

Battery powered digital manometer Model MAN-SD

Options relay, min./max. memory and analogue output



measuring
•
monitoring
•
analysing



Features

- Accuracy class: 0.5
- Material: stainless steel and ceramic
- Connection: G 1/4 AG
- 4-digit LCD-display
- Operation by keys
- Options: 0-2 V_{DC} output signal, min./max. memory, relay

Description

This intelligent digital pressure gauge can be used for indicating, monitoring and remote transmission of pressure in the machine and plant sectors. A piezzo resistive transducer senses the pressure to be measured and indicates it on the electronic display. Optional analogue output for the remote transmission of the values to be measured or a relay output may be added to the visible 4-segment LCD display. The front panel with display can be rotated allowing easy viewing.

The switch point and hysteresis of the model with relay are programmable using the key pad. The zero point and the span of the optional analogue output 0-2 V_{DC}, with refer to the display, is completely scalable.

A wide spectrum of process connections are available on request. The housing can be rotated after loosening the lock-nut to allow easy viewing.

Indicating range

-1 ... 0 bar to 0 ... 400 bar

Applications


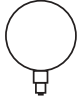
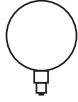
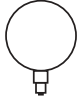
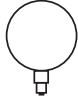
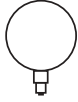
- Process engineering
- Machine engineering
- Environmental engineering
- Hydraulic engineering

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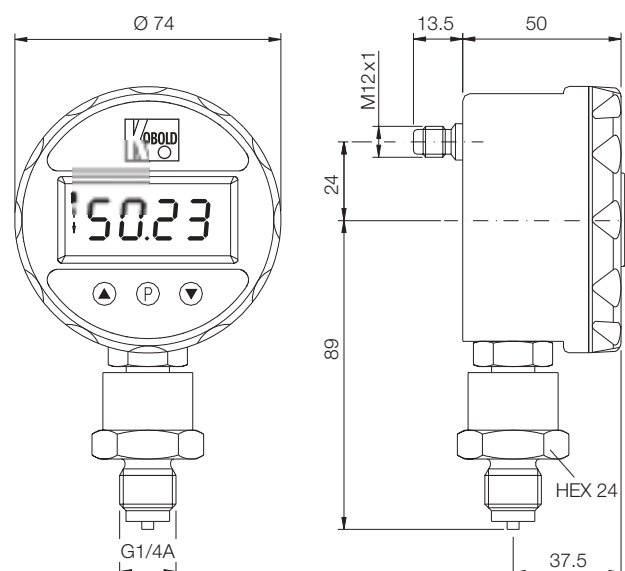
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Technical data

Model MAN-	SD10...	SD1S...	SD20...	SD2S...	SD30...	SD3S...
						
Version:		with min./max. memory	with bi-stable relay	with relay and min./max. memory	Analogue output	Analogue output a. min./max. memory
Analogue output					0-2 V	0-2 V
Measuring range:	-1...0 bar to 0...400 bar					
Housing:	74 mm, PA 6 GK 30, polyester-film					
Connection:	G 1/4 male thread (other connections upon request) stainless steel 1.4571					
Sensor:	ceramic (Al ₂ O ₃)					
Case O-ring:	NBR					
Max. temperature:	Storage: -30...+60°C Medium: -30...+85°C Ambient: 0...+60°C					
Relative humidity:	< 90%, non condensing					
Pressure limits:	40 bar: 3 x range 60 to 250 bar: 2 x range > 250 bar: 1.5 x range					
Accuracy class:	0.5					
Characteristic deviation:	±0.5% (f.s.)					
Temperature coefficient:	zero ±0.2% f.s./10 K full span ±0.1% f.s./10 K					
Conversion rate:	5 / s					
Automatic switch off time (factory set):	2, 4, 8, 16, 32, 64 min. or continuous working (standard: 8 min - only SD 10) (not for analogue output and relay)					
Auxiliary power:	9 V battery (included)					
Battery life:	2000 h (continuous working), 7300 h (off-state) Alkaline (Durazell MN1601, Varta 4922) 5200 h (continuous working), 17300 h (off-state) lithium-battery (Ultralife U9VL-J) (based 5 conversions / s)					
Display:	4-segment LCD-Display, 12.7 mm					
Output (option):	0 - 2 V _{DC} (load: 100 k)					
Relay (option):	bi-stable change over contact					
Peak memory (optional):	Min/Max values displayed via key pad					
Max. switching voltage	30 V _{AC/DC} , 2 A (for relay output)					
Electrical connection:	M 12 x 1 plug DIN (female connector as accessories available)					
Protection:	IP 65					

Dimensional drawings



Digital pressure gauge with ceramic sensor Battery powered Model MAN-HF

Options: 1 relay, min./max. memory,
analogue output 0 - 2 V



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Features

- Accuracy class: 0.5
- 4-digit LCD-display, 12.7 mm
- Compact construction
- Easy operation by set buttons
- Model as battery powered pressure switch by optional bi-stable relay
- Option: min./max. memory
- Option: analogue output 0-2 V_{DC}

Description

This intelligent digital pressure gauge can be used for indicating, monitoring and remote transmission of pressure in the machine and plant sectors. Indication occurs by means of an easily visible 4-digit LCD-display. The front panel with display can be rotated. The switch point and hysteresis of the model with relay are programmable using the key pad. The zero point and the span of the optional analogue output 0-2 V_{DC}, with refer to the display, is completely scalable. A wide range of progress connections are available on request. The housing can be rotated after loosening the lock-nut to allow easy viewing.

Measuring principle

The pressure is detected by a sensor and transformed by the electronics into a digital indication. Parallel to this there is also an analogue output for remote transmission of the values measured, as well as a relay output.

Ranges

-1 ... 0 bar to 0 ... 600 bar

Applications







- Machine construction;
hydraulic and process engineering.

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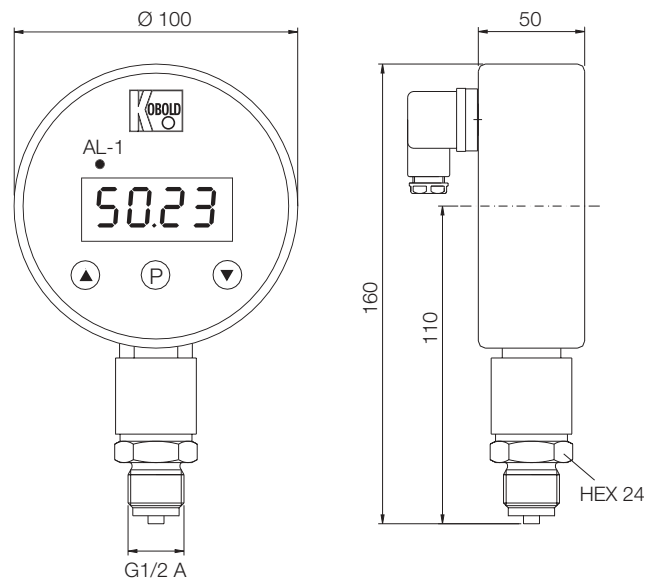
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Technical data

Model MAN-	HF10...	HF1S...	HF20...	HF2S...	HF30...	HF3S...
						
Version:		with min./max. memory	with bi-stable relay	with relay and min./max. memory	Analogue output	Analogue output a. min./max. memory
Analogue output:					0-2 V	0-2 V
Measuring range:	-1...0 bar to 0...600 bar					
Housing:	100 mm, stainless steel					
Connection:	G 1/2 male thread (other connections upon request) stainless steel 1.44571					
Sensor:	ceramic (Al ₂ O ₃)					
Case O-Ring:	NBR					
Max. temperature:	Storage: -30...+60 °C Medium: -30...+85 °C Ambient: 0...+60 °C					
Relative humidity:	< 90 %, non condensing					
Pressure limits:	40 bar: 3 x range 60 to 250 bar: 2 x range > 250 bar: 1.5 x range					
Accuracy class:	0.5					
Characteristic deviation:	± 0.5% (f.s.)					
Temperature coefficient:	zero ±0.2% f.s./10 K full span ±0.1% f.s./10 K					
Conversion rate:	5 / sec.					
Automatic switch off time:	2, 4, 8, 16, 32, 64 min. (not for analogue output and relay)					
Auxiliary power:	9 V battery (included)					
Battery life:	5000 h (9 V battery 600 mAh) 10000 h (9 V lithium-battery 1200 mAh) (@ 5 conversions / sec.)					
Display:	4-segment LCD-Display, 12.7 mm					
Output (option):	0 - 2 V _{DC} (load: 100 k)					
Relay (option):	bi-stable change over contact					
Peak memory (optional):	Min/Max values displayed via key pad					
Max. switching voltage:	30 V _{AC/DC} (max. switch. current: 2 A)					
Max. switching power:	50 VA, 60 W					
Electrical connection:	plug DIN 43651					
Protection:	IP 65					

Dimensional drawings



Digital pressure gauge with ceramic sensor and analogue output

Option: 4 alarm contacts



measuring
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monitoring
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Features

- Analogue output 0/4 - 20 mA, 0 - 10 V
- RS 232- or RS 485-interface (option)
- High contrast LED-display
- Backlit LCD-display for programming
- Adjustment locking by password
- Customer-specific design
- Local indication with integrated process connection
- High overrange protection
- All ranges up to 600 bar to DIN 16064 available
- Version with up to 4 potential free alarm contacts

Description

Digital pressure gauges are intended for indicating, monitoring and remote transmission of pressure-dependant processes in machines and production plants. Indication occurs by means of an easily visible 4-digit green LED-display of 14 mm. The version with relays can carry up to 4 alarm contacts to be set with the keypad.

Other interfaces are available as options. A wide range of process connections are optionally available.

Measuring principle

The pressure is detected by a piezo-resistive sensor and transformed by the electronics into an analogue signal which is proportional to the pressure. Parallel to the indication there is also an analogue output for remote transmission of the values measured.

Ranges

-1 ... 0 bar to 0 ... 600 bar

Applications

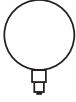

Engineering; machine and apparatus construction

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Technical data

Model	MAN	SF 26 (A4), (A0), (AV)	SF 26 (A4), (A0), (AV)...G	Options
Nominal size		100		see below table
Symbol				
Accuracy class		0.6% FS		
Indicating range		-1...0 bar to 0...600 bar		
Linearity incl. hysteresis		±0.5% FS		
Repeatability		±0.1% FS		
Overload protection		2 x end value		
Housing		stainless steel 1.4301		
Process connection		G 1/2 male, bottom, 1.4571		
Front plate		polyester foil on AL carrier		
Relay			2 x SPDT, max. 60 VA	
Max. load		500 Ohm (mA-output) / 500 Ohm (V _{DC} -output)		
Protection		IP 65		
Electrical connection		terminal box (Phoenix model Mini-Kombicon 3.81 or 5.08 mm)		
Supply		18(15) - 30 V _{DC}		
Output signal		4 - 20 mA / 0 - 20 mA / 0 - 10 V		
Temperatures				
- medium		-20... +85 °C		
- ambient		-20... +60 °C		
- coefficient (offset)		0.3% / 10K FS		
- coefficient (span)		0.3% / 10K FS		

Options upon request

(A4) 4 - 20mA, (A0) 0 - 20mA, (AV) 0 - 10V

Relay (max. 4), RS 232/485 (programmable interface), peak value memory, linearization, rotation (controlling of compressors), differential pressure (Attention: at differential pressure static pressure = difference)
High pressure ranges (> 400 bar...2000 bar; media contacted parts 1.4542 (sensing cell))

Dimensions

