

5100-5105

TENSION AND COMPRESSION LOAD CELLS (VERY HIGH CAPACITIES)

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

Model 5105 - 500 kN



Features

- Wide range of capacities : 10 kN (1 t) up to 50 MN (5000 t)
- Easy to install, compact design
- Protection IP 66
- Material : Stainless steel (5100), Nickel plated steel (5105)
- Cable length: See drawing's table (CL)
- Also available as standard reference load cells following ISO 376 (EN10002/3) (Class "0.5" and "00") (see specific data sheet)

Available options (non exhaustive list)



Ex i



Applications

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 - 50 MN

Specifications	0.25 %	0.1 %	0.05 %	0.03 %	
Accuracy class	0.25 % F.S.*	0.1 % F.S.*	0.05 % F.S.*	0.03 % F.S.*	-
Combined error (Non linearity + hysteresis)	< ± 0.25	< ± 0.1	< ± 0.05	< ± 0.03	% F.S.*
Linearity error	< ± 0.25	< ± 0.1	< ± 0.04	< ± 0.025	% F.S.*
Repeatability error	< ± 0.1	< ± 0.03	< ± 0.02	< ± 0.015	% F.S.*
Creep error over 30 min.	< ± 0.1	< ± 0.06	< ± 0.04	< ± 0.025	% F.S.*
Zero shift after loading	< ± 0.025	< ± 0.015	< ± 0.01	< ± 0.0075	% F.S.*
Reference temperature	23	23	23	23	°C
Nominal temperature range	-10...+45	-10...+45	-10...+45	-10...+45	°C
Service temperature range	-25...+70	-25...+70	-25...+70	-25...+70	°C
Storage temperature range	-50...+85	-50...+85	-50...+85	-50...+85	°C
Temperature coefficient of the sensitivity	< ± 0.05	< ± 0.05	< ± 0.035	< ± 0.015	% F.S./10°C
Temperature coefficient of zero signal	< ± 0.035	< ± 0.035	< ± 0.03	< ± 0.023	% F.S./10°C
Zero balance	± 0.02	± 0.02	± 0.02	± 0.02	mV/V
Sensitivity tolerance	< ± 0.3	< ± 0.3	< ± 0.3	< ± 0.2	%
Input resistance	352 ± 2	352 ± 2	352 ± 2	352 ± 2	Ohm
Output resistance	352 ± 2	352 ± 2	352 ± 2	352 ± 2	Ohm
Insulation resistance (50V)	> 5000	> 5000	> 5000	> 5000	Megaohm
Reference excitation voltage	10	10	10	10	VDC
Nominal range of excitation voltage	3..12	3..12	3..12	3..12	VDC

* F.S.: full scale.

Specifications subject to change without notice.

LOAD CELLS

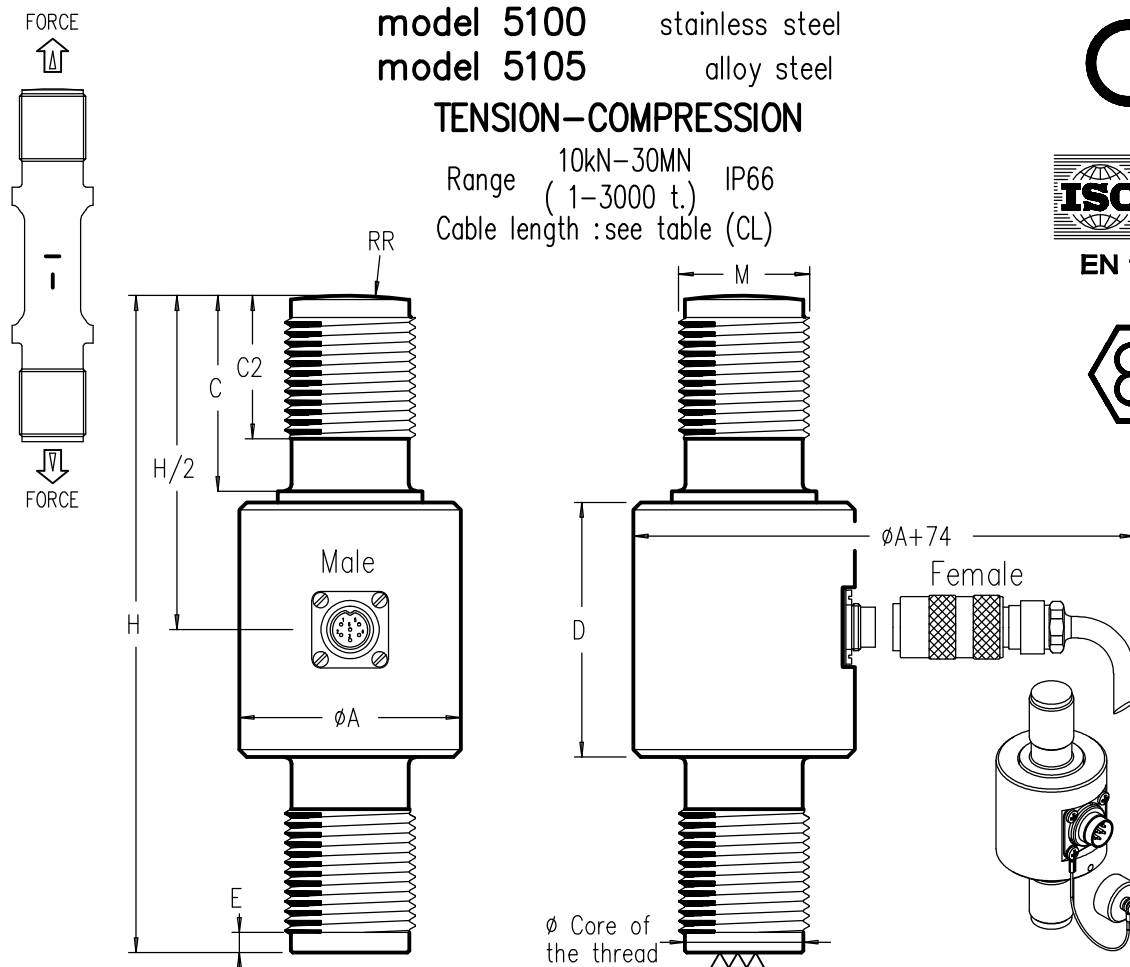
model 5100 stainless steel
model 5105 alloy steel

TENSION-COMPRESSION

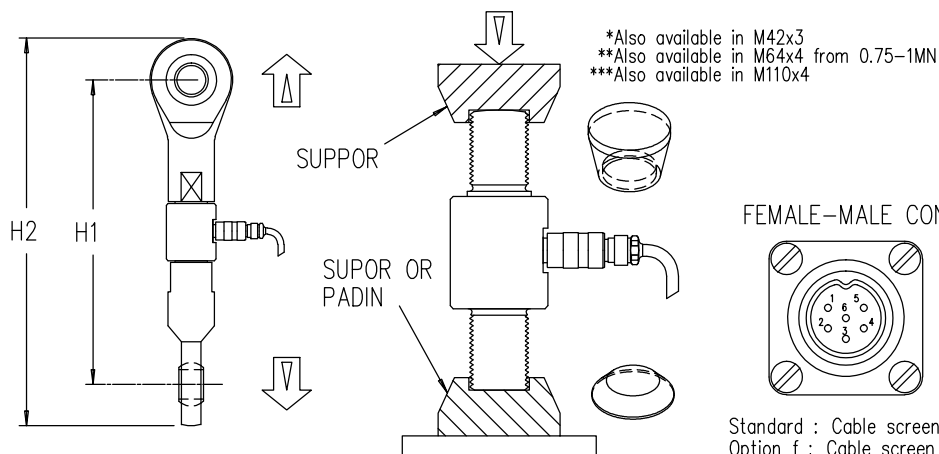
Range 10kN-30MN
(1-3000 t.) IP66
Cable length :see table (CL)



EN 10002



CAPACITIES	ØA	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	±350 Ω
75 -100 kN	60	48	35	73	3	170	80	3 m	M30x2	320	402	0.13-0.15 mm	1.9 kg	±350 Ω
150-200 kN	75	49	44	87	4	190	350	6 m	*M45x3	398	510	0.14-0.16 mm	3.65 kg	(0.25,0.1%)
300-500 kN	88.5	69	65	119	5	265	400	6 m	M64x4	560	740	0.19-0.25 mm	9.8 kg	±700 Ω
0.75-1.5 MN	111	95	85	145	5	340	400	6 m	**M90x4	/	/	0.30-0.42 mm	21 kg	(0.05%,0.03% or
2 - 3 MN	150	128	128	165	7	430	600	6 m	***M125x4	/	/	0.35-0.65 mm	38 kg	cl 1,cl 0.5,cl 00
5 MN	180	162	158	180	8	520	800	6 m	M160x6	/	/	0.73 mm	87 kg	to ISO 376
7.5- 10 MN	220	185	185	210	10	590	1000	6 m	M200x6	/	/	0.83 mm	151 kg	±700 Ω
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

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

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