

## Easy System Integration Platform Size 350x350 mm



### Retail and Bench Scales

MT1022 provides the best weighing performance with such a low profile design. This saves cost in the scale design and makes an attractive low-profile product possible without compromising on performance.



### Off-Center compensation

One load cell can be used to support a weighing platform and, due to the off-center load compensation, the MT1022 will weigh within tolerance regardless of load application point.



### Robustness

MT1022 allows 50% static overload without compromising the weighing performance. The passivated aluminum provides good corrosion resistance suitable for many industrial applications.



### MT1022 Single Point Load Cell

The MT1022 load cell features:

- OIML R60 C3 approval
- NTEP 5000 III S/M approval
- ATEX Zone 1/2 and 21/22 approvals
- Off-center load compensation (R76)
- 350x350 mm platform size
- IP67 protection class
- Passivated aluminum
- 3-30kg capacity range

The MT1022 is the ideal solution for retail scales, small platform scales and packaging and process weighing. Due to the low profile the integration into any system is easy. The low capacity range (3 – 30kg) allows the construction of highly accurate low-capacity scales.

# MT1022 Load Cell Specifications

Parameter		unit of measure	Specification						
Model No.			MT1022						
Rated Capacity (R.C.)		kg (lb, nominal)	3 (6.6)	5 (11)	7 (15.4)	10 (22)	15 (33)	20 (44.1)	30 (66.1)
Rated Output		mV/V @R.C.	2 ± 0.2						
Zero load Output		%R.C.	≤ 10						
Combined Error <sup>1) 2)</sup>		%R.C.	≤ 0.016						
Repeatability Error		%A.L. <sup>3)</sup>	≤ 0.01						
Creep, 30 minute		%A.L.	≤ 0.0167						
Min. Dead Load Output Return (DR), 30 min		%A.L.	≤ 0.0167						
Temperature Effect on	Min. Dead load Output	%R.C./°C (./°F)	≤ 0.0014 (0.0008)						
	Sensitivity <sup>2)</sup>	%A.L./°C (./°F)	≤ 0.0007 (0.00036)						
Temperature Range	Compensated		-10 ~ +40 (+14 ~ +104)						
	Operating	°C (°F)	-20 ~ +65 (-4 ~ +150)						
	Safe Storage		-20 ~ +80 (-4 ~ +176)						
OIML / European Approval <sup>4)</sup>	OIML Cert. No.		R60/1991-NL-99.02						
	European Cert. No.		NMI TC5442						
	Class		C3						
	nmax		3000						
	Vmin	g	0.5	1	1	2	2.5	4	6
	PLC		0.7						
	Humidity Symbol		none						
	Min. dead load	kg (lb)	0 (0)						
	Z		3000						
	NTEP Approval <sup>4)</sup>	Number		11-088					
Class			III S, III M						
nmax			5000						
Vmin		g (lb)	0.45 (0.001)	0.9 (0.002)	0.9 (0.002)	2.2 (0.005)	2.2 (0.005)	2.2 (0.005)	4.4 (0.01)
Min. dead load		kg (lb)	0 (0)						
ATEX Approval <sup>4)</sup>	Number, cat. 2		KEMA 09ATEX0003 X						
	Number, cat. 3		KEMA 09ATEX0004 X						
	Rating		II 2 G Ex ib IIC T4						
			II 2 D Ex ibD 21 IP66 T135°C						
			II 3 G Ex nA II T4						
			II 3 G Ex nL IIC T4						
	Entity Parameters		II 3 D Ex tD A22 IP6X T100°C Ui/Un=20V, Ii=600mA, Pi=1.25W, Ci=5nF, Li=30µH						
Excitation Voltage	Recommended	V AC/DC	5 ~ 15						
	Max.		20						
Terminal Resistance	Excitation	Ω	410 ± 10						
	Output		350 ± 4						
Insulation Resistance @50VDC		MΩ	> 5000						
Breakdown Voltage		V AC	> 500						
Material	Spring Element		Aluminium						
	Enclosure		none						
	Cable		PVC						
Protection	Type		potted						
	IP Rating		IP 67						
	NEMA Rating		NEMA 6/6P						
Load Limit	Safe	%R.C.	150						
	Ultimate		300						
Safe Dynamic Load		%R.C.	70						
Fatigue Life		cycles @R.C.	> 1000000						
Direction of Loading			beam						
Deflection @ R.C., nominal		mm (in)	0.3 (0.012)						
Weight, nominal		kg (lb)	0.5 (1.1)						
Cable Length		m (ft)	1 (3.3), 3m (6.6)						
Barometric Pressure Effect on Zero Load Output		kg/kPa (lb/in.Hg)	none						
Safe Side Load		%R.C.	100						
Overload Protection			none						
Mounting Screw	Grade		12.9						
	Size/thread	mm (in)	M6x1						
	Engaged Length	mm (in)	12 (0.47)						
	Torque, nominal	N.m (ft-lb)	10 (7.5)						
Max Platter Size		cm x cm (in x in)	35 x 35 (14 x 14)						
Off Center Load Error, R76-1		%A.L./cm (./in)	0.0057 (0.0145)						

<sup>1)</sup> Error due to the combined effect of non-linearity and hysteresis

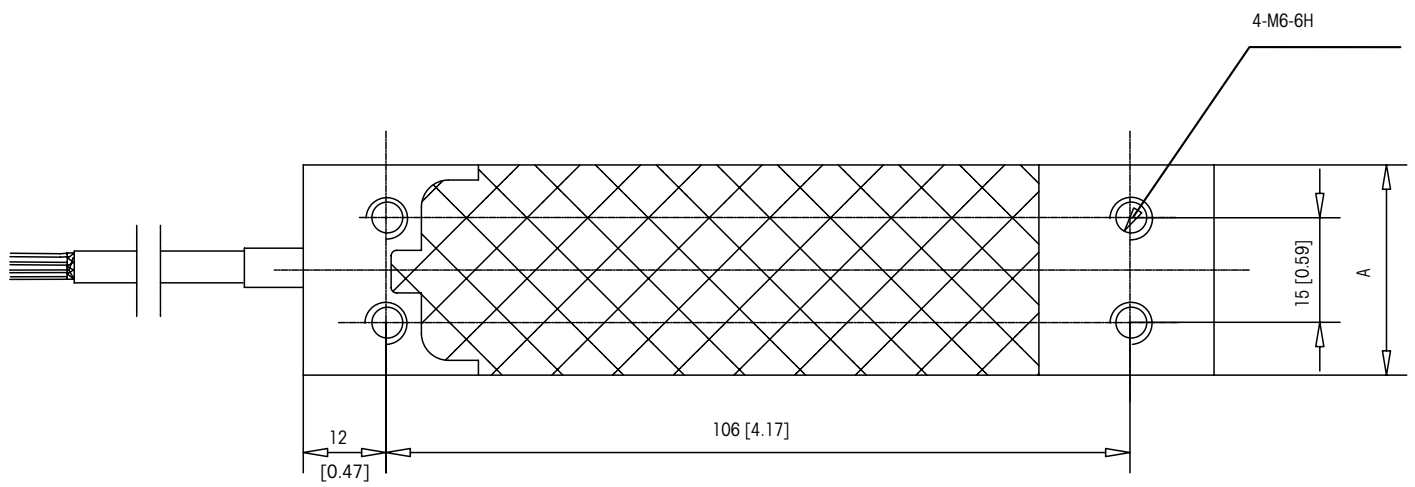
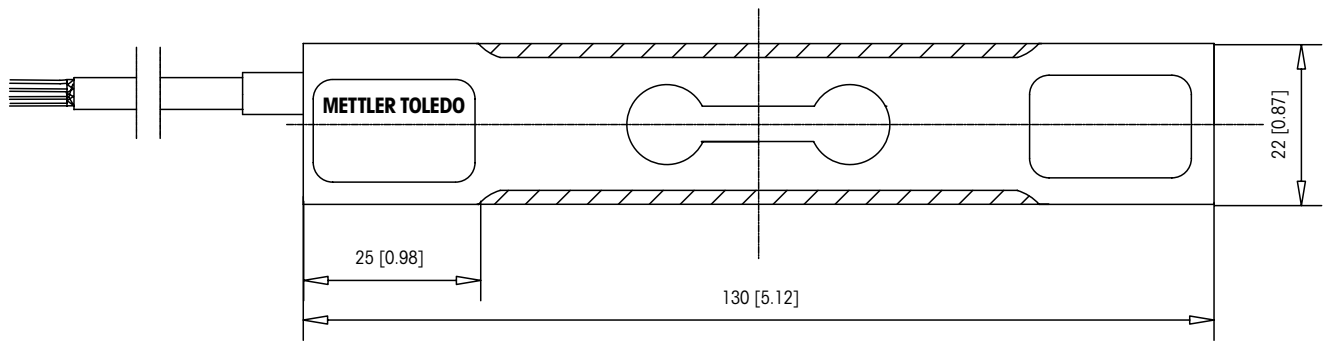
<sup>2)</sup> Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44.

<sup>3)</sup> A.L. = Applied Load

<sup>4)</sup> See certificate for complete information.



# MT1022 Load Cell Dimensional Drawings mm [inch]



Load Cell Capacity	A
3, 5, 7 kg	25.4 (1.0)
10, 15, 20, 30 kg	30 (1.18)

## MT1022 Load Cell Order Information

Description		Item No.
<b>Load cell, model no. MT1022-3kg</b>	<b>1m Cable</b>	<b>71201825</b>
<b>Load cell, model no. MT1022-5kg</b>	<b>1m Cable</b>	<b>71201826</b>
<b>Load cell, model no. MT1022-7kg</b>	<b>1m Cable</b>	<b>71201827</b>
<b>Load cell, model no. MT1022-10kg</b>	<b>1m Cable</b>	<b>71207450</b>
<b>Load cell, model no. MT1022-15kg</b>	<b>1m Cable</b>	<b>71201829</b>
<b>Load cell, model no. MT1022-20kg</b>	<b>1m Cable</b>	<b>71201830</b>
<b>Load cell, model no. MT1022-30kg</b>	<b>1m Cable</b>	<b>71207741</b>
Load cell, model no. MT1022-3kg	3m Cable	72208506
Load cell, model no. MT1022-5kg	3m Cable	72208507
Load cell, model no. MT1022-7kg	3m Cable	72208508
Load cell, model no. MT1022-10kg	3m Cable	72208509
Load cell, model no. MT1022-15kg	3m Cable	72208510
Load cell, model no. MT1022-20kg	3m Cable	72208511
Load cell, model no. MT1022-30kg	3m Cable	72208512

**Bolded entries are stocked**

## MT1022 Load Cell Cable Colours

Colour	Function
Green	+ Excitation
Black	- Excitation
Red	+ Signal
White	- Signal
Yellow	+ Shield

## Full Connectivity

METTLER TOLEDO supplies various data communication interfaces that enable our sensors and instruments to communicate with your PLC, MES, or ERP systems.



## OIML Approvals

The MT1022 is provided with C3 approval acc. to OIML R60. Thus best weighing performance is guaranteed at all specified conditions. Benefit from METTLER TOLEDO experience.



## METTLER TOLEDO Service

Our extensive service network is among the best in the world and ensures maximum availability and service life of your product.

## Weighing Electronics

METTLER TOLEDO offers a complete family of electronics from simple weighing to application solutions for filling, stock control, batching, formulation, counting, and checkweighing.



Quality certificate ISO 9001  
Environment certificate ISO 14001

Subject to technical changes.  
© 11/2011 Mettler-Toledo AG  
Printed in Switzerland MTSI 44099811  
MarCom Industrial

[www.mt.com](http://www.mt.com)

Visit for more information