

TENSION LOAD CELL NOT IN USE FOR HOISTING

MODEL 5205-FORC (alloy steel / nickel plated steel)
MODEL 5200-FORC (stainless steel)



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APPENDIXES:

- Control + diagnostic data sheet
- Drawing

1. OPERATING CONDITIONS OF MODEL 5205-FORC (5200-FORC)

1.1. Mounting

1. The 5205-FORC (5200-FORC) has to be used in the defined conditions of its technical data and following the described conditions.
2. The applied load has to be on the axle in accordance with the preferential direction of $\pm 3^\circ$ shown by the arrow.
3. The 5205-FORC (5200-FORC) should only work in tension. It should not normally be subject to parasitic constraints such as: torsion, flexion, radial forces. It is therefore necessary to uncouple efforts by an appropriate mounting (ex: use of cables, eye hooks, shackles, chains).

Load cell's setting cannot be done using force or by giving violent shocks. Nevertheless, you can use a wooden mallet to ensure the adjustment.

4. Only the length of cable delivered with the load cell can be used; although this cable can be shortened. Otherwise, sensitivity may be different. Please contact us. It's commissioning technician job alone to connect the load cell to its electronic device according to the color codes defined on the form of the load cell and according to the specifications equivalent to the electronics used. The commissioning technician will ensure cable's integrity of the after mounting on site. All damage to this cable or one of the conductors will necessitate its replacement by SENSY.
5. A written agreement from the manufacturer is necessary for particular conditions of use.

1.2. Use

1. This 5205-FORC (5200-FORC) load cell is designed to take an occasional static overload, up to 1.5x the Nominal Load without getting damaged. In no case, can a superior overload (static or dynamic) be accepted.
2. The handled load has to be free and adapted to the nominal load of the system :
 - no anchorage to the ground or to a support;
 - no collision with another load or structure;
 - no jamming;
 - no shock produced by another load falling on the handled load.
3. The load cell should not undergo shocks linked to the conditions of use: case of a balancing beam crashing against winch's frame in the swing of the pulley block.

1.3. Periodic inspections

1. Check output for zero load (Annually)

Option	Max. acceptable	Min acceptable	
(mV/V / 4 wires)	0.15mV/V	-0.15mV/V	
Option C- (4-20mA / 2 wires)	6mA	3mA	
Option J- (4-20mA / 3 wires)	6mA	3mA	
Option T-	(0- 5V / 3 wires)	0.8V	0V
	(0- 10V / 3 wires)	0.8V	0V
	(1-5V / 3 wires)	1.5V	0.5V
	(1 -10V / 3 wires)	1.5V	0.5V
	(-10 / 0 / + 10V)	+1.5V	-1.5V

2. Make sure that the load cell has not been knocked (markings) or chemically attacked (some corrosive greases). If point 1 is not accounted for, just take preventive measures. (Annually)
3. In case of doubt, answer the diagnostic questionnaire provided with the individual form of the load cell, join and consult the constructor.
4. Check cable's integrity.
5. After any serious functioning incident, repeat operations 1 to 3.

1.4. Calibration

If it's not possible to hoist the nominal load for calibration, hoist at least 50% of the nominal load.

1.5. Use features

		option C	option J	option T			option U
Type	Resistive	4-20 mA 4-12-20mA 2 wires	4-20 mA 4-12-20 mA 3 wires	1-5 V 3 wires	0-10 V et 1-5-10 V 3 wires	-10-0-10 V 3 wires	RS232 RS485
Compensated temp. range	From - 10° to + 45° C						
Operating temperature range	From - 30° to + 70° C ¹						
Storage temperature range	-50 to +85°C	From - 40° to + 85° C					
Power supply (VDC)	5...10...15 ²	9 – 30 ³	13 – 30	13 – 30	15 - 18 ⁴	6...12...18	
Load impedance e (Ω)	NA	≤ 750	≤ 1.000	> 5k			
Nominal sig. range	0 – 1...2mV/V	4 - 20 mA	4 - 20 mA	0.1-5 V	0.1-10V	-10-0-10V	
Saturation	> ...3... mV/V	> 24mA	> 24mA	> 11V			

1.6. Intrinsic safety protection

Use of sensors in hazardous zones can only be done with Ex marked sensors, delivered with the certificate hereunder:

ATEX: ISSeP07ATEX012X

This one is issued by an accredited organization. Sensors must be used with appropriate safety material (Zener barrier or galvanic isolator) corresponding to the requested requirements mentioned in the certificate.

SENSY's load cells which are marked Ex i comply with the following standards:

ATEX
EN 60079-0: 2012
EN 60079-26: 2007
EN 60079-11: 2012



The use of junction boxes or additional cable lengths must be considered in the choice of protection. The electrical characteristics of the cable being limited (see certification), it is recommended to carefully chose the cable length and avoid any winding of the cable. After having defined all elements, it is mandatory to control if the sensor's output tension is still compatible with the electronic device in use and the requested accuracy. See certificate for the special conditions for safe use.

1.7. Guarantee

The constructor's guarantee applies provided that the mounting recommendations and general use principles exposed above are respected.

For all particular utilization not described in these documents, preliminary written agreement from SENSY s.a. is mandatory to preserve the conformity.