Honeywell



2,54 mm to 12,7 mm
[0.10 in to 0.50 in]



0,25 mm to 1,02 mm
[0.01 in to 0.04 in]

Model S5 AC-AC

Enhanced Precision Displacement Transducer

DESCRIPTION

Model S5 Ultra Precision displacement transducer is designed for single and multi-point industrial gaging applications and micro-displacement measurements in research and scientific studies. It incorporates non-rotating armatures to increase resistance to side loads and improve repeatability. Bodies and probes are stainless steel constructed and windings are magnetically shielded. Ultra Precision displacement transducers utilize spring loaded captive guided armatures and low friction, non-rotating probes. Non-linearity is 0.25% full scale.

FEATURES

- Miniature design
- 0.25 % non-linearity
- Rugged, enhanced accuracy
- Enhanced immunity to electrical noise
- ±0.01 in to ±0.5 in range
- -58 °F to 257 °F operating range (standard)
- Non-rotating probe
- Stainless steel construction
- Extended life cycle
- Infinite resolution
- Captive guided spring return armature
- Not RoHS compliant

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Model S5 AC-AC

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Stroke range	±0,25 mm to 12,7 mm [±0.10 in to 0.50 in]
Non-linearity (max.)	±0.25 % full scale
Non-repeatability	<20 microinches
Output sensitivity	See table
Output load (min.)	100000 ohm
Resolution	Infinite
Phase shift	<10° @ 5 kHz

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-20 °C to 125 °C [-4 °F to 257 °F]
Temperature effect, zero (max.)	0.006 % full scale/°F
Temperature effect, span (max.)	0.006 % full scale/°F

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Element type	ac-ac displacement transducer
Input supply (calibrated)	5 V RMS @ 5 kHz
Input supply (acceptable)	1 V to 7 V RMS @ 2 kHz to 10 kHz
Electrical termination	Multiconductor shielded cable

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Case material	Stainless steel
Probe material	Stainless steel
Armature type	Captive guided spring return
Weight	See table
Spring force (max.)	See table

RANGE CODES

Range Code	Available ranges
HH	±0,25 mm [±0.01 in]
HI	±0,51 mm [±0.02 in]
HK	±1,02 mm [±0.04 in]
HM	±2,54 mm [±0.10 in]
HN	±5,08 mm [±0.20 in]
HF	±7,62 mm [±0.30 in]
HG	±10,16 mm [±0.40 in]
HP	±12,7 mm [±0.50 in]

OPTION CODES

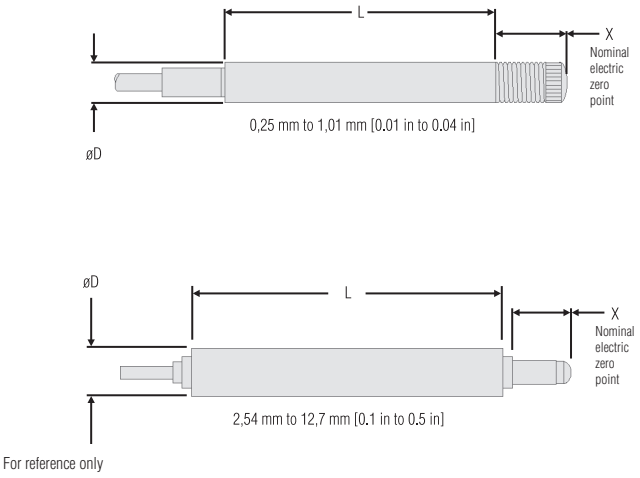
Range Code	**Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings.**
Stroke ranges	±0,25 mm to 12,7 mm [±0.01 in to ±0.5 in]
Electrical termination	Multiconductor shielded cable (1,83 m [6 ft])
Electrical cable orientation	Ra. Right angle cable exit
Mounting threads	TM392. 3/8-32 UNF threaded sleeve
Improved linearity	L10. 0.1 % max. linearity (only for ±0,01 mm to 0,51 mm [±0.040 in to ±0.02 in])
Higher temperature	TM315. 204 °C [400 °F] up to 101,6 mm [±4.0 in]

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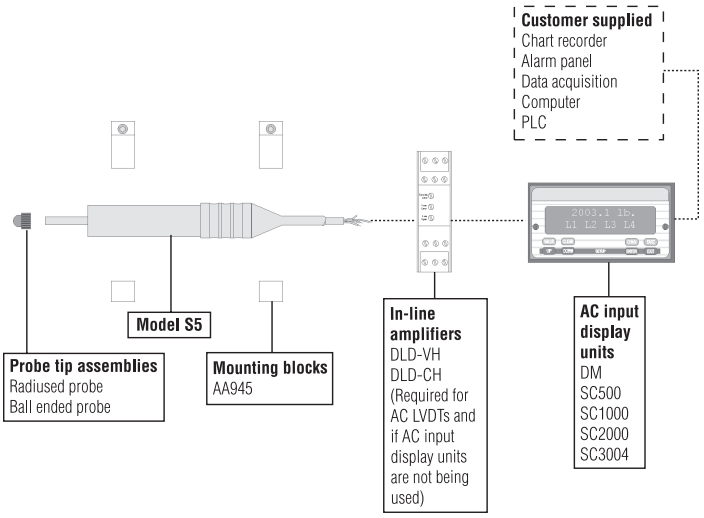
MOUNTING DIMENSIONS

Range code	Available stroke range mm [in]	L mm [in]	D mm [in]	X mm [in]	Approx. unit weight g [oz]	Max. spring force g [oz]	Output sensitivity mV/V/ 0.001 in
HH	±0,25 [±0.01]	48,01 [1.89]	7,88 [0.31]	10,92 [0.43]	396,89 [14]	212,62 [7.5]	4
HI	±0,51 [±0.02]	48,01 [1.89]	7,88 [0.31]	10,92 [0.43]	396,89 [14]	212,62 [7.5]	4
HK	±1,02 [±0.04]	51,05 [2.01]	7,88 [0.31]	12,95 [0.51]	510,29 [18]	212,62 [7.5]	4
HM	±2,54 [±0.1]	61 [2.40]	9,4 [0.37]	11,43 [0.45]	623,69 [22]	119,92 [4.23]	4
HN	±5,08 [±0.2]	78 [3.07]*	9,4 [0.37]	11,43 [0.45]	737,09 [26]	129,84 [4.58]	4*
HF	±7,62 [±0.3]	87,89 [3.46]	9,4 [0.37]	15,24 [0.60]	250,49 [30]	244,94 [8.64]	2
HG	±10,16 [±0.4]	99,06 [3.90]	9,4 [0.37]	19,05 [0.75]	963,88 [34]	209,79 [7.40]	2
HP	±12,7 [±0.5]	120,90 [4.76]	9,4 [0.37]	21,59 [0.85]	1190,68 [42]	214,89 [7.58]	2

* New L dimension and output sensitivity for 5,08 mm [±0.2 in] range. For old L dimension and output sensitivity, consult factory.

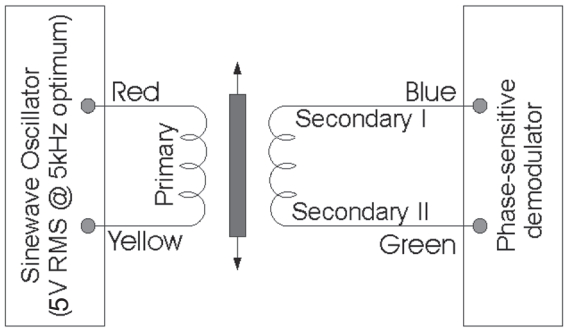


TYPICAL SYSTEM DIAGRAM



WIRING CODES

Wire color	Supply
Red	(+) supply (calibrated @ 5 V RMS, 5 kHz)
Yellow	Supply return
Blue	Output
Green	Output return
Black	Secondary center tap (normally not connected)



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Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

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For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-815-235-6847
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Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING

MISUSE OF DOCUMENTATION

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- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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