



# **Pressure Systems**

Ultra High Purity Pressure Gauge Perfluoroalkoxy (PFA) Wetted Parts Stainless Steel Pressure Measurement Devices Hydra Gauge • Model HG

### Application

Liquid media for ultra high purity liquid distribution systems that require high degrees of accuracy, ultra clean wetted surfaces, and a high degree of chemical resistance. This product is used when the device can be isolated from external vibration, surges and pressure shocks caused by pumps.

#### **Process connection**

In-Line 3/8", 1/2", 3/4", 1" and 1 1/4" flare dead-end 1/4", 3/8" and 1/2" flare, panel mount, dead-end 1/4 NPT female

### Pressure measurement device

Design according to EN 837-1, 63 mm Gauge (lower mounting / center back mounting) or 63 mm Gauge with electrical contacts (lower mounting only) Gauge has 360° orientation even after installation.

#### Accuracy

± 1.6 % of span

#### Pressure ranges

0 ... 2.5 bar (not with electrical contacts) 0 ... 4 bar 0 ... 6 bar or other equivalent units

#### Working range

Steady: <sup>3</sup>/<sub>4</sub> of full scale value Fluctuating: <sup>2</sup>/<sub>3</sub> of full scale value Short time: full scale value Maximum process pressure is limited by pressure-temperature rating of the process connection (see diagram page 4)

### Operating temperature

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

#### Material

Wetted parts: PFA or TFM (modified PTFE) Other non-wetted parts: PVDF, EPDM, Viton Gauge: Stainless steel, Teflon® coated black

### Diaphragm

vented three Layer Diaphragm Assembly

#### Filling liquid

(Precision filled and not field refillable) 50/50 Mix Semiconductor Grade IPA (Isopropyl Alcohol) / DI Water (KN 75)

### **Electrical contacts**

Double contacts acc. to technical data and order code (see overleaf)

#### **Cleaning and packaging**

Production of all wetted parts, cleaning, assembly, calibration and packaging are done in a class 100 cleanroom.

The offer for sale of this product does not infer or imply chemical compatibility with specific applications.



IYDRA - line , Model HG
63 mm gauge stainless steel series with black Teflon <sup>®</sup> coating and in-line 1/2" flare process connection



### Supplementary data sheets

- Hydra Sensor (see data sheet SP 99.21)
- Hydra Dry (see data sheet SP 99.22)

Model HS Model HD

# Dimensions

# HYDRA - line, Model HG, in-line flare process connection



2442 413.01

Process connection	Dimensions [mm]							
	Н	L	L1	F	B1	B2	Ød2	
in-line 3/8" flare	156	118	127	16	40	62	5.5	
in-line 1/2" flare	156	122	133	16	40	62	5.5	
in-line 3/4" flare	162	122	133	19	40	62	5.5	
in-line 1" flare	186.5	165	179	25	56	78	6.5	
in-line 1 1/4 " flare	186.5	224	238	25	56	78	6.5	

# Considerations for use:

This gauge can be rotated a full 360° by hand. No tools required. The gauge can not be removed or the central PVDF nut loosened from the housing as this may cause the fill fluid to leak destroying the measuring unit.

# HYDRA - line, Model HG, dead-end process connection



2436 413.01



Process connection	Dimensions [mm]							
	H1	SW1	SW2	ØD2				
dead-end 1/4" flare	194 ± 2	27	11/16 "	64				
dead-end 3/8" flare	194 ± 2	27	15/16 "	64				
dead-end 1/2" flare	197 ± 2	27	17/16 "	64				
dead-end 1/4 NPT female	150 ± 2	27	-	64				

# **Electrical Alarm Contacts**

Electrical alarm contacts make or break an electric control circuit depending on the position of the instrument's pointer. Points of contact actuation are adjustable over the full extension of the scale graduation. The gauges feature a hub in the window for an adjustment key.

Contact actuation is made when there is an upper or lower deviation of the set desired value by the instrument pointer.

### Electronic contact model 830 E

The electronic contact is intended to be connected to a PLC control unit (SPS) or for direct switching of small loads. The switch outputs have a PNP characteristic.

### Specifications

Range of operating voltage	DC 10 30 V
Switching current	≤ 100 mA

# Make contact (function index 1)

This contact makes, when the rising pressure approaches the set-point. Example:

Set-point at 2 bar, pressure at 1 bar  $\Rightarrow$  contact is open Set-point at 2 bar, pressure at 3 bar  $\Rightarrow$  contact is closed

### Break contact (function index 2)

This contact breaks, when the rising pressure approaches the set-point. Example: Set-point at 2 bar, pressure at 1 bar  $\Rightarrow$  contact is closed Set-point at 2 bar, pressure at 3 bar  $\Rightarrow$  contact is open

Electrical contacts of a gauge are denoted as follows:

XXX.YY	XXX:	model number of contact
	YY:	Contact function index

# Example: 830.12 E:

0.12 E:	electronic contact,
	first contact makes, second contact breaks



### HYDRA - line, Model HG

63 mm gauge stainless steel series, black Teflon ® coating with electrical contacts and in-line 1/2" flare process connection

### Pressure-temperature rating



# Ordering information code for pressure system HYDRA - line, Model HG

ield No.		Code	Feature	es							
			Unit	-1							
		E	dual sc	ale b	ar / psi						
		<u> </u>	dual sc	ale p	si/bar						
. —		н	dual sc	ale ki	a / psi				<b>D</b> /		11
1		?	other						Please	state as additiona	l text
			Range								
		BF	0 bar	. 2.5 1	bar	0 p	si 30 p	SI	0 kPa	250 kPa 1)	
		BG	0 bar	. 4 ba	r	0 p	si 60 p	si	0 kPa	400 kPa	
		BH	0 bar	. 6 ba	r	0 p	si 100	psi	0 kPa	250 kPa	
2		??	other						Please	state as additiona	l text
			Conne	ctor p	position	า					
		U	lower m	lower mount							
3		в	center b	back	mount	1)					
			Windo	N							
4		Α	acrylic								
			Electric	cal co	ontacts						
		Z	without								
		S	electror	nic co	ntact P	NP, 1.	makes / :	2. breaks	model 830	).12 E	
5		?	other						Please	state as additiona	l text
			Proces	s coi	nnectio	n					
		06	In-line 3	3/8 " f	lare						
		08	In-line 1	1/2 " f	lare						
		12	In-line 3	3/4 " f	lare						
		16	In-line 1	l " fla	re						
		20	In-line 1	l 1/4	" flare						
		38	dead-end 1/4 " flare								
		40	dead-end 3/8 " flare dead-end 1/2 " flare								
		42									
6		50	dead-ei	nd 1/4	1 NPT f	emale	7				
			Flare n	ut 🔍							
		77	PFA						Only fo	or flare connections	s, not for NPT
		75	PVDF						Only fo	or flare connections	s, not for NPT
7		ZZ	without						Only wi	ith NPT connection	ns
			Fill flui	d							
8		_L1	KN 75 i	so-pr	opyl-ald	cohol (I	PA) / DI-	water 50:8	50		
	Α	dditior	nal order	info							
		YES	NO								
9		1	Z	add	itional t	ext			Please	state in clearly un	derstandable text !
	1 1									1) not	available with electrical conta
Orc	der code	for M	lodel H	G						1) 1101	available with electrical conta
				U							
		1 2	23	4	5	6	7	8	9		
	HG -			A				L1	-		
									J <u> </u>		
										Optional d	lesigns on request
Δ	dditional	l text.									
A	aunona										

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.



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