

RE 95 148/05.99

Replaces: RE 95 044/12.95



Contamination Switch VS
for detecting metallic contamination of oil

Series 2



VSL.../20

Features

The VS contamination switch is designed to detect the contamination of oil by metallic, ferromagnetic particles. Mounted in an axial piston machine, the VS provides indications of possible wear conditions and permits early prevention of consequential damage.

A permanent magnet at the measuring face of the contamination switch attracts ferromagnetic dirt particles from the passing oil. With increasing accumulation, the metal dirt particles form an electric connection from the magnet to the adjacent metal contacts. The resulting switching signal can be used, for example, to activate a warning device via a relay or to switch off the hydraulic system.

The magnet always forms one of the switch contacts. For the second contact, two alternative versions are available:

Version M: The second switch contact is the screw-in body of the contamination switch. In most cases, therefore, the second contact is at ground potential (bonding of the sensor body, pump housing and vehicle chassis).

Version S: The second contact is a separate switch contact, isolated from the switch body.

Two alternative variants are also available for the electrical connection. One variant uses a built-in plug-in connector with mating connector. The other variant has a free plug-in connector at the end of a connecting cable consisting of 2 leads and a flexible protective tube.

In hydraulic pumps and motors, the VS contamination switch is screwed into existing holes (leakage oil ports). As the preferred installation position, the plug connection should point downwards in order to take full advantage of the accumulation of particles due to gravity.

Warning: correct operation cannot be guaranteed if the VS contamination switch is installed in channels remote from the oil flow.

Ordering Code

VS						/ 2		0	
Type									
Contamination switch								VS	
Electrical connection									
Integral plug-in connector conforming to DIN 43650 / IEC 4400								S	
Connecting leads with flexible tube and DEUTSCH plug-in connector DT04, 2-pin								L	
Threaded connection									
M14 x 1.5								14	
M18 x 1.5								18	
M22 x 1.5								22	
M26 x 1.5								26	
M33 x 2								33	
Second switch contact 14 18...33									
on housing/ground connection		●	○	M					
separate contact		-	●	S					
Series									
								2	
Index									
								0	

● = available ○ = delivery on request - = not available

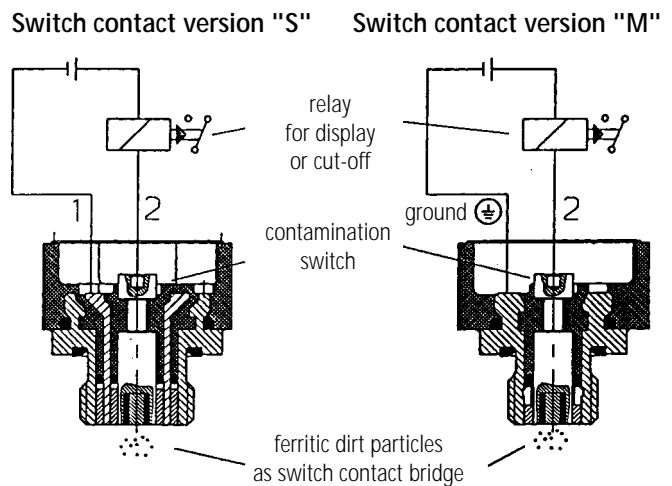
Main components

- Delivered complete with sealing ring
- Delivered complete with mating connector (for connection variant S)

Technical Data

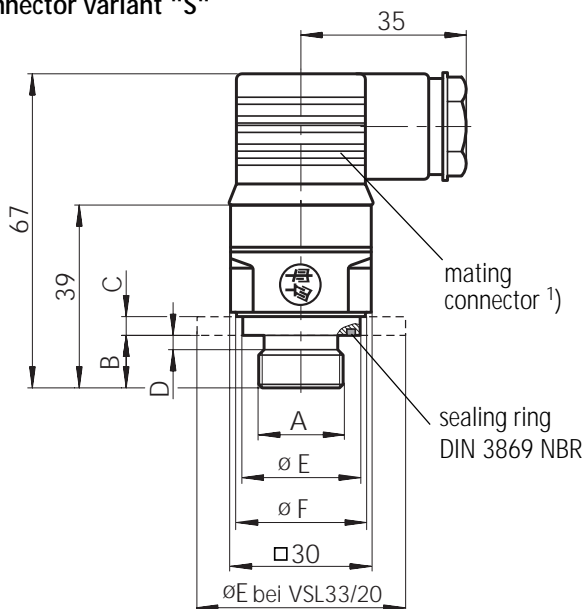
Type		VS
Max. switch voltage		30V
Max. switch current		0.2 A
Max. oil pressure		6 bar abs.
Ambient temperature		-25°C ... +90°C
Max. screw-in torque	Size 14	15 Nm
	Size 18, 22, 26, 33	20 Nm
Installation position: Preferably with connector or outgoing cable pointing downwards		

Terminal Connections



Unit Dimensions

Connector variant "S"

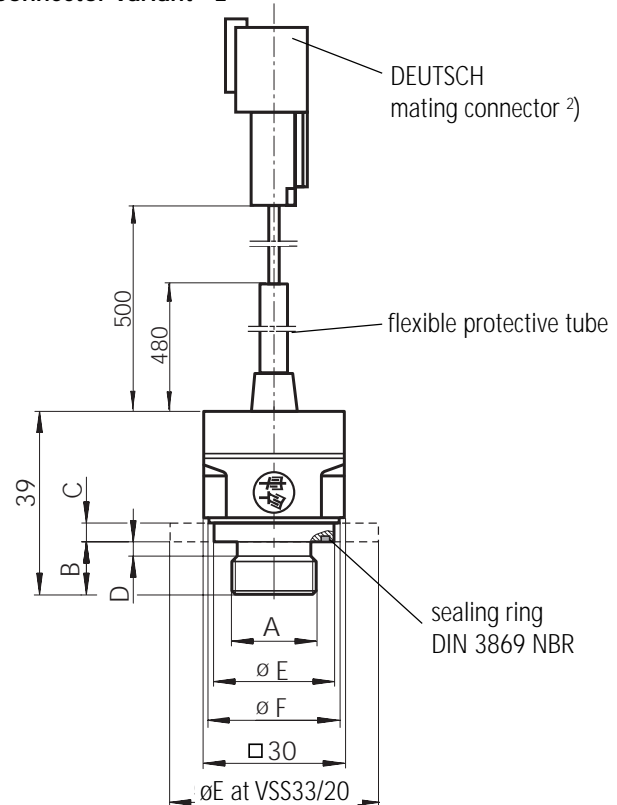


VSS	14	18	22	26	33
A	M14x1.5	M18x1.5	M22x1.5	M26x1.5	M33x2
B	11.2	11.2	11.2	11.2	10.7
C	4	4	4	4	4,5
D	3	3	3	3	4
E	ø19	ø23.9	ø27	ø31.4	ø39.2
F	ø27	ø27	-	-	-

1) For connector variant "S", the mating connector is supplied with the device.

2) For connector variant "L", the DEUTSCH DT06-2S-EP04 mating connector is not included with the device. Available from Brueninghaus Hydromatik on request.

Connector variant "L"



VSL	14	18	22	26	33
A	M14x1.5	M18x1.5	M22x1.5	M26x1.5	M33x2
B	11.2	11.2	11.2	11.2	10.7
C	4	4	4	4	4,5
D	3	3	3	3	4
E	ø19	ø23.9	ø27	ø31.4	ø39.2
F	ø27	ø27	-	-	-

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The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.