

# 75PCAC 75PCDC Series

Pressure Sealed AC & DC-Operated LVDTs



SENTECH INC.

## Features

- Rugged all stainless steel construction
- Perfect for harsh environments
- AC and DC-Operated units
- AC units can operate to 300°F (150°C)
- DC models operate directly with PLCs
- Calibration traceable to NIST
- Mating connector included

## Applications

- Steel and aluminum mills
- Robotics
- Industrial process control
- Bridge and pavement deflection studies
- Aircraft control surface calibration
- Welder electrode positioning
- Building material measurements
- Automated assembly equipment

Sentech is offering the 75 PC series pressure sealed LVDTs for use in harsh, dirty environments, such as those found in heavy industrial plants and processes. With housings constructed of stainless steel, the 75PC series units can sustain pressure of up to 1000 psi and, when properly equipped, can even operate fully immersed in liquids and fluids.

The 75PC series of LVDTs are available in both AC and DC-operated versions in measurement ranges of  $\pm 0.050"$  ( $\pm 1.27\text{mm}$ ) to  $\pm 10.000"$  ( $\pm 254\text{mm}$ ). The 75PCAC series, AC-operated units can be used in high temperature,



high shock and vibration environments and in mill duty applications where the signal conditioner is located away from the hostile environment. Requiring only  $\pm 15\text{V DC}$  to operate, the 75PCDC series, DC units can be used where temperatures are moderate and are ideally suited for direct connection to PLCs and other monitoring and control devices. They utilize integral, miniature, monolithic electronics to accomplish all required signal conditioning functions and give low noise outputs of  $\pm 10\text{V DC}$ .

Electrical connections are made using a 6 pin, bayonet type, hermetically sealed connector mounted to the LVDT housing. The mating cable connector including strain relief is supplied with each unit at no charge. The removable mating connector permits easy repair or replacement of the cable leading to the unit, should it be damaged in service.

## GENERAL SPECIFICATIONS

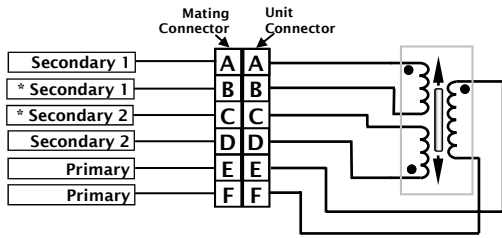
### 75PCAC, AC-OPERATED MODELS

Excitation Voltage	3V AC rms.
Excitation Frequency	400Hz to 10k Hz
Null Voltage	Less than 0.5% FSO
Non-linearity	$\pm 0.25\%$ FRO
Operating Temperature Range	-65°F to +300°F (-55°C to +150°C)
Shock Survival	1000g, 11 milliseconds
Vibration Tolerance	20g up to 2k Hz

### 75PCDC, $\pm 15\text{V DC}$ -OPERATED MODELS

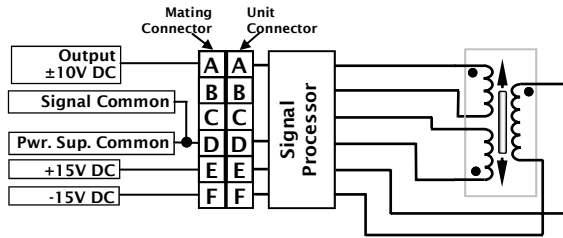
Input Voltage	$\pm 15\text{V DC}$
Input Current	$\pm 20\text{mA}$
Null Voltage	0V DC
Full scale output	$\pm 10\text{V DC}$
Non-linearity	$\pm 0.25\%$
Operating Temperature Range	32°F to 160°F (0°C to 70°C)
Shock Survival	250g, 11 milliseconds
Vibration Tolerance	10g up to 2k Hz

# CONNECTIONS



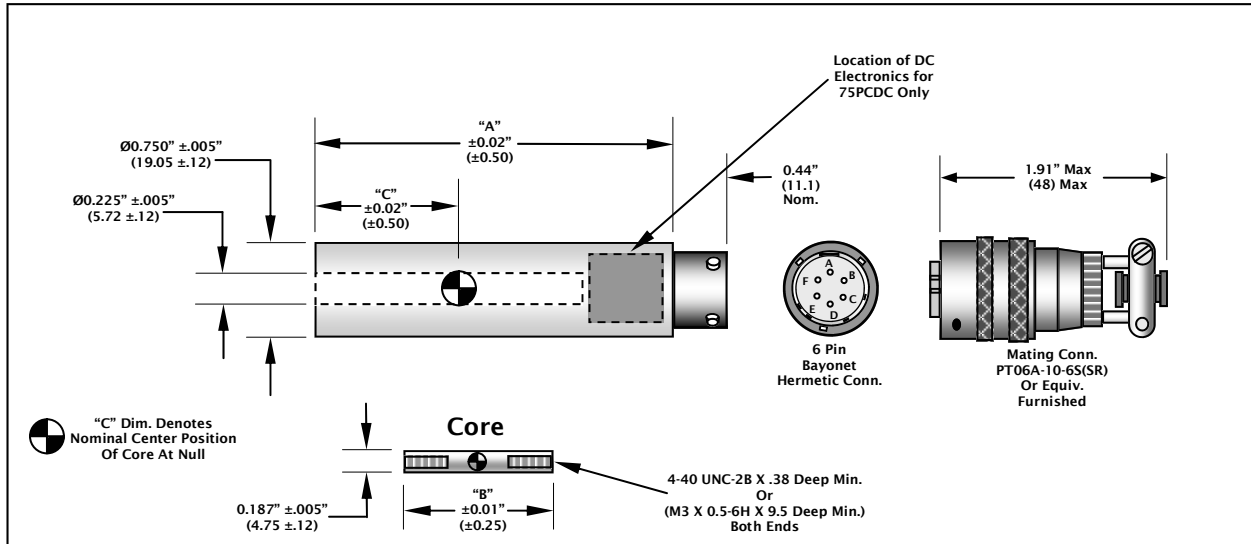
\*Tie Pins B & C For Differential Output

**75PCAC Series**



**75PCDC Series**

# DIMENSIONS



# UNIT SPECIFICATIONS

## 75PCAC Series

Model	Linear Range	Sensitivity mV/.001"/V In (mV/mm/V In)	"A"dim. Body Length Inches (mm)	"B"dim. Core Length Inches (mm)	"C"dim. Null Position Inches (mm)
75PCAC-050	±0.050 (±1.27)	4.2 (165)	1.66 (42.2)	.59 (15.0)	0.55 (14.0)
75PCAC-125	±0.125 (±3.18)	2.4 (95)	2.50" (63.5)	1.10" (27.9)	0.96 (24.4)
75PCAC-250	±0.250 (6.35)	1.6 (63)	3.36 (85.3)	1.80 (45.7)	1.39 (35.3)
75PCAC-500	±0.500" (±12.7)	1.1 (44)	5.05 (128.3)	3.00 (76.2)	2.23 (56.6)
75PCAC-1000	±1.000 (±25.4)	0.84 (33)	7.29 (185.2)	3.80 (96.5)	3.32 (84.3)
75PCAC-2000	±2.000 (±50.8)	0.34 (14)	10.68 (271.3)	5.30 (134.6)	5.05 (128.3)
75PCAC-3000	±3.000 (±76.2)	0.20 (8.0)	15.76 (400.3)	6.20 (157.5)	7.59 (192.8)
75PCAC-5000	±5.000 (±127.0)	0.16 (6.3)	19.70 (500.4)	6.20 (157.5)	9.56 (242.8)
75PCAC-10000	±10.000 (±254.0)	0.13 (5.1)	33.82 (859.0)	12.00 (304.8)	16.61 (421.9)

## 75PCDC Series

Model	Linear Range	Scale Factor V/inch (mV/mm)	"A"dim. Body Length Inches (mm)	"B"dim. Core Length Inches (mm)	"C"dim. Null Position Inches (mm)
75PCDC-050	±0.050 (±1.27)	200 (8000)	2.40 (61.0)	0.75 (19.1)	0.55 (14.0)
75PCDC-125	±0.125 (±3.18)	80 (3000)	3.23 (82.0)	1.25 (31.8)	0.96 (24.5)
75PCDC-250	±0.250 (6.35)	40 (1600)	4.10 (104.1)	2.00 (50.8)	1.39 (35.3)
75PCDC-500	±0.500" (±12.7)	20 (800)	5.79 (147.1)	3.00 (76.2)	2.23 (56.5)
75PCDC-1000	±1.000 (±25.4)	10 (400)	8.05 (204.5)	3.80 (96.5)	3.32 (84.3)
75PCDC-2000	±2.000 (±50.8)	5.0 (200)	11.42 (290.1)	5.30 (134.6)	4.94 (125.5)
75PCDC-3000	±3.000 (±76.2)	3.3 (130)	16.62 (422.1)	6.20 (157.5)	7.59 (192.8)
75PCDC-5000	±5.000 (±127.0)	2.0 (80)	20.45 (519.5)	6.20 (157.5)	9.56 (242.8)
75PCDC-10000	±10.000 (±254.0)	1.0 (40)	33.82 (859.0)	10.00 (254.0)	15.93 (404.6)

### WARRANTY

All Sentech Inc. products are warranted against defective materials and workmanship. This warranty applies for a period of one year from the date of delivery to the original purchaser. Any product that is found within the one year period not to meet these standards will be replaced or repaired at the discretion of Sentech Inc. No other warranty is expressed or implied. Although Sentech Inc. manufactures its products to exacting specification standards, we assume no responsibility for their misuse. Sentech Inc. accepts no liability for damages, incidental or punitive, in applications using our products. *Please note:* It is solely the user's responsibility to properly install and maintain transducers. Sentech Inc. manufactures its products to meet stringent specifications and cannot assume responsibility for those consequences arising from their misuse or unauthorized modification.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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