



## Model MS7A AC-AC

### Submersible\* Displacement Transducer

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#### DESCRIPTION

Model MS7A submersible displacement transducer is engineered for rugged industrial applications which require a waterproof transducer. This stainless steel unit is designed with permanently attached, waterproof connecting cable. Connecting

cables and a waterproof outer jacket are hermetically sealed to the transducer to allow for submersion in most liquids and corrosive fluids. These models can withstand external pressures to 250 psi.

#### FEATURES

- $\pm 0.25$  % non-linearity
- Submersible
- Withstands 250 psi, external pressure
- Stainless steel construction
- $\pm 1.02$  mm to 12.7 mm [ $\pm 0.04$  to  $\pm 0.50$  in range]
- $-4$  °F to 257 °F operating range (standard)
- Enhanced immunity to electrical noise
- Captive guided spring return armature
- Hermetically sealed, waterproof cable 1.83 m [6 ft]
- Easy to operate
- Infinite resolution
- Not RoHS compliant

# Model MS7A AC-AC

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Stroke range	±1,02 mm to 12,7 mm [±0.04 in to 0.50 in]
Non-linearity (max.)	±0.25 % full scale
Non-repeatability	<10 microinches
Output sensitivity	2 mV/V/ 0.001 in
Output load	100000 ohm
Resolution	Infinite

## 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	Hermetically sealed waterproof cable 1.83 m [6ft]

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Case material	Stainless steel
Probe material	Stainless steel
Armature type	Free unguided
Probe thread	M3 X 0.5

## RANGE CODES

Range Code	Available ranges
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]

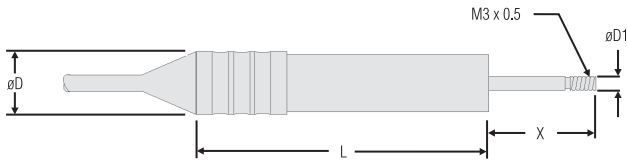
## OPTION CODES

Range Code	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMSensor-ship">http://sensing.honeywell.com/TMSensor-ship</a> for updated listings.
Stroke ranges	±1,02 mm to 12,7 mm [±0.04 in to ±0.5 in]
Electrical termination	Hermetically sealed waterproof cable (1,83 m [6 ft])

# Submersible\* Displacement Transducer

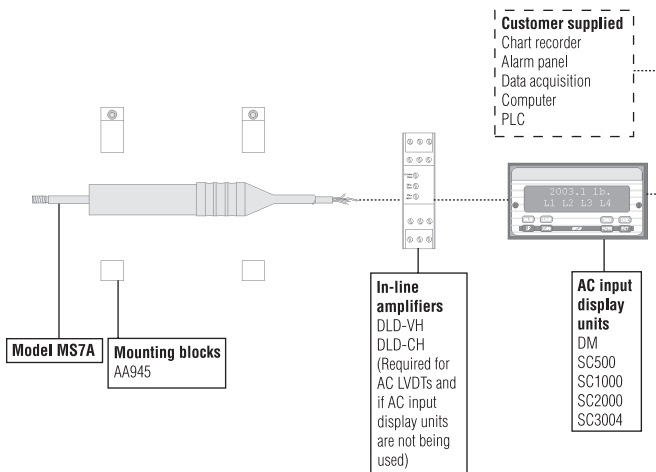
## MOUNTING DIMENSIONS

Range code	Available stroke range mm [in]	L mm [in]	D mm [in]	X ** mm [in]	D1 mm [in]	Total weight*** g [oz]	Armature weight g [oz]
HK	±1,02 [±0.04]	40,89 [1.61]	8,00 [0.315]	16,99 [0.669]	2,34 [0.092]	25,51 [0.90]	3,69 [0.13]
HM	±2,54 [±0.1]	46,99 [1.85]	9,53 [0.375]	17,98 [0.708]	2,34 [0.092]	28,35 [1.00]	5,67 [0.20]
HN	±5,08 [±0.2]	50,29 [1.98]	9,53 [0.375]	22,86 [0.900]	2,34 [0.092]	32,60 [1.15]	7,09 [0.25]
HF	±7,62 [±0.3]	69,85 [2.75]	9,53 [0.375]	29,21 [1.150]	2,34 [0.092]	45,35 [1.60]	9,92 [0.35]
HG	±10,16 [±0.4]	73,91 [2.91]	9,53 [0.375]	32,51 [1.280]	2,34 [0.092]	48,19 [1.70]	10,49 [0.37]
HP	±12,7 [±0.5]	89,91 [3.54]	9,53 [0.375]	34,93 [1.375]	2,34 [0.092]	59,53 [2.10]	12,76 [0.45]



For reference only

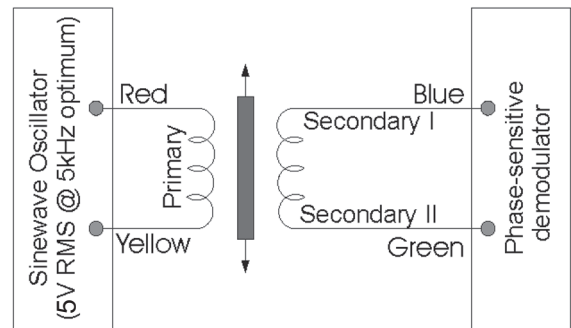
## TYPICAL SYSTEM DIAGRAM



## 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)

Cable shield is not connected to transducer



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## NOTES

\* Not recommended for salt water use

\*\* Dimensions at "X" at nominal electrical zero

\*\*\* Excluding cable

**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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### **WARNING** **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

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

### **WARNING** **MISUSE OF DOCUMENTATION**

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- 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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