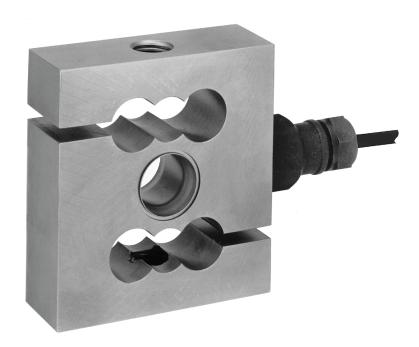
# **UB1** tension load cell



#### product description

A fully welded, stainless steel tension and compression load cell – the UB1 is ideal for very harsh environments. Available in a wide range of capacities from 1000kg thru to 10,000kg it is particularly suited for higher capacity Process Weighing applications. Certified by both OIML and NTEP for trade approved weighing.

#### applications

Suspended tanks and hoppers, crane scales.

#### key features

Stainless steel construction

Hermetically sealed to IP68

High capacity range

Tension and compression loading (bi-directional)

High accuracy, high input resistance

Capacities from 10kN to 100kN (1,020kg to 10,197kg)

Calibration in mV/V/ $\Omega$ 

approvals

OIML approval to C3 (Y = 5,700)

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

#### options

Stainless steel cable gland

















# specifications

Maximum capacity (E <sub>max</sub> )	kN	10 / 20 / 50 / 100	10 / 20 / 50 100		100	
Metric equivalents (1 N=0.10197 kg)	kg	1,020 / 2,039 / 5,099 / 10,197				
Minimum capacity (E <sub>min</sub> )	%*E <sub>max</sub>	0				
Accuracy class according to OIML R60		(GP)	C1	C3	G3*	
Maximum number of verification intervals $(n_{\mbox{\tiny max}})$		n.a.	1,000	3,000	3,000	
Minimum load cell verification interval ( $v_{\text{min}}$ )		n.a.	E <sub>max</sub> /5,700	E <sub>max</sub> /5,700	E <sub>max</sub> /5,700	
Temperature effect on minimum dead load output (TC $_{0}$ )	%*RO/10°C	± 0.0400	± 0.0280	± 0.0246	± 0.0246	
Temperature effect on sensitivity (TC <sub>RO</sub> )	%*RO/10°C	± 0.0200	± 0.0160	± 0.0100	± 0.0100	
Combined error	%*RO	± 0.0500	± 0.0300	± 0.0200	± 0.0200	
Non-linearity	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0166	
Hysteresis	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0166	
Creep error (30 minutes) / DR	%*RO	± 0.0600	± 0.0490	± 0.0166	± 0.0166	
Rated Output (RO)	mV/V	2 ± 0.1%				
Calibration in mV/V/Ω (AI classified)	%	± 0.05 (± 0.005)				
Zero balance	%*RO	± 5				
Excitation voltage	V	515				
Input resistance (R <sub>LC</sub> )	Ω	1,100 ± 50				
Output resistance (R <sub>out</sub> )	Ω	1,000 ± 2				
Insulation resistance (100 V DC)	MΩ	≥ 5,000				
Safe load limit (E <sub>lim</sub> )	%*E <sub>max</sub>	200				
Ultimate load	%*E <sub>max</sub>	300				
Compensated temperature range	°C	-10+40				
Operating temperature range	°C	-40+80 (ATEX -40+60)				
Load cell material		stainless steel 17-4 PH (1.4548)				
Sealing		complete hermetic sealing; cable entry sealed by glass to metal header				
Protection according EN 60 529		IP68 (up to 2 m water depth) / IP69K				
Packet weight	kg	1.8 (10kN, 20kN), 5.9 (50kN), 8.4 (100kN)				

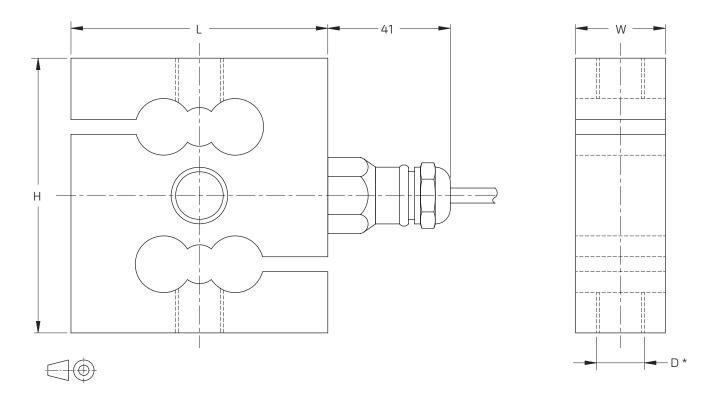
<sup>\*</sup> corresponds to C3 quality, currently no OIML R60 Test Certificate available

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)



Туре	Н	L	W	Thread D
UB1-10 kN / UB1-20 kN	92	86	30	M16
UB1-50 kN	136	143	43	M24 x 2
UB1-100 kN	120	120	60	M24 x 3

<sup>\*</sup> Unified thread 5/8-18 UNF (10...20 kN) and 1-12 UNF (50 kN) is available.

### wiring

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

Cable jacket: polyurethane

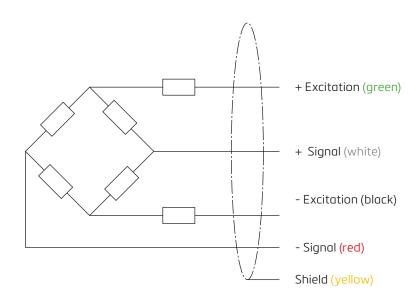
Cable length: 6 m

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.

