

Weld Actuator Rod-End Load Cell

Model WRE

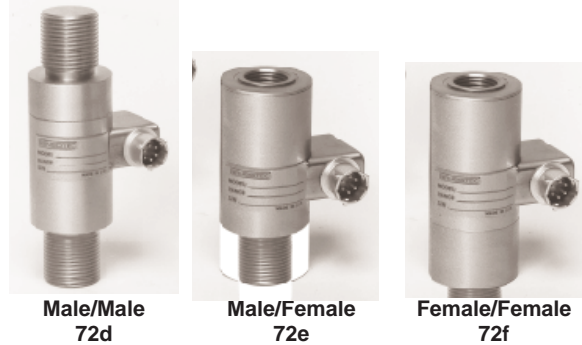
WELD FORCE & TIP STICKING

FORCE RANGES TO 10,000 LBS.

FATIGUE RATED, VIBRATION PROOF

NIST TRACEABLE ACCURACY 0.5%

SIDE-LOAD RESISTANT



The WRE Rod-End Load Cell has been specifically designed for weld guns and stationary weld machines. This load cell measures dynamic, real-time forces transmitted directly to the resistance weld. It is suited for robotic and hand-held weld guns using either air, air-over-oil, or electric servo actuators. It can be integrated into a wide variety of pedestal spot and projection welders and various seam welding machines.

The WRE Rod-End measures actual weld force applied to the electrodes from initial tip contact, through nugget growth, to final release. Its unique design provides excellent side-load resistance and produces accurate compression and tension load signals. Compression load measures the applied force while tension output can be used to indicate the force associated with sticking weld tips.

Interfaced with a variety of digital electronic instrumentation, the WRE Rod-End can ensure proper weld force is achieved and maintained throughout the weld cycle. Accurate force information can help detect nugget growth and indicate expulsion and weld-tip sticking. Using pre-set force limits, the WRE is used to fire current at a predetermined force level ensuring current is fired at exactly the right time while eliminating unnecessary squeeze time.

Specifications

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PERFORMANCE

Load Ranges0-2000, 5000, 10,000 lbs.
Accuracy±0.5% F.S.
Overload150%
Output.....1mV/V nominal

ENVIRONMENTAL

Temperature, Operating.....-65° F to 250° F
Temperature, Compensated60° F to 160° F
Temperature, Effect
-Zero 0.005% F.S./°F
-Span 0.005% Rdg./°F

ELECTRICAL

Excitation (calibration)10VDC nominal (15VDC max.)
Bridge Resistance700 ohms (bonded foil strain gage)
Electrical TerminationPTIH-10-6P or equivalent

MECHANICAL

ConstructionHermetically Sealed Stainless Steel
Life ExpectancyFatigue Rated, Vibration Proof
Off-axis LoadingSide Loading of 20% F.S. All Ranges

How to Order

Model WRE **Order Code: AW712** , ,

Capacity

2000 lbs. DL
 5000 lbs. DR
 10,000 lbs. DV

Exit Port Orientation (Available on any load cell)

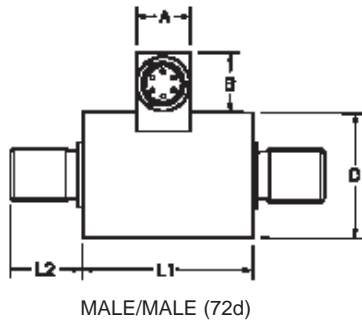
Horizontal (standard)
 Vertical 15b
 Radial 15c

Load-Attaching Threads

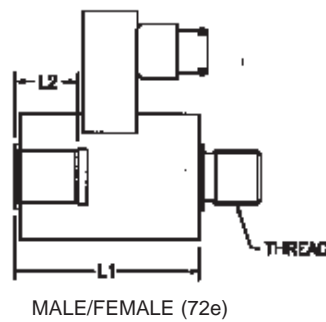
Male/Male 72d
 Male/Female 72e
 Female/Female 72f

Dimensions

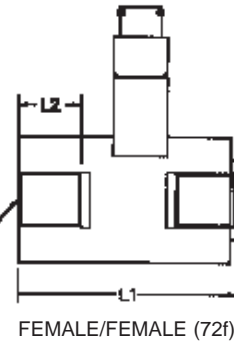
HORIZONTAL EXIT PORT
(STANDARD)



VERTICAL EXIT PORT
15B



RADIAL EXIT PORT
15C



Available Ranges	D	Thread	L2	72d L1	72e L1	72f L1	A	B
2000, 5000 lbs	1.75	3/4-16 UNF	1.00	2.38	2.50	3.06	.75	1.25
10,000 lbs	2.50	1 1/2-12 UNF	1.75	3.00	4.50	6.00	.75	1.25

Options

The WRE Rod-End load cell is interfaced with a variety of instruments and signal conditioners. SENSOTEC offers a WM9000 WeldMeter which is a multi-channel device providing a complete signal conditioning system for up to 14 channels. A variety of features include limits, auto zeroing, and external tare. Various relay configurations and analog and digital output signals are available.

The WM9000 can be used with the WRE load cell to trigger current firing based on preset force limits. A second limit can be used to alarm when force exceeds another preset limit. This configuration can help ensure that proper force is achieved and maintained during current firing and can also help to minimize unnecessary squeeze time.

For advanced signal monitoring, tracking, and analysis, interface the WRE Rod-End load cell to a variety of commercially available weld monitors. Inquire for more details.