



# Miniature Pressure Transmitter

## Type M-10 - 500 PSI to 15,000 PSI

### Tronic

- Small size for installation in limited space
- Pressure ranges from 500 PSI to 15,000 PSI
- 4-20 mA 2-wire or 1-5 V 3-wire output signal
- Highly resistant to pressure spikes and vibration
- Stainless steel case and wetted parts

The MicroTronic is one of the smallest industrial pressure transmitters available. It is ideal for applications that require high accuracy, durability, and small size.

The all welded construction of the sensor assembly eliminates additional sealing materials and gives long term leak-free service. The thin film sensor is manufactured with high grade stainless steel using a vacuum deposition process called sputtering. This process produces excellent long term stability in applications subject to wide, rapid pressure fluctuations.

The MicroTronic provides a linearity of 0.25% B.F.S.L. in addition to a repeatability of better than 0.05% of span. The rugged design withstands shocks to 1000 g and vibration up to 30 g in accordance to DIN IEC 770. CE certification provides reliable operation even under extreme EMI conditions. The MicroTronic is available with a wide range of electrical connections including flying leads, a mini DIN plug, or 4 pin M12 X 1 locking plug. Custom electrical and process connections are available for OEM quantities.



Standard 4-pin locking plug  
M12 x 1



5 foot flying lead

### STANDARD RANGES

RANGE	MAXIMUM*	BURST**
0-500 PSI	1000 PSI	6000 PSI
0-1000 PSI	1800 PSI	8200 PSI
0-3000 PSI	4800 PSI	18,000 PSI
0-5000 PSI	12,000 PSI	25,000 PSI
0-10,000 PSI	18,000 PSI	36,000 PSI
0-15,000 PSI	22,500 PSI	45,000 PSI



4-pin mini DIN plug

#### Notes:

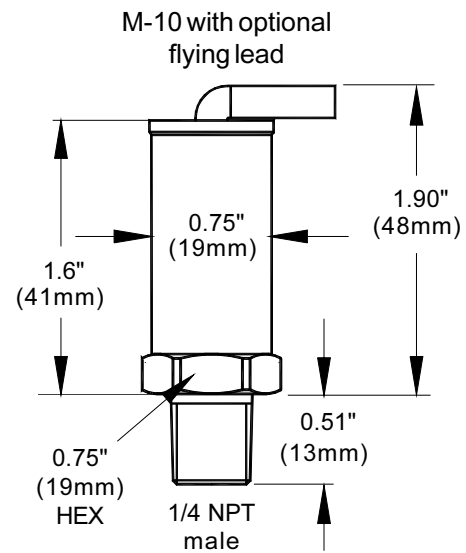
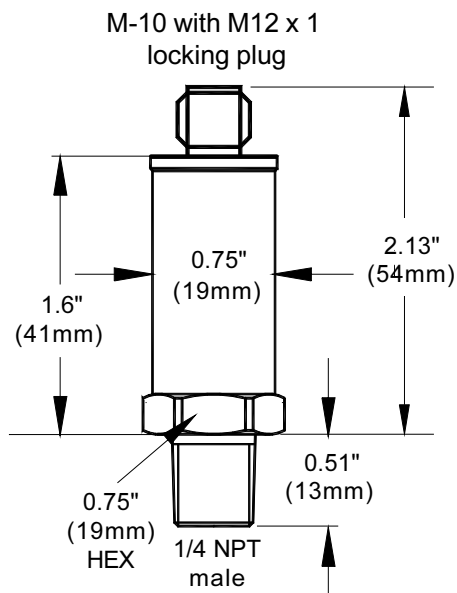
\* Pressure applied up to the maximum rating will cause no permanent change in specifications

\*\* Exceeding the burst pressure may result in destruction of the transmitter and loss of media.

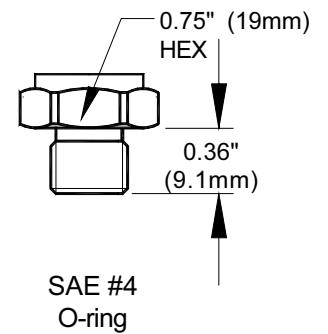
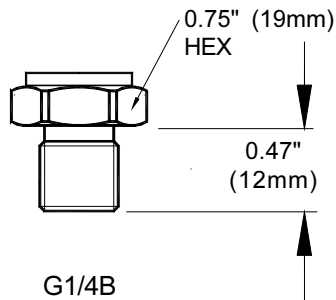
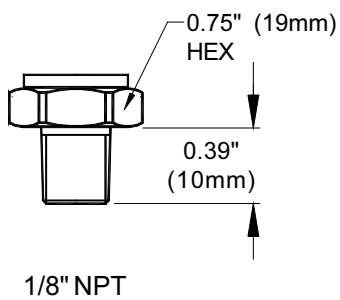
Specifications	Units	Type M-10
Sensing principle Pressure ranges Pressure reference	PSI	Thin film standard ranges as listed {custom ranges available} relative pressure
<b>Pressure connection:</b>  <b>Material:</b> -wetted parts -case		1/4" NPT male {1/8" NPT male} {#4 SAE (7/16-20) male} G1/4B per DIN 16288 G1/4 A per DIN 3852 shape E with Viton seal <b>(Other pressure connections available on request)</b>  1.4571 and 1.4542 stainless steel (316 ss and PH17-4 ss) 1.4571 stainless steel (316 ss)
<b>Supply voltage</b> $U_B$  <b>Output and load limitations:</b> Output signal and maximum load $R_A$  Response time (10...90%)	DC Volts   milliseconds	10 - 30 (8-30 with 1-5 V output)  4-20 mA 2-wire $R_A \leq (U_B - 10V) / 0.02 \text{ A}$ , with $R_A$ in Ohms and $U_B$ in V 1-5 V 3-wire system $R_A > 10 \text{ kOhm}$  $\leq 2$
<b>Accuracy</b> (including hysteresis ) Repeatability  1 year stability	% of span  % of span	$\leq 0.25$ (B.F.S.L.) $\leq 0.05$  $\leq 0.2$ (under reference conditions)
<b>Temperature</b> Media Ambient Storage Compensated range  Temperature error (reference 70°F) on zero point on span	      % of span	-40°F to +212°F (-40°C to +100°C) {-40°F to 257°F (-40°C to +125°C)} -4°F to +185°F (-20°C to +85°C) -40°F to +212°F (-40°C to +100°C) -4°F to +185°F (-20°C to +85°C)  $\leq 0.2$ per 18°F (10°C) change $\leq 0.2$ per 18°F (10°C) change
<b>CE</b> conformity		Interference emission per EN 50 081-1 (March 1993) and EN50 081-2 (March 94), Interference immunity per EN 50 082-2 (February 1996)
Shock resistance Vibration resistance	g g	1000 per IEC 770 30 per IEC 770
Electrical connection  Weight Electrical protection Environmental protection	  oz	4-pin locking plug M12 x 1 4-pin Mini DIN plug 43 650 {5 foot flying lead} {custom plug and cable assemblies}  approximately 1.75 (50 g) protected against reverse polarity, short circuit, and overvoltage IP 65 {IP 67 with cable or locking plug, for pressure ranges $\geq 1500 \text{ PSI}$ }

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

## Dimensions



## Process connections

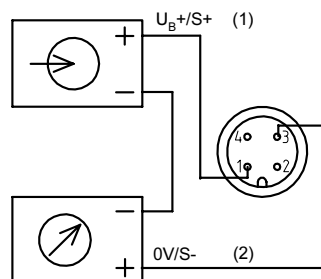


## Wiring

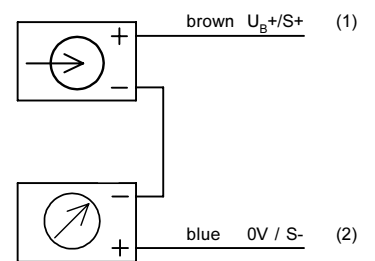
### 2-wire system

Wire	Coding	Locking plug	DIN Plug	Wire Color
Supply +	$U_B^+ / S^+$	pin 1	pin 1	brown
Signal -	0V / S-	pin 3	pin 2	blue

### 4-pin locking plug M 12 x 1

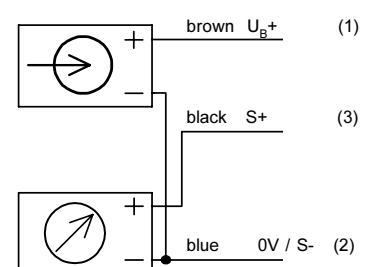
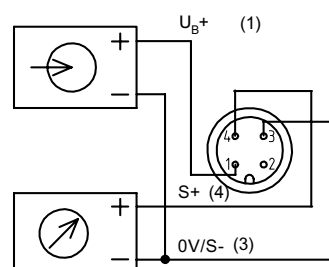


### flying leads



### 3-wire system

Wire	Coding	Locking plug	DIN Plug	Wire Color
Supply +	$U_B^+$	pin 1	pin 1	brown
Supply - Signal -	0V / S-	pin 3	pin 2	blue
Signal +	S +	pin 4	pin 3	black



THE MEASURE OF  
**Total Performance™**

---

**Ordering Information:**

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

Specifications given in this data sheet represent the state of engineering at the time of printing.  
Modifications may take place and the specified materials may change without prior notice.

M-10 8/2000



**WIKAI Instrument Corporation**

1000 Wiegand Boulevard

Lawrenceville, Georgia 30043-5868

Tel: 770-513-8200 Fax: 770-277-2641

<http://www.wika.com> e-mail: [Tronic@wika.com](mailto:Tronic@wika.com)