



FEATURES

- ◆ 4-20mA current loop output
- All-welded stainless steel construction
- MS type connector (MIL-C-5015)
- Imperial or metric threaded core
- Reverse polarity protection
- Calibration certificate supplied with each unit

APPLICATIONS

- Process industries
- Power plants
- Valve position monitoring
- Rolling mill roller gap feedback
- Ideal for electrically noisy environments
- Outdoor use with long cable

HCT SERIES

4 to 20mA loop LVDT Transmitter

SPECIFICATIONS

- ◆ 4-20mA, 2-wire current loop operation
- Stroke ranges from 0.25 to 10 inches
- Hermetically sealed, all welded
- Stainless steel housing
- MS style connector
- Shock and vibration tolerant
- IEC IP68 rating to 1,000 PSI [70 bars]
- Captive core option (most models)

The HCT Series LVDT transmitters are the perfect choice for high performance measurements in environments containing moisture, dirt, and fluid contaminants. Operating on a +10.5 to +28VDC loop voltage, the HCT delivers a smooth 4-20mA current loop output. True hermetic sealing of the coil assembly and electronics provides premium protection against adverse environments.

The integral electrical connector (welded, glass-sealed MS type) provides for easy installation and allows replacing a damaged cable without sacrificing the sensor.

Available in a number of standard linear measurement ranges from 0.25 to 10 inches, the HCT is ideal for process industries and power plant applications, or wherever high accuracy measurements are required in electrically noisy environments. The 2-wire 4-20mA current loop output is compatible with most PLCs.

Like in most of our LVDTs, the HCT windings are vacuum impregnated with a specially formulated, high temperature, flexible resin, and the coil assembly is potted inside its housing with a two-component epoxy. This provides excellent protection against hostile environments such as high vibration and shock.

<u>Captive core option:</u> The HCT features an optional captive core design (available for most models) that greatly simplifies installation. The core rod and bearing assembly includes a Bronze bearing on the front end for self-alignment, while a PTFE sleeve allows low-friction travel through the stainless steel boreliner (spool tube).

PERFORMANCE SPECIFICATIONS

ELECTRICAL SPECIFICATIONS							
Parameter	HCT 250						
Stroke range	0.25 [6.35]	0.5 [12.7]	1 [25.4]	2 [50.8]	5 [127]	10 [254]	
Sensitivity, mA/inch [mA/mm]	64 [2.52]	32 [1.26]	16 [0.63]	8 [0.315]	3.2 [0.126]	1.6 [0.063]	
Non-linearity, % of FR max.	±0.5% ±1%						
Temp. coefficient of sensitivity	0.022%/°F [0.04%/°C]						
Loop supply voltage	+10.5 to +28VDC						
Output	4 to 20mA (Output increases when the core is displaced from null towards the connector)						
Output at null position	12mA (null position is defined as the mid-stroke position)						
Max loop resistance	540 ohms @ +24VDC (see loop resistance chart below)						
Output noise and ripple	25 μA, peak-to-peak maximum						
Stability	0.05% of FSO, after 30 minute warm up						
Frequency response	50Hz @ -3db						

ENVIRONMENTAL AND MATERIAL SPECIFICATIONS			
Operating temperature range	-13°F to +185°F [-25°C to +85°C]		
Survival temperature	-65°F to +250°F [-55°C to 125°C]		
Shock survival	250 g (11ms half-sine)		
Vibration tolerance	10 g up to 2kHz		
Housing material	AISI 400 Series stainless steel		
Electrical connector	6-pin MS type connector (MIL-C-5015)		
IEC 60529 rating	IP68 to 1,000 PSI [70 bars] with use of proper mating connector plug		

Notes:

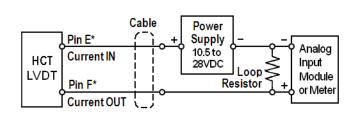
All values are nominal unless otherwise noted

Dimensions are in inch [mm] unless otherwise noted

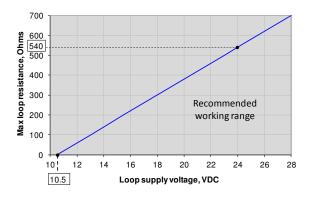
FR: Full Range is the stroke range, end to end; FR=S for 0 to S stroke range

FSO (Full Scale Output): Largest absolute value of the outputs measured at the ends of the range

WIRING SCHEMATIC & LOOP RESITANCE CHART

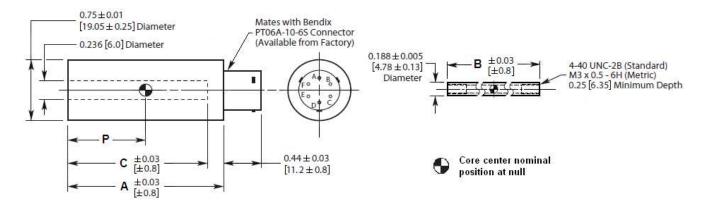


^{*} Pins A through D: No connection



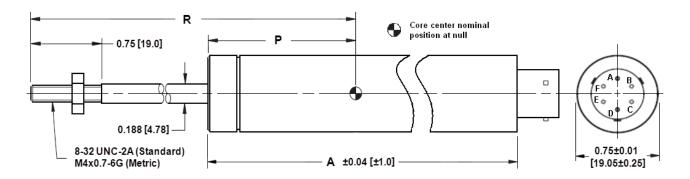
MECHANICAL SPECIFICATIONS - NON CAPTIVE CORE (STANDARD)

Parameter	HCT 250	HCT 500	HCT 1000	HCT 2000	HCT 5000	HCT 10000
Main body length "A"	4.39 [111.4]	5.51 [140]	6.92 [175.8]	9.18 [233.1]	12.28 [311.9]	21.59 [548.3]
Core length "B"	1.25 [31.8]	1.80 [45.7]	3.00 [76.2]	3.80 [96.5]	3.80 [96.5]	6.2 [157.5]
Bore depth "C"	1.91 [48.5]	3.11 [79.0]	4.46 [113.3]	6.72 [170.7]	9.90 [251.5]	19.22 [488.2]
Core center at null "P"	0.96 [24.4]	1.52 [38.6]	2.23 [56.6]	3.36 [85.2]	4.91 [124.7]	9.56 [242.8]
Weight, body, oz [gram]	3.04 [86]	3.63 [103]	4.38 [124]	5.38 [153]	6.51 [185]	12.93 [367]
Weight, core, oz [gram]	0.11 [3]	0.18 [5]	0.29 [8]	0.38 [11]	0.38 [11]	0.62 [18]



MECHANICAL SPECIFICATIONS - CAPTIVE CORE OPTION

Parameter	HCT 250	HCT 500	HCT 1000	HCT 2000	HCT 5000
Main body length "A"	4.72 [119.9]	5.84 [148.3]	7.25 [184.2]	9.51 [241.6]	12.62 [320.5]
Core center at null "P"	1.30 [33.0]	1.86 [47.2]	2.57 [65.3]	3.68 [93.5]	5.25 [133.4]
Core rod position at null "R"	4.36 [110.7]	4.75 [120.7]	6.04 [153.4]	7.87 [199.9]	12.36 [313.9]
Weight, oz [gram]	3.74 [106]	4.66 [132]	5.47 [155]	6.85 [194]	9.6 [272]



Dimensions are in inch [mm]

ORDERING INFORMATION

Description	Model	Part Number	
0.25 inch LVDT	HCT 250	02561020-000	
0.5 inch LVDT	HCT 500	02561021-000	
1 inch LVDT	HCT 1000	02561022-000	

Description	Model	Part Number	
2 inch LVDT	HCT 2000	02561023-000	
5 inch LVDT	HCT 5000	02561024-000	
10 inch LVDT	HCT 10000	02561025-000	

OPTIONS				
Description	Comments	Part Number		
Metric threaded core (M3 x 0.5-6H)	Non-captive core models	XXXXXXXX-006		
Captive core	HCT 250 through 5000 only	XXXXXXXX-200		
Captive core with metric threaded extension (M4x0.7-6G)	TICT 230 tillough 3000 only	XXXXXXXX-206		

ACCESSORIES				
Description	Model	Part Number		
DC power supply (15VDC)	PSD 40-15	02291339-000		
Core connecting rod, 6 inches long, 4-40 threads		05282946-006		
Core connecting rod, 12 inches long, 4-40 threads		05282946-012		
Core connecting rod, 24 inches long, 4-40 threads		05282946-024		
Core connecting rod, 36 inches long, 4-40 threads		05282946-036		
Core connecting rod, 6 inches long, M3x0.5 metric threads		05282977-006		
Core connecting rod, 12 inches long, M3x0.5 metric threads		05282977-012		
Mounting block		04560950-000		
Mating connector kit	PT06A-10-6S(SR)	62101011-000		

NORTH AMERICA

Measurement Specialties, Inc., a TE Connectivity company Tel: 800-522-6752 Email: customercare.frmt@te.com **EUROPE**

Measurement Specialties (Europe), Ltd., a TE Connectivity Company Tel: 800-440-5100

Email: customercare.bevx@te.com

ASIA

Measurement Specialties (China) Ltd., a TE Connectivity company Tel: 0400-820-6015

Email: customercare.shzn@te.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.

