PRESSURE TRANSMITTER WITH DATALOGGER FOR LEVEL MEASUREMENT DL/N

Features

- Compact and robust stainless steel assembly 1.4435 (316L)
- Piezoresistive measuring element
- Gauge or absolute
- Pressure ranges from 0...1 m to 0...250 m water gauge
- Calibration available for all common pressure units mWS, mWC etc.
- Temperature measurement (optional)
- Measuring interval programable from 2 s to 24 h
- Non volatile data memory for 130'000 measurements
- High battery life (up to 10 years)
- Transfer of data to a laptop/handheld computer without removing the datalogger

Typical applications

Recording of level measurement in

- Phreatic Water
- Bore holes
- Waste water
- Reservoirs
- Lakes, rivers
- Sewage treatment plant

Specifications

Pressure range [mH2O]		1 … 5	> 5 … 20	> 20 … 250
Overpressure		3 bar	3 x FS (min. 3 bar)	3 x FS
Accuracy [1]	[± % FS]	≤ 0.25	≤ 0.1	≤ 0.1
Thermal shift	[± % FS/°C]			
Zero	-5…50°C	0.06	0.03	0.015
Span	-5…50°C	0.015	0.015	0.015
Temperature range [2]			-5…50°C	

[1] Zero based non-conformity according to DIN 16086, including hysteresis and repeatability
[2] Other temperature range on request

Datalogger

Units	Pressure, pressure and temperature (temperature as option)	
Resolution	Pressure < 0.01% FS	Temperature 0.1°C
Real time clock	Quartz clock with date, start of first measurement programmable	
Data memory	130'000 measurement values	
	- non volatile, data kept in memory even without battery	- each measurement value is correlated with time and date
Interface	RS232C (V24, three wire)	
Identification	Serial number and programmable Id. number	
Power supply	Lithium battery 3.6V / size AA	- on site battery change

Configuration and Data Transfer

PC-Program for Configuration and Data Transfer

System Requirements	IBM compatible laptop or PC, Windows 95/98/NT or handheld PC with Windows CE 2.11 or upward	
Data Transfer	- 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	
Configuration	- sampling rate	time between two records
	- number of replicates	
	- time and date	
	- description	(e.g. name of location)
	- starting time of first sample	
	- depth to water	
	- tare	the actual pressure value can be set to the real value
	- storage threshold value	(optional)
	- density of the measuring media	the density-setting will affect the level range (optional)
Data Format	Data are stored in ASCII format and may be read with programs like Excel, Lotus or similar	

Electromagnetic compability

Standard		Level	Typical interferences
Emission:			
EN 50081-1:1992	Generic emission standard		
EN 55022:1994	Emission, class B		
Immunity:			
EN 50082-2:1995	Generic immunity		
EN 61000-4-2:1995	Electrostatic discharge	4kV contact, 8kV air	
ENV 50140:1993	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
ENV 50204:1995	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4:1995	Fast transients (burst)	2 kV	Motors, valves
ENV 50141:1993	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets

CE The pressure transmitter DL fulfill the emission and immunity requirements described in the EMC directive 89/336/EEC.

Ordering Information

			64	X	99XX	0761	X4	XXX
Type	DL/N		64					
Pressure Type	Gauge			1				
	Absolute			2				
Pressure range [6]	0… 1.0 mH20							
	0… 1.6 mH20							
	0… 2.5 mH20							
	0… 4.0 mH20							
	0… 6.0 mH20							
	0… 10 mH20							
	0… 16 mH20							
	0… 25 mH20							
	0… 40 mH20							
	0… 60 mH20							
	0…100 mH20							
	0…160 mH20							
	0…250 mH20							
	Special calibration							
Version	level transmitter screwed on, closed (absolute) [1]	(Fig. 1a)		2	49			
	level transmitter screwed on, open (absolute) [1]	(Fig. 1b)		2	50			
	housing for pipe mounting, closed [1] [2]	(Fig. 2a/4)			57			
	housing for pipe mounting, open [1] [2]	(Fig. 2b/4)			58			
	housing for pipe mounting, screwed on, closed [1] [2] [3]	(Fig. 3a/5)			72			
	housing for pipe mounting, screwed on, open [1] [2] [3]	(Fig. 3b/5)			73			
Cable	PE cable [4] [7]							
	PUR cable [4]							
	Teflon cable [4]							
Electrical connection	Connector RSF 4, 4-pin [8]					07		
Interface	RS232C					61		
Accuracy	≤ ±0.25% FS (for pressure ranges ≤ 500 mbar)						1	
	≤ ±0.1 % FS (for pressure ranges > 500 mbar)						2	
Temperature range	-5…50°C [5]						4	
Options	Ballast weight							B
	Electronics packed in gel: Gauge pressure							C
	Absolute pressure							D
	Temperature measurement							E
	Flood protection	(Fig. 6)						I
	Special oil filling: ASEOL Food							G
	Halocarbon							H
	Seals: EPDM							S
	Kalrez							T
	Special options							Z

[1] Version for pipe mounting, minimum diameter 2"
[2] Please specify the size of the thrust-ring (e.g. 2" or 4.5")
[3] Gauge version for cable length > 50m
[4] Please specify the required cable length and media
[5] Other temperature range on request
[6] mWS, mWC etc. available
[7] Suitable for drinking water (food approved)
[8] Data transfer cable **not** included (ordering code VART009)

Dimensions

Fig. 1a

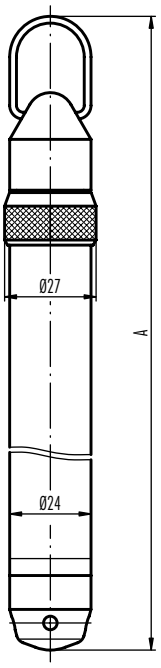


Fig. 6

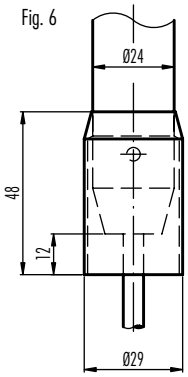


Fig. 4

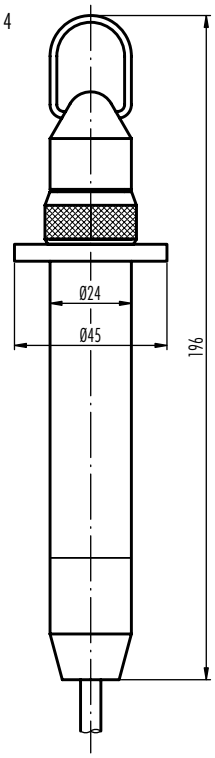


Fig. 5

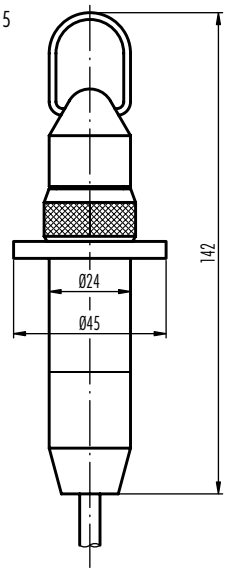


Fig. 2a

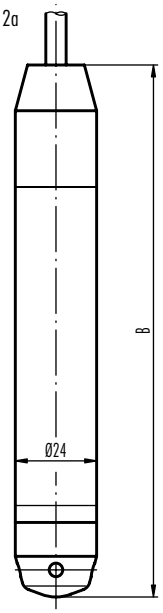


Fig. 3a

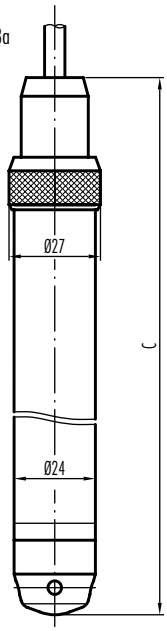
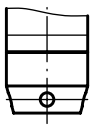


Fig. 1b/2b/3b



Version	Front	Fig.	Length	Weight [g]	Length[3)]	Weight[3)] [g]
absolute	closed	1a	A=288	260		
	open	1b	A=284	260		
gauge	closed	2a	B=157	195	B=244	425
	open	2b	B=153	195	B=240	425
	closed	3a	C=259.5	300		
	open	3b	C=255.5	300		

Fig. 4 Battery housing
Fig. 3a/3b Battery built into the transmitter housing

[3)] with ballast weight

Specifications may change without notice. Stand 06/01

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