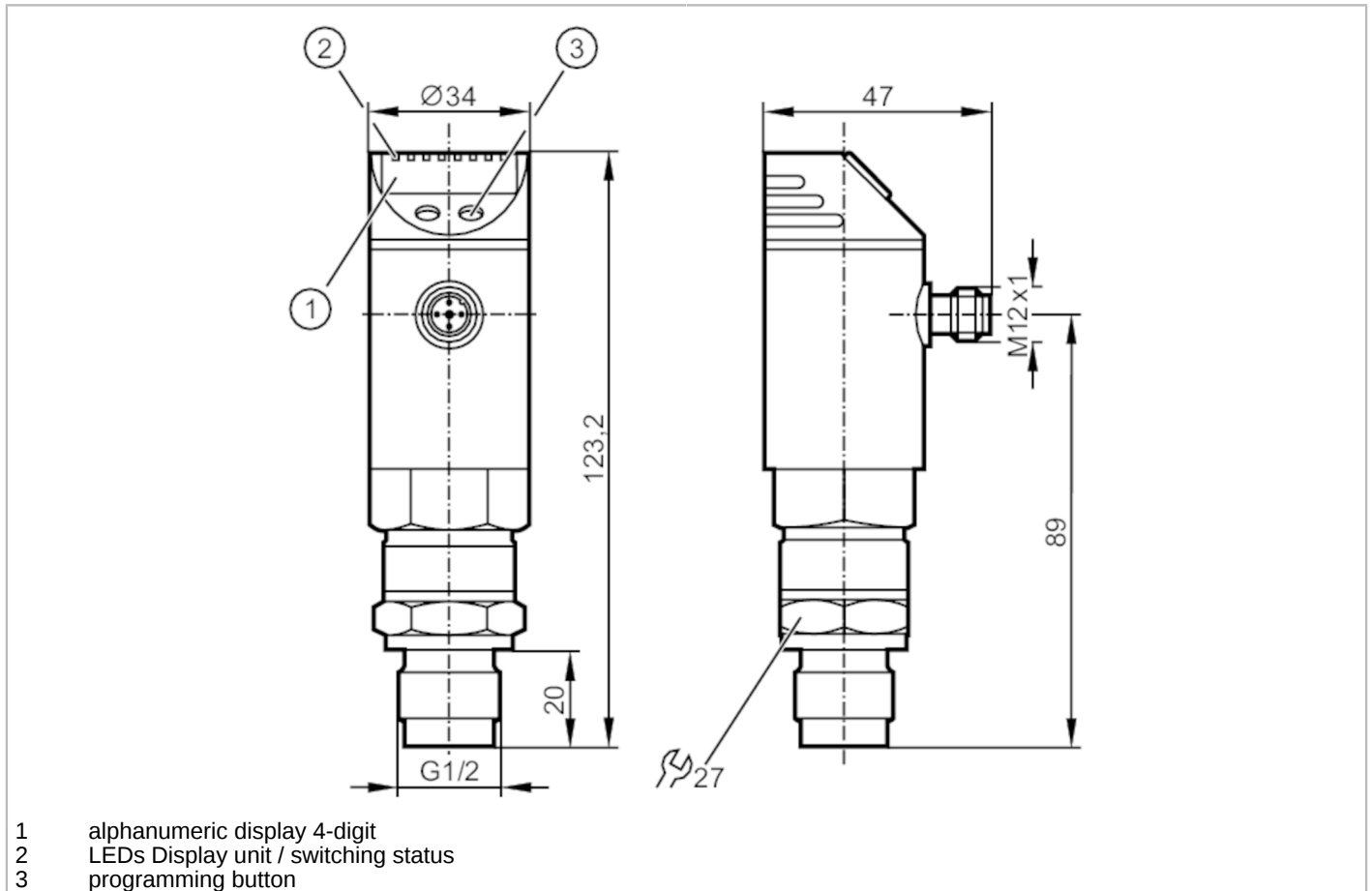


# PY2033



## Pressure sensor with display

PN-025-RDR12-MFRKG/US/ IV



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	-1...25 bar	-14.5...362.5 psi	-0.1...2.5 MPa
Process connection	threaded connection G 1/2 external thread		

### Application

Special feature	Gold-plated contacts		
Application	flush mountable for industrial applications; for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-20...125		
Min. burst pressure	200 bar	2900 psi	20 MPa
Pressure rating	100 bar	1450 psi	10 MPa
Type of pressure	relative pressure		
No dead space	yes		

### Electrical data

Operating voltage [V]	18...32 DC; (to SELV/PELV)		
Current consumption [mA]	< 35		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		



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Power-on delay time	[s]	0.3
Integrated watchdog		yes

### Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
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### Outputs

Total number of outputs		2
Output signal		switching signal; analogue signal; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	< 500
Number of analogue outputs		1
Analogue current output	[mA]	4...20; (scalable 1:4)
Max. load	[Ω]	(U <sub>b</sub> - 10 V) / 20 mA
Analogue voltage output	[V]	0...10; (scalable 1:4)
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

### Measuring/setting range

Measuring range	-1...25 bar	-14.5...362.5 psi	-0.1...2.5 MPa
Set point SP	-0.8...25 bar	-11.5...362.5 psi	-0.08...2.5 MPa
Reset point rP	-0.9...24.9 bar	-13...361 psi	-0.09...2.49 MPa
Analogue start point	-1...18.75 bar	-14.5...272 psi	-0.1...1.88 MPa
Analogue end point	5.25...25 bar	76...362.5 psi	0.53...2.5 MPa
In steps of	0.05 bar	0.5 psi	0.01 MPa
Factory setting		SP1 = 6.25 bar	rP1 = 5.75 bar
		SP2 = 18.75 bar	rP2 = 18.25 bar
		ASP = 0.00 bar	AEP = 25.00 bar

### Accuracy / deviations

Switch point accuracy	[% of the span]	< ± 0,4; (Turn down 1:1)
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	< ± 0,3 (BFSL) / < ± 0,6 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)
Linearity deviation	[% of the span]	< ± 0,5; (Turn down 1:1)
Hysteresis deviation	[% of the span]	< ± 0,1; (Turn down 1:1)
Long-term stability	[% of the span]	< ± 0,1; (Turn down 1:1; per year)

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Temperature coefficient zero point [% of the span / 10 K]	< ± 0,25; (0...80 °C)
Temperature coefficient span [% of the span / 10 K]	< ± 0,25; (0...80 °C)

### Response times

Response time [ms]	< 1.5
Damping process value dAP [s]	0.01...4
Damping for the analogue output dAA [s]	0.01...4
Max. response time analogue output [ms]	3

### Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span
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### Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 65

### Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [years]		167.14

### Mechanical data

Weight [g]	390
Housing	cylindrical
Dimensions [mm]	Ø 34 / L = 123.2
Materials	stainless steel (304/1.4301); stainless steel (316L/1.4435); PC; PBT; PEI; PTFE
Materials (wetted parts)	stainless steel (316L/1.4435)
Min. pressure cycles	10 million
Process connection	threaded connection G 1/2 external thread
Fill fluid for pressure transmission	NEOBEE (food grade, FDA compliant)

### Displays / operating elements

Display	Display unit	3 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit

### Remarks

Pack quantity	1 pcs.
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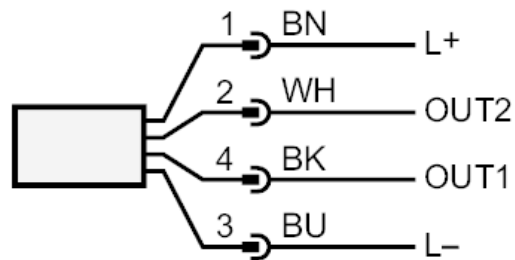
PN-025-RDR12-MFRKG/US/ IV

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



### Connection



OUT1	switching output
OUT2	switching output
	analogue output
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white