

Hydra-Dry Pressure Transducer

Construction

GEMÜ C32 **Hydra-Dry** is an electronic pressure transducer equipped with a ceramic capacitive sensor. The sensor is isolated from the process by the double diaphragm system. The body is made from PFA/PTFE and can be directly integrated into the pipe system by common flare unions. Only the PFA/PTFE body and the PFA diaphragm are wetted parts. The pressure is transmitted by a ceramic sensor. No pressure transmission fluid is required.

Features

- C32 is especially suitable for pressure measurement of ultra high purity chemicals
- All wetted parts are made from High Purity PFA/PTFE
- The pressure is transmitted by a ceramic sensor
- The sensor is isolated from the process by a double diaphragm system
- Protection class IP 67
- REACH / RoHS compliant
- Other certificates on request (e.g. FDA compliance)

Advantages

- Minimal deadleg
- No transmission fluid, „dry solution“
- Non-metallic ultra pure ceramic sensor
- Vented double diaphragm isolates the sensor
- All plastic housing
- No additional auxiliary power required
- 5 different units of pressure can be freely set
- Production, assembly, calibration and packaging in cleanroom ISO 6

Dimensions - GEMÜ *CleanStar*® Hydra-Dry C32

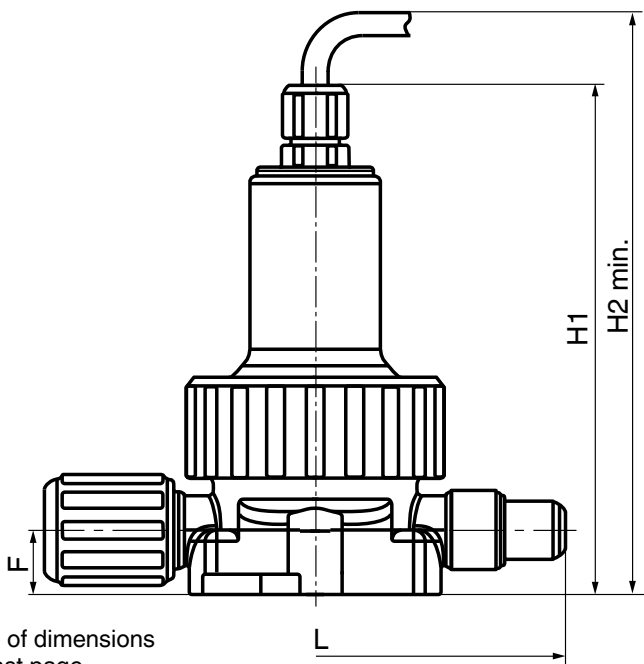


Table of dimensions
see last page



GEMÜ C32
**Hydra-Dry
In-Line**
with integrated
digital display



GEMÜ C32
**Hydra-Dry
Dead-End**



External
digital display
for GEMÜ C32
Hydra-Dry

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.

Version of transmitter diaphragm

Double diaphragm system, vented

Material of wetted parts

Diaphragm PFA
Body PFA (In-Line), PTFE (Dead-End)

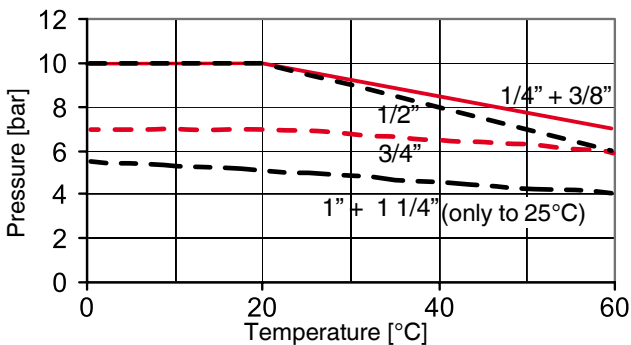
Flow direction

Optional

Temperature

Ambient: 0° to +60° C
Medium: 0° to +60° C
Storage: -20° to +60° C

Pressure/temperature correlation



Pressure/temperature correlation for Flare connections see datasheet GEMÜ „FlareStar“

Pressure transmitter

Input signal

4 ... 20 mA, two wire (supply from current loop, 6 V voltage loss)

Output signal

Analogue signal is directly looped through

Cable length

5 m, flying lead, FEP jacketed

Characteristic deviation

± 0.5 % of span

Maximum admissible current

0,027 A

Temperature

Ambient: 0... +60 °C
Medium: 0... +60 °C
Storage: -20... +60 °C
depending on working pressure

Power supply U_B (digital display)

DC 16 ... 30 V

Display

Type: 7-segment LED, red, 4-digit
Range: -999 ... 6000
Accuracy: $\leq \pm 0.5 \pm 1$ digit (% of span)

Adjustment of scaling

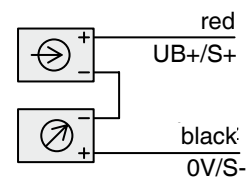
Menu guided programming by external operating keys
Measuring range adjustable
Decimal point freely selectable
Programmable pressure units: bar, psi, kg/cm², MPa, kPa
Zero point freely adjustable within ± 10 % of span

Switching output

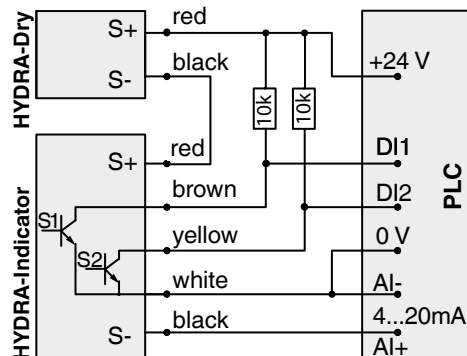
Can be individually adjusted by external operating keys
Number: 2 x NPN Open collector galvanically separated
Function: Make contact, break contact
Adjustment: Freely adjustable within 1... 99 % of span
Temperature error: < 0.1 % / 10 K
Accuracy: $\leq \pm 0.5 \pm 1$ digit (% of span)
Max. switching current: 300 mA (real)
Indication of switching status: LED

Electrical connection diagram

GEMÜ C32 without display



GEMÜ C32 with digital display



Order data

Transmitter

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

Mounting variant	Code
Dead-End	E
In-Line	L

Connection	Code
NPT male thread (only Dead-End)	13
NPT female thread (only Dead-End)	31
Flare connection with CPVA union nut	75
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

Body material	Code
PTFE (Dead-End)	26
PFA (In-Line)	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

Pressure reference: Relative pressure
Not suitable for vacuum applications

Connection form	Code
Cable outlet 5 m, IP 67 (FEP jacketed)	E

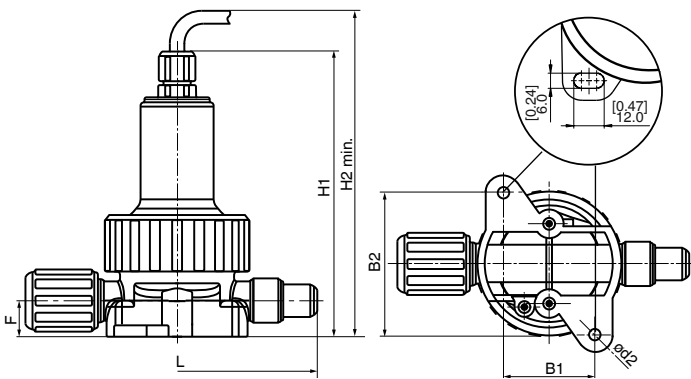
Display	Code
Integrated digital display	I
Separate digital display	S
Without	Z

High Purity version	Code
High Purity white	HPW

Order example	C32	8	L	75	30	H3	B	BF	E	Z	HPW
Type	C32										
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)									E		
Display (code)										Z	
Version High Purity (code)											HPW

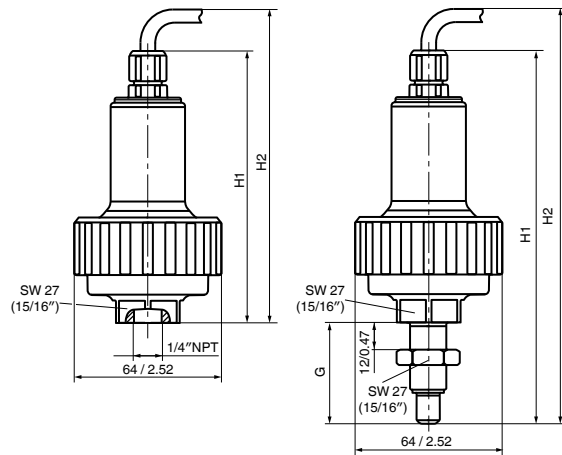
Dimensions GEMÜ CleanStar® Hydra-Dry C32 [mm/inch]

In-Line



* Mounting with slotted hole

Dead-End



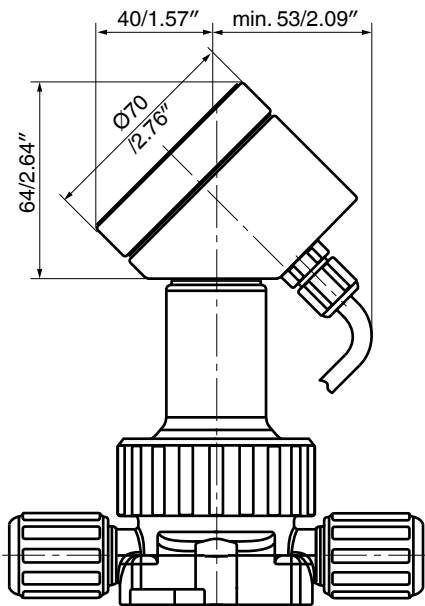
[mm]	H1	H2	L	F	B1	B2	ø d2
3/8" Flare*	130	155	118	16	40	62	5.5
1/2" Flare*	130	155	122	16	40	62	5.5
3/4" Flare*	135	160	122	19	45	62	5.5
1" Flare	160	185	165	25	56	78	6.5
1 1/4" Flare	160	185	225	25	56	78	6.5
[inch]							
3/8" Flare*	5.12	6.10	4.65	0.63	1.57	2.44	0.22
1/2" Flare*	5.12	6.10	4.80	0.63	1.57	2.44	0.22
3/4" Flare*	5.31	6.30	4.80	0.75	1.77	2.44	0.22
1" Flare	6.3	7.28	6.50	0.98	2.20	3.07	0.26
1 1/4" Flare	6.3	7.28	88.6	0.98	2.20	3.07	0.26

	H1*	H2	L
1/4" Flare	161 / 6.34	min. 186 / 7.32	44 / 1.73
3/8" Flare	161 / 6.34	min. 186 / 7.32	44 / 1.73
1/2" Flare	164 / 6.46	min. 189 / 7.44	47 / 1.85
1/4" NPT female thread	117 / 4.61	min. 142 / 5.59	-

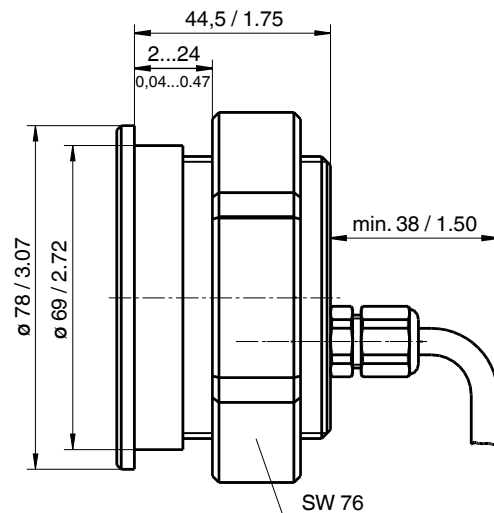
*Tolerances: ± 2 mm / ± 0.08 inch

* Dear customers, we are converting the mounting holes of all valve sizes to slotted holes to simplify mounting. As the conversion in our manufacturing department can only take place successively you may receive both valve bodies with the new slotted holes and with the old round holes in the starting phase. We hope you will understand this.

With integrated digital display



External digital display



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

