



Model LW7S AC-AC

Submersible* Displacement Transducer

DESCRIPTION

Model LW7S submersible displacement transducer is often ideal for drilling, mining, and hydraulic engineering applications which require a displacement transducer with a stainless steel, water-proof construction. This model may be used as direct measur-

ing linear displacement device or positional feedback element in dynamic systems. They are suitable for submersion in fresh water and some corrosive fluids for long periods.

FEATURES

- ± 0.25 % non-linearity
- Submersible
- Stainless steel construction
- ± 12.7 mm to 76.2 mm range [± 0.5 in to ± 3.0 in range]
- Enhanced immunity to electrical noise
- Submersible mating connector with 5 m {16 ft} cable
- Easy to operate
- Captive guided spring return armature
- Infinite resolution
- Not RoHS compliant

Model LW7S AC-AC

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Stroke range	±12,7 mm to 76,2 mm [±0.5 in to 3.0 in]
Non-linearity (max.)	±0.25 % full scale
Non-repeatability (max.)	<20 microinches
Output sensitivity	See table
Resolution	Infinite

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-40 °C to 90 °C [-40 °F to 194 °F]
Temperature effect, zero (max.)	0.005 % full scale/°F
Temperature effect, span (max.)	0.005 % full scale/°F
Pressure rating, standard	150 psi, up to 3000 psi with cable options

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 @ 5 kHz
Output load (minimum)	100000 ohm
Electrical termination	Submersible mating connector with 5.03 m [16.5 ft] cable

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Case material	Stainless steel
Probe material	Stainless steel
Armature type	Captive guided spring return
Probe thread	Not applicable
Spring force (max.)	4 oz/in

RANGE CODES

Range Code	Available ranges
HP	±12,7 mm [±0.5 in]
HQ	±25,4 mm [±1.0 in]
HR	±50,8 mm [±2.0 in]
HS	±76,2 mm [±3.0 in]

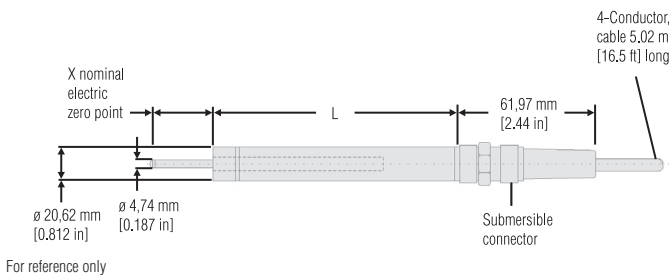
OPTION CODES

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	±12,7 mm to 76,2 mm [±0.5 in to 3 in]
Electrical termination	Multiconductor shielded cable (1.83 m [6.0 ft]) OPT1. No connector or cable, terminated with solder pins OPT5. Mineral insulated welded stainless steel sheathed cable (3 mm [0.12 in] dia. cable, 50 m [1 ft to 164 ft] lengths available, -55 °C to 200 °C [-67 °F to 390 °F], 200 bar [3000 psi])
Electrical cable orientation	OPT7. Radial output submersible connector with 5.03 m [16.5 ft] cable
Improved linearity	L10. ±0.1 % max. linearity (less than or equal to ±101.6 mm [±4 in])
Higher temperature	TM315. 204 °C [400 °F] (less than or equal to ±101.6 mm [±4 in])

Submersible* Displacement Transducer

MOUNTING DIMENSIONS

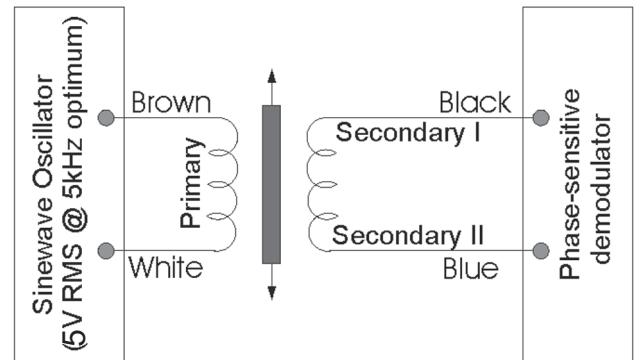
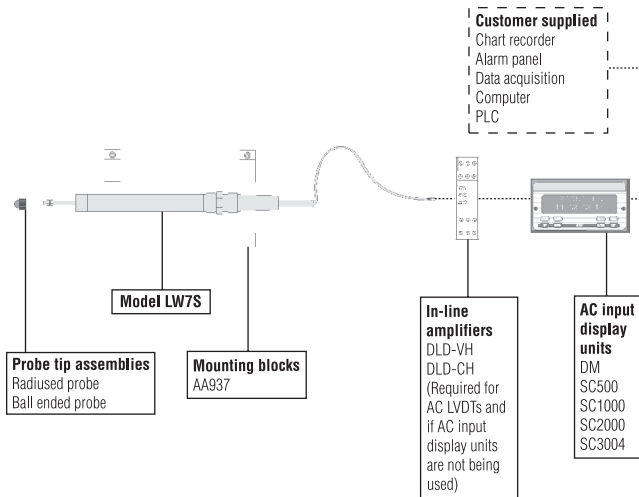
Range code	Available stroke range	L	X	Spring force oz/in	Typical full scale output at 5 V RMS
HP	±12,7 mm [±0.5 in]	152,90 mm [6.02 in]	38,1 mm [1.5 in]	4	3.5 V RMS
HQ	±25,4 mm [±1.0 in]	180,85 mm [7.12 in]	63,5 mm [2.5 in]	4	4.5 V RMS
HR	±50,8 mm [±2.0 in]	304,04 mm [11.97 in]	76,2 mm [3.0 in]	4	7.6 V RMS
HS	±76,2 mm [±3.0 in]	419,86 mm [16.53 in]	114,3 mm [4.5 in]	4	7.5 V RMS



WIRING CODES

Wire color	Dual power supply
Brown	Supply
White	Supply return
Blue	Output
Black	Output return

TYPICAL SYSTEM DIAGRAM



Model LW7S AC-AC

Submersible* Displacement Transducer

NOTES

* Not recommended for salt water use. Consult factory for saltwater submersible applications.

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.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-815-235-6847

Email inquiries to info.sc@honeywell.com

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.

Sensing and Control
Automation and Control Solutions
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422 USA
+1-815-235-6847
www.honeywell.com/sensing

008743-1-EN IL50 GLO
May 2008
Copyright © 2008 Honeywell International Inc. All rights reserved.

Honeywell