

Table 1. Specifications

Characteristic	Parameter	
	LV (Low Voltage)	HV (High Voltage)
Supply voltage	5 \pm 0.5 Vdc	10 Vdc to 30 Vdc
Supply current	20 mA max.	32 mA max.
Supply current (during output to ground short)	25 mA max.	47 mA max.
Output	0.5 V to 4.5 V ratiometric	0.5 V to 4.5 V non-ratiometric
Output signal delay	4 ms typ.	
Overvoltage protection	10 Vdc	–
Reverse polarity protection	-10 Vdc	-30 Vdc
Output to ground short circuit protection	continuous	
Output load resistance (pull down to ground)	10 kOhm	
EMI:	100 V/m from 200 MHz to 1000 MHz per ISO11452-2	
radiated immunity	100 mA BCI per ISO11452-4 from 1 MHz to 200 MHz	100 mA BCI per ISO11452-4 from 1 MHz to 400 MHz
conducted immunity		
EMC	exceeds CE requirements	
Operating temperature range	-40 °C to 125 °C [-40 °F to 257 °F]	
Storage temperature range	-40 °C to 125 °C [-40 °F to 257 °F]	
Ingress protection	IP67 according to DIN 40050	
Expected life	35 M cycles	
Media compatibility	heavy transportation fluids	
Housing material	PBT plastic	
Shock	50 G peak	
Vibration	20 G peak tested from 10 Hz to 2000 Hz	
Resolution	12 bit	
Termination	AMP super seal connector	
Mechanical end stop	no	
Approvals	CE	

Figure 1. Mounting Dimensions (For Reference Only: mm/[in.]

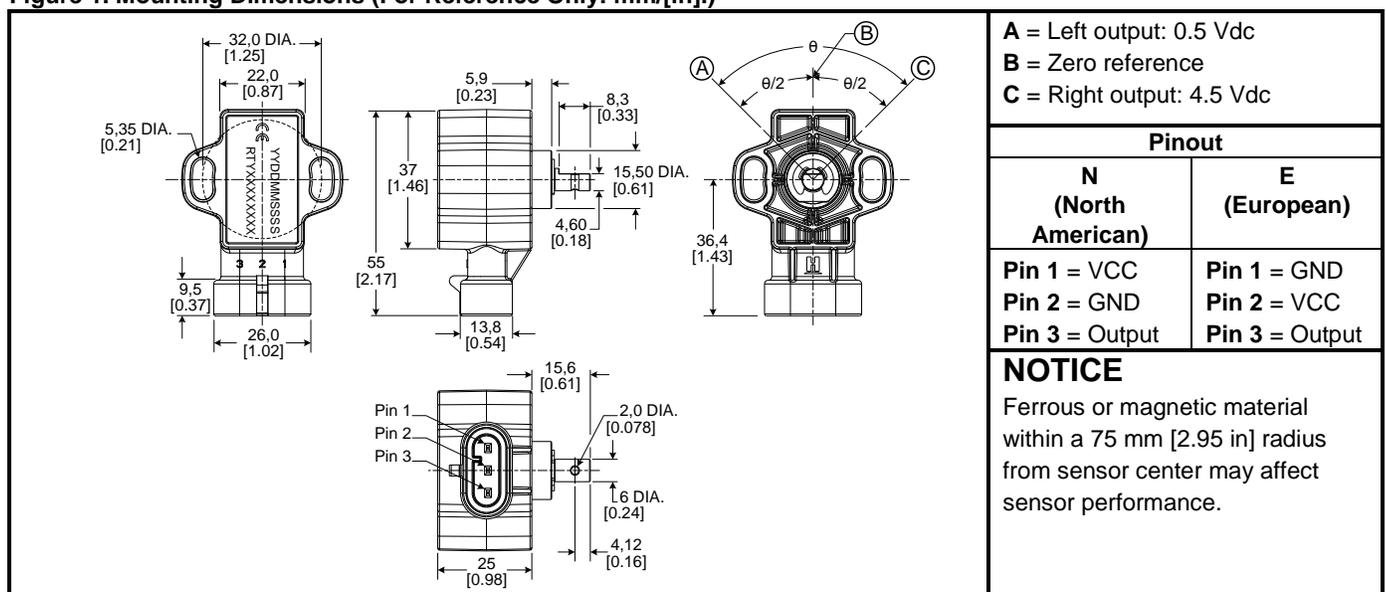
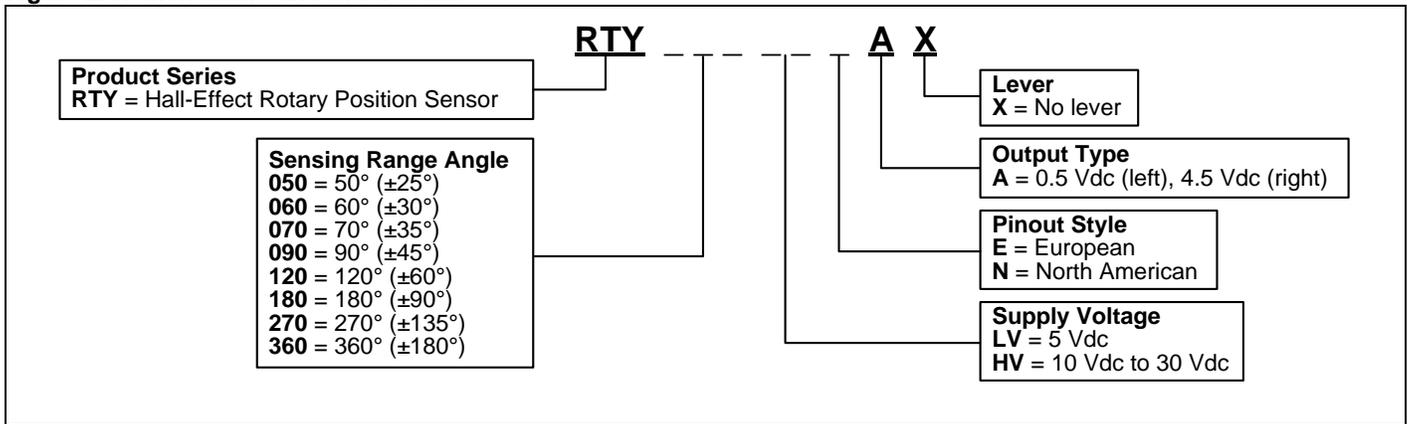


Figure 2. Nomenclature and Order Guide



⚠ WARNING
PERSONAL INJURY
 DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.
Failure to comply with these instructions could result in death or serious injury.

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