

**5100-5105**

## HIGH CAPACITY TENSION/COMPRESSION LOAD CELLS (STANDARD REFERENCE FORCE TRANSDUCER)

- Very high capacity compression and / or tension Standard reference load cells
- Protection from IP 66 to IP 68
- Manufactured following ISO 376 and EN10002-3 norms (Class "0,5" and "00")
- High output signal version in option
- Redundant dual Wheatstone Bridge in option
- EEx ia II C T4/T6 available version for use in hazardous area
- A complete range of mounting accessories is proposed
- Available in high temperature version execution
- Material :
  - Stainless steel (5100)
  - Alloy steel (5105)



Model 5105 – 500 kN

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

- Official calibration purpose
- Industrial process control (ISO 9000...)
- Calibration of testing machines
- Standard calibration of load cells

### AVAILABLE 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	mV/V	1,5 (2 option)			
Zero balance	mV/V	± 0.02	± 0.02	± 0.02	± 0.02
Sensitivity tolerance (g=9,8107 m/s <sup>2</sup> )	%	< ± 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

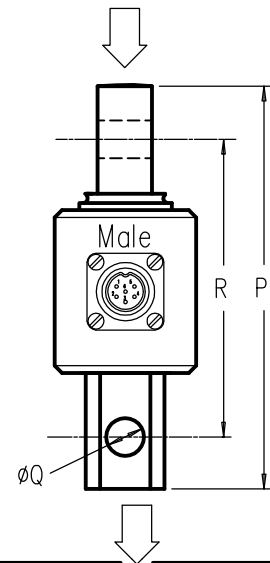
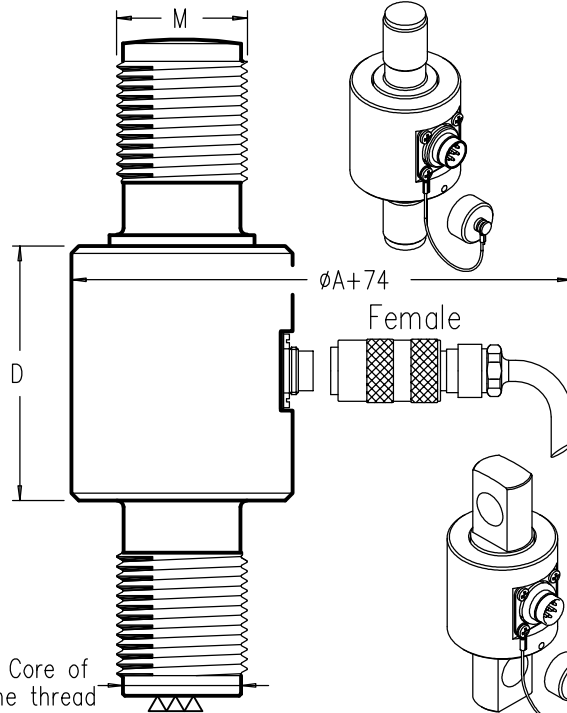
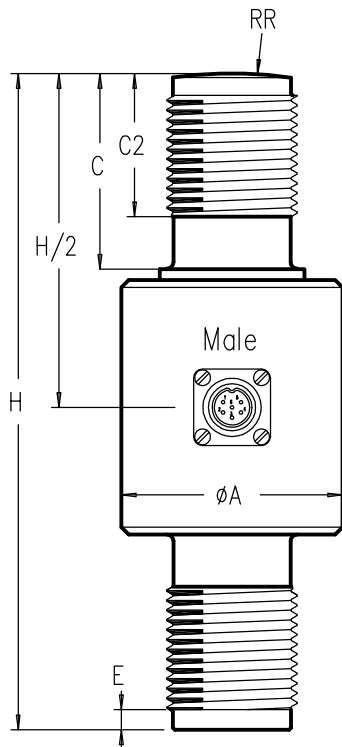
### TENSION-COMPRESSION

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



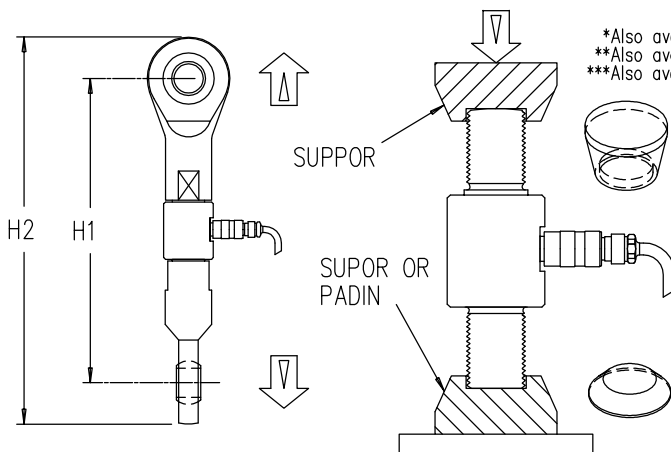
EN 10002

MODEL  
5100L  
5105L



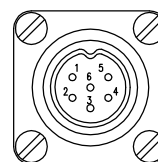
CAPACITIES	øA	C	C2	D	E	H	RR	CL	M	H1	H2	Max.Deflexion	R Input
10 - 50 kN	50	36	26	47	3	125	75	3 m	M24x2	245	307	0.02-0.08 mm	±350 Ω
75 -100 kN	60	48	35	73	3	170	80	3 m	M30x2	320	402	0.13-0.15 mm	±350 Ω (0.25,0.1%) ±700 Ω
150-200 kN	75	49	44	87	4	190	350	6 m	*M45x3	398	510	0.14-0.16 mm	(0.05%,0.03% or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

CAPACIT.	P	CL	øQ	R
2 - 3 t.	144	3 m	18	108
5 t.	160	3 m	24	112
7.5-10 t	240	3 m	35	170
15 -20 t	310	6 m	42	226
30 -50 t	430	6 m	58	290
75 -100t	520	12 m	80	348



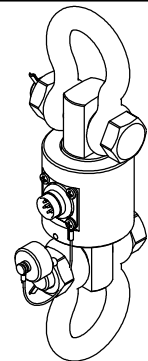
\*Also available in M42x3  
 \*\*Also available in M64x4 from 0.75-1MN  
 \*\*\*Also available in M110x4

#### 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



Rev.2/3/2004