

Hydra-Gauge Pressure gauge

Construction

The GEMÜ C30 *Hydra-Gauge* is equipped with a PFA transmitter and a pressure gauge. 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)). The pressure gauge complies with EN 837-1.

Features

- C30 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 gauge can be rotated through 360°
- Not suitable for applications with strong vibrations, pulsing process pressure or pressure peaks; provide for suitable pulsation dampers and throttling sections, if necessary

Advantages

- Zero dead leg
- The proven GEMÜ *CleanStar*® technology is the basis of the transmitter
- Working medium hermetically isolated from the gauge by a double diaphragm
- Proven long term reliability
- Pressure gauge can be positioned through 360° enabling individual user options

Dimensions - GEMÜ *CleanStar*® Hydra-Gauge C30

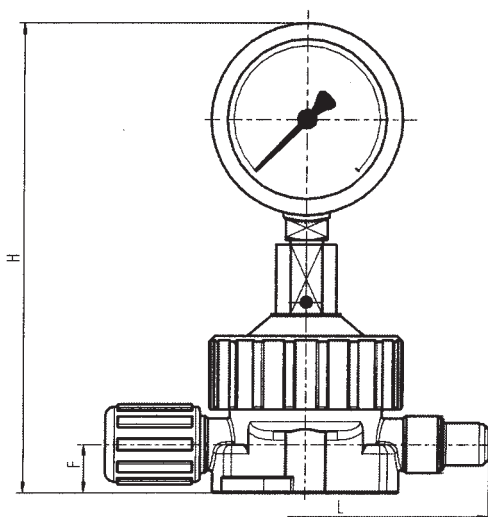
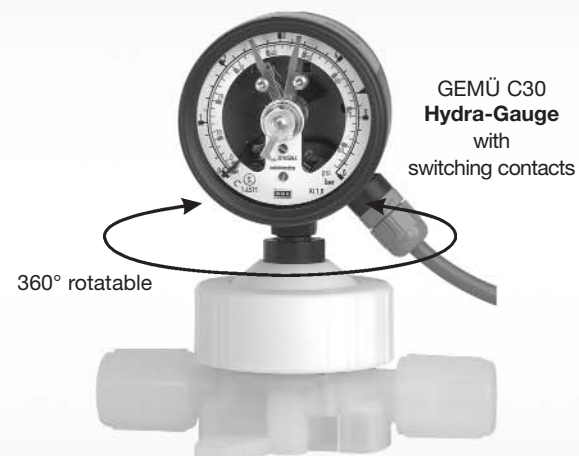
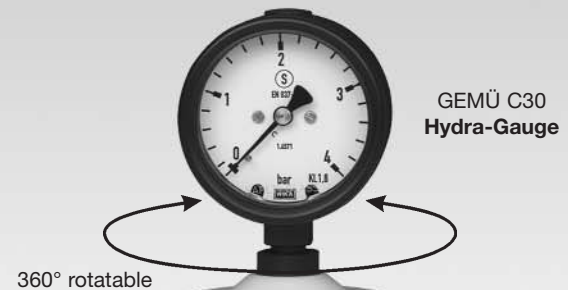


Table of dimensions and further dimensions see last page.



Technical specifications - GEMÜ Hydra-Gauge C30

Transmitter

Version of transmitter diaphragm

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

Material of wetted parts

PFA

Flow medium

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

Flow direction

Optional

Working range

Constant: 3/4 of full scale range

Variable: 2/3 of full scale range

Momentary: full scale range

Temperature

	IPA/DI water (50:50) (ref. no. 2)	DI water (ref. no. 1)
Ambient:	+5° to +60° C	+5° to +60° C
Medium:	+5° to +60° C	+5° to +60° C
Storage/transport:	-20° to +60° C	+5° to +60° C

Influence of temperature

0.5 % of measuring range (scale end value) per 10° C temperature change (reference temperature 20° C).

Pressure gauge

Accuracy

± 1.6 % of measuring range or scale end value

Nominal size

063 mm

Material of measuring system

CrNi steel 1.4571

Gauge material

CrNi steel with Teflon coating

Switching contacts

Switching functions

Make contact: closes as pressure increases

Break contact: opens as pressure decreases

The switching function is irrelevant when piloting a PLC.

Inductive contact

Non-touching switch, no wear, high reliability,
Ex approval, additional switching unit required

Magnetic spring contact

Open contacts, can switch power directly

Electronic contact

Inductive contact with integrated switching amplifier,
non-touching switch, high reliability, for direct
connection to a PLC or piloting relays

Limiting values for the contact load at ohmic load	Inductive contact type 81	Magnetic spring contact type 82	
	unfilled units	unfilled units	filled units
Rated voltage U_{eff}	250 V	250 V	250 V
Rated working current			
Start-up current	0.7 A	1.0 A	1.0 A
Cutoff current	0.7 A	1.0 A	1.0 A
Constant current	0.6 A	0.6 A	0.6 A
Switch rating	10 W / 18 VA	30 W / 50 VA	20 W / 20 VA

Order specifications - GEMÜ Hydra-Gauge C30

Transmitter

Nominal size		Ref. no.
1/4" (only Dead-End)	DN 4	4
1/4" NPT	DN 4	4
3/8"	DN 6	6
1/2"	DN 10	8
3/4"	DN 15	12
1"	DN 20	16

Mounting variant	Ref. no.
In-Line	L
Dead-End	E

Connection	Ref. no.
NPT male thread	13
NPT female thread	31
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

Body material	Ref. no.
PFA	30

Diaphragm material	Ref. no.
PFA	H3

Pressure gauge

Units	Ref. no.
Double scale bar / psi	B
Double scale psi / bar	D
Double scale kPa / bar	G

Measuring range			Ref. no.
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	Ref. no.
Bottom	U
Back, center mount*	B

* Not possible with switching contacts

Sight glass	Ref. no.
Acrylic glass	A
Instrument flat glass	G

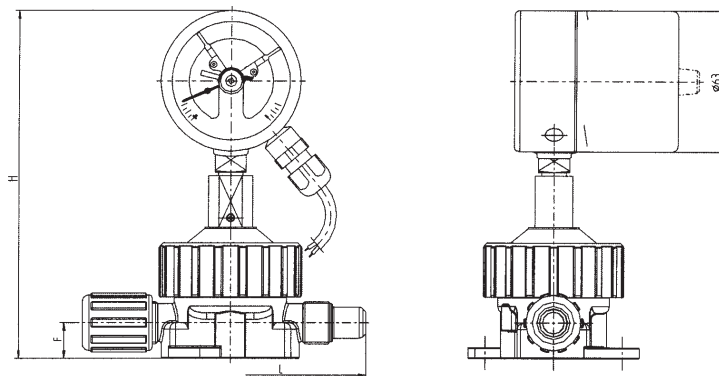
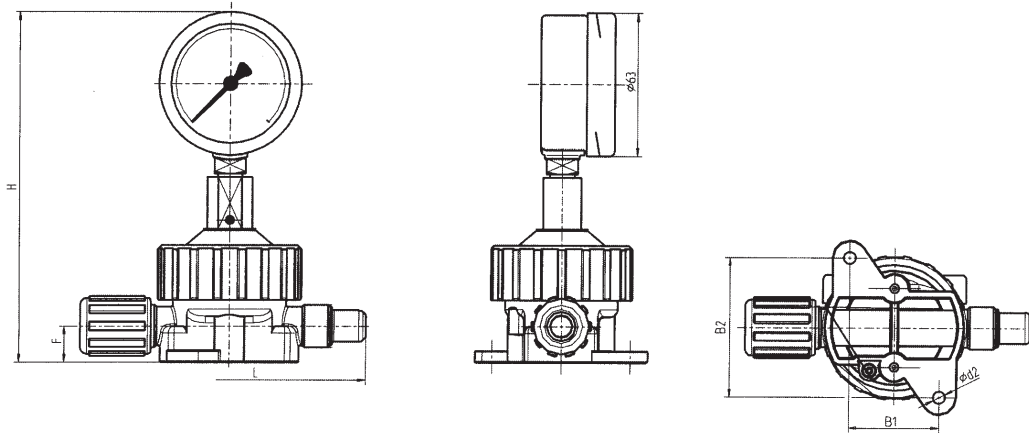
Switching contacts	Ref. no.
Without	Z
Inductive contact 1. Break / 2. Make contact	I
Inductive contact 1. Make / 2. Break contact	K
Magnetic spring contact 1. Break / 2. Make contact	M
Magnetic spring contact 1. Make / 2. Break contact	N
Electronic contact PNP 1. Break / 2. Make contact	P
Electronic contact PNP 1. Make / 2. Break contact	S

Fill fluid of transmitter	Ref. no.
DI water	1
Isopropyl alcohol (IPA) / DI water 50:50	2

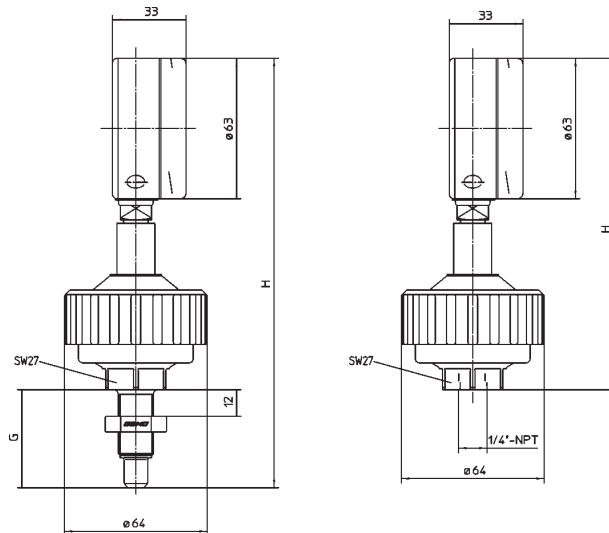
Transmitter version	Ref. no.
High Purity White	HPW

Order example	C30	8	L	75	30	H3	B	BF	U	A	Z	1	HPW
Type	C30												
Nominal size (mm)		8											
Mounting variant (ref. no.)			L										
Connection (ref. no.)				75									
Body material (ref. no.)					30								
Diaphragm material (ref. no.)						H3							
Unit (ref. no.)							B						
Measuring range (ref. no.)								BF					
Connection form (ref. no.)									U				
Sight glass (ref. no.)										A			
Switching contacts (ref. no.)											Z		
Fill fluid of transmitter (ref. no.)												1	
Transmitter version (ref. no.)													HPW

Dimensions - GEMÜ CleanStar® Hydra-Gauge C30 Normal version, with switching contacts and Dead-End version



for version with Min./Max. contact



Dimensions (mm)

In-Line	H	L	F	B1	B2	ϕ d2	Dead-End	H	G
3/8" Flare	156	118	16	40	62	5.5	1/4" Flare	193	44
1/2" Flare	156	122	16	40	62	5.5	3/8" Flare	193	44
3/4" Flare	162	122	19	40	62	5.5	1/2" Flare	196	47
1" Flare	186.5	165	25	56	78	6.5	1/4" NPT female thread	149	-



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