

Global Usage

No Compromise on Performance



Floor Scales

Use the SLB415 load cell in platform and floor scales. Due to the hermetic welded design reliability in most industrial environments is guaranteed. The full set of approvals provides maximum applicability and safety in these applications.



Tank Weighing

The capacity range from 110kg to 4.4t allows the weighing of tanks, hoppers and silos. Rocker pin load cell introduction is ideal for high accuracy and repeatability. Various accessories to ease installation are available.



Hermetically sealed

SLB415 load cells are made from nickel plated tool steel but are hermetically sealed, something normally available only on higher end stainless models. This protects the load cell from damp for the best stability and measuring performance.



SLB415 Beam Load Cells

Every SLB415 beam load cell features:

- Blind hole load introduction
- OIML C3 and NTEP III M 5,000d approvals
- ATEX Zone1/2 and 21/22 approvals
- FM Class I,II,III Div 1&2 approvals
- Nickel plated steel
- Hermetically sealed design
- IP67 protection class

The SLB415 is approved for use in various applications in Europe, Asia, America and almost everywhere else in the world. If an approval is required, the SLB415 probably already complies.

METTLER TOLEDO

SLB415 Load Cell Specifications

Parameter	unit of measure	Specification							
Model No.		SLB415							
Rated Capacity (R.C.)	kg (lb, nominal)	110 (250)	220 (500)	550 (1250)	1100 (2500)	2200 (5000)	4400 (10000)		
Rated Output	mV/V @R.C. - kg	0.970 ± 0.002			1.940 ± 0.002				
	mV/V @R.C. - lb	1.000 ± 0.002			2.000 ± 0.002				
Zero load Output	%R.C.	≤ 1.0							
Combined Error ^{1) 2)}	%R.C.	≤ 0.018							
Repeatability Error	%A.L. ³⁾	≤ 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	≤ 0.0023 (0.0013)							
	Sensitivity ²⁾	≤ 0.0009 (0.0005)							
Temperature Range	Compensated	-10 ~ +40 (+14 ~ +104)							
	Operating	-40 ~ +65 (-40 ~ +150)							
	Safe Storage	-40 ~ +80 (-40 ~ +176)							
OIML / European Approval ⁴⁾	OIML Cert. No.	R60/2000-NL1-13.19							
	European Cert. No.	TC8311							
	Class	C3							
	nmax	3000							
	Y	6000							
	PLC	0.7							
	Humidity Symbol	none							
	Min. dead load	kg (lb)	0.4 (0.88)						
	Z		3000						
	Number		13-081						
NTEP Approval ⁴⁾	Class	III M							
	nmax	5000							
	Vmin	kg (lb)	0.018 (0.04)	0.037 (0.08)	0.092 (0.20)	0.183 (0.40)	0.367 (0.81)	0.733 (1.62)	
	Min. dead load	kg (lb)	0 (0)						
ATEX Approval ⁴⁾	Number, cat. 2	DEKRA 13ATEX0081							
		DEKRA 13ATEX0082							
	Rating	II 2 G Ex ib IIC T4 Gb							
		II 2 D Ex ib IIIC T100°C Db							
		II 3 G Ex ic IIC T4 Gc							
		II 3 G Ex nA IIC T4 Gc							
Entity Parameters	Ta: -40°C to +60°C								
Number, USA	Ui=20V, Ii=600mA, Pi=1.25W, Ci=0.2nF/m (5), Li=1µH/m (5) 3005885								
Factory Mutual Approval ⁴⁾	Rating	IS / I,II,III / 1 / ABCDEFG / T4 Ta = 50°C							
		NI / I / 2 / ABCD / T6 Ta = 50°C							
	Entity Parameters	S / II,III / 2 / FG / T6 Ta = 50°C Vmax=20V, Imax=600mA, Pi=1.25W, Ci=0, Li=0							
System Drawing No, USA	30032271								
Excitation Voltage	Recommended	5-15							
	Max.	20							
Terminal Resistance	Excitation	382±4							
	Output	350±1							
Insulation Resistance @50VDC	MΩ	>5000							
Breakdown Voltage	V AC	>500							
Material	Spring Element	Alloy Steel							
	Enclosure	304 stainless steel							
	Cable entry fitting	304 stainless steel							
	Cable	PVC							
Finish		nickel plated							
	Type	welded							
Protection	IP Rating	IP67							
	NEMA Rating	NEMA 6							
Load Limit	Safe	150							
	Ultimate	300							
Safe Side Load	%R.C.	100							
Safe Dynamic Load	%R.C.	70							
Fatigue Life	cycles @R.C.	> 1,000,000							
Direction of Loading		beam							
Deflection @ R.C., nominal	mm (in)	0.07 (0.003)	0.14 (0.005)	0.23 (0.009)	0.26 (0.01)	0.37 (0.015)	0.6 (0.024)		
Weight, nominal	kg (lb)	1 (2.2)			1.4 (3.1)			2.4 (5.3)	
Cable	Length	m (ft) 2, 3, 5, 10 (6.6, 9.8, 16.4, 32.8)							
	Diameter	mm (in) 5.2 (0.20)							
Barometric Pressure Effect on Zero Load Output	kg/kPa (lb/in.Hg)	none							
Overload Protection		yes					no		
Mounting Screw	Grade	10.9 (Grade 8)							
	Size/thread	M12 (1/2-13 UNC)					M18 (3/4-10 UNC)		
	Engaged Length	-							
	Torque, nominal	N.m (ft-lb)	120 (100)					275 (220)	
Drawing No.	Dimensions	30106055							
	2D	30094487							
	3D	30094488							

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 and NIST HB44

³⁾ A.L. = Applied Load

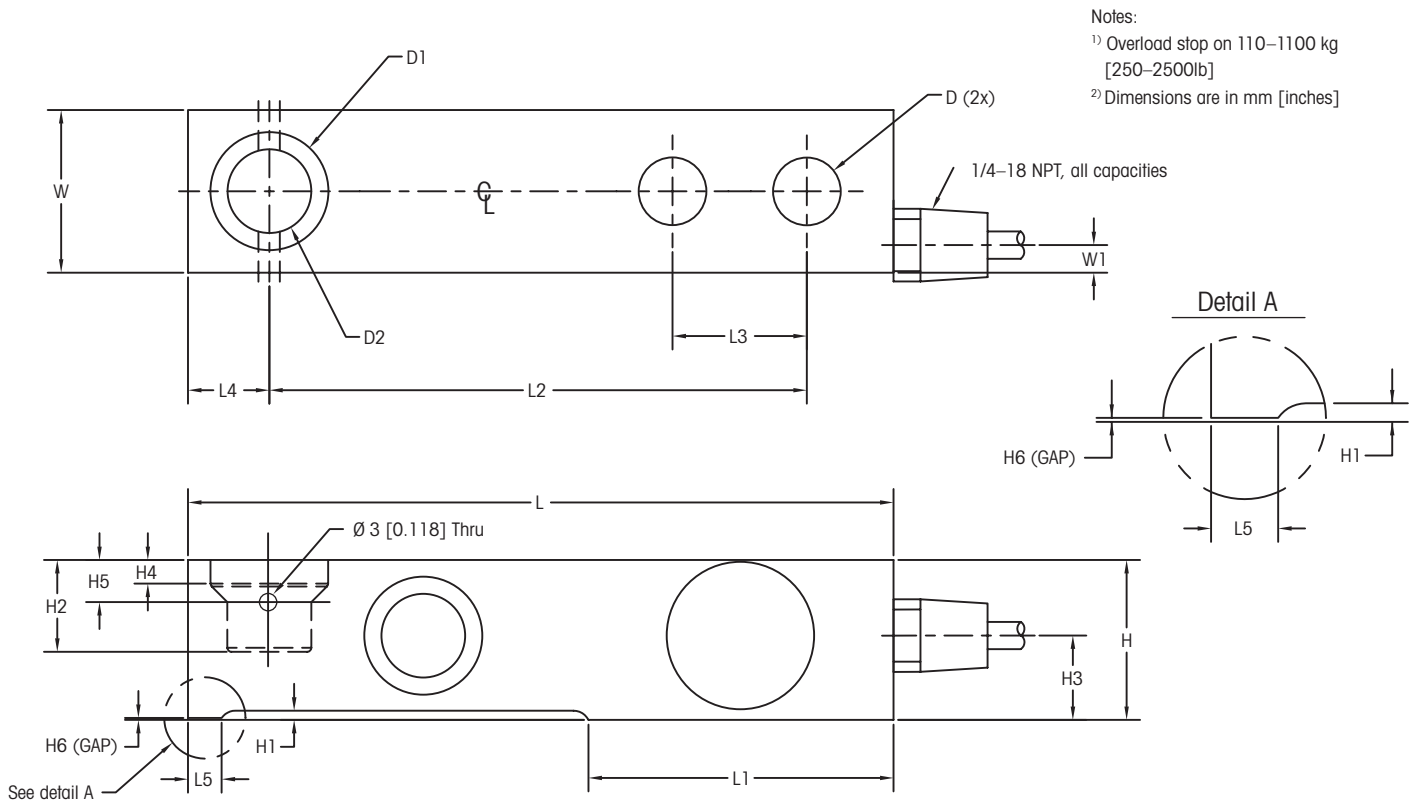
⁴⁾ See certificate for complete information

⁵⁾ /m Load Cell Cable

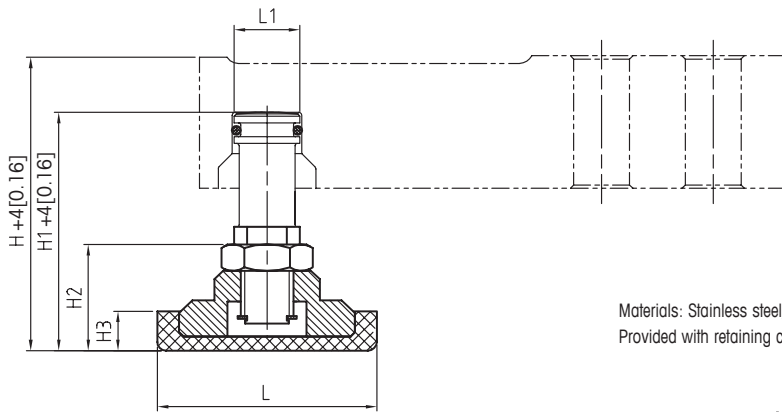


SLB415 Load Cell Dimensional Drawings mm [inch]

Model	Capacity	Dimensions and locations																	
		D (2x)	D1	D2	H	H1	H2	H3	H4	H5	H6 ¹⁾	L	L1	L2	L3	L4	L5 ¹⁾	W	W1
SLB415	110–1100 kg [250–2500 lb]	13.0 [0.51]	22.2 [0.88]	15.9 [0.62]	30.2 [1.19]	1.8 [0.07]	17.3 [0.68]	16 [0.63]	4.5 [0.18]	7.9 [0.31]	0.38 [0.015]	133.4 [5.25]	57.7 [2.27]	101.6 [4.0]	25.4 [1.0]	15.4 [0.61]	6.4 [0.25]	30.7 [1.21]	6.1 [0.24]
SLB415	2200 kg [5000 lb]	13.0 [0.51]	22.2 [0.88]	15.9 [0.62]	36.6 [1.44]	6 [0.24]	22.9 [0.90]	19.6 [0.77]	9.2 [0.36]	12.7 [0.50]	6 [0.24]	136.6 [5.38]	57.9 [2.28]	101.6 [4.0]	25.4 [1.0]	18.4 [0.72]		36.8 [1.45]	6.1 [0.24]
SLB415	4400 kg [10 000 lb]	19.3 [0.76]	34.9 [1.38]	22.2 [0.88]	42.9 [1.69]	4.5 [0.18]	29.3 [1.16]	22.6 [0.89]	10.8 [0.43]	17.8 [0.70]	4.5 [0.18]	171.5 [6.75]	73.8 [2.91]	133.4 [5.25]	38.1 [1.50]	21.4 [0.84]		42.9 [1.69]	6.1 [0.24]



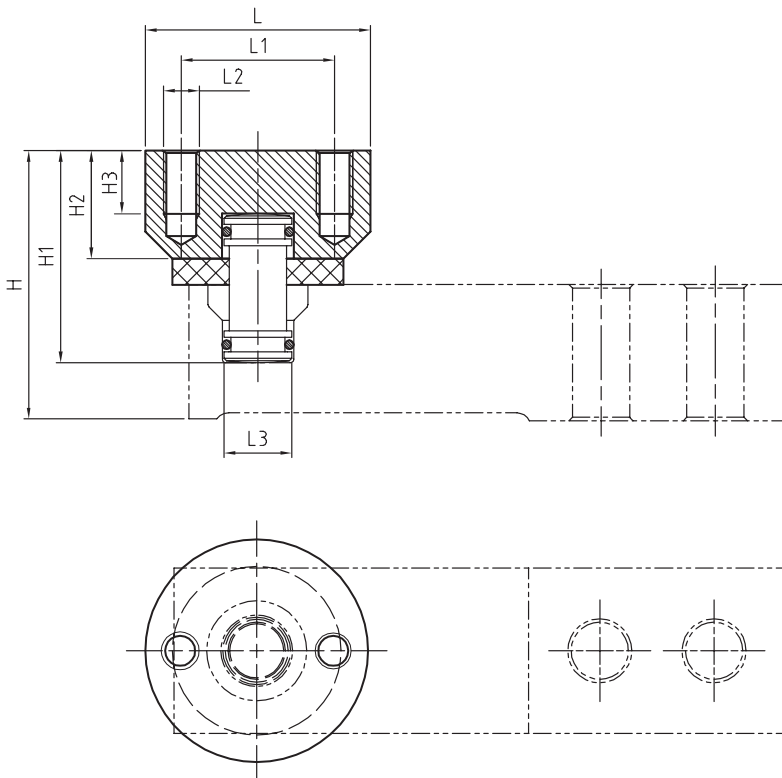
SLB415 Foot Kit FTK mm [inch]



Materials: Stainless steel, NBR 70
Provided with retaining clip

Capacity	Dimensions and Locations					
	L	L1	H	H1	H2	H3
110 kg-1.1 t [250-2500 lb]	ø50 [ø1.97]	ø15 [ø0.59]	66.8 [2.14]	54.3 [2.14]	24.2 [0.95]	9 [0.35]
2.2 t [5000 lb]	ø50 [ø1.97]	ø15 [ø0.59]	66.5 [2.14]	54.3 [2.14]	24.2 [0.95]	9 [0.35]
4.4 t [10,000 lb]	ø70 [ø2.76]	ø15 [ø0.59]	91.2 [3.59]	80 [3.15]	38.5 [1.52]	17 [0.67]

SLB415 Expansion Kit EK mm [inch]

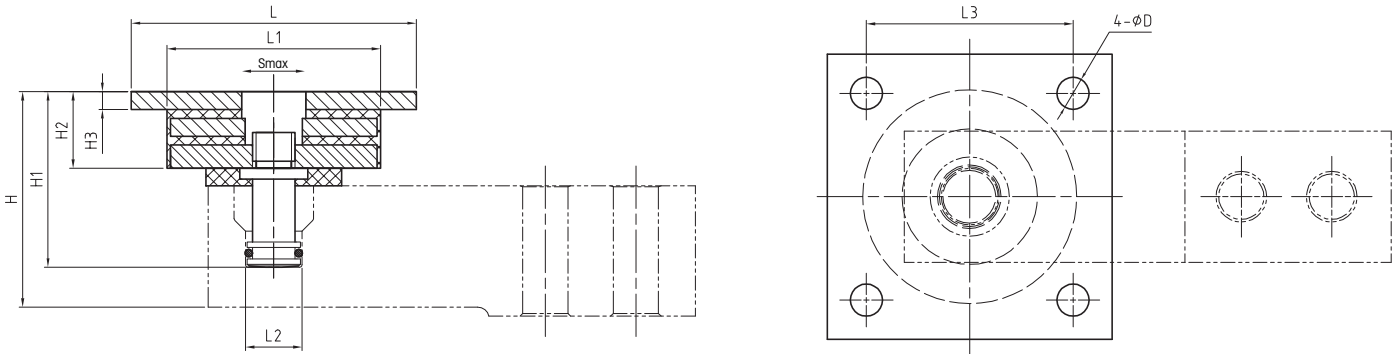


Materials: Stainless steel, Polyethylene foam

Capacity	Dimensions and Locations									
	L	L1	L2	L3	H	H1	H2	H3	Smax*	
110 kg-1.1 t [250-2500 lb]	ø50 [ø1.97]	34 [1.34]	M8	ø15 [ø0.59]	59.6 [2.35]	47.1 [1.85]	24 [0.94]	14 [0.55]	±3 mm [±0.12]	
2.2 t [5000 lb]	ø50 [ø1.97]	34 [1.34]	M8	ø15 [ø0.59]	63.5 [2.50]	52.3 [2.06]	24 [0.94]	14 [0.55]	±3 mm [±0.12]	
4.4 t [10,000 lb]	ø60 [ø2.36]	45 [1.77]	M10	ø21.5 [ø0.85]	73.6 [2.90]	62.4 [2.46]	28 [1.10]	17 [0.67]	±3 mm [±0.12]	

* Max lateral displacement

SLB415 Expansion + Vibration Kit EVK mm [inch]

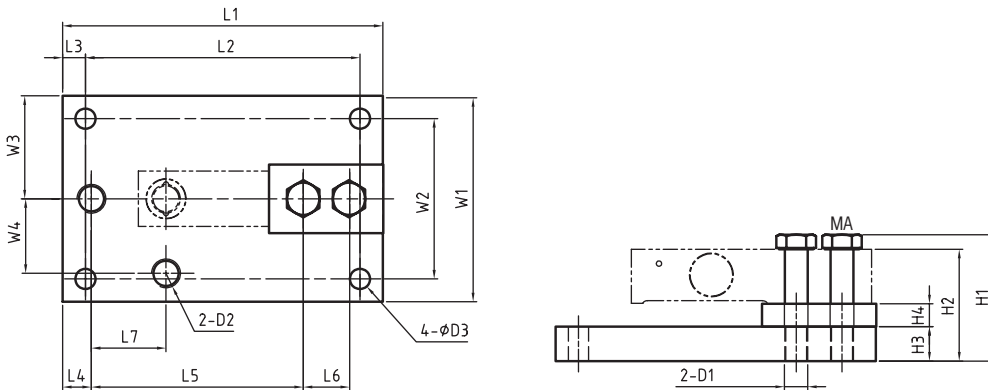


Materials: Stainless steel, NBR 70, Polyethylene foam

Capacity	Dimensions and Locations									
	D	L	L1	L2	L3	H	H1	H2	H3	Smax*
110 kg-1.1 t [250-2500 lb]	ø9 [ø0.35]	ø80 [ø3.15]	ø58 [ø2.28]	ø15 [ø0.59]	58 [2.28]	56.6 [2.23]	44.1 [1.74]	21.5 [0.85]	5 [0.20]	±3 mm [±0.12]
2.2 t [5000 lb]	ø9 [ø0.35]	ø80 [ø3.15]	ø58 [ø2.28]	ø15 [ø0.59]	58 [2.28]	60.5 [2.38]	49.3 [1.94]	21.5 [0.85]	5 [0.20]	±3 mm [±0.12]
4.4 t [10,000 lb]	ø11 [ø0.43]	ø100 [ø3.94]	ø72 [ø2.83]	ø21.5 [ø0.85]	76 [2.99]	75.6 [2.98]	64.4 [2.54]	30 [1.18]	10 [0.39]	±3 mm [±0.12]

* Max lateral displacement

SLB415 Base Plate Kit BPK mm [inch]



Materials: Stainless steel or painted steel

Capacity	Dimensions and Locations											
	L1	L2	L3	L4	L5	L6	L7	W1	W2	W3	W4	
110 kg-1.1 t [250-2500 lb]	177.8 [7]	152.4 [6]	12.7 [0.5]	16.0 [0.63]	117.6 [4.63]	25.4 [1]	41.4 [1.63]	114.3 [4.5]	88.9 [3.5]	57.2 [2.25]	41.4 [1.63]	
2.2 t [5000 lb]	177.8 [7]	152.4 [6]	12.7 [0.5]	16.0 [0.63]	117.6 [4.63]	25.4 [1]	41.4 [1.63]	114.3 [4.5]	88.9 [3.5]	57.2 [2.25]	41.4 [1.63]	
4.4 t [10,000 lb]	235.0 [9.25]	184.2 [7.25]	25.4 [1]	22.4 [0.88]	149.4 [5.88]	38.1 [1.5]	54.1 [2.13]	152.4 [6]	101.6 [4]	76.2 [3]	54.1 [2.13]	

Capacity	Dimensions and Locations									
	H1	H2	H3	H4	D1	D2	D3	MA cs ¹⁾	MA ss ²⁾	
110 kg-1.1 t [250-2500 lb]	70.2 [2.76]	62.0 [2.44]	19.1 [0.75]	12.7 [0.5]	M12	M16	11.2 [0.44]	136 Nm [100 lb-ft]	100 Nm [75 lb-ft]	
2.2 t [5000 lb]	76.5 [3.01]	68.4 [2.96]	19.1 [0.75]	12.7 [0.5]	M12	M16	11.2 [0.44]	136 Nm [100 lb-ft]	100 Nm [75 lb-ft]	
4.4 t [10,000 lb]	99.6 [3.92]	87.4 [3.44]	25.4 [1]	19.1 [0.75]	M18	M18	17.5 [0.69]	340 Nm [250 lb-ft]	270 Nm [200 lb-ft]	

1) Torque carbon steel version 2) Torque stainless steel version

SLB415 Load Cell Order Information

Description		Item No.
Load cell, model no.	SLB415-110kg (250lb) C3 5m (16.4ft) Ex	72260663
Load cell, model no.	SLB415-110kg (250lb) C3 10m (32.8ft) Ex	30088789
Load cell, model no.	SLB415-220kg (500lb) C3 5m (16.4ft) Ex	72260669
Load cell, model no.	SLB415-220kg (500lb) C3 10m (32.8ft) Ex	30088790
Load cell, model no.	SLB415-550kg (1250lb) C3 5m (16.4ft) Ex	72260687
Load cell, model no.	SLB415-550kg (1250lb) C3 10m (32.8ft) Ex	30088791
Load cell, model no.	SLB415-1.1t (2500lb) C3 5m (16.4ft) Ex	72260693
Load cell, model no.	SLB415-1.1t (2500lb) C3 10m (32.8ft) Ex	30088792
Load cell, model no.	SLB415-2.2t (5000lb) C3 5m (16.4ft) Ex	72260681
Load cell, model no.	SLB415-2.2t (5000lb) C3 10m (32.8ft) Ex	30088793
Load cell, model no.	SLB415-4.4t (10000lb) C3 5m (16.4ft) Ex	72260656
Load cell, model no.	SLB415-4.4t (10000lb) C3 10m (32.8ft) Ex	30088795

Options

Base Plate Kit BPK	Carbon Steel 110kg-1.1t (250-2500lb)	72208664
Base Plate Kit BPK	Carbon Steel 2.2t (5000lb)	72209167
Base Plate Kit BPK	Carbon Steel 4.4t (1000lb)	72208665
Expansion Kit EK	Stainless Steel 110kg-2.2t (250-5000lb)	72208662
Expansion Kit EK	Stainless Steel 4.4t (10000lb)	72208663
Expansion+Vibr Kit EVK	Stainless Steel 110kg-2.2t (250-5000lb)	72208670
Expansion+Vibr Kit EVK	Stainless Steel 4.4t (10000lb)	72208671
Foot Kit FTK	Stainless Steel 110kg-2.2t (250-5000lb)	72208674
Foot Kit FTK	Stainless Steel 4.4t (10000lb)	72208675

Bolded entries are stocked

SLB415 Load Cell Cable Colours

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

* Connected to Spring Element



Weighing Electronics

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