

Submersible pressure transmitter for hydrostatic level measurement Type series CG201 . M04 . .



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

- Temperature measuring with Pt 100
- Explosion protection: II 1G Ex ia IIC T6 Ga
- Can be parameterized via PC (FSK-Bus)

Applications

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.

Application area

- Water / wastewater
- Sea water desalinization plants

Technical data

Instrument ranges

nominal range	measuring spans		measuring ranges *		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

* each intermediate value adjustable, see order code → configuration

Housing design

housing material:	stainless steel, mat.-no. 1.4404 (316L), coated
diaphragm material:	titanium
degree of protection:	IP 68, immersible
electrical connection:	stainless steel connector, degree of protection IP 68
cable connection:	pluggable, free of halogen slit cable, 5 strand (see accessories), observe mounting instructions

Weights

probe:	approx. 0.7 kg
+ supply lines depending on length/m:	approx 0.1 kg

Measuring system

sensor:	piezoresistive measuring bridge, protected by an internal high-grade steel diaphragm
system filling:	silicon free, synthetic oil

Temperature ranges

ambient temperature:	-20...+85 °C
storage temperature:	-40...+85 °C
Note safety values as per examination certificate!	

Supply

function range:	12...30 V DC
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Output

Pressure

signal:	4...20 mA, 2-wire circuitry
current range:	3.8...20.8 mA
current limitation:	22 mA

Output (contin.)

alarm state:	< 3.6 mA standard, option: > 21 mA
response time:	160 ms
damping:	0...120 seconds, standard: 0.0 sec
burden:	$R \leq \frac{U_B - 12 V}{20 mA}$ (kOhm)

$R \geq 250 \Omega$ bei communication with LEVELcom

Temperature

output signal:	Pt 100, 2-wire circuitry
application range:	-20...+85 °C
response time T_{90} :	approx. 10 min.

Accuracy

general

limit point setting:	per DIN 16086
reference conditions:	per DIN EN 60770-1
calibration position:	vertical mounting position

pressure

meas. range 0... mbar	2500...1000	600...250	160
lin./hys./rep. (% v.E.)	0.15	0.3	0.4
temperature 0...50 °C	0.2	0.4	0.6
influence(%) -20...85 °C	0.4	0.8	1.2

long term drift

DIN EN 60770-1: 0.1 % f.s.

temperature

meas. element: Pt 100 class B, DIN EN 60751

Approval/Tests

EMC-tested IACS E10

EC-Type Examination Certificate: TÜV 96 ATEX 1122 X

explosion protection: II 1G Ex ia IIC T6 Ga

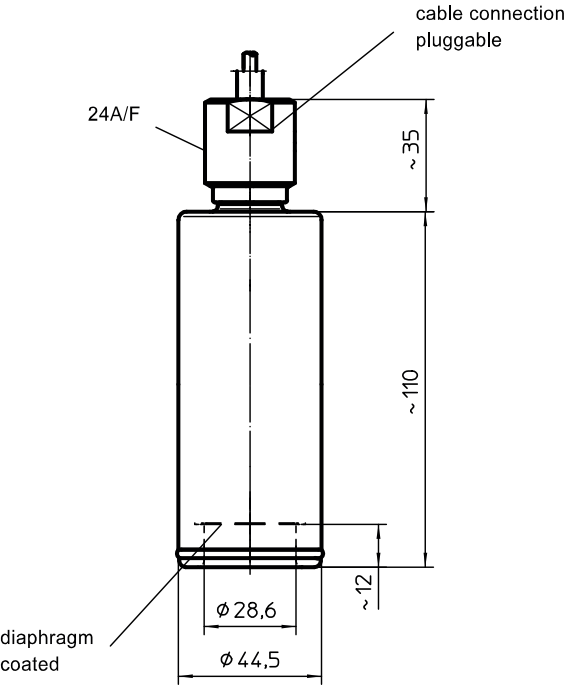
pressure signal temperature signal

$U_i \leq 30 V$	$U_i \leq 20 V$
$I_i \leq 150 mA$	$I_i \leq 320 mA$
$P_i \leq 0.7 W$	$P_i \leq 0.1 W$
$C_i \leq 20 nF$	$C_i \leq 6 nF$
$L_i \leq 50 \mu H$	$L_i \leq 50 \mu H$

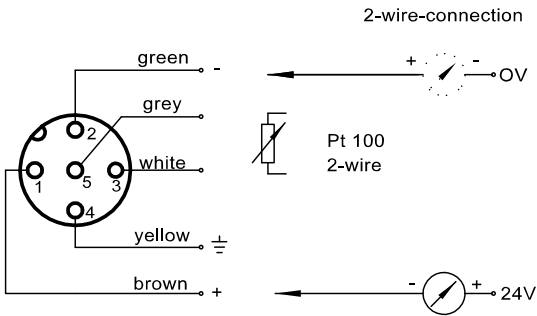
Parameterizing with LEVELcom

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 behavior	<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	-

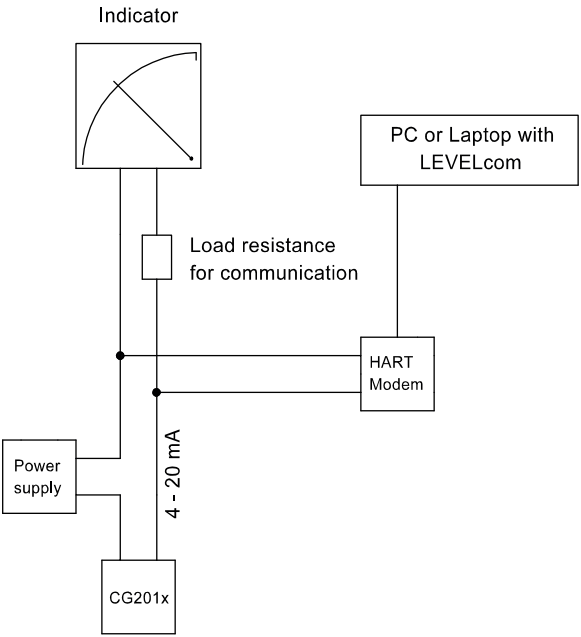
Dimensions



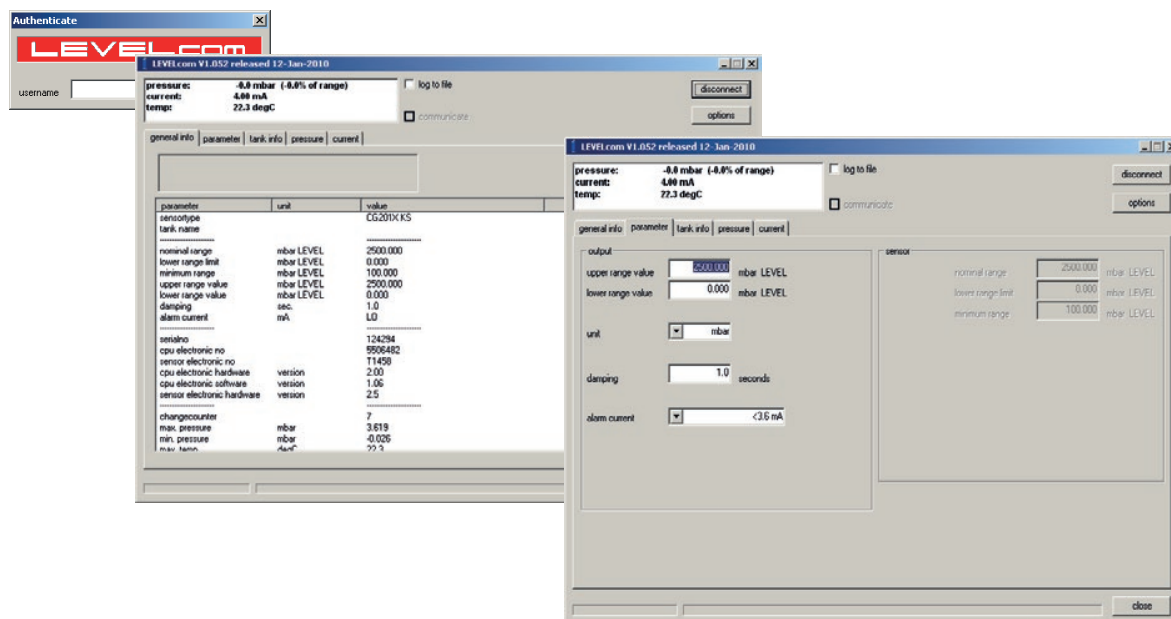
Connection diagram



Function diagram



Dialogue von LEVELcom



Order details

Submersible pressure transmitter for hydrostatic level measurement				CG201 .						
Ex-protection	· without			0						
	· Ex-protection, type of protection see below			1						
output signal	· pressure measurement 4...20 mA			M04						
	· temperature measurement Pt 100			P1						
	· without temperature measurement			P0						
case design	· stainless steel mat.-no. 1.4404 (316L), coated					M1				
nominal range	· 2500 mbar					A1015				
configuration	· per customer choice					F2				
	measuring range	· initial value:								
		· full scale:								
	unit: (mbar, mmWS)									
	alarm state: < 3.6 mA (standard), > 21 mA, option									
damping: 0...120 sec. (standard: 0 sec.)										
diaphragm material	· titanium					K53				
additional features (to be indicated in case of need, only)										
type of ex-protection	·  II 1G Ex ia IIC T 6 Ga					S68				
order code (example):				CG2010	M04	P1	M1	A1015	F2	K53

accessories ¹

Communication	· LEVELcom software	MC1030	
cable connection pluggable, free of halogen, threaded adapter (cylindrical)			UG2021
design	with polyamide flexible tube	· cable length 2.5 m	G2402
		· cable length 5 m	G2405
		· cable length 10 m	G2410
		· cable length 15 m	G2415
		· cable length 20 m	G2420
		· cable length 25 m	G2425
		· cable length 30 m	G2430
		· cable length 35 m	G2435
		· cable length pls. specify (max. 35 m)	
cable attachment galvanized			MM3010

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

² further technical details see data sheet D6-036 (upon request)