

Light-Capacity Weighing for Static and Dynamic Applications



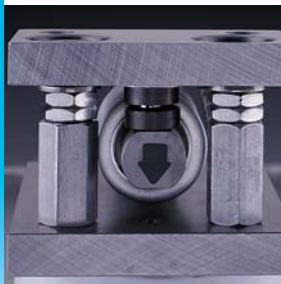
Ball-and-Cup Suspension

The weigh module suspension has a ball-and-cup design capable of handling side-loading forces. When those forces push the top plate laterally, the suspension provides a proportional restoring force to return the top plate to its ideal weighing position.



Load Cells

Model MTB bending-beam load cells provide exceptional accuracy and durability. Constructed of stainless steel, they are designed to survive in harsh environments. Welded stainless steel covers protect the sensitive strain gauges.



Hold-Down Bolts

Each weigh module is equipped with a pair of hold-down bolts that check horizontal movement and restrain the tank from tipping. They also serve as jacking bolts to align the top plate for installation and to lift the empty tank when service is required.



Ground Strap

The mounting hardware includes a ground strap to reduce the risk of electrical damage. The ground strap helps to protect the load cell by shunting electrical currents directly from the top plate to the bottom plate, instead of through the load cell.



0972 ULTRAMOUNT® Weigh Module

ULTRAMOUNT weigh modules enable you to convert a light-capacity tank or other structure into a scale. The self-restoring, ball-and-cup suspension gives the weigh modules exceptional versatility. It enables them to provide accurate and repeatable weighing for static applications (such as tanks, hoppers, vessels, and blenders) and for dynamic applications (such as conveyors, processing vessels, and mechanical platform scales).

- Stainless steel load cells with welded cover
- 304 stainless steel mounting hardware
- Global approvals standard on every load cell

0972 Weigh Module Specifications

Weigh Module Parameter		Unit of Measure	Specification				
Model No.			0972 ULTRAMOUNT				
Rated Capacity		kg (lb)	5 (11)	10 (22)	20 (44)	50 (110)	100 (220)
Max. Top Plate Travel	Transverse	± mm (in)	2.5 (0.10)				
	Longitudinal	± mm (in)	2.5 (0.10)				
Restoring Force ¹		%A.L./mm (.../in) ⁷	1.6 (41)				
Max. Horizontal Force	Transverse ²	kN (lb)	4.1 (900)				
	Longitudinal ³	kN (lb)	4.1 (900)				
Max. Uplift Force ⁴		kN (lb)	4.9 (1100)				
Weight (including load cell)		kg (lb)	2.8 (6.2)				
Material			304 stainless steel				

Load Cell Parameter		Unit of Measure	Specification				
Model No.			MTB				
Rated Capacity (R.C.)		kg (lb)	5 (11)	10 (22)	20 (44)	50 (110)	100 (220)
Rated Output		mV/V @ R.C.	2 ± 0.1%				
Combined Error ^{5, 6}		%R.C.	≤ 0.018				
Temperature Effect on	Min. Dead Load Output	%R.C./°C (.../°F)	≤ 0.001 (0.0006)				
	Sensitivity ⁶	%A.L./°C (.../°F)	≤ 0.0009 (0.0005)				
Temperature Range	Compensated	°C (°F)	-10 to +40 (+14 to +104)				
	Operating	°C (°F)	-20 to +65 (-4 to +150)				
	Safe Storage	°C (°F)	-40 to +80 (-40 to +176)				
OIML/European Approval ⁸	Class		NA	C3			
	nmax		NA	3000			
NTEP Approval ⁸	Class		III S / III M				
	nmax		3000 / 5000				
	Vmin	kg (lb)	R.C./12000				
Factory Mutual Approval ⁸	Rating		IS/I,II,III/1/ABCDEFG/T4 ; NI/I/2/ABCD/T6 ; S/II,III/2/FG/T6				
Excitation Voltage	Recommended	V AC/DC	5 ~ 15				
	Maximum	V AC/DC	20				
Terminal Resistance	Excitation	Ω	≥ 383				
	Output	Ω	350 ± 1				
Material	Spring Element		Stainless steel				
	Type		Welded				
Protection	IP Rating		IP68				
	NEMA Rating		NEMA 6/6P				
Load Limit	Safe	%R.C.	150				
	Ultimate	%R.C.	300				
Deflection @ R.C.		mm (in)	0.30 (0.012)		0.40 (0.016)		
Weight		kg (lb)	0.6 (1.3)				
Cable Length		m (ft)	3 (9.8)				

¹ % of Applied Load (A.L.) per mm (in) displacement of the top plate (transverse and longitudinal).

² Maximum horizontal force that can be applied to the top plate in a direction transverse to the longitudinal axis of the load cell.

³ Maximum horizontal force that can be applied to the top plate in a direction parallel to the longitudinal axis of the load cell.

⁴ Maximum vertical uplift force that can be applied to the top plate.

⁵ Error due to the combined effect of non-linearity and hysteresis.

⁶ Typical values only. The sum of errors due to combined error and temperature effect on sensitivity comply with the requirements of OIML R60 and NIST HB44.

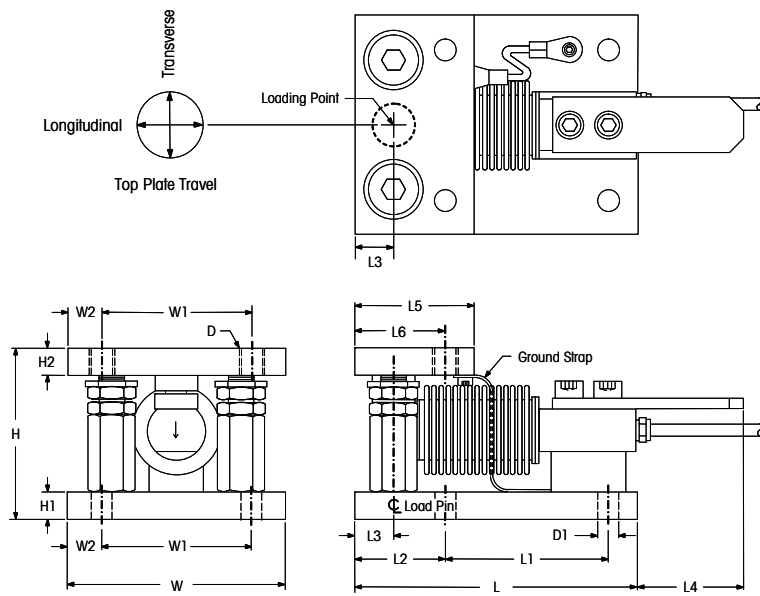
⁷ A.L. = Applied Load.

⁸ See certificate for complete information.

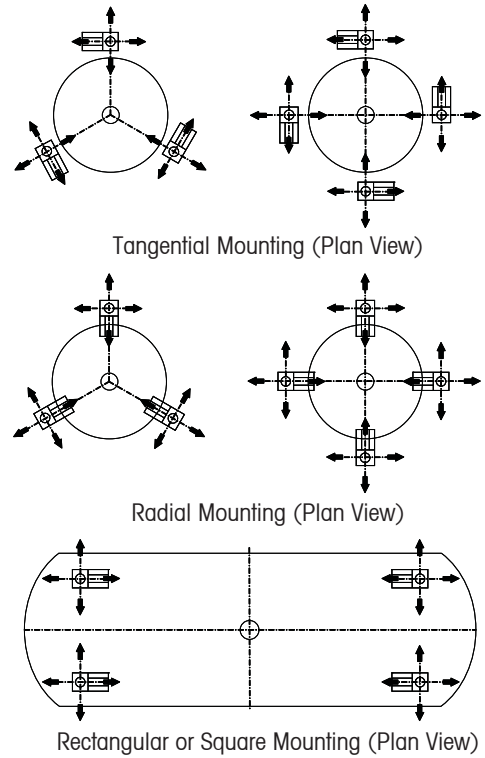
Produced in a facility that is



0972 Weigh Module Dimensions



0972 Mounting Arrangements



Capacity	D	D1	H*	H1	H2	L	L1	L2	L3	L4
5-100 kg	M12x1.75	10.31 mm 0.406 in.	79.6 mm 3.13 in.	12.7 mm 0.50 in.	12.7 mm 0.50 in.	131.8 mm 5.19 in.	76.0 mm 2.99 in.	42.0 mm 1.65 in.	18.0 mm 0.71 in.	49.2 mm 1.94 in.

Capacity	Top Plate Travel						
	L5	L6	W	W1	W2	Longitudinal	Transverse
5-100 kg	55.6 mm 2.19 in.	42.0 mm 1.65 in.	101.6 mm 4.00 in.	70.0 mm 2.76 in.	15.8 mm 0.62 in.	± 2.5 mm ± 0.10 in.	± 2.5 mm ± 0.10 in.

* Height (H) is in weighing configuration. The shipping height is 82.0 mm (3.23 inches) with the top plate in the raised position.

0972 Cable Colors

Color	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	+ Sense
Blue	- Sense
Yellow (long)	Shield

0972 ULTRAMOUNT Weigh Module Ordering Information

Contact your local sales representative for ordering numbers, pricing, and availability.

Global Approvals

Model MTB load cells have global certifications for metrological performance. There is no need for options or additional charges.

ServiceXXL[®] Tailored Services

Tailored Services

Our qualified and equipped specialists are committed to providing timely local and personal service, backed by global depth and expertise. Choose from our ServiceXXL portfolio to tailor a program that meets your needs and budget. You will get professional, factory service with superior results, ensuring maximum benefit from your weighing system.

Mettler-Toledo, Inc.

1900 Polaris Parkway
Columbus, Ohio 43240
Tel. (800) 786-0038
(614) 438-4511
Fax (614) 438-4900

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Weigh-Connect-Control-Comply

METTLER TOLEDO embeds intelligence into weighing applications. Our industry leading scale electronics enable users to integrate their gravimetric measurement with applications running on PCs, PLCs, or DCS systems. Our products are designed specifically for industries subject to regulatory controls, such as pharmaceutical, chemical, food and beverage, and has been confirmed by multiple global agency standards including UL, CE, NTEP, and OIML.

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Ζύγιση
Σήμανση
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Νεύτων Τεχνολογίες ΑΒΕΕ

Γέρακα 113, Τ.Θ. 67934

15344 Γέρακας

Τηλ: 210 6654544

Fax: 210 6654545

marketing@nefton.gr

www.nefton.gr