

Datalogger

**DL**

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# Technical Specifications

## Pressure measuring range (bar)

	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
<b>Overpressure</b>	3 bar	3 x FS ( $\geq 3$ bar)	3 x FS
<b>Burst pressure</b>	> 200 bar	> 200 bar	> 200 bar
<b>Accuracy, (2), (<math>\pm</math> % FS)</b>	$\leq 0.25$	$\leq 0.1$	$\leq 0.1$
<b>Thermal shift (<math>\pm</math> % FS/<math>^{\circ}</math>C)</b>			
Zero point 0...70 $^{\circ}$ C	$\leq 0.06$	$\leq 0.03$	$\leq 0.015$
Zero point -25...85 $^{\circ}$ C	$\leq 0.08$	$\leq 0.04$	$\leq 0.02$
Zero point -40...85 $^{\circ}$ C	$\leq 0.09$	$\leq 0.06$	$\leq 0.03$
Span 0...70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$	$\leq 0.015$
Span -25...85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$	$\leq 0.02$
Span -40...85 $^{\circ}$ C	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$
<b>Long term stability, (3)</b>	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

	> 25 ... 600, (1)	> 600 ... 1000
<b>Overpressure</b>	3 x FS ( $\leq 850$ / $\leq 1500$ bar)	1500 bar
<b>Burst pressure</b>	> 850 / $\leq 1500$ bar	> 1500 bar
<b>Accuracy, (2), (<math>\pm</math> % FS)</b>	$\leq 0.1$	$\leq 0.25$
<b>Thermal shift (<math>\pm</math> % FS/<math>^{\circ}</math>C)</b>		
Zero point 0...70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$
Zero point -25...85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$
Zero point -40...85 $^{\circ}$ C	$\leq 0.03$	$\leq 0.03$
Span 0...70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$
Span -25...85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$
Span -40...85 $^{\circ}$ C	$\leq 0.05$	$\leq 0.05$
<b>Long term stability, (3)</b>	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS

(1) Overpressure and burst pressure 1500 bar (stainless steel) optional

(2) Zero based accuracy according to DIN16086, incl. hysteresis and repeatability at ambient temperature

(3) 1 year (typ. / max.)

## Temperature range

<b>Operating temperature</b>	-40...85 $^{\circ}$ C
<b>Process temperatur</b>	-40...100 $^{\circ}$ C
<b>Storage temperatur</b>	-40...85 $^{\circ}$ C

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## Functions

<b>Data Transfer</b>	Data transfer of last measurement period, data transfer of all data, data transfer for a defined time-period, the data will be represented in a txt.file or in a graph
<b>Resolution</b>	< 0.01% FS
<b>Real time clock</b>	Quartz-precision clock with date, Start-time of datalogging configurable
<b>Data memory</b>	130'000 measurement values / non volatile, data kept in memory even without battery
<b>Interface</b>	RS232C / 9600 Baud
<b>Identification</b>	Each datalogger has a unique serial number, as well as a user-definable description
<b>Power supply</b>	1 x Lithium battery 3.6 V / size AA (on site battery change)
<b>Protection class</b>	IP 65 (cap closed)
<b>Configuration</b>	Sampling rate, number of replicates, time and date, description, starting time of first sample, tare, storage threshold value, density of the measuring media
<b>Data format</b>	Data are stored in an ASCII format file and can be processed with Excel™, Lotus™ or similar

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## System Requirements

<b>PC</b>	Processor: Min. 200 MHz Memory: Min. 50 MB RAM: Min. 64 MB
<b>Operating system</b>	Windows 2000 (Service Pack 4) / XP (Service Pack 3/32-Bit) / Vista (32-Bit) / 7 (32-Bit)

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## Qualifications

	Description	Level	Typical interferences
<b>EN 61000-4-2</b>	Electrostatic discharge	4 kV contact 8 kV air	
<b>EN 61000-4-3</b>	Irradiated RF	10 V/m (0.08...2.7 GHz, 3s)	Radio sets, wireless phones

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## Physical specifications

<b>Materials</b>	
Transducer	Stainless steel (316L / 1.4435), (1)
Housing	Aluminium AlMgSi1
Cap	POM
Seals	Viton (Standard), EPDM, Kalrez

(1) Hastelloy (C-276) on request

## Equipment

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### Overview

<b>10.00.0091</b>	Accessories overview
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### Software

<b>101087</b>	PC Software V2.26
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## Additional documents

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### Manual

	Article number	Description
<b>10.00.0205</b>	DEB016	Operating instructions

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### Operating and safety instructions

	Article number
<b>10.88.0368</b>	DMM031

## Ordering information

		X. XXXX.	XXXX.	XX.	XXX
<b>Type</b>	DL	63			
<b>Pressure type</b>	Gauge	1			
	Absolute (vacuum)	2			
	Sealed gauge	3			
<b>Pressure measuring range</b>	Any pressure measuring ranges between 0...100 mbar and 0...1000 bar available, (1)	XX			
<b>Process connection</b>	G 1/4 F, (Fig. 1)	00			
	G 1/4 M, (Fig. 2)	11			
	G 1/2 M, (Fig. 3)	13			
	G 1/2 M, frontal diaphragm, (Fig. 4)	14			
	G 1/2 M, flush diaphragm, (Fig. 5)	15			
<b>Electrical connection</b>	RSF 5, 5-pin		08		
<b>Output signal</b>	RS232C		61		
<b>Accuracy</b>	$\leq \pm 0.25\%$ FS ( $\leq 500$ mbar / $> 600$ bar)			1	
	$\leq \pm 0.1\%$ FS ( $> 500$ mbar...600 bar)			2	
<b>Temperature range</b>	0...70°C compensated (allowed process temperature: -40...100°C)			0	
	-25...85°C compensated (allowed process temperature: -40... 100°C)			1	
	-40...85°C compensated (allowed process temperature: -40...100°C)			2	
<b>Option 1</b>	Throttle, (2)				A
	Special oil filling: ASEOL Food (for food applications)				G
	Special oil filling: Halocarbon (for oxygen applications), (3)				H
<b>Option 2</b>					
<b>Option 3</b>	Seals: Viton (standard)				U
	Seals: EPDM				S
	Seals: Kalrez				T

(1) mbar, PSI, kPa etc. available

(2) Only with pressure connection Fig. 2 and Fig. 3

(3) Maximum pressure measuring range  $\leq 270$  bar (burst pressure  $> 400$  bar)

# Technical drawings

## Pressure Connection

## Dimensions

## Electrical Connection

Fig. 1

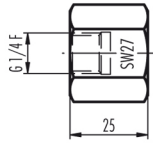


Fig. 2

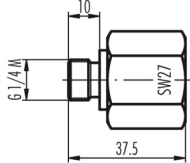


Fig. 3

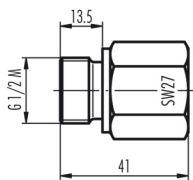


Fig. 4

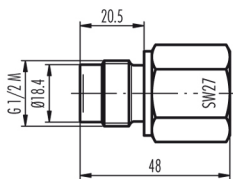
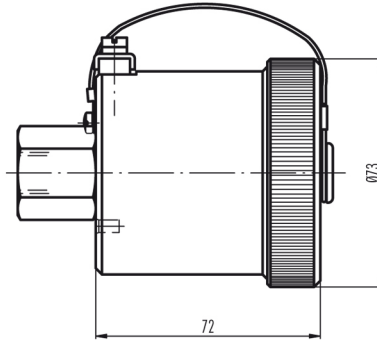
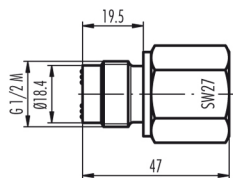
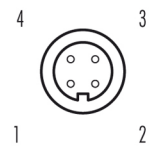


Fig. 5



Cable  
socket connector



Pin	RS232C
1	TxD
2	RxD
3	GND

Specifications may change without notice.

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