# **Easy System Integration**

# Platform Size 400x400 mm



#### **Bench and Floor Scales**

MT1241 provides the best weighing performance for bench scales and smaller floor scales in its capacity range. With a low profile design, cost optimization and an attractive product appearance can be achieved.



#### Off-Center compensation

One load cell can be used to support a weighing platform and, due to the off-center load compensation, the MT1241 will weigh within tolerance regardless of load application point.





#### **Robustness**

MT1241 allows 50% static overload without compromising the weighing performance. The passivated aluminium provides good corrosion resistance suitable for many industrial applications.

### MT1241 Single Point Load Cell

The MT1241 load cell features:

- OIML R60 C3 approval
- Off-center load compensation (R76)
- 400x400 mm platform size
- IP67 protection class
- Passivated aluminum
- 30-250kg capacity range

The MT1241 is the ideal solution for small floor scales and hoppers. Due to the low profile the integration into any system is easy. The broad capacity range allows wide application in industrial weighing applications.



## MT1241 Load Cell Specifications

Model Model Pick	Parameter		unit of measure	Specification						
Billed Dulpul	Model No:			MT1241						
Sec   Se	Rated Capacity (R.C.)		kg (lb, nominal)	30 (66)	50 (110)	100 (220)	150 (331)	200 (441)	250 (551)	
Combined From 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Rated Output		mV/V @R.C.							
Repentably Error	Zero load Output		%R.C.							
Case of Summular Man Dead Load Dutple Return (DR) 30 min Min Dead Load Outple Min Dead Load Load Load Limit Min Dead Load Outple Min Dead Load Outple Min Dead Load Load Limit Min Dead Load Outple Min Dead Load Outple Min Dead Load Load Limit Min Dead Load Unit Dead Load Load Load Load Load Load Load Lo	Combined Error 1)		%R.C.	≤ 0.018						
Ceep. 30 minute         %AL 1º         s 0.0167           Romperclure Effect on Emperclure Range         Min Dead load Output Sensitivity Set. C.PC (J*F)	Repeatability Error		%R.C.	≤ 0.01						
Min. Dead Load Cutyur Return   OR3, 30 min   Sh.L.   \$0.0167   \$1.0001000   \$1.000100   \$1.000000   \$1.000100000000000000000000000000000000			%A.L. <sup>2)</sup>							
Semplerdure Erect on   Semilarity   Send Info (C, IP)		(DR), 30 min	%A.L.							
Sensitivity	Τ Γ# Ι	Min Dead load Output	%R.C./°C (/°F)	≤ 0.0023 (0.0011)						
Compensated   **C (**F)	Temperature Effect on	Sensitivity		≤ 0.0009 (0.0005)						
Safe Storage   °C (*F)   -20 to +80 (-4 to +176)		Compensated		-10 to +40 (+14 to +104)						
Solis Storage   **C (*F)	Temperature Range	Operating	°C (°F)	` ,						
OiML / European Approval   European Cert No.   European Cert No.   Cisss   C3	······p · · · · · · · · · · · · · · · ·	Safe Storage		, ,						
European Approvol   2	-		` ,	· ,						
OIML / European Approval         Class         C.3           nmax         3000           Y         6000           Pc         3000           Humidity Symbol         none           Humidity Symbol         none           Excitation Voltage         Recommended V AC/DC         5-15           Excitation Maximum         V AC/DC         20           1 munical Resistance @50VD         MΩ         350 ± 4           Insulation Resistance @50VD         MΩ         350 ± 4           Insulation Resistance @50VD         MΩ         5000           Breakdown Voltage         V AC/DC         >5000           Breakdown Voltage         V AC         >5000           Breakdown Voltage         V AC         >5000           Breakdown Voltage         V AC         > 5000           Breakdown Voltage         V AC         > 5000           Coble entry fifting         none         none           Coble entry fifting         none         none           Coble entry fifting         none         PC           Coble entry fifting         none         PC           Coble to Dynamic Lood         %R.C.         150           Sofe Dynamic Lood         %R.C.										
DML / Furopean Approval   Part										
OML / European Approval 30 / Pc         Y         6000           Pc / Pc         0.7           Humilally Symbol Min. dead load         kg (b)         0.00           Excitation Voltage         Recommended Recommended V AC/DC         5-15           Terminal Resistance         Excitation Ω         2         410 ± 10           Terminal Resistance @50VDC         MΩ         350 ± 4           Insulation Resistance @50VDC         MΩ         ≥ 5000           Breakdown Voltage         V AC         > 500           Moterial         Spring Element         Aluminum           Enclosure         V AC         > 500           Coble entry fifting         none           Coble entry fifting         none           Coble entry fifting         none           Coble entry fifting         none           Coble entry fifting         per c           Load Limit         Sofe         %R.C.         150           Sofe Dynamic Load         %R.C.         300           Sofe Dynamic Load         %R.C.         300           Sofe Dynamic Load         %R.C.         70           Fortigue Life         cycles @R.C.         2,00,000           Derection of Loading         mm (m)         0										
Z   PLC	OIML / Furonean Approval 3)									
Pic         Pic         0.7           Hunlidity Symbol         none           Min. dead load         kg (lb)         0 (0)           Excitation Voltage         Recommended         V ACDC         5-15           Terminal Resistance         Excitation         Ω         410 ± 10           Insulation Resistance ©60VDC         MΩ         350 ± 4           Breakdown Voltage         MΩ         > 5000           Breakdown Voltage         V AC         > 5000           Breakdown Voltage         Spring Element         Aluminum           Enclosure         Cable         Aluminum           Cable         PVC         PVC           Oale entry fifting         none         none           Cable         PVC         PVC           Protection         Type         Sillicone cover           Protection         Type         Sillicone cover           Protection (Loading)         %R.C.         300           Safe Dynamic Load         %R.C.         300           Safe Dynamic Load         %R.C.         70           Oetledion @ R.C.         mm (in)         0.3 kp (0.012 kp)           Weight         kg (lb)         1.2 (2.7)           Cable Length <td>Olivie / Europouri / pprovur /</td> <td></td> <td></td> <td colspan="5"></td>	Olivie / Europouri / pprovur /									
Humidity Symbol   Min. dead load   Min. dead load load   Min. dead load load load load load load load lo										
Min. dead lood   Mg (lb)   0 (0)										
Excitation Voltage         Recommended Moximum         V AC/DC         5 - 15           Terminal Resistance         Excitation         Ω         410 ± 10           Terminal Resistance         Excitation         Ω         410 ± 10           Output         Ω         350 ± 4           Insulation Resistance         MQ         ≥ 5000           Breakdown Voltage         V AC         > 500           Breakdown Voltage         V AC         > 500           Moterial         Spring Element         Aluminum           Enclosure         None         none           Coble entry rifting         none         none           Coble entry rifting         none         PVC           Protection         Type         silicone cover           Protection         Type         silicone cover           Protection         Type         silicone cover           Load Limit         Safe         %R.C.         150           Sofe Dynamic Load         %R.C.         300           Sofe Dynamic Load         %R.C.         70           Foltigue Life         cycles @R.C.         70           Direction of Loading         mm (in)         0.3 typ (0.012 typ)           Weight			la (lb)							
Excitation Voltage         Maximum         V AC/DC         20           Terminal Resistance         Excitation         Ω         410 ± 10           Insulation Resistance @50VDC         MΩ         ≈ 5000           Breakdown Voltage         V AC         > 500           Material         Spring Element         Aluminum           Material         Enclosure         none           Coble entry fitting         none           Coble entry fitting         none           Coble entry fitting         pvc           Protection         IP 67           Insulation Excess the fitting of the protection of Loading         Set of the protection of the protection of Loading           Safe Dynamic Load         %R.C.         300           Safe Dynamic Load         %R.C.         70           Folique Life or Cycles @R.C.         pl.000,000           Direction of Loading         compression           Defection & R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (b)         1.2 (2.7)           Coble Length         mm (in)         2 (6.6)           Barometric Pressure Effect or Zero Load Output         kg/kPo (tb/in.Hg)         none           Sole Side Load         %R.C.         100	-									
Excitation   Ω	Excitation Voltage									
terminal Resistance         Output         Ω         350 ± 4           Insulation Resistance @50VDC         MΩ2         ≥ 5000           Breakdown Voltage         V AC         > 5000           Material         Spring Element         Aluminum           Enclosure         none         Aluminum           Coble entry fifting         none           Coble objecting         PVC           Protection         Type         Silicone cover           IP Rating         IP Rating         IP Rote           Load Limit         Safe         %R.C.         150           Utlimate         %R.C.         300           Safe plymanic Load         %R.C.         70           Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Coable Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/RPa (lb/in-Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         m (ft)         R.C.         100										
Insulation Resistance @50VDC   MΩ   \$5000	Terminal Resistance									
Breakdown Voltage         V AC         > 500           Material         Enclosure         none           Cable entry fitting         none           Cable entry fitting         none           Cable entry fitting         pvc           Protection         Type         silicone cover           IP 67         IP 67           Load Limit         Safe         %R.C.         150           Ultimate         %R.C.         300           Safe Dynamic Load         %R.C.         70           Folique Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Cable Length         m (if)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/RPa (lb/In.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No         No           Mounting Screw         Finangeal Length         mm (in)         12 (9.5)           Finangeal Length         mm (in)         10 (7.4)           Mox Platter Size         cm x cm (in x in)		·								
Material         Spring Element Enclosure         Aluminum           Cable entry lifting Cable         none           Cable (Cable entry lifting Cable)         none           Protection         Type IP Rating IP 67           Load Limit         Safe MR.C. IBO           Safe Dynamic Load         %R.C. IBO           Safe Dynamic Load         %R.C. TO           Fatigue Life Cycles @R.C. IBO         70           Direction of Loading Deflection of Loading IBO         compression           Deflection @ R.C. IBO         mm (in) IBO           Weight IBO         kg (lb) IBO           Weight IBO         kg (lb) IBO           Barometric Pressure Effect on Zero Load Output IBO         kg/kPa (lb/in.Hg) IBO           Safe Side Load IBO         %R.C. IBO           Mounting Screw IBO         Mex. IBO           Mounting Screw IBO         Mex. IBO           Mounting Screw IBO         Nm (in) IBO           Max Platter Size         cm x cm (in x in) IBO           Mox Platter Size         cm x cm (in x in) IBO           Mox Platter Size         cm x cm (in x in) IBO										
Material         Enclosure         none           Cable entry fitting         none           Cable         PVC           Protection         Type         silicone cover           IP Rating         IP 67           Load Limit         Safe         %R.C.         150           Variety of Load         %R.C.         300           Safe Dynamic Load         %R.C.         70           Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Cable Length         m (ff)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No         No           Mounting Screw         Grade         12.9           Mounting Screw         Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Mox Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)			V AC							
Cable entry fitting   Cable   PVC										
Cable         PVC           Protection         Type         silicone cover           Load Limit         IP Rating         IP 67           Load Limit         Safe         %R.C.         150           Sufe Dynamic Load         WR.C.         300           Safe Dynamic Load         70         70           Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (bb)         1.2 (2.7)           Coble Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (t-lb)         10 (7.4)           Max Plotter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Material									
Protection         Type   IP Rating         silicone cover           Load Limit         Safe   %R.C.   150           Uttimate         %R.C.   300           Safe Dynamic Load         %R.C.   70           Fatigue Life   cycles @R.C.   >1,000,000           Direction of Loading   Direction of Loading   mm (in)   0.3 typ (0.012 typ)           Weight   kg (b)   1.2 (2.7)           Cable Length   m (ft)   2 (6.6)           Barometric Pressure Effect on Zero Load Output   kg/kPa (lb/in.Hg)   none           Safe Side Load   %R.C.   100           Overload Protection   No           Mounting Screw   Grade   Size/thread   Mexit   Engaged Length   mm (in)   12 (0.5)   Torque   N.m (ft-lb)   10 (7.4)           Max Platter Size   cm x cm (in x in)   40x40 (15.7x15.7)										
Protection   IP Rating   IP 67				<u> </u>						
P Rating	Protection									
Load Limit         Ultimate         %R.C.         300           Safe Dynamic Load         %R.C.         70           Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Coble Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No         No           Mounting Screw         Size/thread         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)										
Safe Dynamic Load         %R.C.         300           Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (bb)         1.2 (2.7)           Cable Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Load Limit									
Fatigue Life         cycles @R.C.         >1,000,000           Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Cable Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)		Ultimate								
Direction of Loading         compression           Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (lb)         1.2 (2.7)           Cable Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)			%R.C.							
Deflection @ R.C.         mm (in)         0.3 typ (0.012 typ)           Weight         kg (ib)         1.2 (2.7)           Cable Length         m (ff)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)			cycles @R.C.	>1,000,000						
Weight         kg (lb)         1.2 (2.7)           Cable Length         m (ff)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Size/thread         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)				compression						
Cable Length         m (ft)         2 (6.6)           Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)				0.3 typ (0.012 typ)						
Barometric Pressure Effect on Zero Load Output         kg/kPa (lb/in.Hg)         none           Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)			kg (lb)							
Safe Side Load         %R.C.         100           Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Cable Length		m (ff)	2 (6.6)						
Overload Protection         No           Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ft-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)										
Mounting Screw         Grade         12.9           Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ff-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Safe Side Load		%R.C.	100						
Mounting Screw         Size/thread         M6x1           Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ff-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Overload Protection						No			
Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ff-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)	Mounting Screw					1	2.9			
Engaged Length         mm (in)         12 (0.5)           Torque         N.m (ff-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)		Size/thread				M	6x1			
Torque         N.m (ff-lb)         10 (7.4)           Max Platter Size         cm x cm (in x in)         40x40 (15.7x15.7)			mm (in)		12 (0.5)					
Max Platter Size cm x cm (in x in) 40x40 (15.7x15.7)			N.m (ff-lb)							
· · · · · · · · · · · · · · · · · · ·	Max Platter Size									
Off Center Load Error @33%R.C.	Off Center Load Error @33%R.C.		%A.L./cm (/in)							

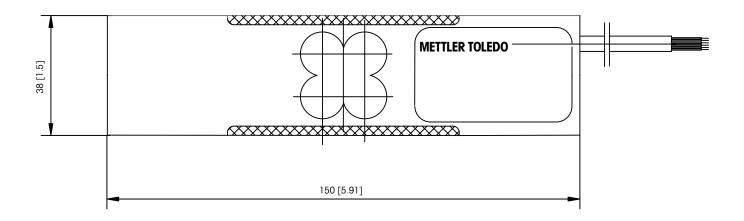
 $<sup>^{\</sup>rm 1)}$  Error due to the combined effect of non-linearity and hysteresis

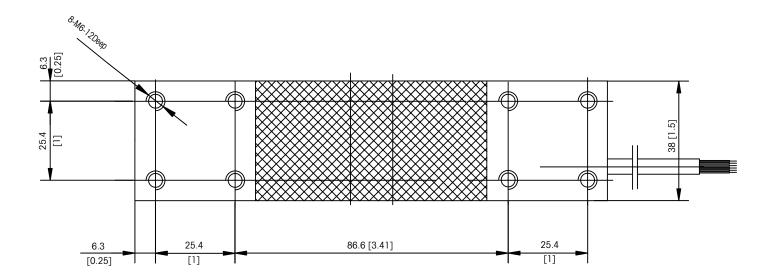
 $<sup>^{\</sup>rm 3)}$  See certificate for complete information.



<sup>&</sup>lt;sup>2)</sup> A.L. = Applied Load

## MT1241 Load Cell Dimensional Drawings mm [inch]





## MT1241 Load Cell Order Information

Description	Item No.
Load Cell MT1241-30kg	71207451
Load Cell MT1241-50kg	71207452
Load Cell MT1241-100kg	71207453
Load Cell MT1241-150kg	71201841
Load Cell MT1241-200kg	71201842
Load Cell MT1241-250kg	71207454

# MT1241 Load Cell Cable Colours

Colour	Function
Green	+ Excitation
Black	<ul><li>Excitation</li></ul>
Red	+ Signal
White	- Signal
Blue	+ Sense
Brown	– Sense
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**

ServiceXXL®

The MT1241 is provided with C3 approval acc. to OIML R60. Thus best weighing performance is guaranteed at all specified conditions. Benefit from METTLER TOLEDO experience.



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.
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