Pressure Switches, Series PM1

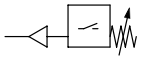
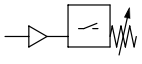
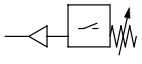
► Operating pressure: -0.9 - 16 bar ► mechanical ► electr. connection: Plug, ISO 4400, form A ► Diaphragm, spring loaded, adjustable

00132602

Measurement	Relative pressure
Switching element	microswitch (input/output)
Switching frequency	1,5 Hz
Protection against overpressure	80 bar
Ambient temperature min./max.	-10°C / +80°C
Medium temperature min./max.	-10°C / +80°C
Medium	Compressed air hydraulic oil
Shock resistance max. (XYZ direction)	15 g
Vibration resistance (XYZ direction)	10 g (60 - 500 Hz)
Switching point	adjustable
Hysteresis	max. switching pressure difference
DC operating voltage min./max.	12 V - 125 V
Operational voltage AC min./max.	12 V - 250 V
Mounting orientation	Any
Mounting types	via through holes
Function	change-over contact (mechanical)
Protection class	IP 65
Weight	0.2 kg
Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- Switching function increasing pressure: contact switches from 1-2 to 1-3.Switching function decreasing pressure: contact switches from 1-3 to 1-2.
- Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching!

	Type	Operating pressure range min./max.	Compressed air connection	Repeatability (% of full scale value)	Certificates	Fig.	Note	Part No.
		[bar]						
	PM1-M3-G014	-0.9 / 0	internal thread, G 1/4	± 4 %	CCC	Fig. 1	1); 3)	0821100010
	PM1-M3-G014	0.2 / 2	internal thread, G 1/4	± 3 %	-	Fig. 1	2); 4)	3410582100
		0.2 / 3			CCC		1); 3)	0821100011
		0.5 / 8			-		1); 4)	0821100012
		0.5 / 10			-		2); 4)	3410582000
		0.5 / 16			CCC		1); 4)	0821100013
	PM1-M3-F001	-0.9 / 0	Flange with O-ring, Ø 5x1,5	± 4 %	CCC	Fig. 2	1); 3)	0821100020

1) Scope of delivery: with electrical connector
2) Scope of delivery: without electrical connector
3) Diaphragm: Fluorocaoutchouc
4) Diaphragm: Acrylonitrile Butadiene Rubber

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	Type	Operating pressure range min./ max.	Compressed air connection	Repeatability (% of full scale value)	Certificates	Fig.	Note	Part No.
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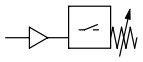
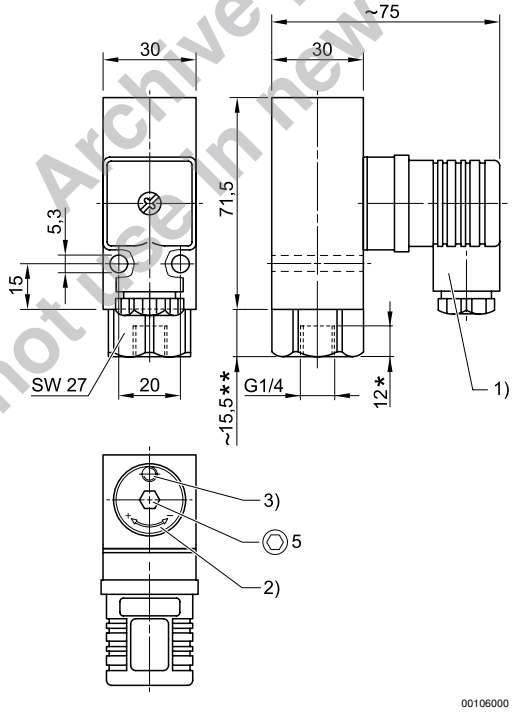
	PM1-M3-F001	0.2 / 3	Flange with O-ring, Ø 5x1,5	± 3 %	CCC	Fig. 2	1); 3)	0821100021
	PM1-M3-F001	0.5 / 8					2); 4)	0821100024
	PM1-F001-M3	0.5 / 16					1); 4)	0821100023

1) Scope of delivery: with electrical connector
2) Scope of delivery: without electrical connector
3) Diaphragm: Fluorocaoutchouc
4) Diaphragm: Acrylonitrile Butadiene Rubber

Fig. 1



1) Electrical connector
2) adjustment screw
3) adjustment protection
* minimum screw-in depth
** approx. 9,5 mm for 3410582000; 0821100012; 0821100013

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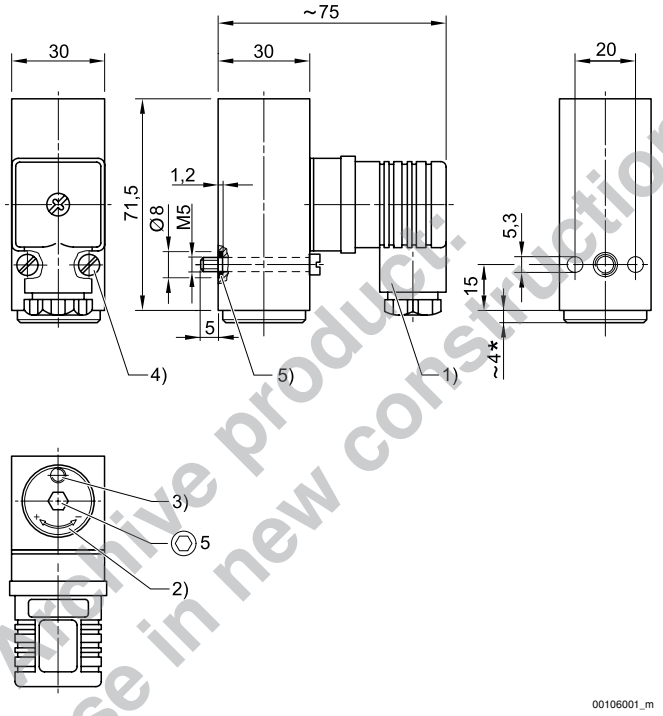
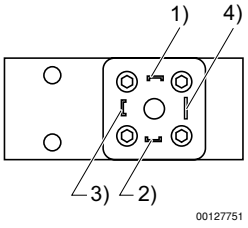
Fig. 2



1) Electrical connector
2) adjustment screw
3) adjustment protection
4) cylinder screw M5x35 (included in scope of delivery)
5) O-ring Ø5x1.5 (included in scope of delivery)
* 0 mm for 0821100023 and 0821100024

PIN assignment for electrical connector



1) +UB
2) break contact
3) make contact
4) GND

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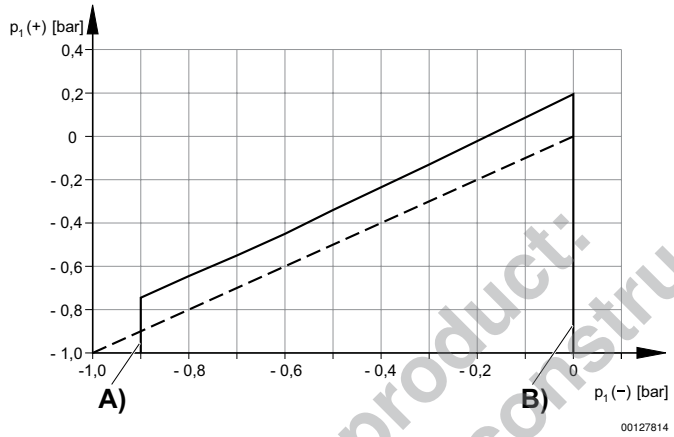
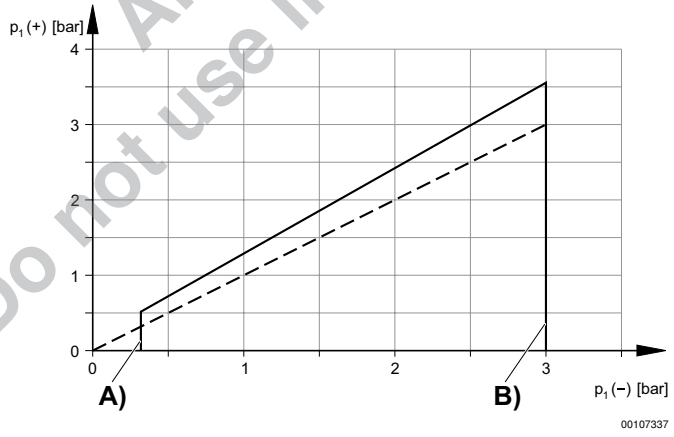
differential switching pressure characteristic curve (-0,9 – 0 bar)



A) p1 (-), min.
B) p1 (-), max.
p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure

differential switching pressure characteristic curve (0,2 – 3 bar)



A) p1 (-), min.
B) p1 (-), max.
p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure

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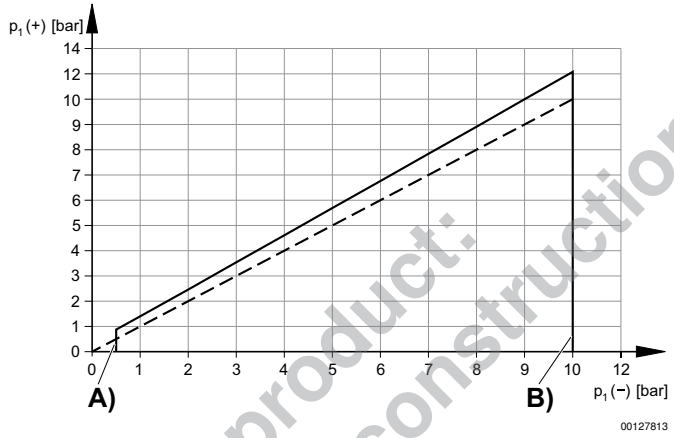
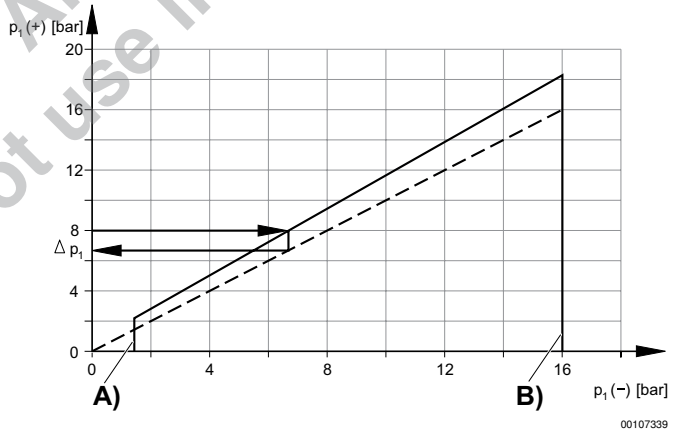
► Operating pressure: -0.9 - 16 bar ► mechanical ► electr. connection: Plug, ISO 4400, form A ► Diaphragm, spring loaded, adjustable

Differential switching pressure characteristic curve (0,5 – 10 bar)



A) p1 (-), min.
B) p1 (-), max.
p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure

differential switching pressure characteristic curve (0,5 – 16 bar)



A) p1 (-), min.
B) p1 (-), max.
p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure
Δ p1 = max. operating pressure difference or hysteresis
Example:
p1 (+) = 8 bar > p1(-) = 6.8 bar
Δ p1 = 1.2 bar

max. permissible continuous current I max. [A] with ohmic load

U [V]	30	48	60	125	250							
I [A] 1)	5	5	5	5	5							
I [A] 2)	5	1,2	0,8	0,4	–							

reference cycle: 30/min., reference temperature: +30 °C
1) AC
2) DC

Pressure Switches, Series PM1

► Operating pressure: -0.9 - 16 bar ► mechanical ► electr. connection: Plug, ISO 4400, form A ► Diaphragm, spring loaded, adjustable

max. permissible continuous current I max. [A] with inductive load

U [V]	30	48	60	125	250							
I [A] 1) 3)	3	3	3	3	3							
I [A] 2) 4)	3	0.5	0.35	0.05	–							

reference cycle: 30/min., reference temperature: +30 °C
1) AC
2) DC
3) cos ≈ 0,7°
4) L/R ≈ 10 ms