

# Globally Approved For Accuracy and Safety



## Vehicle Weighing

Use the 0782 load cell in new truck, railroad track and other heavy capacity weighbridge applications or as a replacement for cells in an old weighbridge to enhance its performance. The 0782 is ideally suited to this application.



## Tank Weighing

The capacity range from 20t to 300t allows the weighing of big tanks and silos with ease. The stainless steel design, hermetic sealing and IP68 protection provides the best reliability in tank weighing applications.



## Weigh Module

The optional METTLER TOLEDO weigh module adds suspension, checking and anti-tipping to your 0782 load cell and includes top and bottom mounting plates to simplify installation.



## Hermetically Sealed

The stainless steel housing is welded in place to create a hermetic seal to prevent moisture from entering the interior of the load cell and deteriorating the weighing performance or causing failure.



## 0782 High Capacity Load Cell For High Capacities

The 0782 is approved for use in various applications in Europe, Asia, America and almost everywhere else in the world. If an approval is required, the 0782 probably already complies. The 0782 load cell is even approved for hazardous areas.

Every 0782 high capacity load cell features:

- OIML C3 and NTEP IIIILM 10.000d approvals (20t–100t)
- ATEX Zone1/2 and 21/22 approvals
- FM Class I,II,III Div 1 approvals
- IECEx Zone 1/2 and 2/22 approval
- Stainless steel
- Hermetically sealed design
- IP68 / IP69K protection class

# 0782 Load Cell Specifications

Parameter	Unit of measure	Specification					
Model No.		0782					
Rated capacity (R.C.)	f (klb, nominal)	20 (44)	30 (66)	50 (110)	100 (220)	200 (441)	300 (661)
Rated output	mV/V @R.C.	2 ± 0.1 %					
Zero load output	%R.C.	≤ 1					
Combined error <sup>1) 2)</sup>	%R.C.	≤ 0.018			≤ 0.05	≤ 0.06	
Repeatability error	%A.L. <sup>3)</sup>	≤ 0.01			≤ 0.02		
Creep, 30 minute	%A.L.	≤ 0.0167			≤ 0.03	≤ 0.04	
Min. dead load output return (DR), 30 min	%A.L.	≤ 0.0167			≤ 0.03	≤ 0.04	
Temperature effect on	Min. dead load output	≤ 0.002 (0.001)					
	Sensitivity <sup>2)</sup>	≤ 0.0009 (0.0005)			≤ 0.002 (0.001)		
Temperature range	Compensated	-10 ~ +40 (+14 ~ +104)					
	Operating	-40 ~ +65 (-40 ~ +150)					
	Safe storage	-40 ~ +80 (-40 ~ +176)					
OIML / European approval <sup>4)</sup>	OIML Cert. No.	R60/2000-NL-01.04					
	European Cert. No.	NMI TC5844					
	Class	C3					
	nmax	3000					
	Y	6666					
	PLC	0.7					
	Humidity symbol	CH					
	Min. dead load	kg (lb)	0 (0)				
NTEP approval <sup>4)</sup>	Z	3000					
	Number	01-004					
	Class	III L M					
	nmax	10000					
	Vmin	kg (lb)	1.4 (3.0)	2.1 (4.5)	3.5 (7.5)	7.0 (15.0)	
Min. dead load	kg (lb)	50 (100)					
ATEX approval <sup>4)</sup>	Number, cat. 2	KEMA 02ATEX1249 X II 2 G Ex ib IIC T4 ... T6 II 2 D Ex ibD 21 IP68 T60 °C					
	Rating						
	Entity parameters	Ui = 25V, li = 600mA, Pi = 0.57-1.25W, Ci = 2.6-6nF, Li = 13-30µH					
	Number, cat. 3	DEKRA 19ATEX0039 X II 3 G Ex ic IICT6 ...T4 Gc ; II 3 G Ex nA IIC T6 Gc ; II 3 G Ex ec IIC T6 Gc ; II 3 D Ex tc IIIC T60°C Dc Ui = 25V, li = 600mA, Ci = 2.6-6nF, Li = 13-30 µH, Pi = 0.57-1.25W					
	Rating	DEK 16.0068X "Ex ib IIC T6 ...T4 Gb ; Ex ib IIIC T55°C ... T60°C Db ; Ex ic IIC T6 ... T4 Gc ; Ex nA IIC T6 Gc ; Ex ec IIC T6 Gc ; Ex tc IIIC T60°C Dc"					
Entity parameters	Ui = 25V, li = 600mA, Pi = 0.57-1.25W, Ci = 2.6-6nF, Li = 13-30µH						
IECEx approval <sup>4)</sup>	Number	3013511 / 3028342C					
	Rating	IS / I, II, III / 1 / ABCDEFG / T4 Ta = -40°C to +50°C					
	Entity parameters	NI / I, II, III / 2 / ABCDFG / T4 Ta = -40°C to +50°C					
Factory mutual approval <sup>4)</sup>	Number, USA / Canada	IS / I, II, III / 1 / ABCDEFG / T4 Ta = -40°C to +50°C ; NI / 1 / 2 / ABDC / T4 Ta = .40C to +50°C DIP/II, III/2 / FG					
	Rating, USA	Class I, Division 1, Groups A, B, C and D; Class II, Groups E, F and G; Class III					
	Rating, Canada	cFM CSA	Vmax = 20V, Imax = 600mA, Pi = 1.25W NI/II/2/ABCD/T4 ; DIP/II, III/2/FG				
Entity parameters		Vmax = 20V, Imax = 600mA, Pi = 1.25W					
		Ci = 4nF, Li = 17.7µH					
System drawing No		142730					
Excitation voltage	Recommended	V AC/DC					
	Max.	5 ~ 15					
Terminal resistance	Excitation	20					
	Output	Ω					
Insulation resistance @50VDC	MΩ	1150 ± 25					
Breakdown voltage	V AC	1000 ± 3					
Material	Spring element	> 5000					
	Enclosure	> 500					
	Cable entry fitting	Stainless steel					
	Cable	Stainless steel					
Protection	Type	PVC					
	IP rating	Welded					
	NEMA rating	IP68, IP69K					
Load limit	Safe	NEMA 6/6P					
	Ultimate	%R.C.					
Safe dynamic load	%R.C.	125					
Fatigue life	cycles @R.C.	300					
Direction of loading		70					
Restoring force <sup>5)</sup>	%A.L./mm (. /in)	>1,000,000					
Max. horizontal travel <sup>6)</sup>	± mm (in)	0.8 (19)		2 (52)		1.6 (40) 2.5 (63)	
Deflection @ R.C., nominal	mm (in)	4 (0.16)		5 (0.20)		6 (0.24)	
Weight, nominal	kg (lb)	0.25 (0.010)	0.27 (0.011)	0.34 (0.014)	0.38 (0.015)	0.54 (0.021)	0.57 (0.023)
Cable	Length	2.8 (6.2)		3 (6.6)		3.3 (7.3) 4.5 (9.9)	
	Diameter	m (ft)		13 (42.5)		20 (66) 30 (98)	
Barometric pressure effect on zero load output	kg/kPa (lb/in.Hg)	5.8 (0.23)					
		3 (6.6)	4.5 (9.9)	7.5 (16.5)	15 (33)	30 (66)	45 (99)

<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

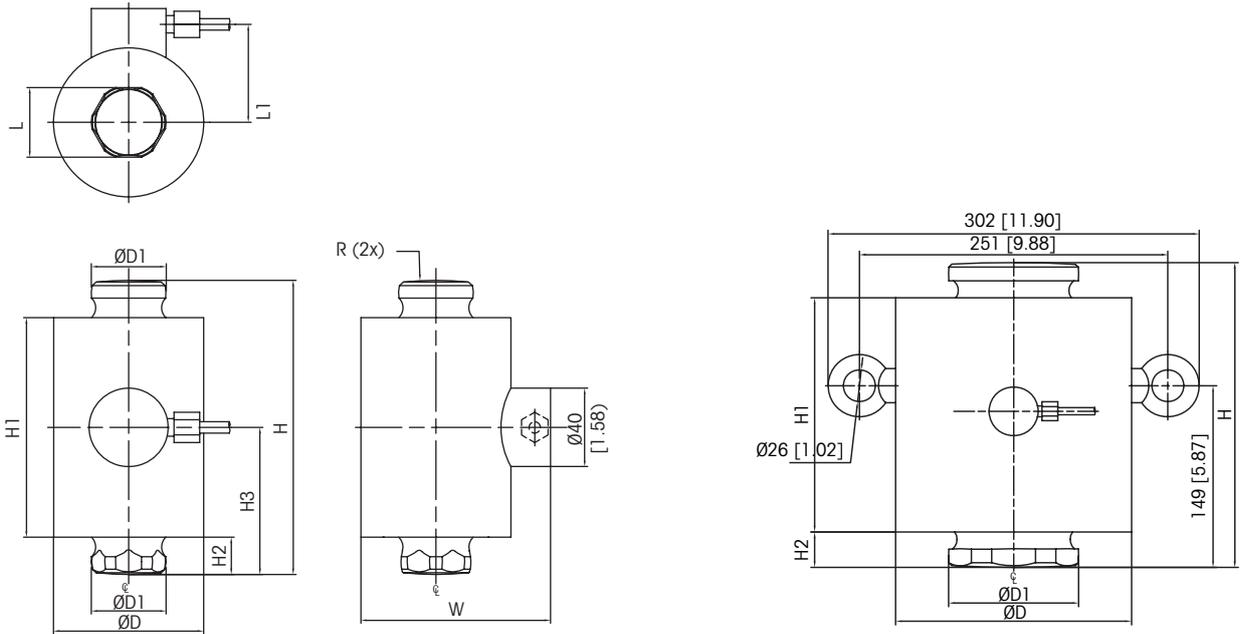
<sup>4)</sup> See certificate for complete information.

<sup>5)</sup> % of Applied Load (A.L.) per mm (in) displacement of the top button relative to the bottom button.

<sup>6)</sup> Maximum horizontal displacement of the top button relative to the bottom button.



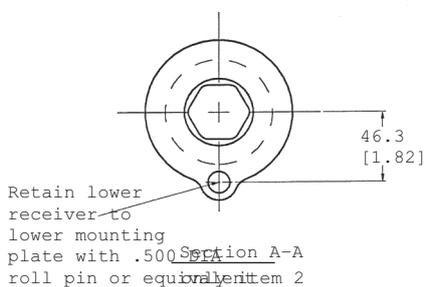
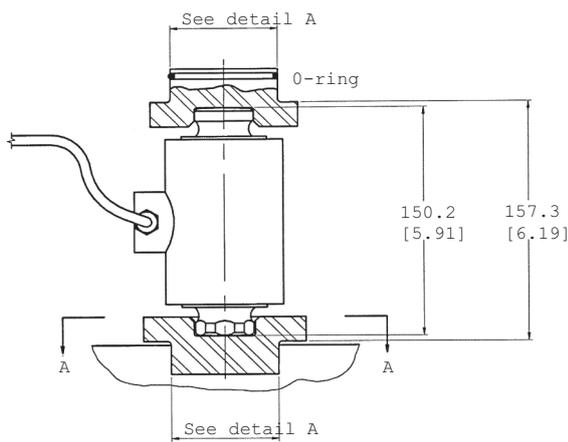
# 0782 Load Cell Dimensional Drawings mm [in]



Capacity	Dimensions and locations									
	D	D1	H	H1	H2	H3	L	L1	R	W
20-30t [33-66 klb]	76 [2.99]	37.8 [1.49]	150 [5.91]	112 [4.41]	19 [0.75]	75 [2.95]	33.5 [1.40]	50 [1.97]	160 [6.30]	96 [3.78]
50t [110 klb]	76 [2.99]	37.8 [1.49]	150 [5.91]	112 [4.41]	19 [0.75]	75 [2.95]	35.5 [1.40]	50 [1.97]	305 [12.0]	96 [3.78]
100t [220 klb]	102 [4.02]	53.8 [2.12]	150 [5.91]	112 [4.41]	19 [0.75]	75 [2.95]	50.6 [1.99]	64 [2.52]	305 [12.0]	123 [4.84]
200t [440 klb]	158 [6.22]	80 [3.15]	195 [7.68]	145 [5.71]	25 [0.98]	93 [3.66]	75.25 [2.96]	93 [3.66]	400 [5.75]	180 [7.09]
300t [660 klb]	192 [7.56]	106 [4.17]	250 [9.84]	192 [7.56]	29 [1.14]	128 [5.04]	99.20 [3.91]	110 [4.33]	900 [35.4]	213 [8.39]

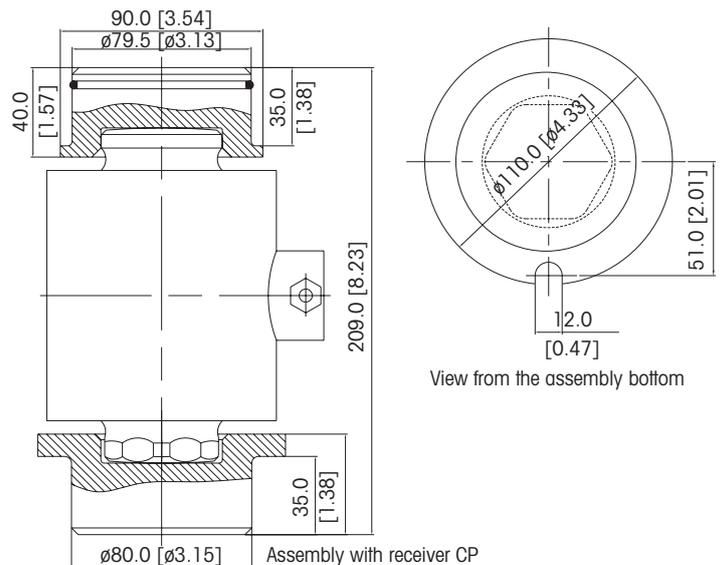
300t only

## 0782 Load Cell Receivers mm [in] 20t-50t



Detail A  
Receiver mounting plate top & bottom

## 0782 Load Cell Receivers mm [in] 100t



The receiver shown here are an example out of few. METTLER TOLEDO provides more receiver. Please contact the responsible sales in charge.

## 0782 Load Cell Order Information

Description		Item No.
Load cell, model no.	0782 20t (44klb) 13m (42.5ft) cable C3/IIILM10	71201708
Load cell, model no.	0782 30t (66klb) 13m (42.5ft) cable C3/IIILM10	71201709
Load cell, model no.	0782 50t (110klb) 13m (42.5ft) cable C3/IIILM10	71201710
Load cell, model no.	0782 100t (220klb) 13m (42.5ft) cable C3/IIILM10	71201711
Load cell, model no.	0782 200t (441klb) 20m (66ft) cable	71210093
Load cell, model no.	0782 300t (661klb) 30m (98ft) cable	71210169

## 0782 Load Cell Cable Colours

Colour	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	+ Sense
Blue	- Sense
Yellow (long)	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.



### Global Approvals

The 0782 is provided with all listed approvals. No need to think about options and additional charges. Simplifies the conduct of global business, order processing and service-part stocking.



### Weighing Electronics

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



## METTLER TOLEDO Service

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

#### METTLER TOLEDO Group

Industrial Division  
Local contact: [www.mt.com/contacts](http://www.mt.com/contacts)

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For more information

