

2960-2962-2965

LOW PROFILE (PANCAKE) LOAD CELLS

Universal tension and compression load cells for industrial force measurements.



Features

- Flat design
- High stiffness – Low deflection
- Highly resistant to transverse forces
- Protection IP 66
- Complete range of mounting accessories available
- Material : stainless steel (2960), aluminium (2962), alloy steel (2965)
- Cable length : See drawing's table (CL)
- Fatigue resistant

Available options (non exhaustive list)



Ex i

Applications

The load cells 2960-2962-2965 are perfectly designed to the following applications :

- Force measurement on machines, industrial process control, fatigue tests

Capacities

2962 : (3) - 5 - 7.5 kN

2960 - 2965 : 10 - (15) - 20 - (30) - 50 - (75) - 100 - 150 - 200 - 300 - 500 - (750) - 1.000 - 2.000 - 3.000 kN

Specifications

	0.25 %	0.1 %	
Accuracy class	0.25 % F.S.*	0.1% F.S.*	-
Combined error (Non linearity + hysteresis)	< ± 0.25	< ± 0.1	% F.S.*
Linearity error	< ± 0.25	< ± 0.1	% F.S.*
Repeatability error	< ± 0.1	< ± 0.03	% F.S.*
Creep error over 30 min.	< ± 0.1	< ± 0.06	% F.S.*
Reference temperature	23	23	°C
Nominal temperature range	-10...+45	-10...+45	°C
Service temperature range	-25...+70	-25...+70	°C
Storage temperature range	-50...+85	-50...+85	°C
Temperature coefficient of the sensitivity	< ± 0.05	< ± 0.05	% F.S.* / 10°C
Temperature coefficient of zero signal	< ± 0.035	< ± 0.035	% F.S.* / 10°C
Sensitivity tolerance	< ± 0.3	< ± 0.3	%
Insulation resistance (50V)	> 5000	> 5000	Megaohm
Reference excitation voltage	10	10	VDC
Nominal range of excitation voltage	3..12	3..12	VDC
Nominal sensitivity	2	2	mV/V
Safe load limit	150	150	% F.S.*
Breaking load	>300	>300	% F.S.*
Static lateral force limit	50	50	% F.S.*
Permissible dynamic loading	70	70	% F.S.*
Input resistance	702 ± 2	702 ± 2	Ohm
Output resistance	702 ± 2	702 ± 2	Ohm

* F.S.: full scale.

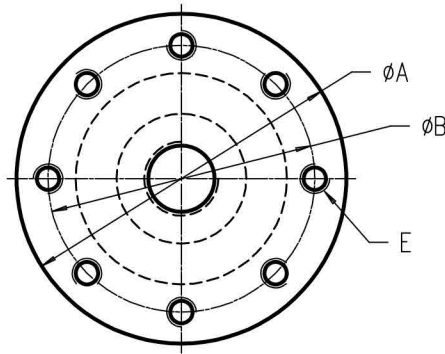
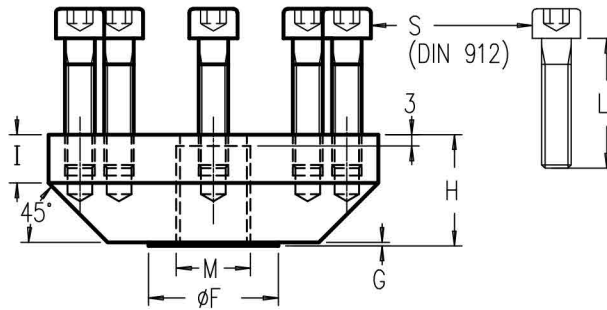
Specifications subject to change without notice.

ACCESSORIES

model T2960 stainless steel
 model T2962 aluminium
 model T2965 alloy steel

BASES FOR TENSION – COMPRESSION

Range 3 kN – 1 MN



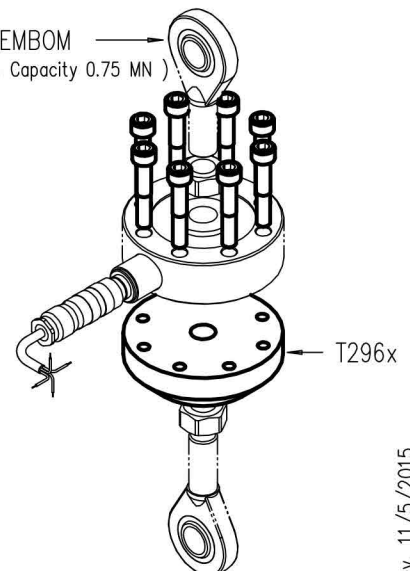
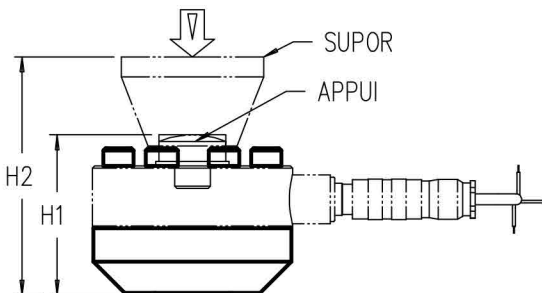
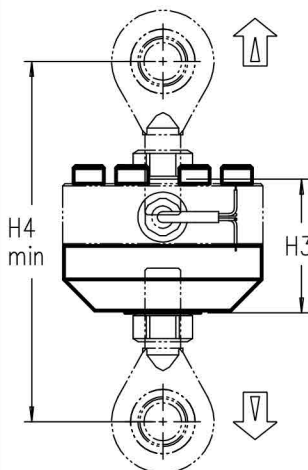
MODEL	CAPACITIES	ØA	ØB	E	ØF	G	I	S	M	H	H1	H2	H3	H4	Torque (N.m)	Weight (kg)
T2962	3 – 7.5 kN	89	72	8 x M8	25	1	13	8xM8 L=35	M16	30	70	105	58	143	15 (M8)	0.57
	10 – 50 kN				35				M20x1.5			109		160	40 (M8)	1.19
T2960 T2965	75 – 100 kN	149	125	8x M12	52		20	8xM12 L=50	M30x2	46	99.5	140.5	84.5	225	130 (M12)	5.25
	150 – 200 kN	178	145	8x M16	70		23	8xM16 L=70	M36x3	50	120	160	100	285	320 (M16)	8.7
	300 – 500 kN	198	172	16xM16	115		35	16xM16 L=80	M60x4	65	157	219	130	455	320 (M16)	14.5
	0.75 – 1 MN	279	229	16xM24	162		36	16xM24 L=100	M64x4*	75	172	247	145	550	1000 (M24)	35.5

(* M90x4 on request)

Fastener quality 10.9 or 12.9

(Max. Capacity for rod ends M64x4 : 0.75 MN
 No Rod ends Available in M90x4)

EMBOM
 (Maximum Capacity 0.75 MN)



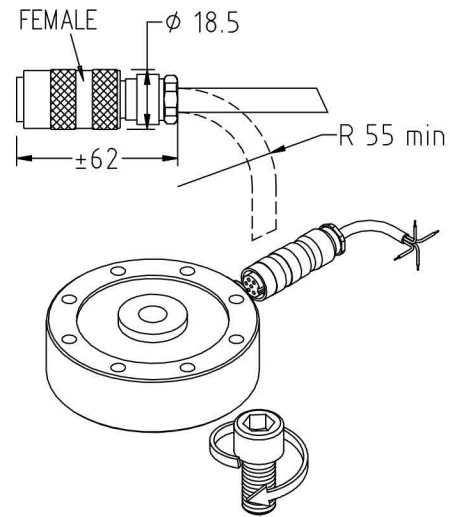
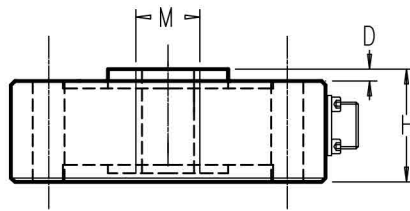
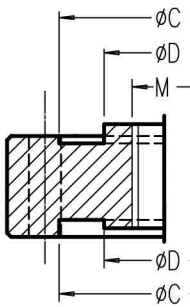
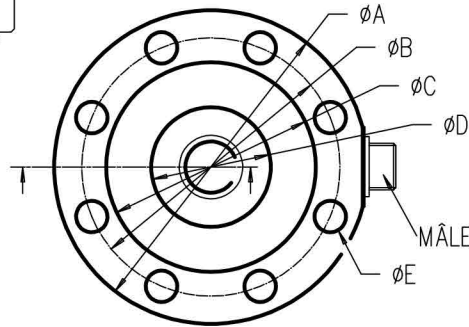
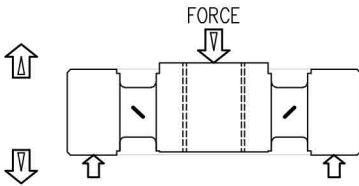
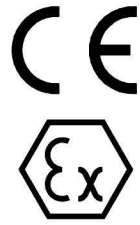
LOAD CELLS

model 2960 stainless steel
 model 2962 aluminium
 model 2965 alloy steel

TENSION-COMPRESSION

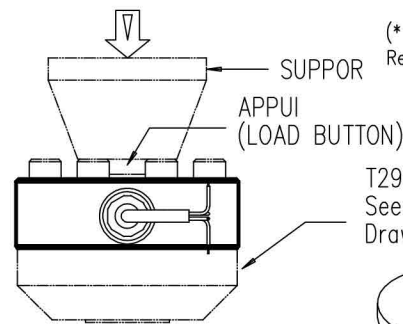
Range 3 kN – 3 MN IP66
 (0.3 – 300 t.)

Cable length : see table (CL)



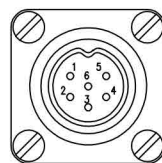
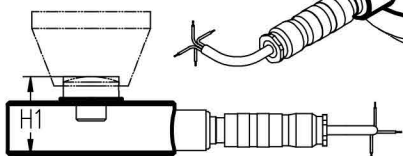
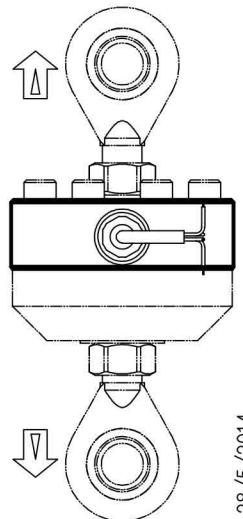
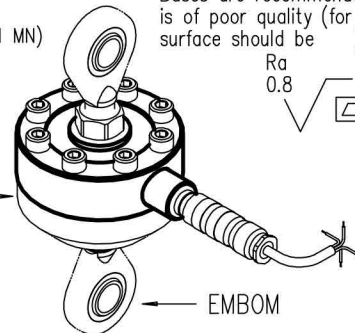
Fastener quality 10.9 or 12.9

MODEL	CAPACITIES	ϕA	ϕB	ϕC	ϕD	ϕE	M	H	D	CL(m)	H1	Max.Deflexion	Torque (N.m)	Weight
2962	3 – 7.5 kN	89	72	59	33	8x ϕ 8.2	M16	28		3	40	0.05 mm	15 (M8)	0.3kg.
	10 – 50 kN						M20x1.5					0.04 mm	40 (M8)	0.9kg.
2960 2965	75 – 100 kN	149	125	106	46	8x ϕ 12.5	M30x2	38.5		6	53.5	0.05 mm	130 (M12)	3.5kg.
	150 – 200 kN	178	145	115	69	8x ϕ 16.5	M36x3	50			70	0.06 mm	320 (M16)	7 kg.
	300 – 500 kN	198	172	140	90	16x ϕ 16.5	M60x4	65	3	12	92	0.07 mm	320 (M16)	12kg
	0.75 – 1 MN	279	229	180	120	16x ϕ 24.5	M64x4*	70			97	0.08 mm	1000 (M24)	28kg
	3 MN	390	335	280	195	24x ϕ 24.5	M125x4*	130			7	/	0.15 mm	1000 (M24)



(* M90x4 on request
 Ref : 2960(5)M-0.75-1 MN)

Bases are recommended mainly if mating surface is of poor quality (for direct mounting, surface should be $Ra 0.8$)



CONTACT N°
 1 Excitation - Yellow
 2 Signal + Green
 3 Signal - White
 4 Excitation + Brown
 5 Sense - Grey
 6 Sense + Pink

Cable screen not connected to transducer