

The K3 Series are for use in high temperature applications where the process temperatures may reach 538°C (1000°F) such as high temperature engineered polymers. The K Series utilizes standard melt pressure principles and construction, but uses a near incompressible NAK (Sodium Potassium) for pressure transmission. The K Series strain sensing technology is bonded foil strain gage.

#### MAIN FEATURES

- Pressure ranges from:  
0-35 to 0-1000 bar / 0-500 to 0-15000 psi
- Accuracy  $\leq \pm 0.25\%$  FSO (H);  $\leq \pm 0.5\%$  FSO (M)
- Hydraulic transmission system for pressure signal guarantees stability at working temperature (NaK).  
Liquid conforming to RoHS Directive.  
NaK is defined as a safe substance (GRAS)
- Quantity of NaK contained per model:  
K30 series (30mm<sup>3</sup>) [0.00183 in<sup>3</sup>], K31-K32-K33 series (40mm<sup>3</sup>) [0.00244 in<sup>3</sup>]
- 1/2-20UNF, M18x1.5 standard threads; other types available on request
- Inconel 718 diaphragm with GTP+ coating for temperatures up to 538°C (1000°F)
- 15-5 PH diaphragm with GTP+ coating for temperatures up to 400°C (750°F)
- Hastelloy C276 diaphragm for temperatures up to 300°C (570°F)
- 17-7 PH corrugated diaphragm with GTP+ coating for ranges below 100bar-1500psi up to 400°C (750°F)
- Stem material: 17-4 PH

*GTP+ (advanced protection)*

*Coating with high resistance against corrosion, abrasion and high temperature*



#### TECHNICAL SPECIFICATIONS

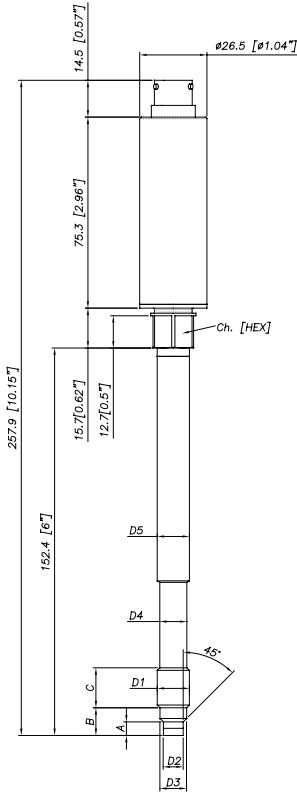
Accuracy (1)	<b>H</b> $\leq \pm 0.25\%$ FSO (100...1000 bar) <b>M</b> $\leq \pm 0.5\%$ FSO (35...1000 bar)
Resolution	Infinite
Measurement range	0..35 a 0..1000bar 0..500 a 0..15000psi
Maximum overpressure	2 x FSO 1.5 x FSO over 700bar/10000psi
Measurement principle	Strain gauge
Power supply	6..12Vdc (10Vdc typical)
Bridge resistance	350 Ohm (550 Ohm below 100bar - 1500psi)
Insulation resistance (at 50Vdc)	>1000 MOhm
Output signal Full Scale FSO (tolerance $\pm 0.5\%$ FSO)	2.5 mV/V (option 2) 3.33 mV/V (option 3)
Zero balance	$\pm 5\%$
Calibration signal	80% FSO
Compensated temperature range	0...+100°C 32...212°F
Maximum temperature range	-30...+120°C -22...250°F
Thermal drift in compensated range: Zero / Calibration / Sensibility	$< 0.02\%$ FSO/°C $< 0.01\%$ FSO/°F
Diaphragm maximum temperature	538°C 1000°F
Zero drift due to change in process temperature)	$< 3,5$ bar/100°C $< 28$ psi/100°F
Thermocouple (model K32)	STD : type "J" (isolated junction)
Protection degree (with 6-pole female connector)	IP65
Electrical connections	Conn. 6-pin VPT07RA10-6PT (PT02A-10-6P) Conn.8-pin PC02E-12-8P

FSO = Full Scale Output

(1) BFSL method (Best Fit Straight Line): includes combined effects of Non-Linearity, Hysteresis and Repeatability.

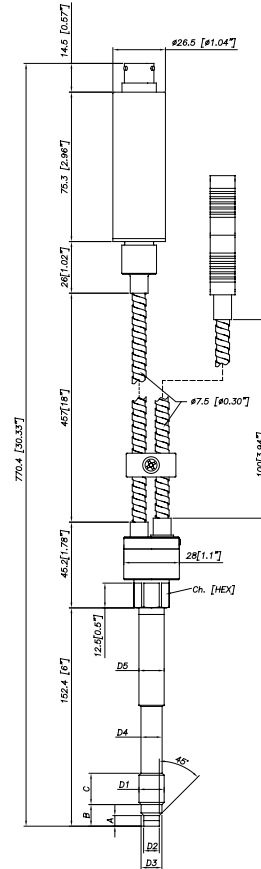
# MECHANICAL DIMENSIONS

## K30

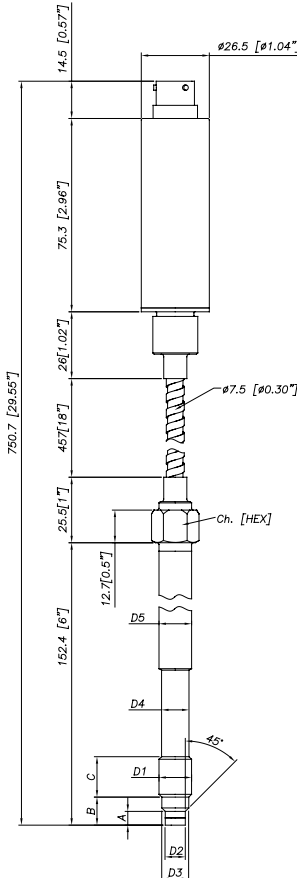


D1	<b>1/2 - 20UNF</b>
D2	$\phi 7.8 - 0.05$ [ $\phi 0.31$ " - 0.002 ]
D3	$\phi 10.5 - 0.025$ [ $\phi 0.41$ " - 0.001 ]
D4	$\phi 10.67$ [ $\phi 0.42$ " ]
D5	$\phi 12.7$ [ $\phi 0.5$ " ]
A	5.56 - 0.26 [ 0.22" - 0.01 ]
B	11.2 [ 0.44" ]
C	15.74 [ 0.62" ]
Ch [Hex]	16 [ 5/8" ]

## K32

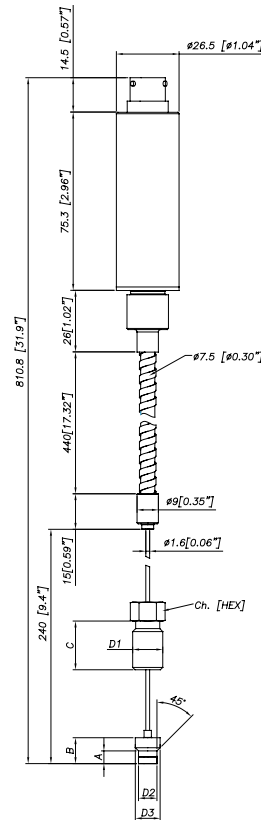


## K31



D1	<b>M18x1.5</b>
D2	$\phi 10 - 0.05$ [ $\phi 0.394$ " - 0.002 ]
D3	$\phi 16 - 0.08$ [ $\phi 0.63$ " - 0.003 ]
D4	$\phi 16 - 0.4$ [ $\phi 0.63$ " - 0.016 ]
D5	$\phi 18$ [ $\phi 0.71$ " ]
A	6 - 0.26 [ 0.24" - 0.01 ]
B	14.8 - 0.4 [ 0.58" - 0.016 ]
C	19 [ 0.75" ]
Ch [Hex]	19 [ 3/4" ]

## K33



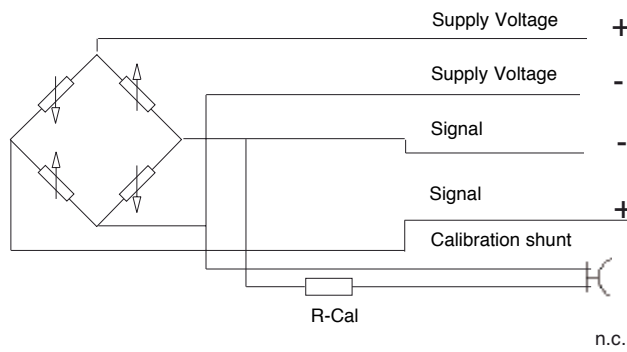
Exposed capillary	
D1	1/2-20UNF
D2	.307/.305" [7.80/7.75mm]
D3	.414/.412" [10.52/10.46mm]
A	.125/.120" [3.18/3.05mm]
B	.318/.312" [8.08/7.92mm]
C	.81" [20.6mm]

**NOTE :** dimensions refer to rigid stem length option "4" (153 mm – 6")

**WARNING :** For installation use a maximum tightening torque of 56 Nm(500 in-lb)

## ELECTRICAL CONNECTIONS

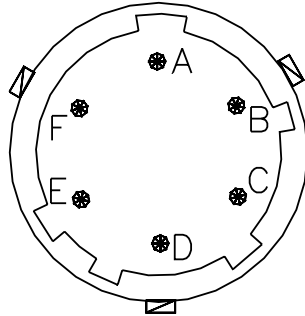
### mV/V OUTPUT



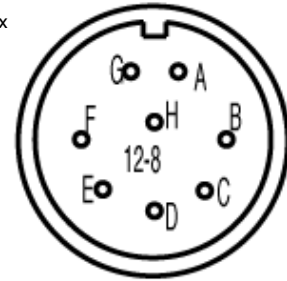
6-pin	8-pin
C	A
D	C
B	D
A	B
E - F	E - F
	G - H

Connect the cable sheathing to the side of the instrument.

6-pin connector  
VPT07RA10-6PT2  
(PT02A-10-6P)



8-pin connector  
PC02E-12-8P Bendix



## ACCESSORIES

### Connectors

6-pin female connector (IP65 protection degree)  
8-pin female connector

**CON300**  
**CON307**

### Extension cables

6-pin connector with 8m (25ft) cable  
6-pin connector with 15m (50ft) cable  
6-pin connector with 25m (75ft) cable  
6-pin connector with 30m (100ft) cable  
8-pin connector with 8m (25ft) cable  
8-pin connector with 15m (50ft) cable  
8-pin connector with 25m (75ft) cable  
8-pin connector with 30m (100ft) cable  
Other lengths

**C08W**  
**C15W**  
**C25W**  
**C30W**  
**E08W**  
**E15W**  
**E25W**  
**E30W**  
**on request**

Cable color code 6 wires	
Conn.	Wire
A	Red
B	Black
C	White
D	Green
E	Blue
F	Orange

Codice colore cavo 8 wires	
Conn.	Wire
A	White
B	Red
C	Green
D	Black
E	Blue
F	Orange
G	n.c.
H	n.c.

### Accessories

Mounting bracket  
Dummy plug for 1/2-20 UNF  
Dummy plug for M18x1,5  
Drill kit for 1/2 -20 UNF  
Drill kit for M18 x 1,5  
Cleaning kit for 1/2-20 UNF  
Cleaning kit for M18x1,5

**SF18**  
**SC12**  
**SC18**  
**KF12**  
**KF18**  
**CT12**  
**CT18**

### Thermocouple for K32 model

Type "J" (153mm - 6" rigid stem)

**TTER 601**

