



In Line Tension Link

UASeries

The UA Series is an extremely rugged, high performance tension link constructed of alloy tool steel or stainless steel. The UA Series is designed to accurately measure weight and force in capacities ranging from 0-3,000 lbs. to 0-400,000 lbs.

The UA Series is an extremely rugged, high performance tension link constructed of alloy tool steel or stainless steel. It is designed to accurately measure tension loads in rated capacities ranging from 0-3,000 to 0-400,000 lbs. Proprietary, axial "gun-bore" gauging techniques produce the benefits of relatively compact size and excellent environmental sealing. This tension link is Harsh Environment Sealed (IP67-Limited Immersion) by virtue of proprietary, multi-redundant barriers uniquely integrated to protect all internal components. This tension link has an integral MS connector with several mating connector/cable combinations available. The UA Series offers unique mounting capabilities to address application-specific requirements. The attributes of the UA Series make it ideal for crane/lift/winch loading, mooring line tension monitoring, guyline tensioning as well OEM requirements where a versatile, rugged solution is needed. The UA Series reliability produces exceptional performance for applications in aerospace, automotive, steel processing, off-shore, power generation, mining, material handling, wood/pulp/paper, petrochemical and similarly demanding applications.



For more information call **1-888-545-8988**

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APPLICATIONS

- Tension Measurements
- Crane, Lifting & Winch Systems
- Mooring Line Tension Measurements
- Guyline Tensioning

FEATURES

- Up to 400,000 lbs. Capacities
- Alloy or Stainless Steel Construction
- Application Versatility
- 0.25% Accuracy Class
- Excellent Overall Performance
- IP67 Environmental Sealing
- OEM and Custom Configurations
- Options and Accessories
- Two Year Warranty

UA Series Specifications

Innovative Measurement Solutions



PERFORMANCE

| | |
|--|--|
| Rated capacities ⁽¹⁾ (lbs.) | 3K, 4K, 5K, 6K, 10K, 20K, 25K, 50K, 60K, 75K, 100K, 125K, 150K, 200K, 250K, 300K, 400K |
| Rated output (FSO) | 2 mV/V |
| Output Tolerance | Nominal |
| Combined Error Band | ≤ 0.25 % FSO |
| Non-Linearity | ≤ 0.25 % FSO |
| Hysteresis | ≤ 0.25 % FSO |
| Non-Repeatability | ≤ 0.2 % FSO |
| Side Load Rejection Ratio | 500:1 |
| Zero balance | ± 2 % FSO |
| Creep (20 minutes) | 0.05 % of Load |

⁽¹⁾ ("K" = thousand)

MECHANICAL

| | |
|-------------------|--|
| Material | Alloy Tool Steel (UA1) 17-4ph Stainless Steel (UA3) |
| Finish | Natural |
| Safe overload | Compression 150 % FSO Tension 150 % FSO Side Load 100% FSO |
| Ultimate overload | Compression 300% FSO Tension 300% FSO Side Load: 200% FSO |
| Deflection | See Dimensions Table |
| Weight | See Dimensions Table |

ELECTRICAL

| | |
|--------------------------|--|
| Input Impedance | 350 (nominal) |
| Output Impedance | 350 (nominal) |
| Insulation Resistance | >5000 Megohms @ 50VDC |
| Excitation Voltage | 10 V AC/DC (15 V maximum) |
| Connector Pin Functions | + Excitation (A) - Excitation (D) + (Optional) Remote Sense (E) - (Optional) Remote Sense (F) + Signal (B) - Signal (C) Shield (G) |
| Cable Color Code | + Excitation (red) - Excitation (black) + Signal (green) - Signal (white) Shield (natural) |
| Cable Type | 4-conductor, 22 AWG, Polyurethane Jacket, Tinned Copper Braid, Diameter: 0.220" |
| Cable Length | See Dimensions Table |
| Cable Termination | Finished Conductors |
| Cable Seal | Compression Gland Fitting |
| Temperature, Operating | -65 to +250 °F (-54 to +120°C) |
| Temperature, Compensated | 15 to +115 °F (-9 to +46°C) |
| Temperature, Storage | -65 to +300 °F (-54 to +149°C) |
| Temperature Effects | Zero < 0.005% FSO/°F < 0.009% FSO/°C |
| Temperature Effects | Output < 0.008% of Rdg./°F < 0.014% Rdg./°C |
| Sealing | IP67; Multi-redundant; Limited Immersion Tolerance |

The temperature ratings provided do not include the companion cable/connector assembly. If PUR or PVC cable is employed, the maximum operating temperature is 180°F (82°C)

UA Typical System Configuration

SENSING LOAD CELL(S)



SIGNAL CONDITIONING

Analog Transmitters



Serial Transmitters



Digital Indication



Process Control



Batch Control

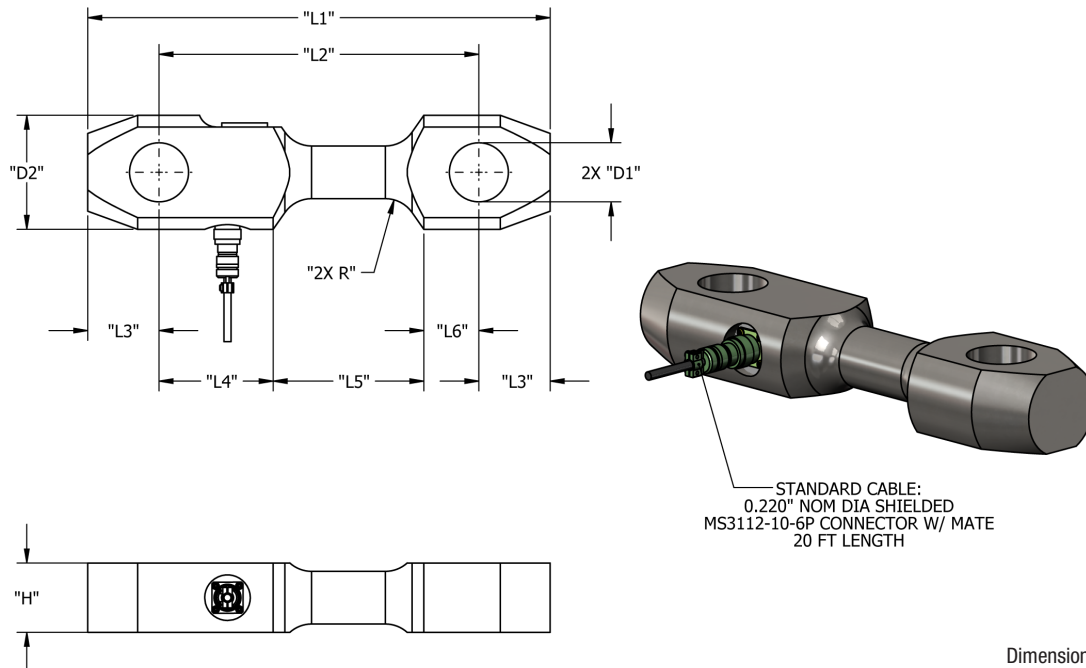


Data Acquisition



OUTPUT OPTIONS

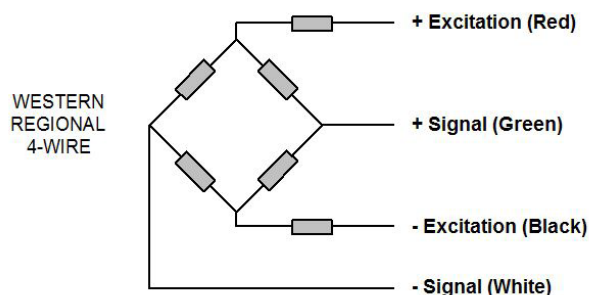
0-5 VDC
0-10VDC
±5 VDC
±10 VDC
4-20 mA
0-20 mA
RS-232
RS-422
RS-485
20 mA Serial Loop
Ethernet
Profibus DP
DeviceNet
CANOpen
ControlNet
Modbus RTU
Wireless



Dimensions in Inches

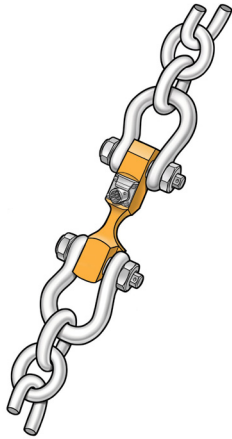
| Capacity (K LBS) | H | L1 | L2 | L3 | L4 | L5 | L6 | D1 | D2 | R | Deflect | Weight |
|---------------------|------|-------|-------|------|------|------|------|-------|------|------|------------|-----------|
| DIMENSIONS (INCHES) | | | | | | | | | | | | |
| 3 | 1.44 | 7.00 | 5.25 | 0.88 | 2.56 | 2.31 | 0.36 | 0.625 | 2.00 | 0.50 | 0.005" NOM | 1.3 LBS |
| 4 | 1.44 | 7.00 | 5.25 | 0.88 | 2.56 | 2.31 | 0.36 | 0.625 | 2.00 | 0.50 | 0.005" NOM | 1.3 LBS |
| 5 | 1.44 | 7.00 | 5.25 | 0.88 | 2.63 | 2.25 | 0.36 | 0.625 | 2.00 | 0.50 | 0.005" NOM | 1.3 LBS |
| 6 | 1.44 | 7.00 | 5.25 | 0.88 | 2.63 | 2.25 | 0.36 | 0.625 | 2.00 | 0.50 | 0.005" NOM | 1.3 LBS |
| 10 | 1.44 | 9.25 | 6.75 | 1.25 | 3.06 | 2.63 | 1.06 | 1.000 | 2.00 | 0.50 | 0.005" NOM | 2.0 LBS |
| 20 | 1.44 | 9.25 | 6.75 | 1.25 | 3.00 | 2.69 | 1.06 | 1.000 | 2.00 | 0.50 | 0.005" NOM | 5.5 LBS |
| 25 | 1.44 | 9.25 | 6.75 | 1.25 | 2.94 | 2.75 | 1.06 | 1.000 | 2.00 | 0.50 | 0.005" NOM | 5.5 LBS |
| 50 | 1.50 | 12.00 | 8.50 | 1.75 | 3.06 | 3.94 | 1.56 | 1.375 | 2.88 | 1.00 | 0.005" NOM | 10.5 LBS |
| 60 | 1.50 | 12.00 | 8.50 | 1.75 | 3.06 | 3.88 | 1.56 | 1.375 | 2.88 | 1.00 | 0.005" NOM | 10.7 LBS |
| 75 | 1.81 | 12.88 | 9.00 | 1.94 | 3.06 | 4.38 | 1.56 | 1.563 | 3.25 | 1.00 | 0.005" NOM | 15.0 LBS |
| 100 | 2.13 | 14.19 | 9.81 | 2.19 | 3.50 | 4.63 | 1.69 | 1.813 | 3.50 | 1.00 | 0.005" NOM | 19.2 LBS |
| 125 | 2.25 | 15.25 | 10.50 | 2.38 | 3.93 | 5.13 | 1.44 | 2.000 | 3.88 | 1.00 | 0.005" NOM | 24.0 LBS |
| 150 | 2.50 | 15.88 | 10.75 | 2.56 | 3.38 | 5.31 | 1.06 | 2.250 | 4.13 | 1.00 | 0.005" NOM | 30.0 LBS |
| 200 | 2.75 | 17.25 | 11.63 | 2.81 | 3.44 | 5.94 | 1.25 | 2.500 | 4.75 | 1.00 | 0.005" NOM | 41.0 LBS |
| 250 | 3.00 | 18.88 | 12.75 | 3.06 | 4.50 | 5.75 | 1.50 | 2.750 | 5.25 | 1.00 | 0.005" NOM | 54.0 LBS |
| 300 | 3.25 | 20.63 | 14.25 | 3.19 | 5.00 | 6.50 | 2.75 | 3.000 | 5.75 | 1.00 | 0.005" NOM | 69.0 LBS |
| 400 | 4.75 | 23.75 | 15.25 | 4.25 | 4.50 | 7.00 | 3.75 | 3.250 | 6.38 | 1.50 | 0.005" NOM | 107.0 LBS |

UA Wiring Diagram

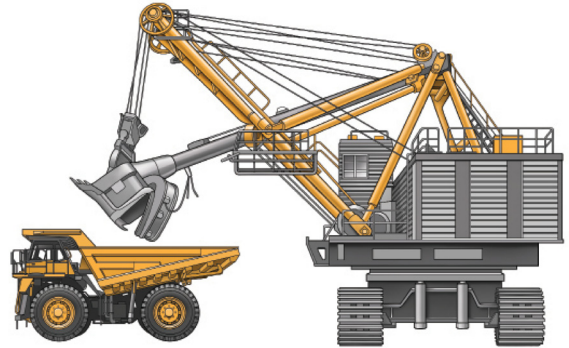




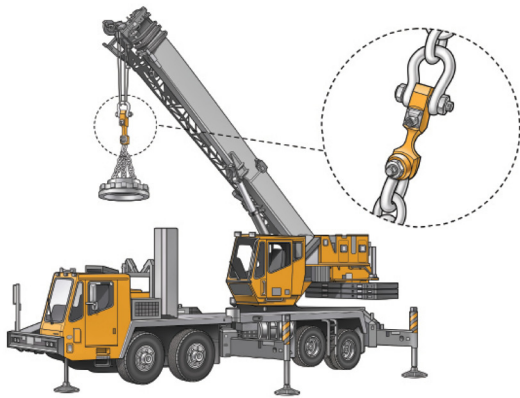
Dog Bone Through Hole



Excavating



Mobile Crane



Legal Disclaimer



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