



## 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%	≤ .05%	
Nonrepeatability ≤ .03%	≤ .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)

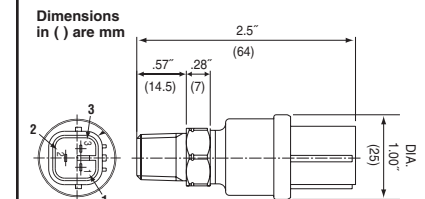
### OPTIONS

- 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