

Submersible pressure transmitter

for hydrostatic level measurement

Typenreihe CG201 . M04 . .



Application area

- Water / wastewater
- Sea water desalinization plants
- Swimming baths

Features

- Digital design of the electronic unit
- Measuring ranges 0...160 mbar to 0...2500 mbar each intermediate value adjustable
- Accuracy 0.15 %
- Immersion case: stainless steel, coated
- Titanium diaphragm
- Cable connection pluggable, free of halogen
- Degree of protection IP 68
- Output signal: 4...20 mA

Options

- Approvals/Certificates
 - Ex-protection : II 1 G EX ia IIC T6 Ga
- Temperature measurement with Pt100
- Can be parameterized via PC (FSK-Bus)
- As per UKCA regulations

Application

The submersible pressure transmitter is suitable for level measurement in wells, tank farms and open stretches of water. It converts the hydrostatic pressure measurements into a load-independent current or voltage signal.

Technical data

Measuring ranges

Nominal range	Measuring spans		Measuring ranges ¹		Overload limits	Vacuum tight < 50 °C
	min. span	max. span	min.	max.		
2500 mbar	160 mbar	2500 mbar	0...160 mbar	0...2500 mbar	6 bar	40 mbar abs.

¹ each intermediate value adjustable, see order code

Constructional design / case

Design:	Immersion case		
Material:	<u>Case:</u> stainless steel mat.-no. 1.4404 (316L), coated <u>Diaphragm:</u> titanium		
Degree of protection per EN 60529:	IP 68, immersible		
Electrical connection:	Stainless steel connector		
Cable connection:	Pluggable, free of halogen slit cable, 5 strand		
Weight:	Probe:	approx. 0.7 kg	
	Supply line:	approx. 0.1 kg/m	

Measuring system

Sensor:	Piezoresistive measuring bridge, protected by an internal high-grade steel diaphragm
System filling:	Silicon free, synthetic oil

Measuring accuracy

<u>General:</u>	
Limit point setting:	per DIN 16086
Reference conditions:	per EN 60770-1
Calibration position:	vertical mounting position

Pressure measurement:

Measuring range (mbar):	2500...1000	600...250	160
Lin./Hy./Rep. (% v.E.)	0.15	0.3	0.4
Temp. influence (%) at 0...50 °C	0.2	0.4	0.6
Temp. influence (%) at -20...85 °C	0.4	0.8	1.2

Long term drift 0.1 % f.s. per EN 60770-1

Temperature measurement:

Measuring element: Pt100 per EN 60751, class B

Output

Pressure measurement:

Output signal:	4...20 mA, 2-wire technology
Current range:	3.8...20.8 mA
Current limitation:	ca. 22 mA
Alarm state:	< 3.6 mA option > 21 mA
Response time:	160 ms
Damping:	0...120 seconds standard: 0.0 sec
Burden, R _B :	R _B ≤ (U _V -12V)/20mA [kOhm] U _V = supply voltage R ≥ 250 Ω for LEVELcom communication

Temperature measurement:

Output signal:	Pt100, 2-wire technology
Application range:	-20 °C...85 °C
Response time T ₉₀ :	approx. 10 min.

Supply voltage

Function range:	12...30 V DC
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Temperature ranges

Ambient:	-20...85 °C
Storage:	-40...85 °C

Note safety values as per examination certificate.

Tests and certificates

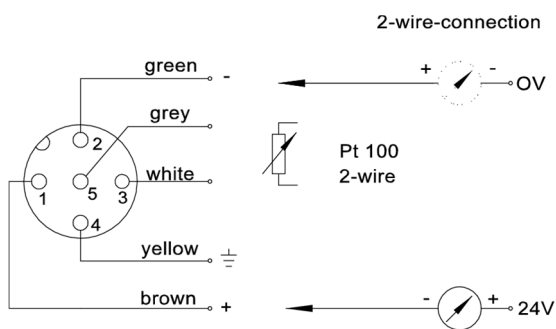
EMV-tested IACS E10
 EC-Type Examination Certificate: TÜV 96 ATEX 1122 X
 Type of Ex-protection:  II 1G Ex ia IIC T6 Ga

Pressure signal:	Temperature signal:
U _i ≤ 30 V	U _i ≤ 20 V
I _i ≤ 150 mA	I _i ≤ 32 mA
P _i ≤ 0,7 W	P _i ≤ 0,1 W
C _i ≤ 20 nF	C _i ≤ 6 nF
L _i ≤ 50 µH	L _i ≤ 50 µH

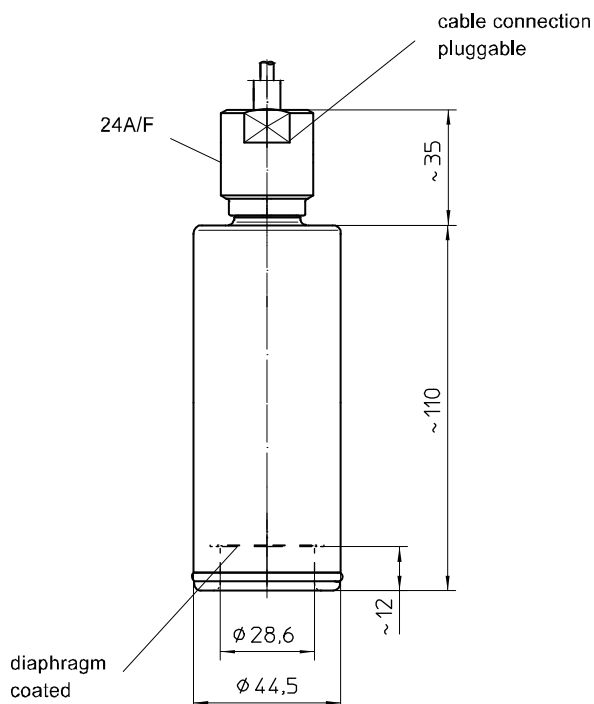
Parameterisation

Parameter	Setting range	Standard
lower range value	see instrument ranges	nominal range
upper range value	see instrument ranges	nominal range
unit	mbar, mmWs	mbar
damping	0.0...120.0 sec.	0.0 sec.
alarm behaviour	< 3.6 mA, > 21.0 mA	< 3.6 mA
tank name		-
order number		-
pressure trimming	zero point -50...50 % of nominal range	-
	span -10...10 % of nominal range	-
current adjustment	- 2 %...5 %	-
measuring circuit test	3.55...21.5 mA	-
maximum pointer	pressure and temperature resettable	-

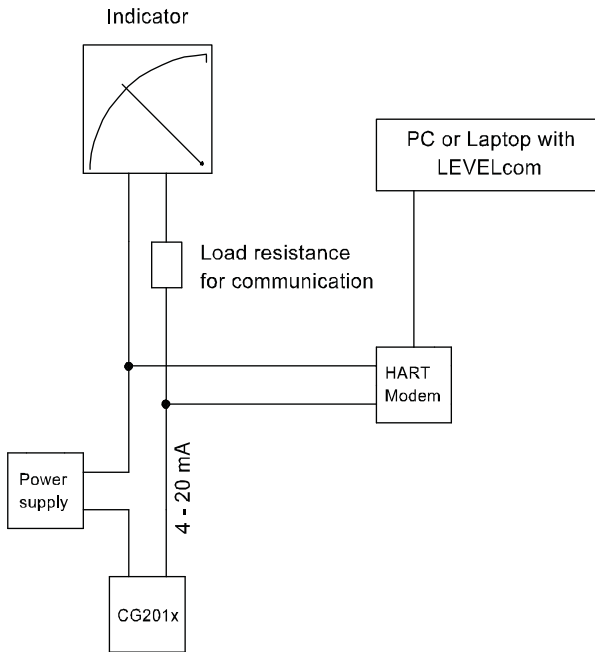
Connection diagram



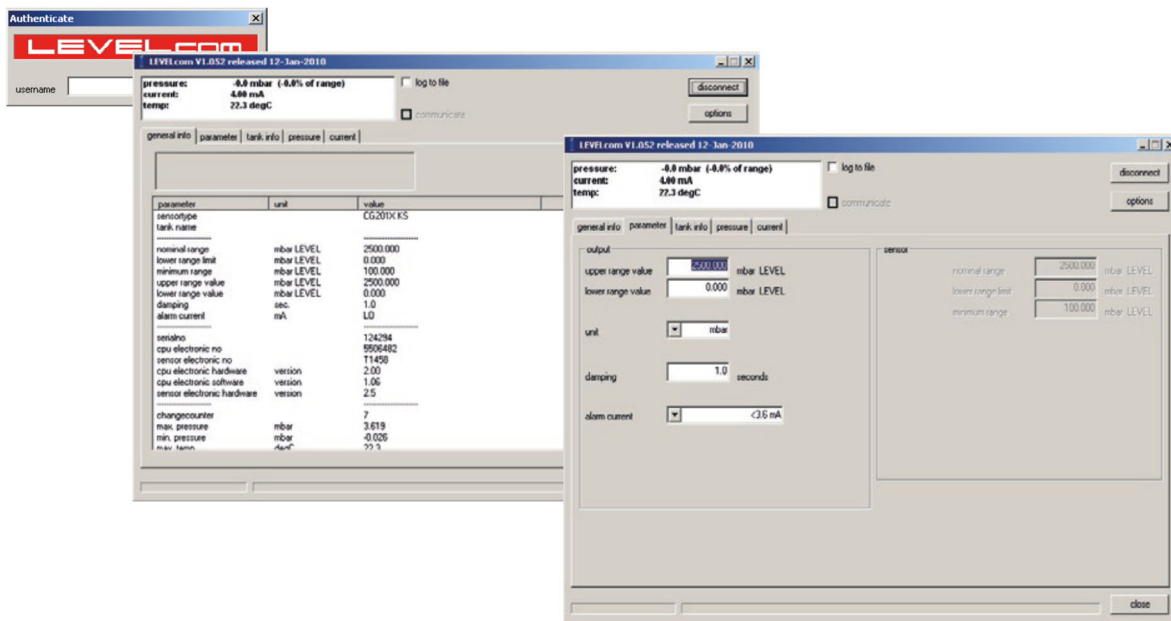
Dimensions



Function diagram




LEVEL.com



Order details

Submersible pressure transmitter for hydrostatic level measurement Type series CG201 .

Order details submersible pressure transmitter CG201 .			
CG201 .	submersible pressure transmitter for hydrostatic level measurement		
0	Ex-protection	without	
1		Ex-protection, type of protection see below	
M04	output signal	pressure measurement 4...20 mA	
P1		temperature measurement Pt100	
P0		without temperature measurement	
M1	case design	stainless steel mat.no. 1.4404 (316L), coated	
A1015	nominal range	2500 mbar	
F2	configuration	per customer choice	
		measuring range	initial value:
			full scale:
		unit: mbar (standard), mmWS (option)	
		alarm state: < 3.6 mA (standard), > 21 mA (option)	
	damping: 0...120 sec. (standard: 0 sec.)		
K53	diaphragm material	titanium	

additional features (to be indicated in case of need, only)		
S68	type of Ex-protection	 II 1G Ex ia IIC T6 Ga
W2660	as per UKCA regulations	

accessories ¹			
MC1030	communication	LEVELcom software	
UG2011	cable connection pluggable, free of halogen, threaded adapter (cylindrical)		
G2402	design	with polyamide flexible tube	cable length 2.5 m
G2405			cable length 5 m
G2410			cable length 10 m
G2415			cable length 15 m
G2420			cable length 20 m
G2425			cable length 25 m
G2430			cable length 30 m
G2435			cable length 35 m
G2499			cable length pls. specify (max. 35 m)
MM3010			cable attachment galvanized

Order detail (example): CG2010 - M04 - P1 - M1 - A1015 - F2 - K53

¹ other accessories for adapting the submersible pressure transmitter are available as modular systems