



Pivot End Tension Link

UB Series

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

The UB 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 available as Hostile Environment Sealed (IP66-High Pressure Jets), Harsh Environment Sealed (IP67-Limited Immersion) and Hermetically Sealed (IP68-Continuous 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 UB Series offers unique mounting capabilities to address application-specific requirements. The attributes of the UB 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 UB 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.



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

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

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UB 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	≤ 0.5 % FSO
Non-Linearity	≤ 0.5 % FSO
Hysteresis	≤ 0.5 % 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 (UB1) 17-4ph Stainless Steel (UB3)
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)

UB Typical System Configuration

SENSING LOAD CELL(S)



SIGNAL CONDITIONING

Analog Transmitters



Serial Transmitters



Digital Indication



Process Control



Batch Control



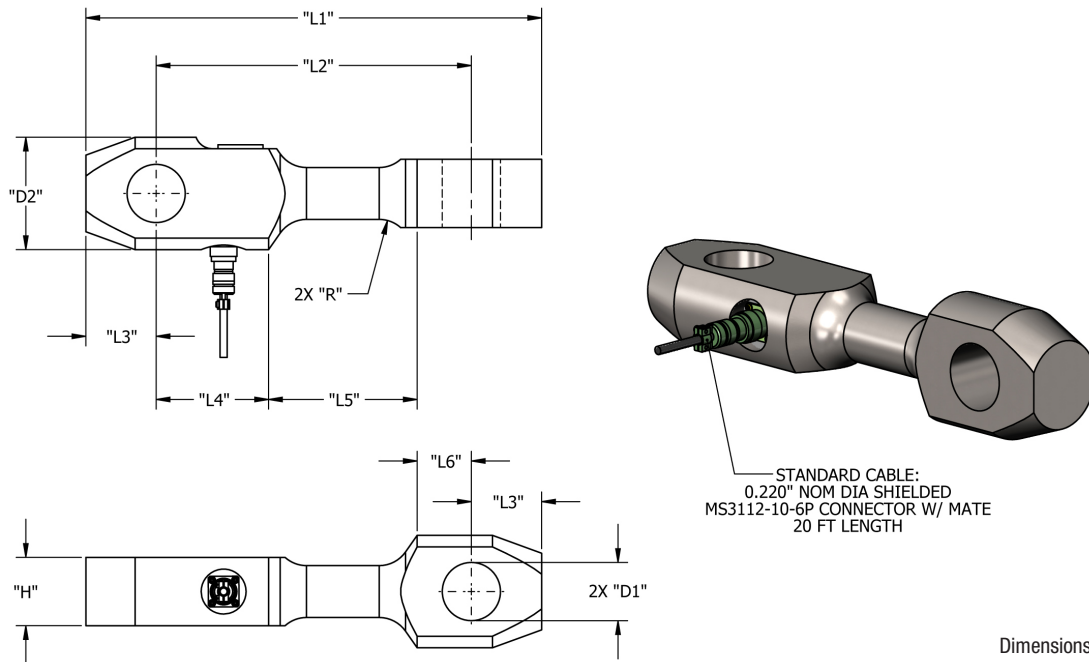
Data Acquisition



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

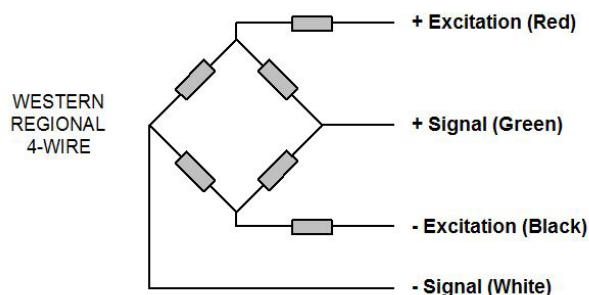
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Dimensions in Inches

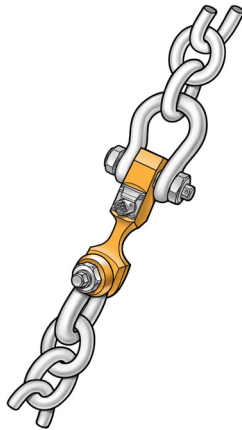
Capacity (LBS)	H1	L1	L2	L3	L4	L5	L6	D1	D2	R	Deflect	Weight
DIMENSIONS (INCHES)												
3	1.44	7.00	5.25	0.88	2.56	2.31	0.36	0.625	2.00	0.50	0.005" NOM	1.3 LBS
4	1.44	7.00	5.25	0.88	2.56	2.31	0.36	0.625	2.00	0.50	0.005" NOM	1.3 LBS
5	1.44	7.00	5.25	0.88	2.63	2.25	0.36	0.625	2.00	0.50	0.005" NOM	1.3 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

UB Wiring Diagram

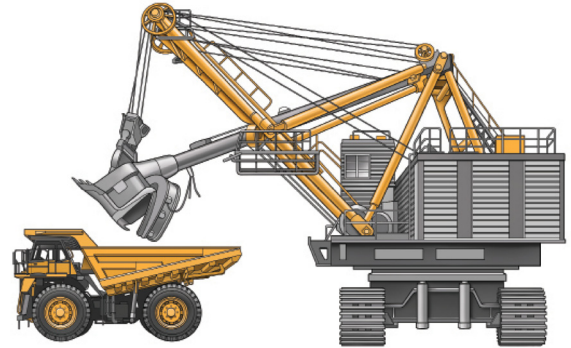




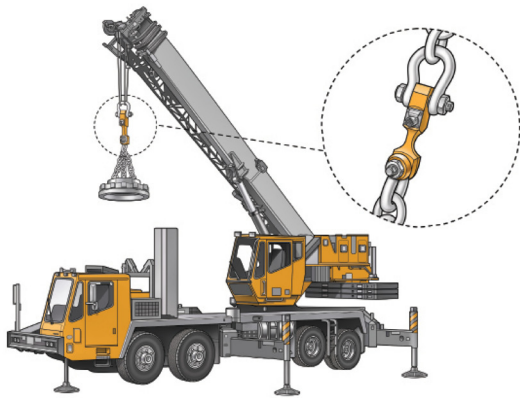
90° Through Hole



Excavating



Mobile Crane



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