

## Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new **Interactive Catalog**. The **Interactive Catalog** is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.



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### **Sensing and Control**

Honeywell Inc.

11 West Spring Street

Freeport, Illinois 61032

# ZS-00313-12

## ONE PART M12 PROXIMITY SENSOR (INCORPORATING LED INDICATORS)

### Description :

Environment-proof self-contained proximity sensor enclosed in a rugged hermetically sealed ceramic/stainless steel housing, designed to meet the requirements of ground mobile and naval applications.

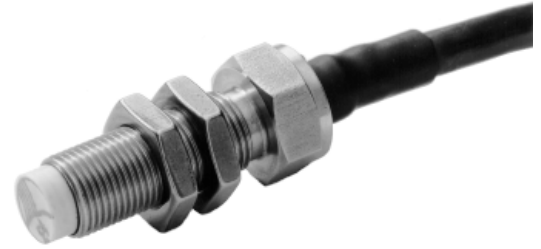
Operation by the Eddy Current Killed Oscillator (ECKO) principle, which is used to detect metallic objects passing in front of the sensing face. Once a target metal is detected, a trigger signal is produced which is then passed through the output conditioning circuitry to give a high or low output, depending on the sensor application.

### Features :

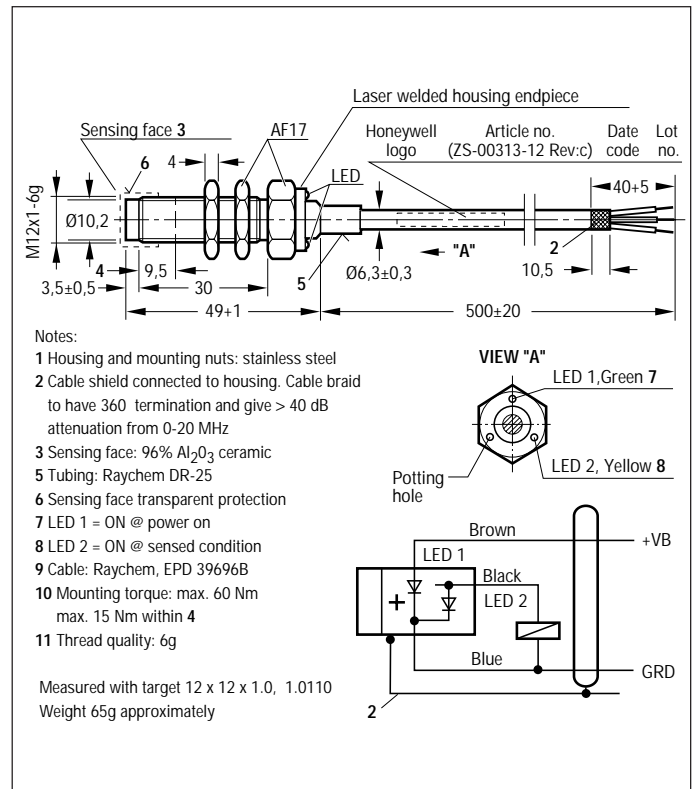
- All metal sensing
- Small size M12 housing
- High frequency switching
- Integral LEDs to indicate supply and output status
- High level of electronics protection

### Typical Applications :

- Ammunition loading systems
- Gun turret position control
- Door and hatch open/closed monitoring



Dimensions in mm (for reference only)



# Specifications

		Tests
<b>Sensing Characteristics :</b>		Measuring method (Note 2)
Nominal sensing distance (mm)	4	
Effective sensing distance (mm)	3,6 to 4,4	
Differential travel (%)	3 to 20	
Stability of sensing distance (%)	+12.5/-7.5 within -25° C to +70° C +25/-7.5 within -40° C to +100° C	
Reproduceability (%)	≤1	
Repetition rate of sensing (Hz)	≥2000	
Power-on delay (ms)	≤10	
Power-on false pulse (μs)	≤25 @ R <sub>L</sub> = 1 K0hm	
<b>Power Supply :</b>		
Supply voltage range (V)	12 to 32	
Ripple voltage (V <sub>ss</sub> )	≤7	MIL-STD-1275 A(AT)
Surge voltage (V)	100 V, 50 ms	MIL-STD-1275 A(AT)
Transients (V)	250 V, 50 μ	MIL-STD-1275 A(AT)
Burden current (mA)	≤25	
<b>Output Characteristics :</b>		
Voltage drop (V)	≤2.5 @ 50 mA	
Residual current (μA)	≤100	
Load current (mA)	≤200 to +70° C lin falling to 100 @ + 100° C	
<b>Environmental Characteristics :</b>		
Operating temperature range (°C)	-40 to +100	IEC 68-2-1/IEC 68-2-2
Storage temperature (°C)	-55 to +100	IEC 68-2-8/IEC 68-2-2
Damp heat, steady	56 days	IEC 68-2-3. Ca
Damp heat, cyclic	+55° C, 6 Cycles	IEC 68-2-30. Db
Rapid change of temperature	-55° C/+85° C, 5 Cycles	IEC 68-2-14. Na
Vibration sinusoidal	5 to 13 Hz, 6 mm	DEF STAN 07-55
sinusoidal	13 to 500 Hz, 39,2 msec <sup>-2</sup>	Pt2, Sec 1/1
random	0.1 gn <sup>2</sup> /Hz, 20-500 Hz	Para 4.a(1), 4.b(1)
Shock	300 ms <sup>-2</sup> /10 ms	IEC 68-2-27. Ea
Salt mist	pH 6,5-7,2 @ +35° C	IEC 68-2-11. Ka
Contamination resistance	Engine and gearbox oil, aviation fuel, sea water, water, ethanol, methanol	Clause 14.3 DEF 133
Transition resistance (mOhm)	≤17,5 @ 100 mA	RAY QPC 1017 Issue 2
Leakage (immersion)	96 kPa for 2 hours	512.2 MIL-STD-810D
Cable tensile strength (N)	≥20	IEC 68-2-21.Ua1
Insulation resistance (MOhm)	≥50 @ 500 Vdc	
<b>Special Features :</b>		
Reverse polarity supply leads	Yes	
Short circuit protection	Yes	
EMI (Note 1)	Class A3, A4	MIL-STD-461B
EMP	50 kVm <sup>-1</sup> /130 Am <sup>-1</sup> , 10 nsec/200 nsec	DEF 07-55, T2,S5
Nuclear survivability	Nuclear hardened	
MTBF prediction, exclusive of LED	1435000 h @ +20° C, GM application	MIL-HDBK 217E
Notes :		
1. CE03, CS01, CS02, CS06, RE01, RE02, RS01, RS02, RS03.		
2. Unless otherwise stated, tested to or by similarity to Honeywell internal specifications		
<b>Ordering guide</b>		
<b>Listing</b>	<b>Description</b>	
ZS-00313-12	Current sourcing	