

## HCT-IS

### Schaevitz™ 2-wire Position Transmitter

- Measurement ranges from 0 ... 6.35 mm to 0 ... 254 mm
- LVDT
- Non-linearity 0.5 % or 1.0 %
- Output signal 4 ... 20 mA
- Supply voltage 12.75 ... 28 VDC



The HCT is a breakthrough position transmitter for use in hazardous locations. The two-wire loop configuration allows use with a single barrier and a minimum of wire or cable. True hermetic packaging of the coil assembly and electronics provides the maximum protection against adverse environments. A 4 ... 20 mA transmitter output is the favored configuration for process industries and power plants. Six standard ranges are available from 0 to 0.25 inches (6.35 mm), to 0 to 10 inches (250 mm). Custom scaling is available for OEM requirements.

- Non-linearity <0.5 %, 1% full range
- 4 ... 20 mA, 2-wire operation
- self-contained electronics
- hermetically sealed housing
- calibration certificate supplied with all models

#### Options

- metric thread core
- captive core option for convenient installation

#### Approvals

- FM approved

Intrinsically safe approval classification:

- Class I, Div. 1, Group A, B, C, D
- Class II, Div. 1, Group G
- Class III

Intrinsically safe maximum entity parameters

(suggested barrier: R.Stahl)

- $V_{max} = 32$  VDC,  $C_i = 12$  nF
- $I_{max} = 110$  mA,  $L_i = 0$

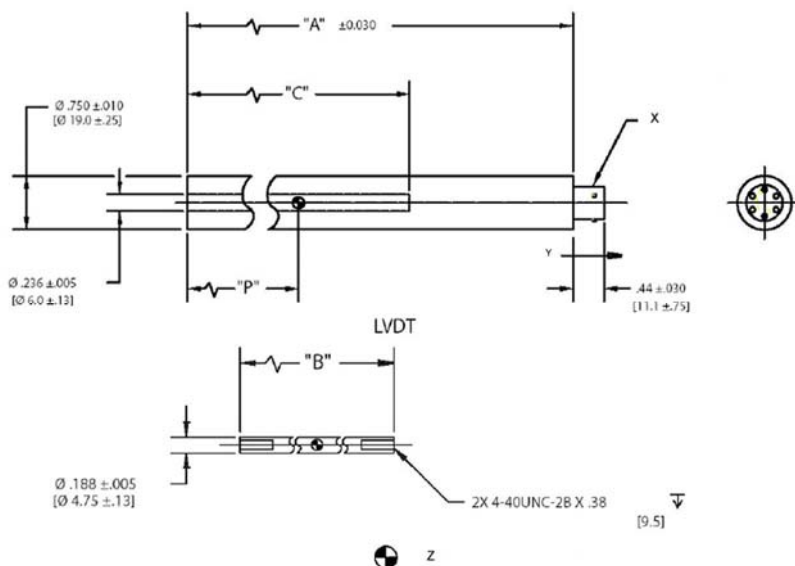
#### Measurement Ranges

Model number	Linear range, nominal	
	inch	mm
HCT420-250IS	0 ... 0.25	0 ... 6.35
HCT420-500IS	0 ... 0.5	0 ... 12.7
HCT420-1000IS	0 ... 1.0	0 ... 25.4
HCT420-2000IS	0 ... 2.0	0 ... 50.8
HCT420-5000IS	0 ... 5.0	0 ... 127
HCT420-10000IS	0 ... 10.0	0 ... 254

#### Specifications

Measurement ranges:	0 ... 6.35 mm to 0 ... 254 mm
Non-linearity:	
ranges up to 127 mm	<0.5 % full range
range 254 mm	<1.0 % full range
Output:	4 ... 20 mA, 2-wire loop
Supply voltage:	12.75 ... 28 VDC
Max. loop resistance:	600 $\Omega$ at 28 VDC
Output noise and ripple:	max. 25 $\mu$ A peak-peak
Operating temperature range:	-25 ... +85 $^{\circ}$ C
Temp. coefficient of sensitivity:	<0.04 %/ $^{\circ}$ C
Stability:	0.1 % after 30 minute warm up
Frequency response:	min. 50 Hz (-3 dB)
Controls:	none required
Electric termination:	6-pin hermetically sealed MS connector

## Mechanical Specification



**X:** mates with Bendix PT06A-10-6S connector (not included)

**Y:** direction of core movement for increasing output current

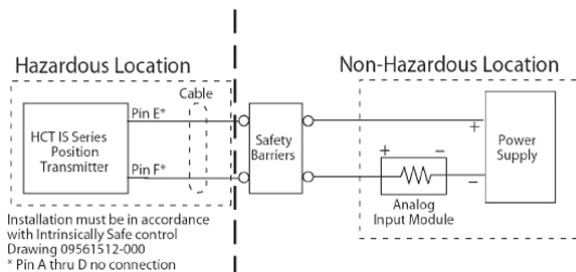
**Z:** nominal center position of core at null

All dimensions in inches, values in brackets in mm, approx. values.

These drawings are for information only and not intended for construction purpose. Please ask for detailed drawings.

Model number	Weight, approx.				Dimensions							
	Body		Core		A (Body)		B (Core)		C		P	
	oz	g	oz	g	inch	mm	inch	mm	inch	mm	inch	mm
HCT420-250IS	3.04	86	0.11	3	4.39	111.5	1.25	31.75	1.91	48.5	0.96	24.3
HCT420-500IS	3.36	103	0.18	5	5.51	140.0	1.80	45.7	3.11	79.0	1.52	38.7
HCT420-1000IS	4.38	124	0.29	8	6.92	175.8	3.00	76.2	4.46	113.3	2.23	56.6
HCT420-2000IS	5.38	153	0.38	11	9.18	233.2	3.80	96.5	6.72	170.7	3.36	85.2
HCT420-5000IS	6.51	185	0.38	11	12.28	311.9	3.80	96.5	9.90	251.5	4.91	124.6
HCT420-10000IS	12.93	367	0.62	18	21.59	548.4	6.20	157.5	19.22	488.2	9.56	242.8

## Wiring



## Ordering Information

Specify the HCT IS model with the appropriate range followed by the desired option number(s) added together.

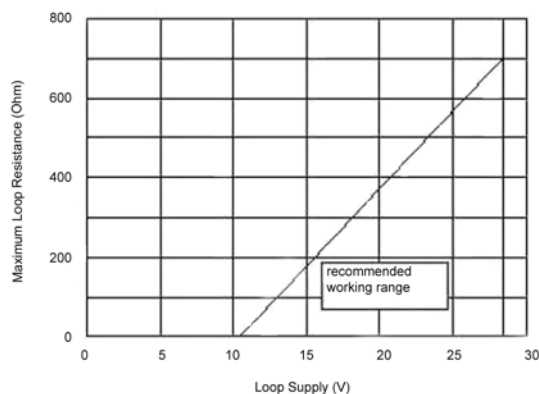
### Example:

Model Number HCT 250 IS-206 is an HCT IS Series LVDT transmitter with a 0 to 6.35 mm range with a Metric Thread Core (006) and the captive core option (200).

Option number	Description
006	metric thread core
200	captive core <sup>(1)</sup>

(1) available on HCT-250IS through HCT-5000IS models only

## Max. Widerstand im Stromkreis

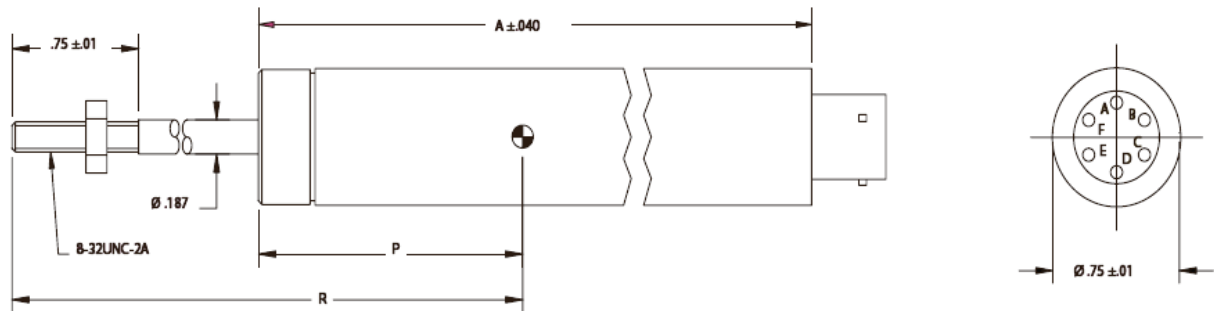


Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

## Captive Core Option

### For LVDT Series HCA, HCD and HCT

These LVDTs feature a captive core design that greatly simplifies installation. The design utilizes a core rod and bearing assembly that is captured and guided within the LVDT providing low friction travel throughout the stroke length. The assembly incorporates two Delrin bearings on the core rod traveling through the stainless steel boreliner. A bronze bearing on the front end utilizes a self-aligning feature to accommodate lateral LVDT movement during operation, the core rod and bearing assembly is field replaceable.



Dimensions in inches, approx. values.

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#### ■ Mechanical Specifications HCA Series

Model	Linear range		Weight, approx.		Dimensions, approx.					
	Inches	mm	oz	g	A		P		R	
					in	mm	in	mm	in	mm
050 HCA	±0.050	±1.25	1.98	56	2.00	50.8	0.89	22.8	3.70	94.0
125 HCA	±0.125	±3.0	2.61	74	2.84	72.1	1.30	33.0	4.28	108.7
250 HCA	±0.250	±6.0	3.14	89	3.70	94.0	1.73	43.9	4.75	120.7
500 HCA	±0.500	±12.5	4.06	115	5.39	136.9	2.57	65.3	6.04	153.4
1000 HCA	±1.000	±25	6.64	188	7.63	193.8	3.66	93.0	7.90	200.7
2000 HCA	±2.000	±50	7.38	209	11.02	279.9	5.39	138.9	10.52	267.2
3000 HCA	±3.000	±75	10.63	301	16.10	408.9	7.93	201.4	15.27	387.9

#### ■ Mechanical Specifications HCD Series

Model	Linear range		Weight, approx.		Dimensions, approx.					
	Inches	mm	oz	g	A		P		R	
					in	mm	in	mm	in	mm
050 HCD	±0.050	±1.25	2.19	62	2.74	69.6	0.89	22.8	3.78	96.0
125 HCD	±0.125	±3.0	2.65	75	3.57	90.7	1.30	33.0	4.36	110.7
250 HCD	±0.250	±6.0	3.14	89	4.44	112.8	1.73	43.9	4.85	123.2
500 HCD	±0.500	±12.5	4.06	115	6.13	155.7	2.57	65.3	6.04	153.4
1000 HCD	±1.000	±25	5.61	159	8.39	213.1	3.66	89.4	7.90	200.7
2000 HCD	±2.000	±50	7.87	223	11.76	298.7	5.39	113.4	10.52	267.2
3000 HCD	±3.000	±75	10.63	301	16.96	430.8	7.93	201.4	15.27	387.9

## ■ Mechanical Specifications HCT Series

Model	Linear range		Weight, approx.		Dimensions, approx.					
	Inches	mm	oz	g	A		P		R	
					in	mm	in	mm	in	mm
<b>HCT 420-250</b>	0 ... 0.250	0 ... 6.25	3.74	106	4.63	117.6	1.30	33.0	4.36	110.7
<b>HCT 420-500</b>	0 ... 0.500	0 ... 12.5	4.66	132	5.75	146.1	1.86	47.2	4.75	120.7
<b>HCT 420-1000</b>	0 ... 1.000	0 ... 25	5.47	155	7.16	181.9	2.57	65.3	6.04	153.4
<b>HCT 420-2000</b>	0 ... 2.000	0 ... 50	6.85	194	9.42	239.3	3.88	93.5	7.87	199.9
<b>HCT 420-5000</b>	0 ... 5.000	0 ... 125	9.60	272	12.52	318.0	5.25	133.4	12.36	313.9

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