Honeywell

LCZ Series

Hall-effect Zero Speed Sensors



DESCRIPTION

The LCZ Series Hall-effect Zero Speed Sensors provide a durable, cost-effective solution in most harsh environments.

The sensor is available in 9,5 mm [3/8 in/0.375 in] and 15,9 mm [5/8 in/0.625 in] diameters, in both 50,8 mm [2.00 in] and 76,2 mm [3.00 in] lengths.

The stainless steel package is simple to install and adjust. It does not require rotational orientation.

FEATURES

- Low cost
- Omni-directional sensor to target orientation
- Digital output
- Small size
- Low power consumption

POTENTIAL APPLICATIONS

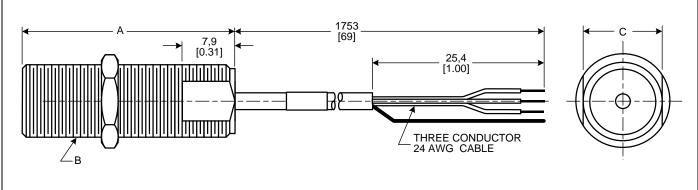
- Industrial process control
- · Factory automation
- · Rotary applications, such as:
 - Pumps
 - Rollers
 - Mixers
 - Fan speed measurement
 - Transmission
 - Spindles
 - Gear reducer RPM
 - Process speed
 - Synchronization
 - Generator set
 - Compressor speed
 - Dyno testing

LCZ Series

Table 1. Sensor Specifications

Characteristic	Minimum	Maximum	Unit	Condition	
Supply voltage	4.5	26	Vdc	_	
Supply current	_	20	mA	load = infinity, Vcc = 26	
Reverse polarity	30	_	Vdc	_	
Output sinking	_	20	mA	0.4 V max. short circuit protected	
Voltage low	_	0.4	V	at 30 mA max. sink	
Voltage high	_	30	Vdc	_	
Duty cycle	20	80	%	within operating gap	
Operating frequency	0	15 k	Hz	no orientation required	
Output signal rise/fall time	_	4.0	μs	880 Ohm, 20 pF	
Dielectric strength	200	_	Vac	<2 mA leakage	
Operation gap	_	_	_	at gaps below curve (see Figure 3)	
Output impedance	4.7	5.3	kOhm	_	
Operating temperature range	-40 [-40]	125 [257]	°C [°F]	_	
Storage temperature	_	125 [257]	°C [°F]	_	
Sealing					
Shock		50 G, 11 ms	_		
Vibration	15	G, 10 Hz to 2000	_		
Housing material		stainless steel	-		
Weight		see Figure 1			

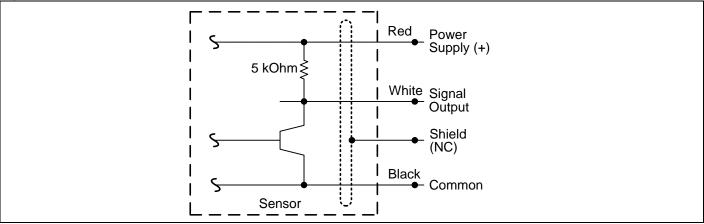




Catalog Listing	Thread Length (A)	Thread Type (B)	Flats (C)	Max. Mounting	Weight
				Torque	
LCZ260	50,8 mm [2.00 in]	3/8-24UNF-2A	7,9 mm [0.312 in]	4,1 [36 in lb]	59,5 g [2.1 oz]
LCZ260-30	76,2 mm [3.00 in]	3/8-24UNF-2A	7,9 mm [0.312 in]	4,1 [36 in lb]	68,0 g [2.4 oz]
LCZ460	50,8 mm [2.00 in]	5/8-18UNF-2A	14,3 mm [0.562 in]	27,1 N m [240 in lb]	104,9 [3.7 oz]
LCZ460-30	76,2 mm [3.00 in]	5/8-18UNF-2A	14,3 mm [0.562 in]	27,1 N m [240 in lb]	136,1 g [4.8 oz]

Hall Effect Zero Speed Sensor

Figure 2. Equivalent Electrical Schematic





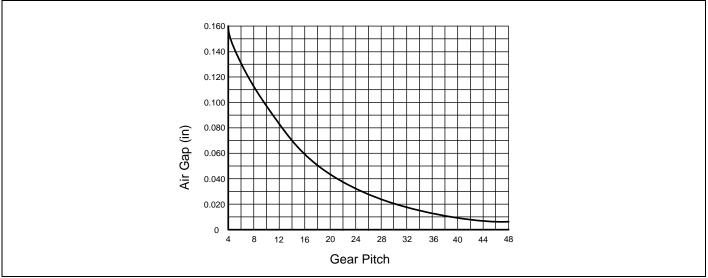


Figure 4. Target Motion

