Rexroth
Bosch Group

Contamination Switch VS

RE 95148/04.08 **1**/4
Replaces: 11.02

Data Sheet

Series 2
for detecting metallic impurities in oil

Contents

Ordering Code

VS				/	2	2
01	02	03	04		05	06

Type

01	Contamination switch	**VS**

Electrical connection

		18, 33	22, 26	
02	Integrated plug connector to DIN 43650 / IEC 4400	●	●	**S**
	Connecting strands with protective sheath and socket DEUTSCH DT04, 2-pin	–	●	**L**

Screw thread

03	M18x1,5	**18**
	M22x1,5	**22**
	M26x1,5	**26**
	M33x2	**33**

Switch contact

04	Separate contact	**S**

Series

05		**2**

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06		**2**

● = available – = not available

Material Number

Variants	Material Number
VSS18S/22	R902601956
VSS22S/22	R902601957
VSS26S/22	R902601958
VSS33S/22	R902601959
VSL22S/22	R902601963
VSL26S/22	R902601964

Description

The contamination switch VS detects metallic ferromagnetic impurities in oil. Installed in an axial piston unit, the contamination switch VS provides early warning of wear processes and makes it possible to avoid consequential damage in good time.

The contamination switch VS is screwed into the existing bores (e.g. case drain ports) of hydraulic pumps and hydraulic motors. Most abrasion is likely to occur in the case drain area. The plug connector should be fitted so that it faces downwards in order to promote the accumulation of particles due to gravity.

Ferromagnetic impurities in the oil are attracted by a permanent magnet on the measuring surface of the contamination switch VS. As the particles accumulate, they form an electric bridge between the magnet and adjacent metal contacts. This switch signal can then be used to activate an alarm via a relay, for example, or to switch off the hydraulic system.

The magnet always forms one of the two switch contacts. A separate contact which is isolated from the switch housing forms the second switch contact.

Two different versions are also available for the electrical connection: either an integrated plug connector with mating plug or a free plug connector on the end of a connecting lead with two strands and a protective sheath.

Main part

– Supplied with sealing ring

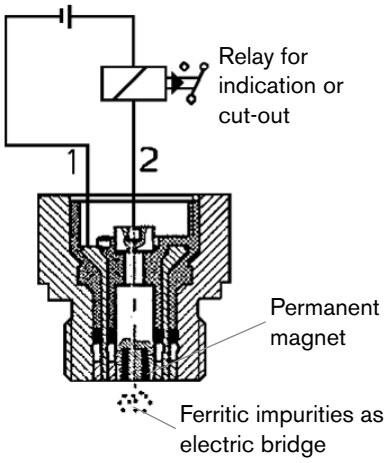
– Supplied with mating plug (connection version S)

Technical Data

Type		VS
Max. switching voltage		30 V
Max. switching current		0,2 A
Max. oil pressure		6 bar abs.
Ambient temperature		-25°C ... + 90 °C
Max. screw-in torque	Size 18	25 Nm
	Size 22	60 Nm
	Size 26	70 Nm
	Size 33	140 Nm
Installed position		Preferably with connector and cable outlet pointing downwards

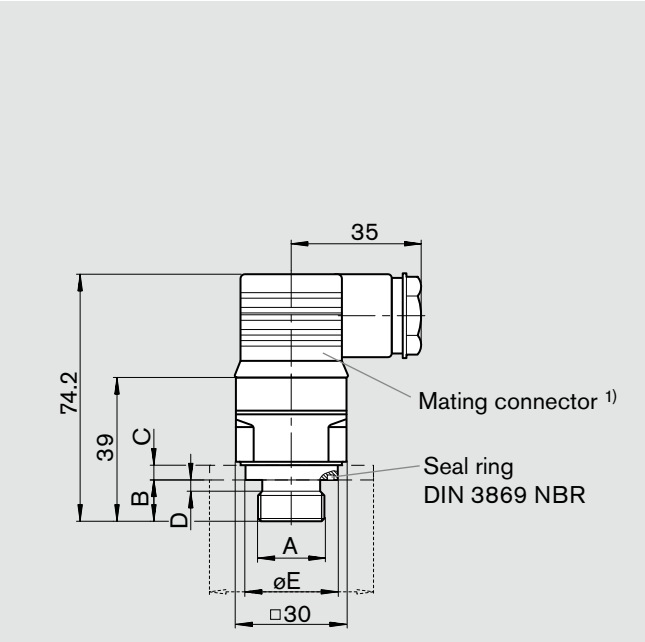
Connection

Switch contact version „S“

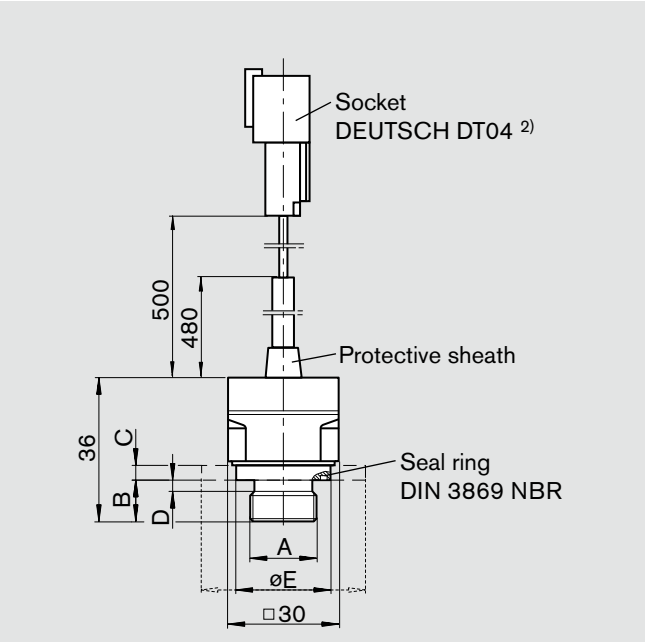


Dimensions

Connection version „S“



Connection version „L“



VSS	18	22	26	33
A	M18x1,5	M22x1,5	M26x1,5	M33x2
B	12	12	12	12
C	4	4	4	4,5
D	3	3	3	4
E	ø23,9	ø27	ø31,4	ø39,2

VSL	22	26
A	M22x1,5	M26x1,5
B	12	12
C	4	4
D	3	3
E	ø27	ø31,4

1) Connection version „S“ is supplied complete with mating connector.

2) The mating connector DEUTSCH DT06-2S-EP04 for connection version „L“ is not included in supply. Available from Rexroth on request.

Safety Instructions

General instructions:

- The suggested circuits do not imply any technical liability for the system on the part of Rexroth.
- System developments, installations and commissioning of electronic systems for controlling hydraulic drives must only be carried out by trained and experienced specialists who are sufficiently familiar with the components used and with the complete system.
- No components that are defective or not working properly should be used. If components fail and/or exhibit malfunction, repair must be carried out immediately.
- Before setting the system into operation, you must ensure that the vehicle and the hydraulic system are in a safe condition. Make certain that no persons are present in the danger zone of the machine.
- A sufficiently large distance to radio systems must be maintained.
- All connectors must be unplugged from the electronics during electrical welding operations.
- Cables to the electronics must not be routed close to other power-conducting lines in the machine or vehicle.

Conventional use:

- The sensor is designed for use in mobile working machines provided no limitations / restrictions are made to certain application areas in this data sheet.
- Operation of the sensor must generally occur within the operating ranges specified and released in this data sheet, particularly with regard to voltage, temperature, vibration, shock and other described environmental influences. Use outside of the specified and released boundary conditions may result in danger to life and/or cause damage to components which could result in consequential damage to the complete system.
- Damages which result from improper use and/or from unauthorized, unintended interventions in the device not described in this data sheet render all warranty and liability claims with respect to the manufacturer void.

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