

# Model KM15 Pressure Transducer

Upgraded replacement to KM10



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## APPLICATIONS

An upgraded replacement to the popular Type KM 10, the cost effective construction of the KM15 is ideally suited to address the demanding pressure sensing needs of the original equipment manufacturer in a multitude of applications, including:

- Off-Road Equipment
- Construction Machinery
- HVAC/Refrigeration
- Compressor Control
- Pump Monitoring
- Agricultural Implements
- Diagnostic Kits
- Engine Monitoring
- Process Automation & Control
- Hydraulic & Pneumatic Sensing
- Machine Tool
- RoHS compliant

The Ashcroft® KM15 pressure transducer marries a proven polysilicon thin film sensor to a high performance ASIC to provide a highly accurate, stable and durable transducer.

Calibration, by digital compensation, results in an extremely linear and repeatable instrument over a wide temperature range.

The highly stable thin film sensor of 17-4 PH stainless steel is electron beam welded to one of a wide selection of stainless steel pressure fittings to provide superior media compatibility and over-pressure capability.

## PERFORMANCE SPECIFICATIONS

Ref. Condition 23°C ±2° (73°F)

**Accuracy:** Includes non-linearity, hysteresis, non-repeatability, – BFSL (Best Fit Straight Line) method: ±0.5% Span, 100 psig F.S. and above ±1.0% Span, 75 psig F.S. and below

**Stability:** ±0.25% Span/year

**Interchangeability:** <0.5% Span

**Durability:** Tested to 10 million cycles (10 to 100%FS)

## ENVIRONMENTAL SPECIFICATIONS

**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 to 120°C (–25 to +250°F)

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

## FUNCTIONAL SPECIFICATIONS

**Ranges:**

vac/0 psi*	vac/300 psi*	0/500 psi
vac/15 psi*	0/15 psi*	0/750 psi
vac/30 psi*	0/30 psi*	0/1000 psi
vac/50 psi*	0/50 psi*	0/1500 psi
vac/75 psi*	0/75 psi*	0/2000 psi
vac/100 psi*	0/100 psi*	0/3000 psi
vac/150 psi*	0/200 psi*	0/5000 psi
vac/200 psi*	0/300 psi*	0/7500 psi

\*Ranges in psig with vented cable or Metri-Pack termination only

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.

## 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. 500 Vac option

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

100M ohm min.@50 Vdc.

**Warm-up Time:** <25 msec

**CE Compliance:**

Per EN 61326: 1997 Annex A: 1998 (A1), 2001 (A2), 2003 (A3)

## PHYSICAL SPECIFICATIONS

**Pressure Connection Options:** see "To Order" below

**Pressure Connection:** 304 SS

**Housing:** 304 SS

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

**Electrical Termination:** see "To Order" below

• Metri Pack 150 Series

• Shielded Cable

• Flying Leads

**Protection Rating:** IP67

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

Cable:Approx. 3.88 oz. (110g)

## OPTIONS

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

## Model KM15 Pressure Transducer

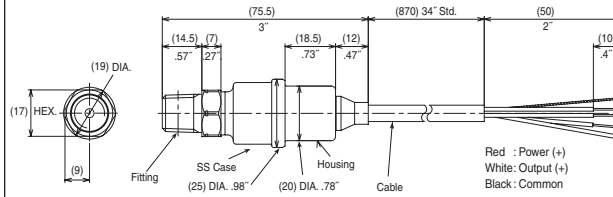
Upgraded replacement to KM10

### DIMENSIONS

#### SHIELDED CABLE TERMINATION

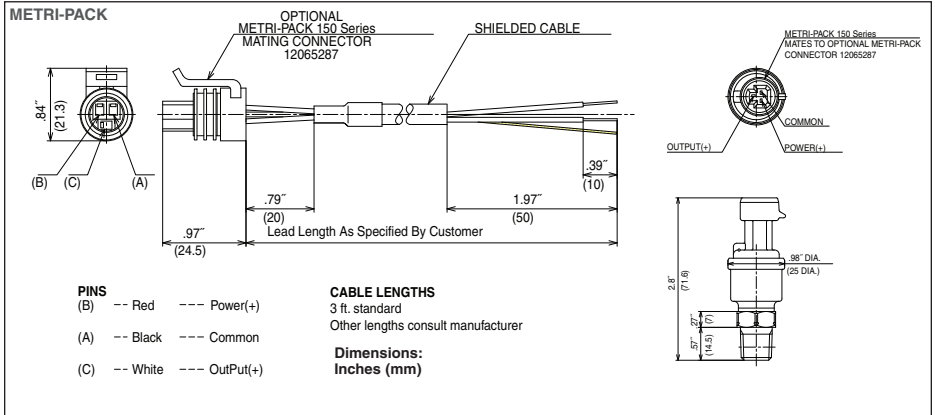
(Height may vary slightly depending on process connection)

Dimensions:  
Inches (mm)

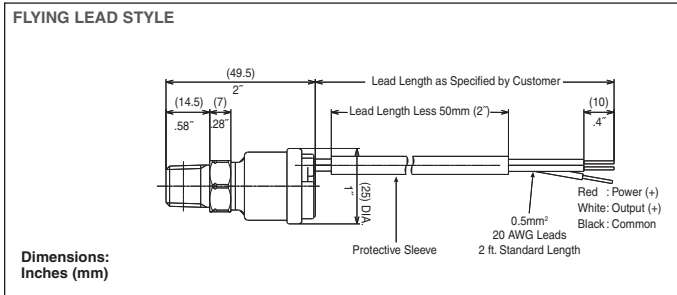


Cable is shielded with aluminum polyester tape and covered with PVC jacket. Operating temperature of -30/105°C, storage temperature -40/120°C. Cable includes drain wire. Vent tube provided in ranges of 300 psi and below. Individual wires are AWG 24 with tinned copper ends. Cable is rated at 300V, and is UL 2517 listed. 3 ft. (.9mm) standard length.

#### METRI-PACK



#### FLYING LEAD STYLE



### How To Order

<b>K</b>	<b>M</b>	<b>1</b>	<b>5</b>					<b>#</b>	<b>X</b>		
<b>Model Type (KM15)</b>	<b>Accuracy Class</b> (5) 0.50% (100 psi & above) (7) 1.0% (75 psi & below)	<b>Pressure Connection</b> (M01) 1/8 NPT-M (M02) 1/4 NPT-M (M38) 3/8-24 UNF-2A (MEK) 7/16-20 UNF-2A (FRW) 7/16-20 UNF-2B (M10) M10 x 1 (M14) M14 x 1.5 (MR3) R 3/8 (MR2) R 1/4 (MG3) G 3/8 (MG2) G 1/4	<b>Output Signal</b> (15) 1-5 Vdc (RM) Ratiometric 0.5-4.5 Vdc	<b>Electrical Termination</b> <b>For Metri-Pack</b> (G1) = no mating conn. (G2) = mating conn. 3' cable (G1) = mating conn. w/customer specified length <b>For Shielded Cable</b> (F2) 36" shielded cable, PVC sheath (P1) Other length (P9) Custom cable <b>For Flying Lead</b> (12) 12 inch length (24) 24 inch length (36) 36 inch length	<b>Pressure Range</b> <b>PSIG</b> Vac./0 Vac./15 Vac./30 Vac./50 Vac./75 Vac./100 Vac./150 Vac./200 Vac./300 <b>PSIS*</b> 0/100 0/150 0/200 0/300 0/500 0/750 0/1000 0/1500 0/2000 0/15 0/3000 0/30 0/5000 0/50 0/7500 0/75	<b>Special Features*</b> (XTS) Throttle Screw (X6B) Gaseous Oxygen Cleaning  *Additional Options (consult factory)  *Sealed sensor					