

5100-5105

TENSION AND COMPRESSION LOAD CELLS (VERY HIGHS CAPACITIES)

Universal load cells combining accuracy, sturdiness and easiness to install.

- Wide range of capacities : 10 kN (1 t) up to 30 MN (3000 t)
- Easy to install, compact design
- Protection IP 66
- Material : Stainless steel (5100), Nickel plated steel (5105)
- Available options (non exhaustive list):
 - o High service temperature (180 °C)
 - o ATEX Ex ia IIC T6 to T4 certified (hazardous area)
 - o 0..10 V or 4..20 mA output signal
- Also available as standard reference load cells following ISO 376 (EN10002/3) (Class "0.5" and "00") (see specific data sheet)



Model 5105 - 500 kN

The SENSY's load cells 5100-5105 are perfectly designed to the following applications :

- Industrial force measurement
- Force measuring on test bench
- Weighing of hanging load

CAPACITIES :

5100 - 5105 : (10) - (15) - 20 - 30 - 50 - (75) - 100 - (150) - 200 - 300 - 500 kN
(0.75) - 1 - 1,5 - 2 - 3 - 5 - 7.5 - 10 - 15 - 20 - 30 MN

TECHNICAL DATA					
Accuracy class		0.25	0.1 1000 d	0.05 2000 d	0.03 3000 d
Linearity error	% F.S.	< ± 0.25	< ± 0.1	< ± 0.05	< ± 0.025
Hysteresis error	% F.S.	< ± 0.25	< ± 0.1	< ± 0.05	< ± 0.025
Non - repeatability	% F.S.	< ± 0.1	< ± 0.03	< ± 0.02	< ± 0.015
Creep error over 30 min.	% F.S.	< ± 0.1	< ± 0.06	< ± 0.04	< ± 0.025
Zero shift after loading	% F.S.	< ± 0.025	< ± 0.015	< ± 0.01	< ± 0.0075
Reference temperature	°C	23	23	23	23
Nominal temperature range	°C	- 10...+ 45	- 10...+ 45	- 10...+ 45	- 10...+ 45
Service temperature range	°C	- 30...+ 70	- 30...+ 70	- 30...+ 70	- 30...+ 70
Storage temperature range	°C	- 50...+ 85	- 50...+ 85	- 50...+ 85	- 50...+ 85
Temperature coefficient of the sensitivity	%/10°C	< ± 0.05	< ± 0.05	< ± 0.035	< ± 0.015
Temperature coefficient of zero signal	% F.S./10°C	< ± 0.035	< ± 0.035	< ± 0.03	< ± 0.023
Nominal sensitivity	mVV	1,5 (2 option)			
Zero balance	mVV	± 0.02	± 0.02	± 0.02	± 0.02
Sensitivity tolerance (g=9,8107 m/s²)	%	< ± 0.3	< ± 0.3	< ± 0.3	< ± 0.1
Input / Output resistance	Ohm	351 ± 2	351 ± 2	351 ± 2	702 ± 3
Insulation resistance (50V)	MOhm	> 5000	> 5000	> 5000	> 5000
Nominal excitation voltage	V	5 to 10	5 to 10	5 to 10	5 to 10
Nominal range of the excitation voltage	V	2...15	2...15	2...15	2...15
Safe load limit	% F.S.	150	150	150	150
Breaking load	% F.S.	300	> 300	> 300	> 300
Static lateral force limit	% F.S.	10	10	10	10
Permissible dynamic loading	% F.S.	50	50	50	50

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

LOAD CELLS

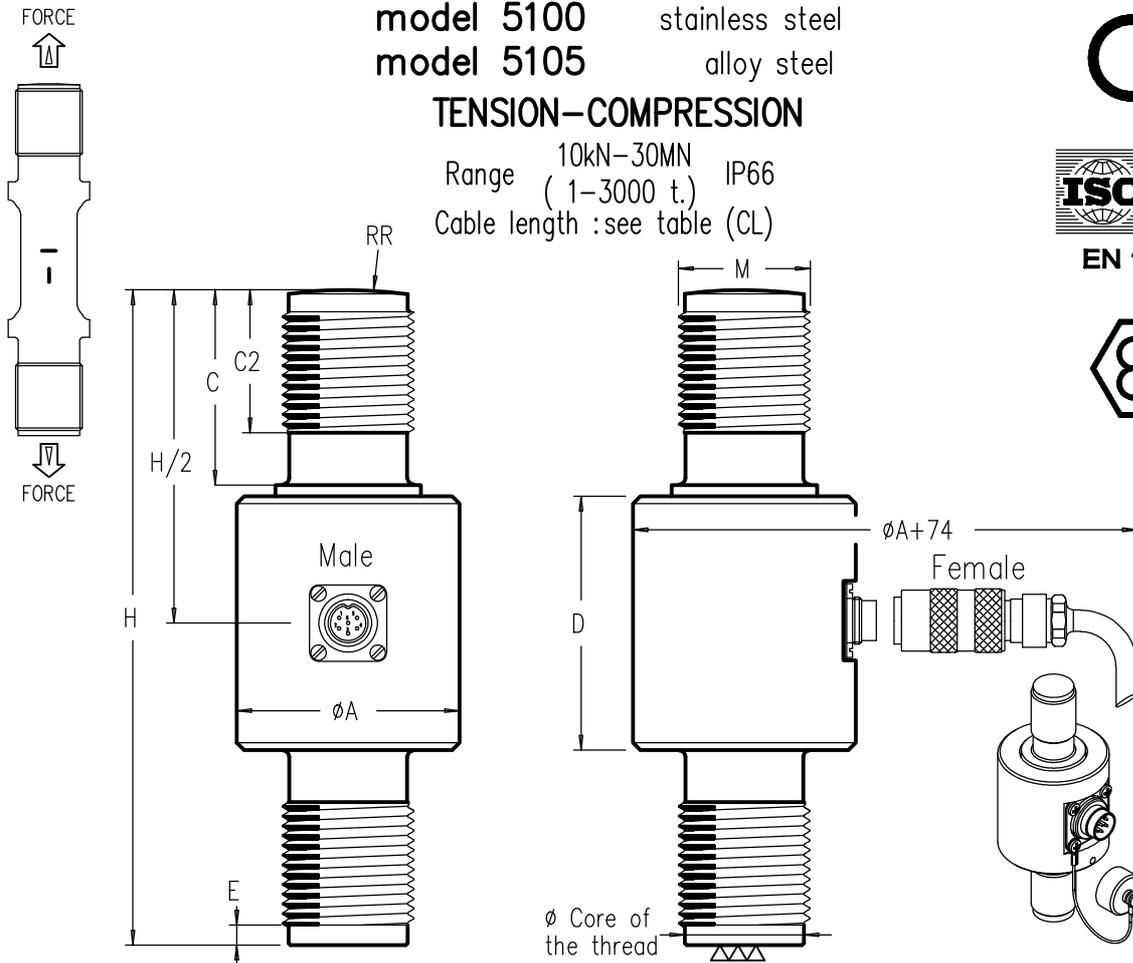
model 5100 stainless steel
 model 5105 alloy steel

TENSION-COMPRESSION

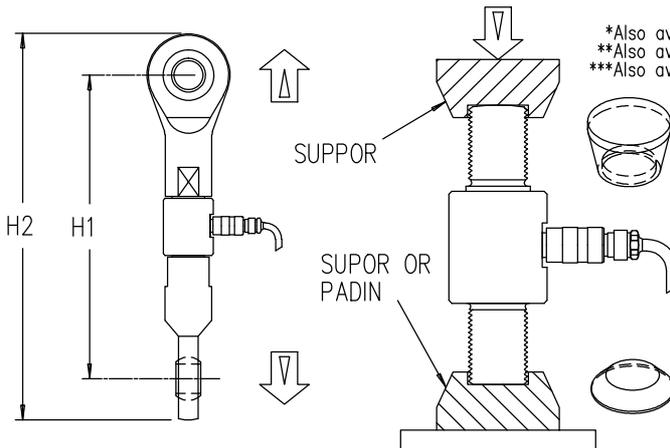
Range 10kN-30MN IP66
 (1-3000 t.)
 Cable length :see table (CL)



EN 10002

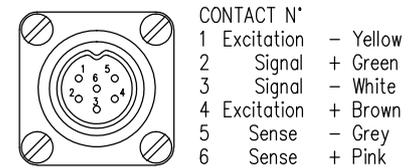


CAPACITIES	ϕA	C	C2	D	E	H	RR	CL	M	H1	H2	Max.Deflexion	Weight	R Input
10 - 50 kN	50	36	26	47	3	125	75	3 m	M24x2	245	307	0.02-0.08 mm	0.8 kg	$\pm 350 \Omega$
75 -100 kN	60	48	35	73	3	170	80	3 m	M30x2	320	402	0.13-0.15 mm	1.9 kg	$\pm 350 \Omega$ (0.25,0.1%)
150-200 kN	75	49	44	87	4	190	350	6 m	*M45x3	398	510	0.14-0.16 mm	3.65 kg	$\pm 700 \Omega$
300-500 kN	88.5	69	65	119	5	265	400	6 m	M64x4	560	740	0.19-0.25 mm	9.8 kg	(0.05%,0.03% or cl 1,cl 0.5,cl 00 to ISO 376)
0.75-1.5 MN	111	95	85	145	5	340	400	6 m	**M90x4	/	/	0.30-0.42 mm	21 kg	$\pm 700 \Omega$
2 - 3 MN	150	128	128	165	7	430	600	6 m	***M125x4	/	/	0.35-0.65 mm	38 kg	
5 MN	180	162	158	180	8	520	800	6 m	M160x6	/	/	0.73 mm	87 kg	
7.5- 10 MN	220	185	185	210	10	590	1000	6 m	M200x6	/	/	0.83 mm	151 kg	
15 MN	280	230	230	230	10	710	1200	12m	M250x6	/	/	1 mm	280 kg	
20 MN	360	300	300	240	12	860	1500	12m	M330x6	/	/	1.2 mm	590 kg	
30 MN	390	330	330	250	13	930	1500	12m	M360x6	/	/	1.6 mm	760 kg	



*Also available in M42x3
 **Also available in M64x4 from 0.75-1MN
 ***Also available in M110x4

FEMALE-MALE CONNECTOR DIN 45322



Standard : Cable screen not connected to transducer
 Option f : Cable screen connected to transducer