Electronic Contamination Switch
EY-1356

Description:

The contamination switch series EY-1356 works as a warning element in hydraulic systems and gearboxes and has been developed by HYDAC ELECTRONIC to meet the special requirements of our customers.

The sensor detects and attracts metal ferromagnetic particles in oil or in other hydraulic fluids. The accumulation of particles generates a switching signal (change in the ohmic resistance). The contamination sensor thus provides an early warning of possible wear. Substantial damage on bearings and gear wheels, for instance, can therefore be avoided.

The sensor is available with different mechanical and electrical connections and can be integrated into almost any application.

Special features:

- Simple design
- Robust design
- Standard connection types

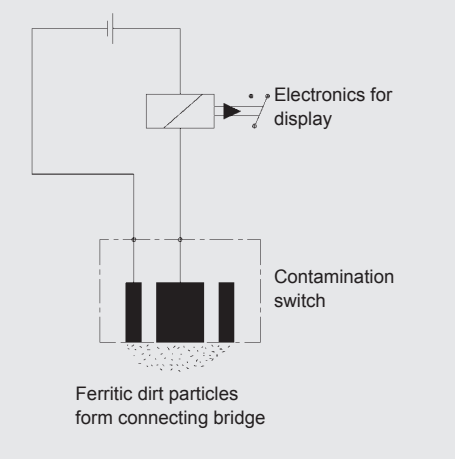
Technical data:

Maximum switching voltage	30 VDC
Maximum switching current	200 mA
Maximum oil pressure abs.	6 bar (16 bar)
Holding power of the permanent solenoid	~ 1.5 N
Ambient temperature	-25 °C .. +90 °C
Protection class to IEC 60529	
DEUTSCH male connector DT04 2 pole	IP67
Integrated male connector according to EN175301-803/ ISO4400	IP65
Mating connector supplied	
DEUTSCH male connector DT04 2 pole	no
Integrated male connector according to EN175301-803/ ISO4400	yes
Max. torque value	
M14x1.5	15 Nm
M18x1.5	25 Nm
M22x1.5	60 Nm
M26x1.5	70 Nm
M33x2	140 Nm
Installation position	We recommend an "upside-down" mounting position, i.e. connector or cable outlet pointing downwards.

The contamination switch is supplied with seal ring DIN 3896 NBR.

Functional principle / diagram:

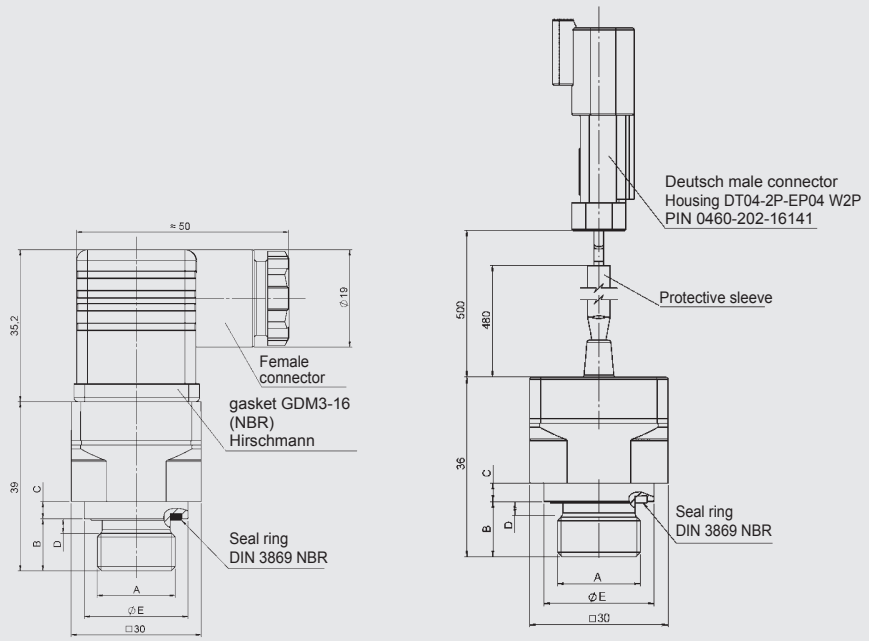
The permanent solenoid at the measuring surface of the contamination switch attracts the ferromagnetic particles from the passing oil. The increased accumulation of particles forms an electrical bridge between the permanent solenoid and the adjacent metal contact. The resulting switching signal can, for instance, activate a warning function or switch off the system.



Order details:

Electrical connection	Mechanical connection	Part number
Integrated male connector according to EN175301-803/ ISO4400	M14x1.5	3252533
	M18x1.5	3305023
	M22x1.5	3731848
	M26x1.5	3731849
	M33x2	3252555
Strand DEUTSCH male connector DT04 2 pole	M14x1.5	3731852
	M18x1.5	3731853
	M22x1.5	3731854
	M26x1.5	3731855
	M33x2	3731856

Dimensions:

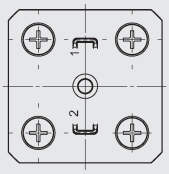


Dim.	14	18	22	26	33	
A	M14x1.5	M18x1.5	M22x1.5	M26x1.5	M33x2	Other types of connection are available on request
B	12	12	12	12	12	
C	4	4	4	4	4.5	
D	3	3	3	3	4	
ØE	19	23.9	27	31.4	39.2	

Pin connections:

in accordance with EN 175301-803

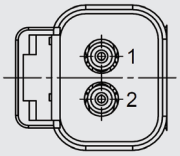
Without connector



Pin	
1	$+U_B$
2	$-U_B$

Reverse polarity permitted

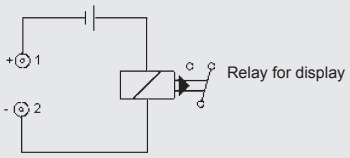
Cable assignment for Deutsch DT04



Pin	
1	$+U_B$
2	$-U_B$

Reverse polarity permitted

Switching example:



Note:

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

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