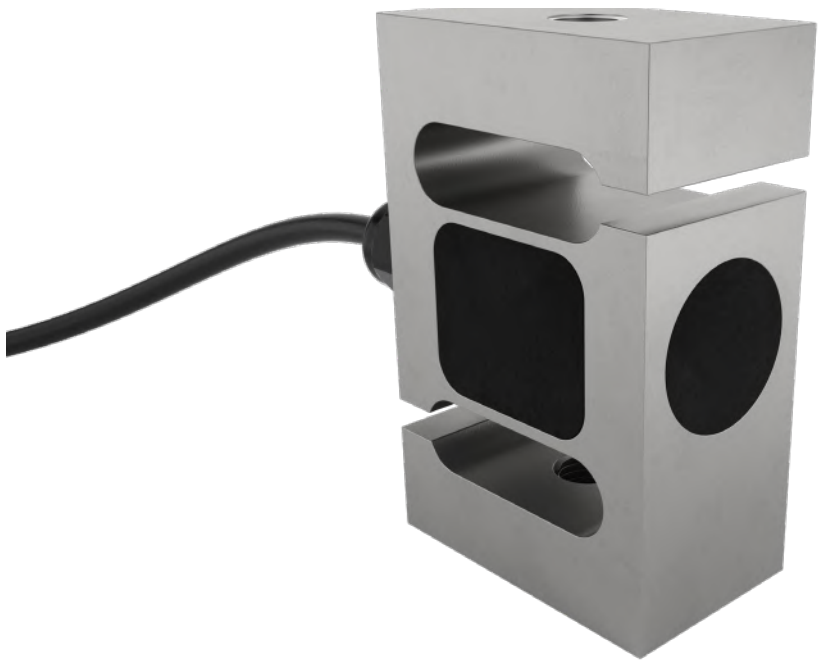
ULB tension load cell



product description

The ULB tension and compression load cell delivers a extremely wide range of capacities from 100kg thru to 5000kg. Constructed from stainless steel and environmentally sealed using potting compound, it is both robust as well as being an economic choice for process plant applications. Certified by both OIML and NTEP for trade approved weighing.

applications

Suspended tanks and hoppers, crane scales.

key features

- Stainless steel construction
- Environmentally sealed by potting to IP67
- Tension and compression loading (bi-directional)
- Wide range of capacities from 100kg to 5,000kg
- High accuracy
- High input resistance
- Calibration in mV/V/Ω

approvals

- OIML approval to C3 (Y = 12,000) (for tension load only)
- NTEP approval to 5,000 intervals, Class III and 10,000 intervals, Class III L
- ATEX hazardous area approval for zones 0, 1, 2, 20, 21 and 22
- FM hazardous area approval

accessories

- Compatible range of hardware
- Compatible range of electronics

RoHS compliant

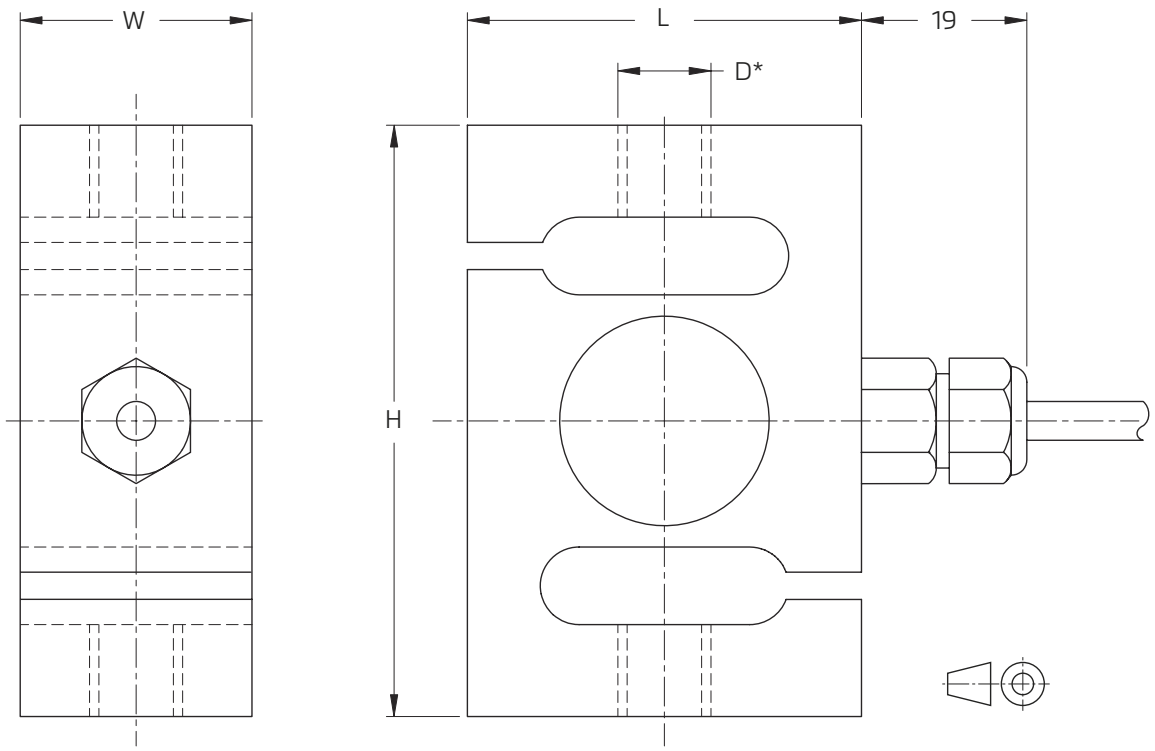
flintec quality + precision

specifications

Maximum capacity (E_{max})	kg	100 / 200 / 500 / 1,000 / 2,000 / 3,000 / 5,000	100 / 200	500 / 1,000 / 2,000 / 3,000 / 5,000
Minimum dead load (E_{min})	%*E_{max}	0		
Accuracy class according to OIML R60		(GP)	G3**	C3*
Maximum number of verification intervals (n_{max})		n.a.	3,000	
Minimum load cell verification interval (v_{min})		n.a.	E_{max} /12,000	
Temperature effect on minimum dead load output (TC_0)	%*RO/10°C	± 0.0400	± 0.0116	
Temperature effect on sensitivity (TC_{RO})	%*RO/10°C	± 0.0200	± 0.0100	
Combined error	%*RO	± 0.0500	± 0.0200	
Non-linearity	%*RO	± 0.0400	± 0.0166	
Hysteresis	%*RO	± 0.0400	± 0.0166	
Creep error (30 minutes) / DR	%*RO	± 0.0600	± 0.0166	
Rated Output (RO)	mV/V	2 ± 0.1%		
Calibration in mV/V/W (A...I classified)	%	± 0.05 (± 0.005)		
Zero balance	%*RO	± 5		
Excitation voltage	V	5...15		
Input resistance (R_{LC})	Ω	1,100 ± 50		
Output resistance (R_{out})	Ω	1,000 ± 2		
Insulation resistance (100 V DC)	MΩ	≥ 5,000		
Safe load limit (E_{lim})	%*E_{max}	200		
Ultimate load	%*E_{max}	300		
Compensated temperature range	°C	–10...+40		
Operating temperature range	°C	–20...+65 (ATEX –20...+60)		
Load cell material		stainless steel 17-4 PH (1.4548)		
Sealing		potted		
Protection according EN 60 529		IP67		
Packet weight	kg	1.0 (100kg, 200kg), 1.1 (500kg, 1,000kg), 1.85 (2,000kg), 2.62 (3,000kg), 5.22 (5,000kg)		

* Accuracy class is only valid for tension load. ** corresponds to C3 quality, test certificate not available
The limits for Non-Linearity, Hysteresis, and TC_{RO} are typical values.
The sum of Non-linearity, Hysteresis and TC_{RO} meets the requirements according to OIML R60 with p_{LC}=0.7.

product dimensions (mm)



Type	H	L	W	Metric thread D-M	Unified thread D-U	Unified thread D-H
100 kg...500 kg	76.2	49	30	M12	1/2-20	
1000 kg				M16		5/8-18
2000 kg	86.1	76.2			5/8-18	
3000 kg	88.7	88.7	40	M20 x 1.5	3/4-16	
5000 kg	146	91.2	56.4	M24 x 2	1-12	

* 3 versions available: ULB-xxxx kg-M (with metric thread), ULB-xxxx kg-U (with unified thread) or ULB-xxxx kg-H (with special thread)

wiring

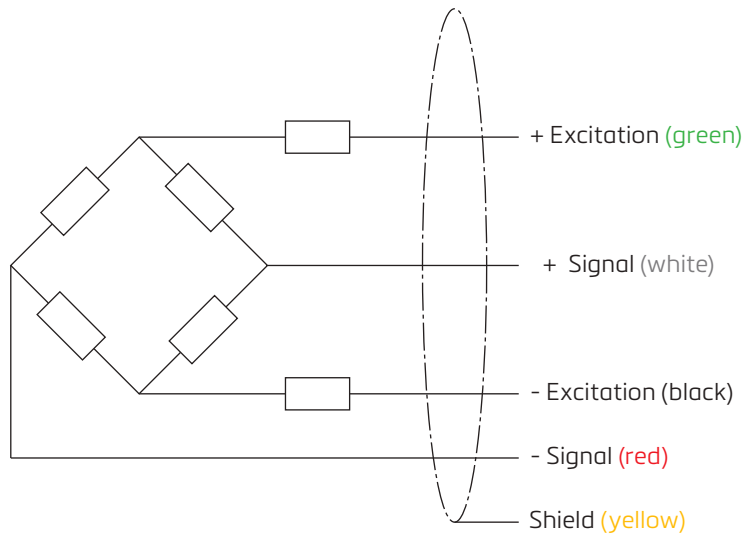
The load cell is provided with a shielded, 4 conductor cable (AWG 24).

Cable jacket: polyurethane

Cable length: 6 m

Cable diameter: 5 mm

The shield is floating
(On request the shield can be connected to the load cell body)



Specifications and dimensions are subject to change without notice.