



## Type KM10 Rugged, Compact Transducer for the High Volume OEM

### APPLICATIONS:

**High Volume Pressure Sensing in:  
Off Road Equipment, Construction  
Machinery, HVAC/R, Compressors,  
Pump Control**

### BENEFITS & FEATURES

- Compact size
- All welded sensor
- -40/120°C operating temp
- Rugged SS construction
- IP 67 ingress rating
- Ranges through 7500 psi

### PERFORMANCE CHARACTERISTICS

Ref. Condition 23°C ±2° (73°F)

Accuracy Class (F.S.):	±0.5%	
	(75 psig & below)	(100 psig & above)
Nonlinearity B.F.S.L.	≤ 0.4%	≤ .15%
Hysteresis	≤ .05%	
Nonrepeatability	≤ .03%	
Ranges:	0/50 psi* vac/100 psi*	0/1500 psi
	0/75 psi* vac/150 psi*	0/2000 psi
	vac/50 psi* vac/200 psi*	0/3000 psi
	vac/75 psi* vac/300 psi*	0/5000 psi
	0/100 psi* 0/500 psi	0/7500 psi
	0/200 psi* 0/750 psi	
	0/300 psi* 0/1000 psi	

**Stability:** ±0.25% F.S./year

**Interchangeability:** < .5% F.S.

**Durability:** Tested to 50 million cycles

### FUNCTIONAL CHARACTERISTICS

Overpressure (F.S.):	Proof	Burst
750 psi & below	2 x range	10 x range
1500 psi	2 x range	5 x range
3000 psi	2 x range	5 x range
5000 psi	1.5 x range	5 x range
7500 psi	1.2 x range	5 x range

**Vibration:** Random to 1 KHz, 20 g's

**Shock:** 50 g's, 11 msec

**Drop Test:** No effect 1 meter drop on concrete

**Response Time:** Less than 1msec

**Position Effect:** Less than 0.01% F.S.

The new Ashcroft® KM10 Pressure Transducer is the ideal choice for the high volume OEM who requires an economical yet durable pressure transducer. The KM10 marries a proven polysilicon thin film sensor to a high performance ASIC to provide a highly accurate, stable, and rugged pressure sensing instrument.

### ENVIRONMENTAL CHARACTERISTICS

#### Temperature:

Storage	-40/120°C	(-40/250°F)
Operating	-40/120°C	(-40/250°F)
Compensated	-30/120°C	(-25/250°F)

**Humidity:** 0/100%R.H., no effect

#### Thermal Coefficients (-30/120°C):

Zero	Span
±0.01%/°C (±0.0055%/°F)	±0.01%/°C (±0.0055%/°F)

### ELECTRICAL SPECIFICATIONS

#### Output Signal Options:

Output	Excitation	Supply Current
0.5-4.5 Vdc (ratiometric)	5 Vdc ± .5 Vdc	10mA typical
1-5 Vdc	8-32 Vdc	10mA typical

**Reverse Polarity Protection:** Yes

**Insulation Breakdown Voltage:** (Circuit to case)

150 Vac/1 min.

**Insulation Resistance:** (Circuit to Case)

100M ohm min.@50 Vdc.

**Warm-up Time:** Less than 25 msec

### PHYSICAL CHARACTERISTICS

#### Standard Process Connections (304SS):

½ NPT	¼ NPT
R ¼, R ¾, G ¼, G ¾	¾-24 UNF-2A
M10 x 1	M14 x 1.5
¼-20 UNF-2A	¼-20 UNF-2B

**Diaphragm Material:** 17-4 PH SS

**Housing:** 304SS

**Electrical Termination:** Three Types

- Shielded Cable
- Detachable Connector
- Flying Lead



**Protection Rating:** IP67

**Weight:** Approx. 2 oz. (60g)

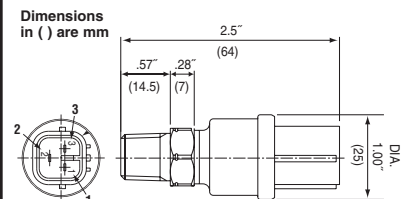
### OPTIONS

- Throttle screws
- Custom mating harness
- Special cleaning (for O<sub>2</sub>)
- Non-standard pressure ranges
- Alternate process connections
- Special calibration/accuracy

### DETACHABLE CONNECTOR STYLE

#### Dimension Drawing

(Height may vary slightly depending on process connection)



#### Mating Connector

Mates to HW090 Connector by Sumitomo Wiring Systems. Made of PBT (polybutylene terephthalate).

**Flying Leads:** 20AWG, 3 ft. (.9m) standard

PIN	Color	Function
1	Red	Supply (+)
2	White	Output (+)
3	Black	Common

Shielded cable termination and flying lead termination is also available.

### TO ORDER THE KM10 PRESSURE TRANSDUCER:



Model Type  
(KM10)



Accuracy Class  
(5) 0.50%  
(100 psi & above)  
(7) 1.0%  
(75 psi & below)



Pressure Connection  
(M01) ½ NPT-M  
(M02) ¼ NPT-M  
(M38) ¾-24 UNF-2A  
(MEK) ¼-20 UNF-2A  
(FRW) ¼-20 UNF-2B  
(M10) M10 x 1  
(M14) M14 x 1.5  
(MR3) R ¾  
(MR2) R ¼  
(MG3) G ¾  
(MG2) G ¼



Output Signal  
(15) 1-5 Vdc  
(RM) Ratiometric  
0.5-4.5 Vdc



Electrical Termination  
For Shielded Cable  
(F2) 36" shielded cable,  
PVC sheath  
(P1) Other length  
(P9) Custom cable  
For Detachable Connector  
(A2) Mating connector  
with 36" flying leads  
(A1) Other length  
For Flying Lead  
(12) 12 inch length  
(24) 24 inch length  
(36) 36 inch length



\*Pressure Range  
PSIG PSIS  
Vac./75 0/500  
Vac./75 0/750  
Vac./100 0/1000  
Vac./150 0/1500  
Vac./200 0/2000  
Vac./300 0/3000  
0/50 0/5000  
0/75 0/7500  
0/100  
0/150  
0/200  
0/300



Special Features  
(XTS) Throttle  
(X6B) Oxygen cleaning