

Hydra-Sensor Pressure Transmitter

Construction

The GEMÜ C31 **Hydra-Sensor** pressure measurement device is equipped with a pressure transmitter. The body is made from PFA and can be directly integrated into the pipe system by common flare unions. A PFA double diaphragm prevents contamination of the working medium. Only the PFA body and the PFA diaphragm are wetted parts. The pressure is transmitted by a monitor liquid (50 % DI water and 50% IPA (isopropyl alcohol) or 100 % DI water).

Features

- C31 is especially suitable for pressure measurement of ultra high purity chemicals
- All wetted parts are made from High Purity PFA
- Pressure transmission by double diaphragm technology
- Pressure transmitter can be rotated through 360°

Advantages

- Minimal deadleg
- The proven GEMÜ **CleanStar®** technology is the basis of the transmitter
- Working medium isolated from the transmitter by a patented PFA double diaphragm
- Pressure transmitter can be positioned through 360° enabling individual user options

Dimensions - GEMÜ **CleanStar®** Hydra-Sensor C31

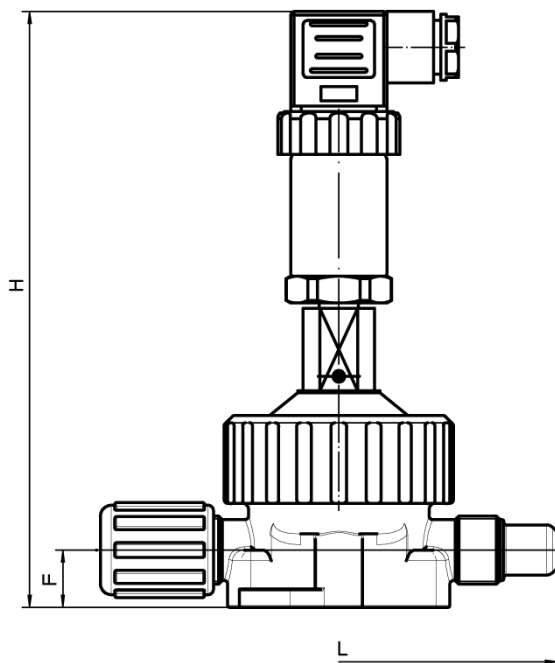
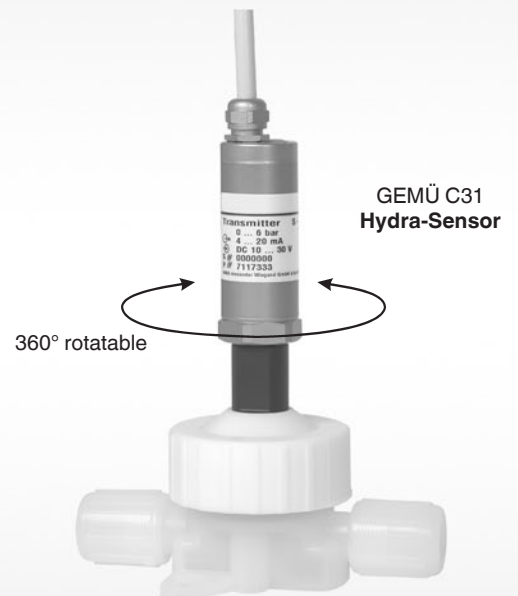
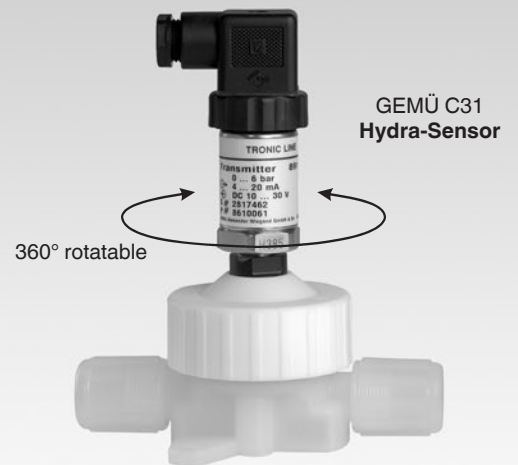


Table of dimensions see last page.



Technical data

Transmitter

Flow medium

Suitable for any inert or corrosive gases or liquids,
- particularly high purity media - which do not corrode the
body and diaphragm materials.

For corrosive media like HCL type C32 is recommended
(see data sheet C32)

Version of transmitter diaphragm

Double diaphragm system for overpressure ranges
Single diaphragm for +/- pressure ranges

Material of wetted parts

PFA

Flow direction

Optional

Temperature

	IPA/DI water (50:50) (Code 2)	DI water (Code 1)
Ambient:	+5° ... +60° C	+5° ... +60° C
Medium:	+5° ... +60° C	
Storage/transport:	-20° ... +60° C	

depending on working pressure

Pressure transmitter

Auxiliary power

DC 10...30 V

Output signal

4...20 mA, two wire

Cable length

5 m, with cable outlet IP 67

Characteristic deviation

0.5 % of span

Voltage drop

3 V

Pressure measurement device

Sensor 4...20 mA, 2-wire system
(with optional pluggable LCD)

Maximum admissible current

40 mA

Temperature

Ambient:	+5° ... +60° C
Medium:	+5° ... +60° C
Storage:	-20° ... +60° C

depending on working pressure

Temperature compensation

Additional measurement error up to 0.5 % per 10° C
temperature deviation from the reference temperature of 20° C

Order data

Transmitter

Nominal size		Code
1/4" (only Dead-End)	DN 4	4
1/4" NPT (only Dead-End)	DN 4	4
3/8"	DN 6	6
1/2"	DN 10	8
3/4"	DN 15	12
1"	DN 20	16
1 1/4"	DN 25	20

Mounting variant	Code
Male thread NPT	A
Dead-End	E
Female thread NPT	I
In-Line	L

Connection	Code
NPT female thread	31
Flare connection with C PVA union nut	75
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

Body material	Code
PFA	30

Diaphragm material	Code
PFA	H3

Pressure transmitter

Unit	Code
Bar	B
psi	P
kPa	A

Measuring range			Code
0...30 psi	0...250 kPa	0...2,5 bar*	BF
0...60 psi	0...400 kPa	0...4,0 bar	BG
0...100 psi	0...600 kPa	0...6,0 bar	BH
-30 inHg...15 psi	-100...150 kPa	-1...1,5 bar*	CF
-30 inHg...30 psi	-100...300 kPa	-1...3,0 bar	CG
-30 inHg...60 psi	-100...500 kPa	-1...5,0 bar	CH

* Not possible with electrical contacts

Connection form	Code
L-plug DIN 43 650, IP 65	A
Cable outlet, IP 67, 5.0 m flying lead (Housing Epoxy coated)	D

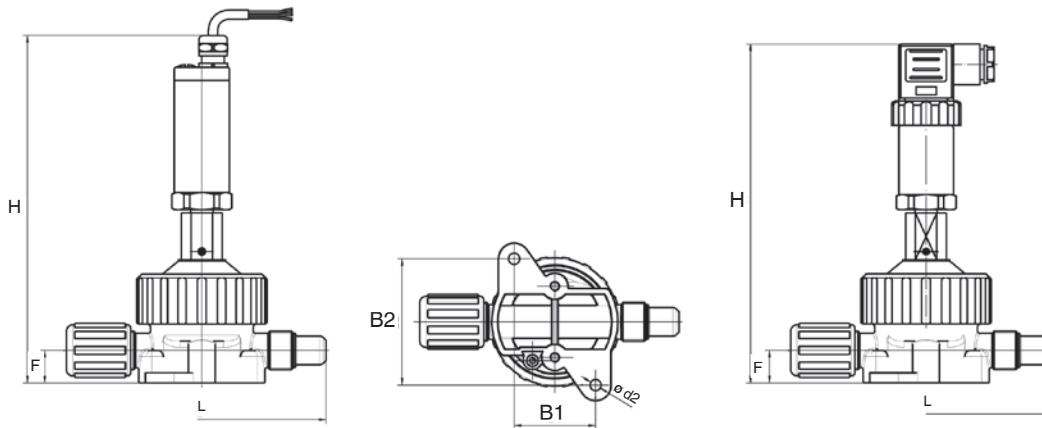
Display	Code
LCD, 4-digit (only possible with L-plug version)	L
Without	Z

Fill fluid of transmitter	Code
DI water	1
Isopropyl alcohol (IPA) / DI water 50:50	2

Version High Purity	Code
High Purity white	HPW

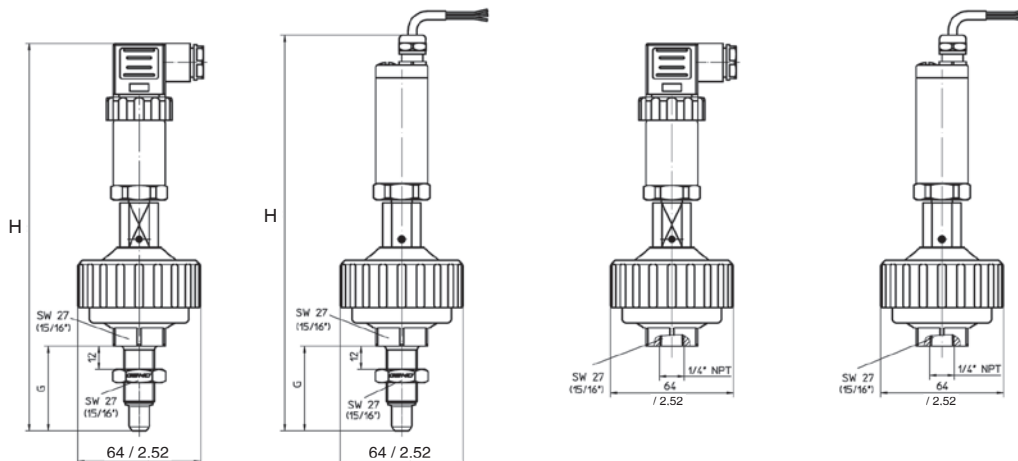
Order example	C31	8	L	75	30	H3	B	BF	A	Z	1	HPW
Type	C31											
Nominal size (code)		8										
Mounting variant (code)			L									
Connection (code)				75								
Body material (code)					30							
Diaphragm material (code)						H3						
Unit (code)							B					
Measuring range (code)								BF				
Connection form (code)									A			
Display (code)										Z		
Fill fluid (code)											1	
Version High Purity (code)												HPW

Dimensions - GEMÜ CleanStar® Hydra-Sensor C31 In-Line [mm / inch]



In-Line	H		L	F	B1	B2	ø d2
	Connection code A	Connection code D					
3/8" Flare	167 / 6.57	171 / 6.73	118 / 4.65	16 / 0.63	40 / 1.57	62 / 2.44	5.5 / 0.22
1/2" Flare	167 / 6.57	171 / 6.73	122 / 4.80	16 / 0.63	40 / 1.57	62 / 2.44	5.5 / 0.22
3/4" Flare	172 / 6.77	176 / 6.92	122 / 4.80	19 / 0.75	40 / 1.57	62 / 2.44	5.5 / 0.22
1" Flare	197 / 7.76	201 / 7.91	165 / 6.50	25 / 0.98	56 / 2.20	78 / 3.07	6.5 / 0.26
1 1/4" Flare	197 / 7.76	201 / 7.91	225 / 8.86	25 / 0.98	56 / 2.20	78 / 3.07	6.5 / 0.26

Dimensions - GEMÜ CleanStar® Hydra-Sensor C31 Dead-End [mm / inch]



Dead-End	H*		L
	Connection code A	Connection code D	
1/4" Flare	201 / 7.93	206 / 8.11	44 / 1.73
3/8" Flare	201 / 7.93	206 / 8.11	44 / 1.73
1/2" Flare	204 / 6.10	209 / 8.23	47 / 1.85
1/4" NPT female thread	157 / 6.18	162 / 6.38	-

*Tolerances: ± 2 mm / ± 0.08 inch

For further High purity products, accessories and other products, please see our Product Range catalogue and Price List. Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

