

S-Type Tension Load Cell

for economical, no-compromise weighing



Tension Weighing

Use the SLS510 in tension weighing applications requiring Stainless Steel Load Cells to convert suspended hoppers or other hanging devices into a weighing system. The cell can also be used to convert mechanical scales to electronic. The robust and economical design is suitable for use in industrial environments requiring a higher degree of corrosion protection.



Robust Strain Gauge Design

The SLS510 load cell uses a reliable Strain Gauge design with excellent measurement stability. The high sensitivity output enables the use of economic weight indicators, providing a valuable low-cost solution. The wide capacity range offers the optimum selection to maximize signal for your application.



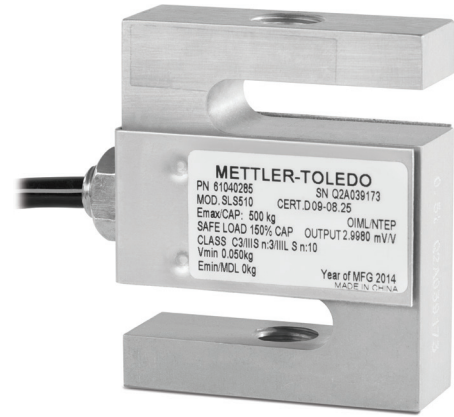
Version

The METTLER TOLEDO SLS510 load cell is available with Inch threads to match the commonly available standards. Due to this common mechanical interface the SLS510 can be easily integrated into most systems.



Tension Weigh Mount

The optional SWS310 Tension Weigh Module provides a complete solution to integrate into your system. Due to the optimized design the best weighing performance is guaranteed. The load cell is electrically isolated from the rods, while the ground strap provides a bypass for current, thus protecting against lightning and welding damage.



SLS510 S-Type Tension Load Cell

Use the SLS510 when better corrosion protection is required and weighing performance cannot be compromised. Every SLS510 load cell features:

- OIML C3 and NTEP approval
- ATEX and FM approvals
- Reliable Strain Gauge design
- Standard mechanical interface
- Robust design, Stainless steel
- High output signal 3mV/V
- Potted; IP67 Protection

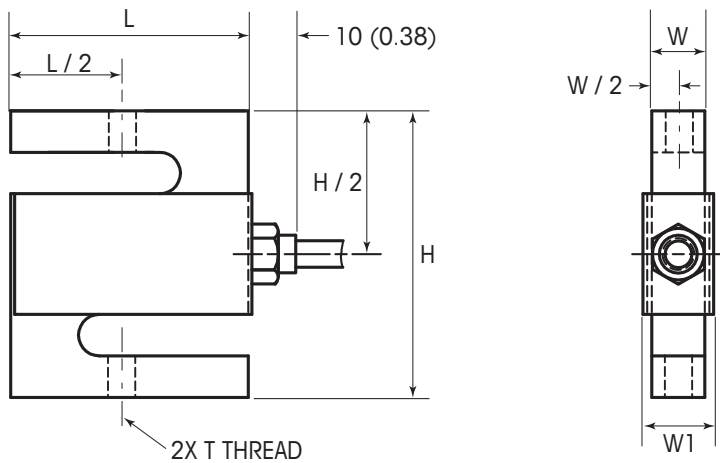
The SLS510 is approved for use in various applications in Europe and America. Its metrology approval is OIML C3, and its high output signal permits the use of economic terminals and transmitters. Together, these features ensure the best possible system performance.

Load Cell Parameter		Unit of measure	Specification								
Model No.			SLS510								
Rated Capacity (R.C.)		kg	50, 100	250	500	1000	2500	5000	7500	10000	20.000
Rated Output		mV/V @ R.C.	3.000 ± 0.25%								
Zero Load Output		% R.C.	1								
Combined Error ²		% R.C.	≤ 0.018								
Repeatability Error		% A.L. ³	≤ 0.01								
Creep, 30 Minutes Use		% A.L.	≤ 0.0167								
Temperature Effect on	Min Dead Load Output	% R.C./°C (.../°F0)	≤ 0.0167								
	Sensitivity	% R.C./°C (.../°F0)	≤ 0.0009 (0.0005)								
Temperature Range	Compensated	°C (°F)	-10 to +40 (+14 to +104)								
	Operating		-35 to +65 (-30 to +150)								
	Safe Storage		-35 to +85 (-30 to +185)								
OIML / European Approval	European Cert No.		D09-08.25								
	Class		C3								
	nmax		3000								
	Y		7000	10000			12000				
	PLC		0.7								
	Humidity Symbol		none								
	Min. Dead Load		0 (0)								
	Z		3000								
NTEP Approval	Number		11-020								
	Class		Class III, IIII								
	nmax		Class III = 5000, Class IIII = 10,000								
	Vmin (Class III)	lb	0.002	0.012	0.03	0.08	0.12	0.20	0.40	0.60	
	Min. Dead Load	lb	2	5			10		15		
ATEX Approval	Number, cat 1		FM09ATEX0048X								
	Number, cat 3		FM09ATEX0049X								
	Rating		II 1 G Ex ia IIC T4 Ta = -20°C to +40°C; IP67								
			II 1 D Ex iaD T73°C; IP67								
			II 1 G Ex nL IIC T4 Ta = -20°C to +40°C; IP67								
Entity Parameters		Ui=20V, Ii=600mA, Pi=6W, Ci=12nF, Li=40µH									
FM Approval, USA / Canada	Number		3036007 / 3036007C								
	Rating		IS / I,II,III / 1 / ABCDEFG / T4								
			I,II,III / 2 / ABCDFG / T4								
			Class 1, Zone 0, AEx, ia IIC T4								
			Class 1, Zone 0, Ex, ia IIC T4								
	Rating (USA only)		Class 1, Zone 2, Group IIC T4								
	Rating (Canada only)		Ex nL IIC T4								
Entity Parameters		Vmax=20V, Imax=600mA, Pi=6W, Ci=12nF, Li=40µH									
System Drawing No.		175295R									
Excitation Voltage	Recommended	V AC/DC	1								
	Maximum	V AC/DC	18								
Terminal Resistance	Excitation	Ω	430 ± 60								
	Output	Ω	351 ± 2								
Insulation resistance at 50 VDC		MΩ	> 5000								
Breakdown voltage		V AC	> 500								
Material	Spring element		Stainless Steel								
	Enclosure		Stainless Steel								
	Cable entry fitting		Stainless Steel								
	Cable		Polyurethane								

Load Cell Parameter (cont.)		Unit of measure	Specification							
Protection	Type		Potted with Metal Cover							
	IP Rating		IP67							
	NEMA Rating		NEMA 6 / 6P							
Load limit	Safe	% R.C.	150							
	Ultimate		300							
Safe dynamic load		% R.C.	70							
Fatigue life		Cycles @ R.C.	1,000,000							
Direction of loading			Tension							
Deflection @ R.C., nominal		mm (in)	0.18 [0.007]	0.22 [0.009]	0.29 [0.011]	0.37 [0.014]	0.74 [0.029]	0.78 [0.031]	0.57 [0.022]	
Weight, nominal		kg (lb)	0.45 [1.0]	0.7 [1.6]		0.9 [2.0]	1.6 [3.4]	1.8 [4.0]	3 [6.6]	7.3 [16.1]
Cable length		m (ft)	6 (19.7)							
Overload protection			no							
Barometric Pressure Effect on Zero Load Output		kg/kPa (lb/in.Hg)	none							
Drawing No.	Dimensions		TA601265							
	To-Scale		TC601386							

- 1) Error due to the combined effect of non-linearity and hysteresis
- 2) Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60
- 3) A.L. = Applied Load
- 4) See certificate for complete information.

SLS510 Load Cell Dimensional Drawing mm [inch]



Capacity	Dimensions (inch [mm]) and Data							
	H	H / 2	L	L / 2	T [2x]	W	W / 2	W1
50 - 300 lb	2.40 [61.0]	1.20 [30.5]	2.00 [50.8]	1.00 [25.4]	1/4 - 28UNF X 0.35 DP	0.46 [11.7]	0.23 [5.8]	0.59 [15.1]
500 - 1,500 lb	2.40 [61.0]	1.20 [30.5]	2.00 [50.8]	1.00 [25.4]	1/2 - 20UNF X 0.35 DP	0.71 [18.0]	0.36 [9.0]	0.84 [21.4]
2,000 lb	2.40 [61.0]	1.20 [30.5]	2.00 [50.8]	1.00 [25.4]	1/2 - 20UNF X 0.35 DP	0.96 [24.4]	0.48 [12.2]	1.09 [27.8]
3,000 lb	3.90 [99.1]	1.95 [49.5]	3.00 [76.2]	1.5 [38.1]	1/2 - 20UNF X 0.55 DP	0.96 [24.4]	0.48 [12.2]	1.09 [27.8]
5,000 lb	3.90 [99.1]	1.95 [49.5]	3.00 [76.2]	1.5 [38.1]	3/4 - 16UNF X 0.55 DP	0.96 [24.4]	0.48 [12.2]	1.09 [27.8]
10,000 lb	3.90 [99.1]	1.95 [49.5]	2.94 [74.7]	1.47 [37.31]	3/4 - 16UNF X 0.62 DP	1.21 [30.7]	0.61 [15.4]	1.34 [34.1]
15,000 lb	5.50 [139.7]	2.75 [69.9]	3.44 [87.4]	1.72 [43.7]	1 - 14UNF X 1.06 DP	1.46 [37]	0.73 [18.5]	1.59 [40.4]
20,000 lb	7.00 [177.8]	3.50 [88.9]	4.44 [112.8]	2.22 [56.4]	1 1/4 - 12UNF X 1.56 DP	1.69 [42.9]	0.845 [21.5]	1.82 [46.2]

SLS510 Load Cell Order Information

Order Information	
Description	Item No.
Load cell, model no. SLS510, 50kg C3	61040282
Load cell, model no. SLS510, 100kg C3	61040283
Load cell, model no. SLS510, 250kg C3	61040284
Load cell, model no. SLS510, 500kg C3	61040285
Load cell, model no. SLS510, 1000kg C3	61040286
Load cell, model no. SLS510, 2500kg C3	61040287
Load cell, model no. SLS510, 5000kg C3	61040288
Load cell, model no. SLS510, 7500kg C3	61040289
Load cell, model no. SLS510, 10000kg C3	61040290
Rod End + Nut M8x1.25 CS - 100kg	72229545
Rod End + Nut M12x1.75 CS - 1T	72229546
Rod End + Nut M20x1.5 CS - 5T	72229547
Rod End + Nut M24x2 CS - 7.5T	72229548
Rod End + Nut M30x2 CS - 10T	72229549

Bolded entries are stocked

SLS510 Load Cell Cable Colors

Color	Function
Red	+ Excitation
Black	- Excitation
Green	+ Signal
White	- Signal
Bare	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.



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.



METTLER TOLEDO Service

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



Quality certificate ISO 9001
Environmental certificate ISO 14001

Subject to technical changes.
©12/2020 METTLER TOLEDO
INDB0068.E0

www.mt.com

For more information