

2960-2962  
-2965

## LOW PROFILE (PANCAKE) LOAD CELLS

Universal tension and compression load cells for industrial force measurements.

- Flat design
- High stiffness – Low deflection
- Insensitive to transverse forces and torques
- Protection IP 66
- Complete range of mounting accessories available
- Available options (non exhaustive list):
  - o High service temperature (180 °C)
  - o Fatigue resistant
  - o Amplified output (V or mA)
  - o ATEX Ex ia IIC T6 to T4 certified (hazardous area)
- Material :
  - o Stainless steel (2960)
  - o Aluminium (2962)
  - o Alloy steel (2965)



Model 2960 - 100 kN

The SENSY's 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 kN  
 (Higher capacities on request up to 3000 kN)

TECHNICAL DATA				
Accuracy class	%	0.25	0.1	0.03 (2962 seult)
Linearity error	% F.S.	< ± 0.25	< ± 0.1	< ± 0.03
Hysteresis error	% F.S.	< ± 0.25	< ± 0.1	< ± 0.03
Non - repeatability	% F.S.	< ± 0.1	< ± 0.03	< ± 0.015
Creep error over 30 min.	% F.S.	< ± 0.1	< ± 0.06	< ± 0.02
Zero shift after loading	% F.S.	< ± 0.025	< ± 0.015	< ± 0.005
Reference temperature	°C	23	23	23
Nominal temperature range	°C	- 10...+ 45	- 10...+ 45	- 10...+ 45
Service temperature range	°C	- 30...+ 70	- 30...+ 70	- 30...+ 70
Storage temperature range	°C	- 50...+ 85	- 50...+ 85	- 50...+ 85
Temperature coefficient of the sensitivity	%/10°C	< ± 0.05	< ± 0.05	< ± 0.02
Temperature coefficient of zero signal	% F.S./10°C	< ± 0.035	< ± 0.035	< ± 0.013
Nominal sensitivity	mV/V	2	2	2
Zero balance	mV/V	± 0.02	± 0.02	± 0.02
Sensitivity tolerance (g=9,8107 m/s <sup>2</sup> )	%	< ± 0.3	< ± 0.3	< ± 0.1
Input / Output resistance	Ohm	702 ± 20	700 ± 2	700 ± 2
Insulation resistance (50V)	MOhm	> 5000	> 5000	> 5000
Nominal excitation voltage	V	5 to 10	5 to 10	5 to 10
Nominal range of the excitation voltage	V	2...15	2...15	2...15
Safe load limit	% F.S.	150	150	150
Breaking load	% F.S.	> 300	> 300	> 300
Static lateral force limit	% F.S.	50	50	50
Permissible dynamic loading	% F.S.	50	50	50

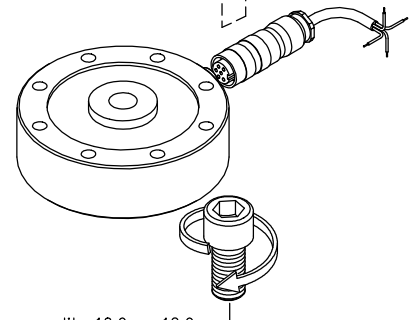
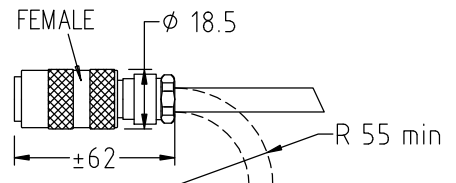
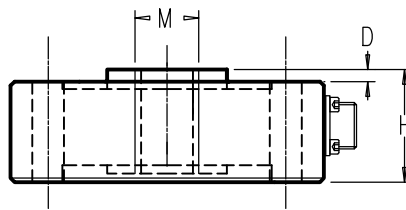
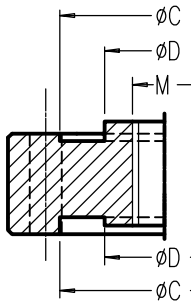
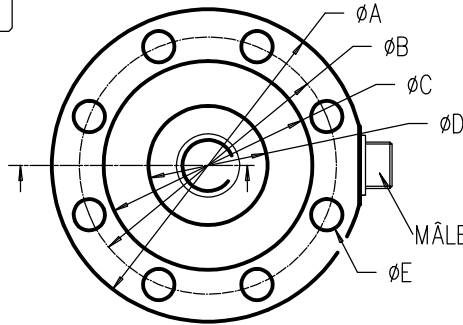
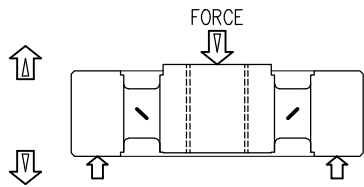
F.S.: full scale Specifications subject to change without notice

## LOAD CELLS

model 2960 stainless steel  
 model 2962 aluminium  
 model 2965 alloy steel

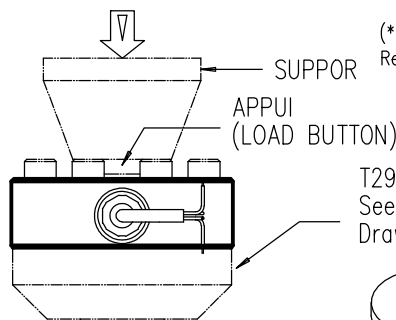
### TENSION-COMPRESSION

Range 3 kN - 1 MN IP66  
 (0.3 - 100 t.)  
 Cable length : see table (CL)



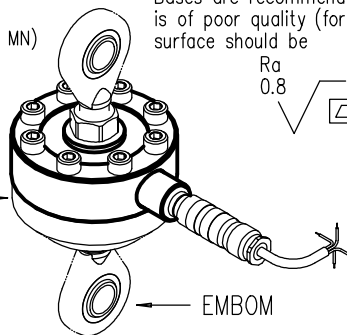
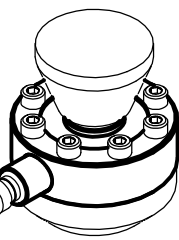
Fastener quality 10.9 or 12.9

MODEL	CAPACITIES	ØA	ØB	ØC	ØD	ØE	M	H	D	CL(m)	H1	Max.Deflexion	Torque (N.m)	Weight
2962	3 - 7.5 kN	89	72	59	33	8xØ8.2	M16	28	2	3	40	0.05 mm	15 (M8)	0.3kg.
	M20x1.5						0.04 mm					40 (M8)	0.9kg.	
2960 2965	75 - 100 kN	149	125	106	46	8xØ12.5	M30x2	38.5	6	6	53.5	0.05 mm	130 (M12)	3.5kg.
	150 - 200 kN	178	145	115	69	8xØ16.5	M36x3	50			70	0.06 mm	320 (M16)	7 kg.
	300 - 500 kN	198	172	140	90	16xØ16.5	M60x4	65	3	12	92	0.07 mm	320 (M16)	12kg
	0.75 - 1 MN	279	229	180	120	16xØ24.5	M64x4*	70			97	0.08 mm	1000 (M24)	28kg
	3 MN	390	320	280	195	24xØ24.5	M125x4*	130			7	/	0.15 mm	1000 (M24)

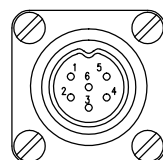
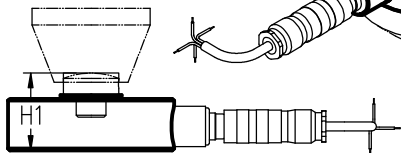
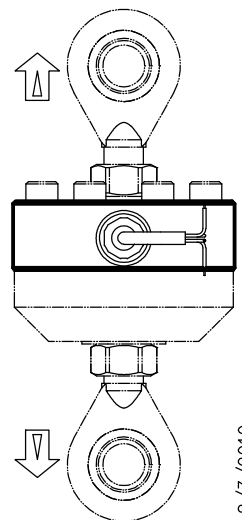


(\* M90x4 on request  
 Ref : 2960(5)M-0.75-1 MN)

T2960  
 See (ask for  
 Drawing T2960



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

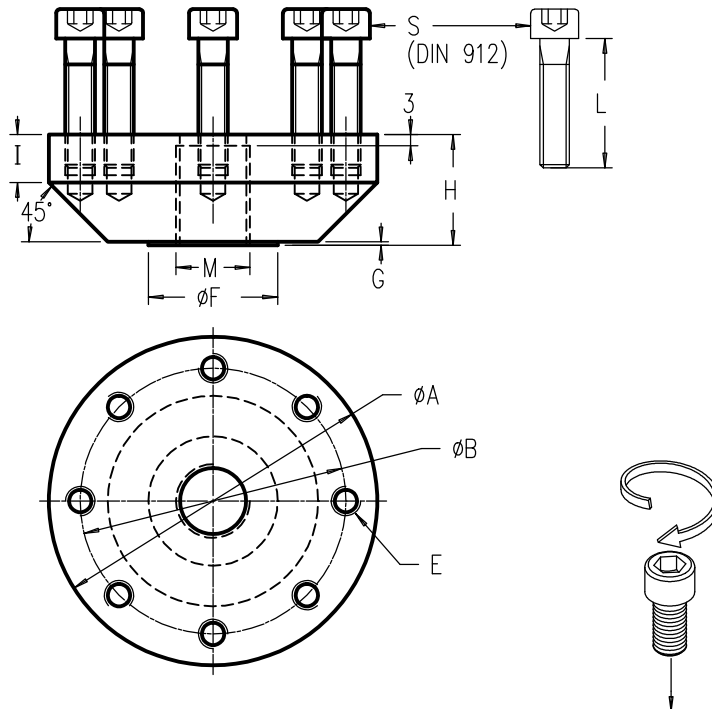
Cable screen not connected to transducer

## 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
	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

