Industrial Pressure Transmitters
for very high pressure applications

Tronic **Type HP-1** - 40,000 PSI to 120,000 PSI

- Patented sealing cone sensor technology
- Highly resistant to dynamic pressure changes
- 4-20 mA 2-wire output signal, others available
- Special design features improve operator safety
- Several process connections available
- Stainless steel case and wetted parts

WIKA HP-1 pressure transmitters and transducers are precision engineered for extremely high pressure applications. A patented mechanical sealing cone design eliminates welds in the process connection that are potential leak points. This design also provides excellent durability in applications that have frequent dynamic load changes.

Safety is important when working with extremely high pressures. The HP-1 incorporates several safety features. Eliminating welds in the process connection greatly improves sensor durability. In the event of sensor failure, The special small diameter arc eroded pressure port limits the flow of media into the transmitter case. The NOVA SWISS process connection also includes special pressure relief ports in the case that direct the media back towards the process connection.

The HP-1 provides excellent accuracy and long term stability in high pressure applications. It is suitable for extremely high pressure applcations including water jet cutting, high pressure hydraulic presses, fuel injection test stands, and food sterilization.

STANDARD RANGES

RANGE	MAXIMUM*	BURST**
0-40,000 PSI	50,000 PSI	90,000 PSI
0-60,000 PSI	72,000 PSI	115,000 PSI
0-75,000 PSI	87,000 PSI	145,500 PSI
0-85,000 PSI	100,000 PSI	160,000 PSI
0-100,000 PSI	115,000 PSI	160,000 PSI
0-120,000 PSI	145,000 PSI	175,000 PSI

Notes:
* Pressure applied up to the maximum rating will cause no permanent change in specifications
** Exceeding the burst pressure may result in destruction of the transmitter and loss of media.

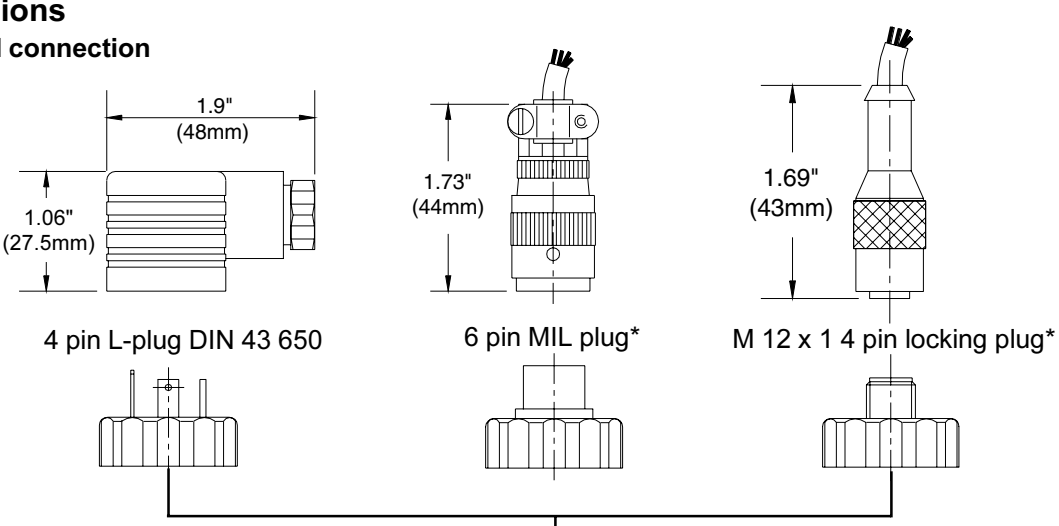
Specifications		**Type HP-1**			
Pressure reference		relative pressure			
Pressure connection		**Pressure connection**	**sealing cone Ø**	**mounting torque**	**maximum pressure**
	Female threads [1]	M16 x 1.5 with sealing cone	3.2 mm	40 Nm	65,000 PSI (4500 BAR)
		NOVA SWISS	2.5 mm	80 Nm	120,000 PSI (8000 BAR)
		M 20 x 1.5	3.2 mm	40 Nm	75,000 PSI (5000 BAR)
			2.5 mm	80 Nm	120,000 PSI (8000 BAR)
		9/16"-18 UNF (autoclave F-250-C)	3.2 mm	40 Nm	65,000 PSI (4500 BAR)
			2.5 mm	80 Nm	120,000 PSI (8000 BAR)
		5/8"-18 UNF	3.2 mm	40 Nm	65,000 PSI (4500 BAR)
			2.5 mm	80 Nm	120,000 PSI (8000 BAR)
	Male threads	M 14 x 1.5 LH	5.5 mm	200 Nm	75,000 PSI (5200 BAR)
		3/8"-24 UNF LH	3.0 mm	120 Nm	120,000 PSI (8000 BAR)
Materials -wetted parts -case		PH13-8 stainless steel (1.4534) 304 stainless steel (1.4301)			
Supply voltage U_B	DC Volts	10 - 30 (14 - 30 for 0 - 20 mA and 0 - 10 V output signal)			
Output and load limitations: Output signal and maximum load		4-20 mA 2-wire system $R_A[Ohm] \leq (U_B[V]-10V) / 0.02\ A$ {0-20 mA 3-wire system} $R_A[Ohm] \leq (U_B[V]-14V) / 0.02\ A$ {0-5 V 3-wire system} $R_A > 5$ kOhm (min) {0-10 V 3-wire system} $R_A > 10$ kOhm (min) {other signal outputs available}			
Sampling rate	Hz	100			
zero and span adjustment	%	±10			
Accuracy (linearity, including hysteresis and repeatability)	% of span	≤0.25% (B.F.S.L.)			
Repeatability	% of span	≤ 0.05			
Hysteresis		≤ 0.2			
1 year stability	% of span	≤ 0.2 (under reference conditions)			
Temperature Media Ambient Storage Compensated range		-4°F to +176°F (-20°C to +80°C) -4°F to +176°F (-20°C to +80°C) -40°F to +185°F (-40°C to +85°C) -4°F to +176°F (-20°C to +80°C)			
Temperature error (reference 70°F) on zero point on span	% of span	≤ 0.2 per 18°F (10°C) change ≤ 0.2 per 18°F (10°C) change			
CE conformity		Interference emission and immunity per EN 61326			
Shock resistance Vibration resistance	g g	100 per IEC 770 for mechanical shock 5 per IEC 770 for vibration under resonance conditions			
Electrical connection		4-pin L-plug per DIN 43 650 with solderless screw terminal and PG 13 fitting {4-pin L-plug with 1/2" female conduit opening, 5 foot cable with free ends, 6 pin MIL plug, M 12 x 1 4-pin plug}			
Weight Dimensions	lb	approximately 0.6 (0.3 Kg) see drawing			
Electrical protection		protected against reverse polarity, short circuit, and overvoltage			
Environmental protection		IP 65 (NEMA 5) with 4 pin L-plug {IP 67 (NEMA 4) with 5 foot cable}, {MIL plug}, {M12 x 1}			

Notes: Items in curved brackets { } are available as special order options

[1] The torque values listed are supplied as examples and do not apply to all installations. Please check with the OEM for specific installation and torque instructions.

Dimensions

Electrical connection

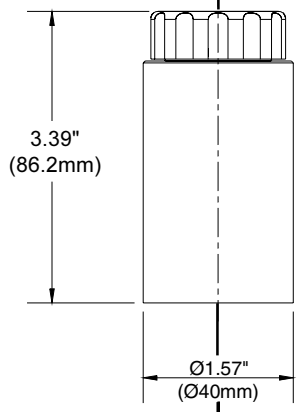


4 pin L-plug DIN 43 650

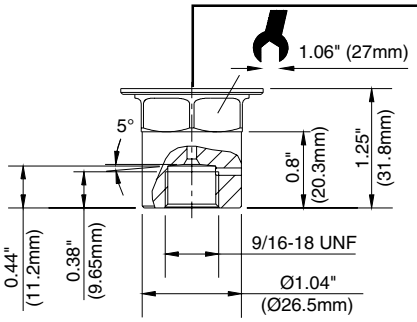
6 pin MIL plug*

M 12 x 1 4 pin locking plug*

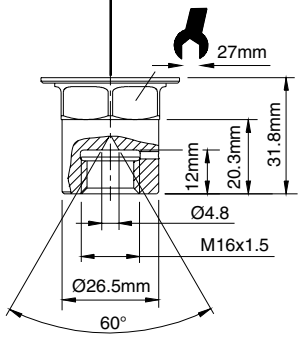
Case



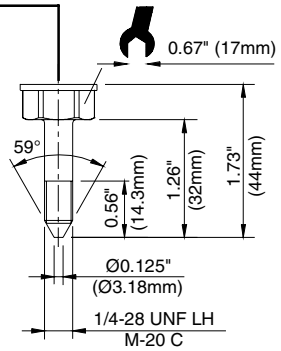
Process connections



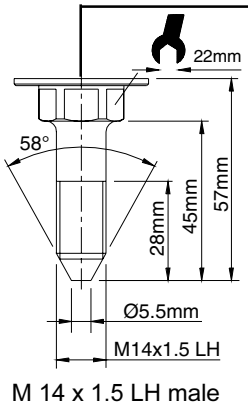
F 250-C
9/16-18 UNF female



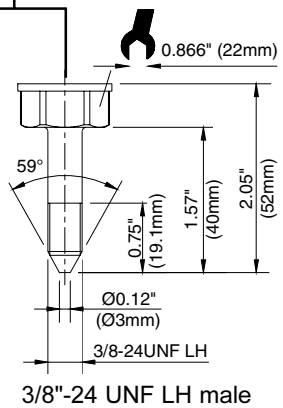
M 16 x 1.5 female
with sealing cone



1/4"-28 UNF LH male
M 250-C



M 14 x 1.5 LH male



3/8"-24 UNF LH male

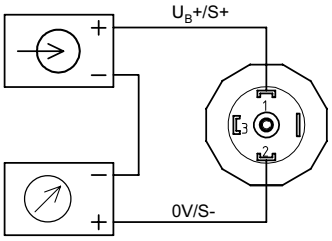
Pressure ring		Pressure screw	
			
Pressure connection on HP-1	Order number	Order number	Measuring point connector
1/4"-28 UNF LH	1295675	1295667	M 16 x 1.5
M 14 x 1.5 LH	2238519	2238501	M 30 x 2
3/8"-24 UNF LH	2315853	2315887	M 20 x 1.5

* Mating connector supplied at additional cost

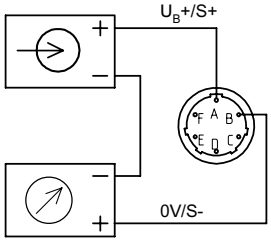
Wiring

2-wire system

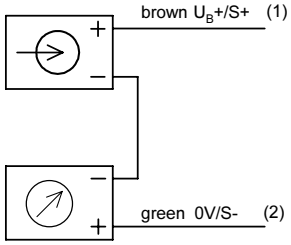
DIN 43 650 plug



MIL-plug PT 02 E-10-6P

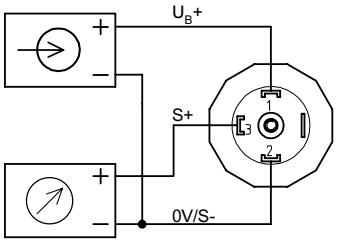


flying lead

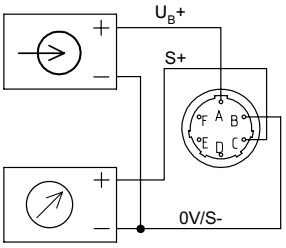


3-wire system

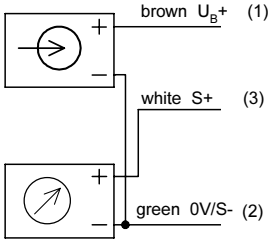
DIN 43 650 plug



MIL-plug PT 02 E-10-6P



flying lead



2-wire system

Wire	Coding	DIN Plug	Wire Color
Supply +	U_B+ / S+	pin 1	brown
Signal -	0V / S-	pin 2	green

3-wire system

Wire	Coding	DIN Plug	Wire Color
Supply +	U_B+	pin 1	brown
Supply - Signal -	0V / S-	pin 2	green
Signal +	S +	pin 3	white

THE MEASURE OF

Total Performance™

Ordering Information:
State computer part number (if available) / type number / range / output / process connection / electrical connection / other required options.

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1/2002