

Electronic maintenance indicator PiS 3303

1. Features

Filter elements are only used economically when their dirt absorption capacity is completely exploited. For this reason, the filter and system control or monitor must reliably indicate when the filter element requires replacement. This maintenance indicator has an electrical M12 8-pole connection in accordance with IEC 61076-2-101. Thanks to the Filtration Group modular system, the electronic maintenance indicator can be used on all Filtration Group pressure filters.

Merkmale

- Analogue output signals for dynamic pressure and differential pressure in one sensor
- Switching contact 75% soiling as a pre-warning signal for replacing the filter element
- Switching contact 100% soiling as a warning signal for the filter element being exhausted
- High switching precision of the contacts to better exploit filter capacities
- Cold start suppression optional
- Worldwide distribution

2. Function

The electronic maintenance indicator is made up of two sensors which record input and output pressure at the filter. The sensor signals p1 and p2 are converted analogue-digital and processed by an electronic system controlled by micro-controller. The differential pressure dp is calculated using the difference p1-p2.

Two analogue output signals are transmitted. The first output delivers a current signal 4...20 mA proportional to the dynamic pressure p1.



The second output delivers a current signal 4...20 mA proportional to the differential pressure dp.

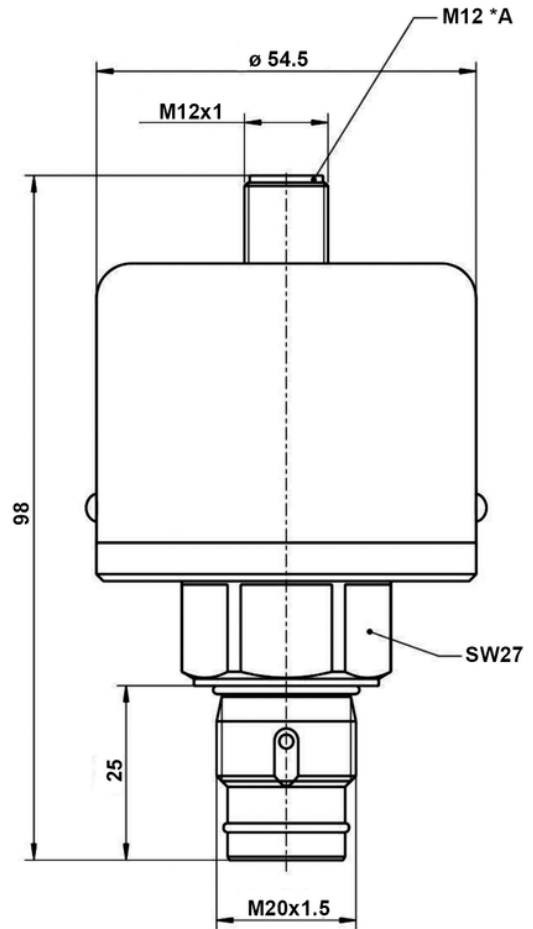
Two semiconductor relays K1 and K2 can be configured in the factory either as normally open or normally closed contacts. Contact K1 switches at 75% soiling level and contact K2 subsequently at 100% soiling level.

If cold start monitoring is active, the contacts do not switch at a media temperature below +30 °C.

3. Technical data

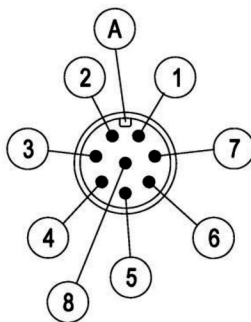
Material:	AL
Contact with media:	FKM, AL, ceramic, stainless steel
Process connection:	connecting piece M20x1.5
Electr. connection:	M12 plug-type connector, 8-pole, IEC 61076-2-101
Operating temperature:	-30 °C to +85 °C
Ambient temperature:	-40 °C to +85 °C
Storage temperature:	-40 °C to +85 °C
Humidity:	0 to 95 % rel. hum.
Soiling 100 %:	3.5 bar
Dynamic pressure p1:	0 to 25 bar
Accuracy p1:	1 % (FS 25 bar)
Differential pressure dp:	0 to 8 bar
Accuracy dp:	1 % (FS 25 bar)
Max. overload (p1, dp):	37.5 bar
Compensation range:	-10 °C bis +70 °C
Output signal (p1, dp):	4 bis 20 mA max. 600 Ω
Contact 1 (75 %):	2.6 bar
Contact 2 (100 %):	3.5 bar
Contact type:	N/O or N/C
Switching current:	200 mA
Switching delay:	5 s ±5 %
Nominal voltage:	24 V DC
Perm. operating voltage:	20 to 30 V DC
Electr. connection type:	3 conductors
Max. power consumption: with switching outputs:	2 W 8 W
Protection type:	IP 65

4. Dimensions



*A = Plug connection
Maximum torque 33 Nm

5. Connection



1	Supply	+Ub		white
2	Supply	GND		brown
3	Switching output K1	75 %		green
4	Output signal	p1	4 to 20 mA	yellow
5	Output signal	dp	4 to 20 mA	grey
6	Switching output K2	100 %		pink
7	Functional earth	FE		blue
8	internal use	not wired		red
A	Coding			

Filtration Group GmbH
Schleifbachweg 45
D-74613 Öhringen
Phone +49 7941 6466-0
Fax +49 7941 6466-429
sales@filtrationgroup.com
www.filtrationgroup.com
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