HYDAC INTERNATIONAL



Contamination sensor
EY-1356

Features

- Simple construction
- Robust design
- Standard connection types

Description

The contamination sensor series EY-1356 is designed to work as a warning device for hydraulic systems and gearboxes. It has been developed by HYDAC ELECTRONIC to meet the special requirements of our customers.

The sensor attracts metallic ferromagnetic particles in oil or in other hydraulic fluids. The collected particles form a bridge across the magnetic faces providing a resistive value according to the amount of particles gathered, thus generating an early warning of possible wear. Substantial damage to bearings and gears for instance, can therefore be avoided.

Application fields

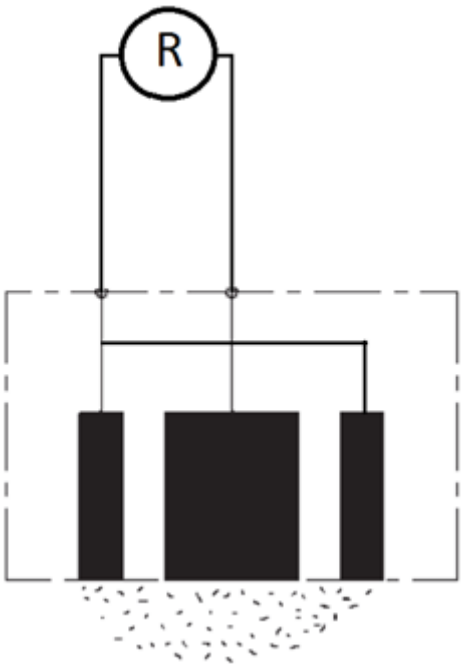
The sensor is available with a variety of mechanical and electrical connections and can be integrated into many applications.

Technical data

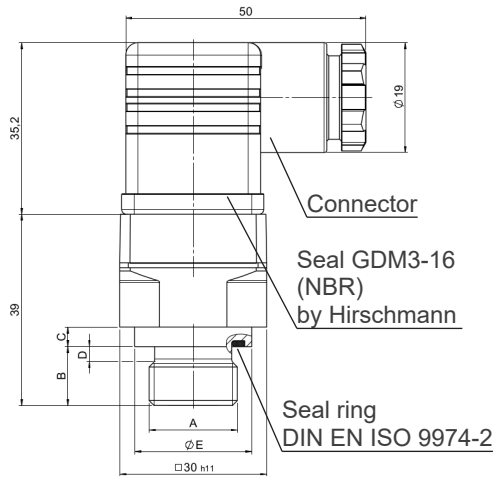
Performance data	
Max. voltage	30 V DC
Max. current	200 mA
Max. oil pressure, absolute	16 bar
Retention force of the permanent solenoid	~ 1.5 N
Ambient temperature	-25 °C .. +90 °C
Protection type acc. to DIN 40050 Protection type acc. to DIN EN 60529	Deutsch plug connector DT04 2 pole IP 67 Integrated connector acc. to EN 175301-803 / ISO 4400 IP 65 Connector M12x1 2 pole IP 67 / IP 69K
Mating connector supplied	Deutsch plug connector DT04 2 pole. No Integrated connector acc. to EN 175301-803 / ISO 4400. Yes Connector M12x1 2 pole. No
Max. tightening torque	M14x1.5 15 Nm M18x1.5 25 Nm M22x1.5 60 Nm M26x1.5 70 Nm M33x2 140 Nm
Mounting position	We recommend an "upside-down" mounting position, i.e. connector or cable exit pointing downwards.
The contamination sensors are supplied with the appropriate NBR DIN EN ISO 9974-2 seal ring.	

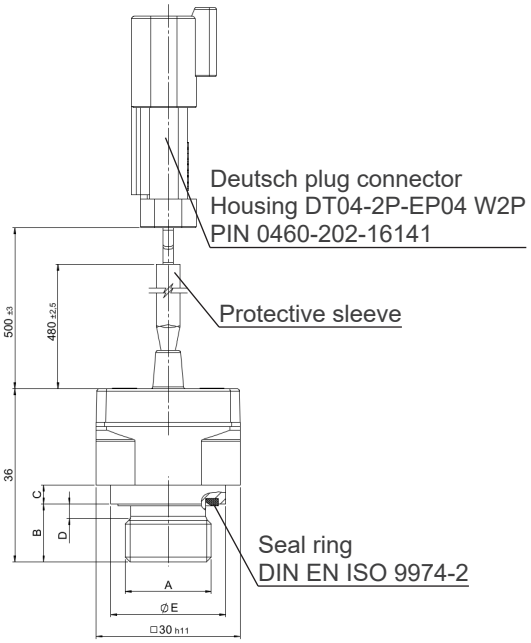
Functional principle / diagram:

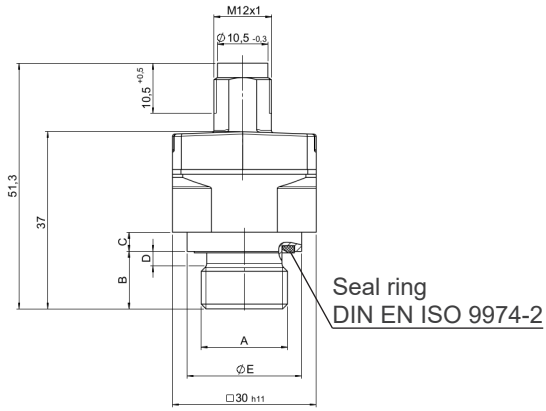
The permanent magnet on the measuring surface of the contamination sensor attracts ferromagnetic contaminant particles from the passing oil. The increased accumulation of particles forms an electrical bridge between the permanent magnet and the adjacent metal contact. By evaluating the ohmic resistance for instance, a warning function could be activated or the system could be switched off.



Device dimensions



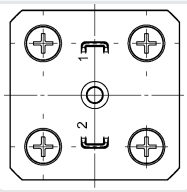


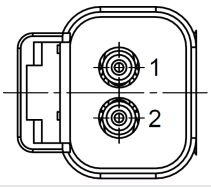


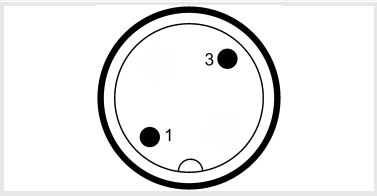
Dim.	14 *	18	22	26	33	
A	M14x1.5	M18x1.5	M22x1.5	M26x1.5	M33x2	Other types of connection are available on request
B	12	12	12	12	12	
C	4	4	4	4	4.5	
D	3	3	3	3	4	
ØE	19	23.9	27	31.4	39.2	

Pin connections

* Please note that on the 14 mm version, the external ring magnet is connected to the housing (ground).

EN 175301-803, 2 pole	Pin	
	1	External magnet
	2	Internal magnet
	Reverse polarity possible	

Strands with Deutsch DT 04, 2 pole	Pin	
	1	External magnet
	2	Internal magnet
	Reverse polarity possible	

M12x1, 2 pin	Pin	
	1	External magnet
	3	Internal magnet
	Reverse polarity possible	

Order details

Electrical connection	Mechanical Connection	Part number
EN175301-803 (DIN 43650)	M14x1.5 M18x1.5 M22x1.5 M26x1.5 M33x2 7/8-14UNF-2A G3/4	3836591 3829087 3829086 3829088 3829089 3836592 3951612
Strand Deutsch plug connector DT04, 2 pole	M14x1.5 M18x1.5 M22x1.5 M26x1.5 M33x2 7/8-14UNF-2A G3/4	3836593 3836635 3829090 3647788 3829092 3836636 3836637
M12x1, 4 pole	M14x1.5 M18x1.5 M22x1.5 M26x1.5 M33x2 7/8-14UNF-2A G3/4 G1/2 G1/4	3886876 3886877 3886878 3886879 3886880 3886882 3886883 4169753 4173036

Accessories

For an uncomplicated replacement of the sensor in hydraulic systems, HYDAC ELECTRONIC offers several variants of oil stop valves.

Oil stop valve M26x1.5 – FM
Order no.: 4589833

Oil stop valve M42x2 – FM
Order no.: 4589834

Oil stop valve M48x2 – FM
Order no.: 4589956

Other oil stop valves on request.

Note

The information in this brochure relates to the operating conditions and applications described.
For applications or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

HYDAC ELECTRONIC GMBH
Hauptstraße 27
66128 Saarbrücken/Germany
Telephone +49 (0)6897 509-01
Fax +49 (0)6897 509-1726
E-mail: electronic@hydac.com
Internet: www.hydac.com