

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.



**Click this icon to try the new
Interactive Catalog.**

Sensing and Control
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ZS-00228-02

ONE PART UNDERWATER PROXIMITY SENSOR

Description :

Environment-proof self-contained proximity sensor enclosed in a rugged hermetically sealed ceramic/stainless steel housing and overmoulded to provide complete encapsulation.

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.



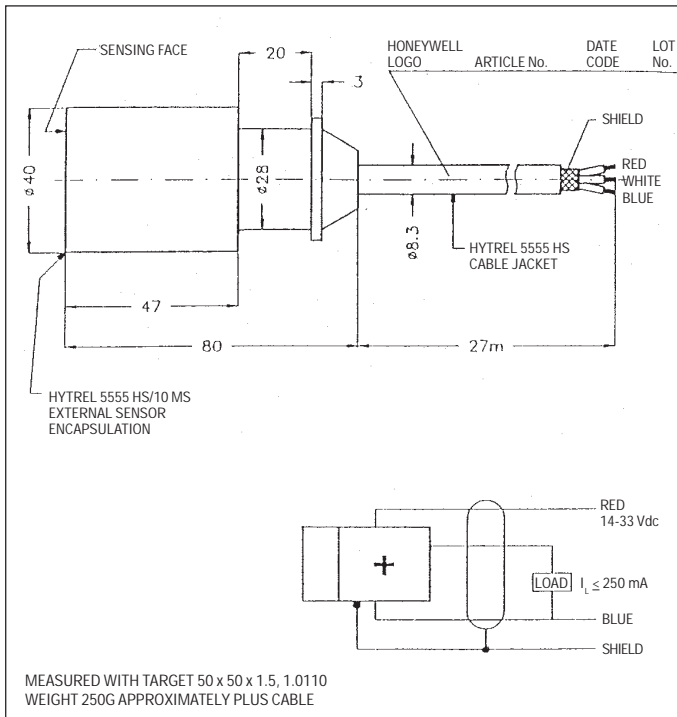
Features :

- All metal sensing
- High level sealing by overmoulding
- High performance sealed and shielded cable
- Reverse polarity and short circuit protection

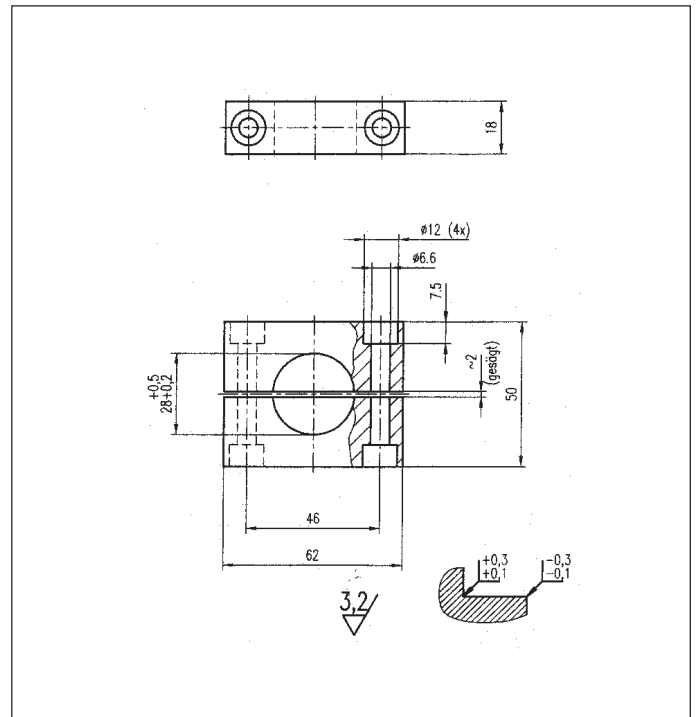
Typical Applications :

- Submarine control systems
- Submersible vehicles
- Offshore underwater equipment
- Underwater pipeline controls

Dimensions in mm unless otherwise specified (for reference only)



Mounting Bracket (to be ordered separately)



Specifications

Sensing Characteristics :	Level	Specification (Note 1)
Nominal sensing distance	12.7 mm	
Effective sensing distance	11 to 14 mm	
Differential travel	3 to 20 %	
Minimum operating distance	10.3 mm	
Maximum release distance	18.5 mm	
Repeatability	≤ 1 %	
Switching frequency	≥ 500 Hz	
Power on delay	≤ 10 ms	
Electrical Specifications :		
Power Supply -		
Supply voltage	14 to 33 V	
Ripple voltage	≤ 7 V	MIL-STD-1275 A (AT)
Surge voltage	100 V in 50 ms	MIL-STD-1275 A (AT)
Transients	250 V in 50 μs	MIL-STD-1275 A (AT)
Burden current	< 10 mA	
Output -		
On state output voltage	≤ 3 V	
Off state leakage current	≤ 100 μA	
Load current	≤ 200 mA to 65° C lin falling 100 at 100° C	
Reverse polarity protection	yes	
Short circuit protection	yes	
Environmental Specifications :		
Operating temperature range	-30° to +70° C	IEC68-2-1 / IEC 68-2-2
Storage temperature	-40° to +85° C	IEC68-2-1 / IEC 68-2-2
Damp heat, steady state	56 days	IEC68-2-13 Ca
Damp heat, cyclic	6 cycles at 55° C	IEC68-2-30 Db
Temperature shock	-55° C/+85° C, 5 cycles	IEC68-2-14 Na
Vibration	10 to 500 Hz, 0.75/100 ms ²	IEC68-2-6 Fc
Bump	400 ms ² , 6 x 4000 bumps	IEC68-2-29 Eb
Shock	1000 ms ² /6 ms	IEC68-2-27 Ea
Cable termination tensile strength	≥ 40 N	IEC68-2-21 Ua1
Insulation resistance	> 50 MOhm at 500 Vdc	
Insulation voltage	≥ 1000 Vrms at 1 min	
Icing/freezing rain	not affected	521.0 MIL-STD-810D
Leakage (2 hr immersion)	9.0 Mpa	DEF 133, clause 15.3
Immersion, cyclic	100 cycles, 0 to 6.89 Mpa	DG ships 2137
Salt mist	not affected	DEF 133, clause 14.0
Acid corrosion	not affected	DEF 133, clause 14.1
Alkaline corrosion	not affected	DEF 133, clause 14.2
Contamination resistance	Engine and gearbox oils, water, sea water, aviation fuels, ethanol, methanol	DEF 133, clause 14.3
Mean Time Between Failure prediction	144000 hrs at 20° C NU application	MIL-HDBK 217E
Notes :		
1. Unless otherwise stated, tested to or by similarity to Honeywell internal specifications		
Ordering guide		
Listing	Description	
ZS-00228-02	Current sourcing	
ZS-00228-999	Mounting bracket	