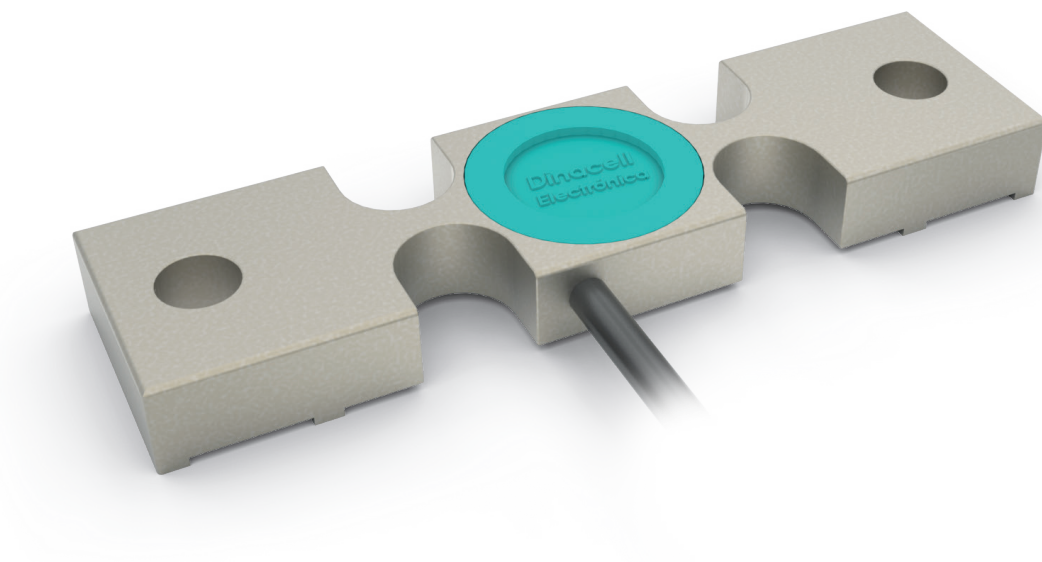


SV-3000

User Manual



Introduction

1.1 General Overview

The SV-3000 is designed to work on traction and compression. Designed for measuring the load limits on beams based on the metallic structure deformations (steel beams) or on elevators. Where variations of the load due to the addition or the subtraction of weight in the cabin, transmits deformation to the beam structure measured by the sensor.

The SV-3000 is easy to install on a clean part of the load beam structure. This load weighing system could be used in lift installations, making it easy to install on the elevator.

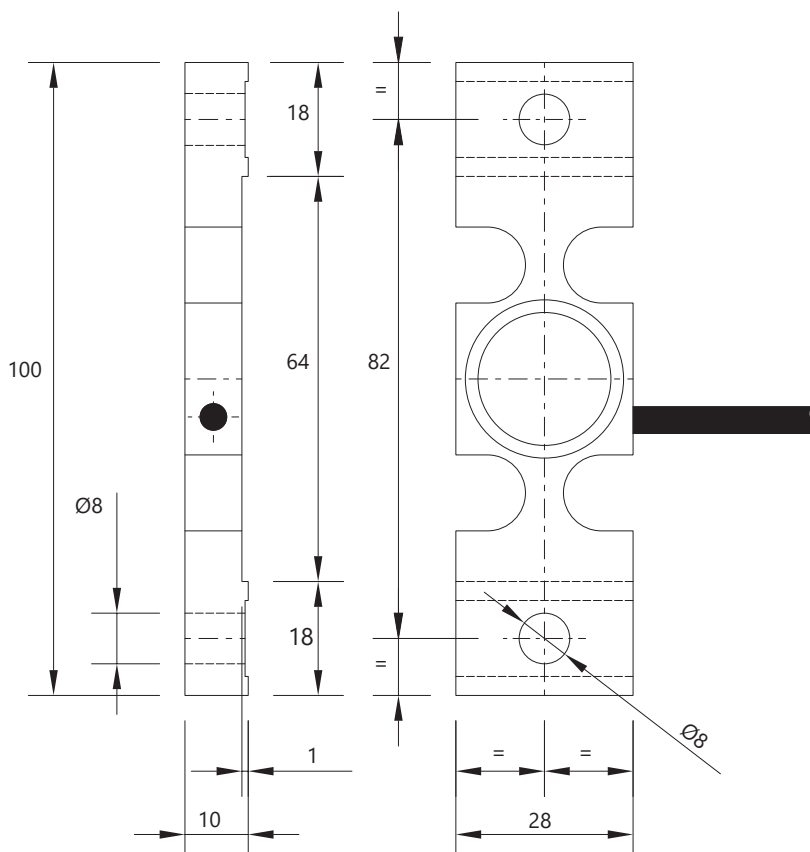
This sensor has a cable with USB or wired output depending on the load weighing control device to be used. It is possible to improve the quality of the measurement by adding more than one sensor to the installation.

For installations requiring more than one sensor, multiple sensors can be connected to an (1) INTERFACE device. The INTERFACE device can support USB output sensors and is able to provide either USB output or 5 wire connection to the load weighing control unit. The correct INTERFACE device should be ordered based upon the load weighing control connection requirements.



(1) INTERFACE

1.2 Dimensions and connection depending on the model



Cable type:

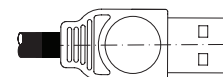
4x0.14mm² $\varnothing 4$

Standard length:

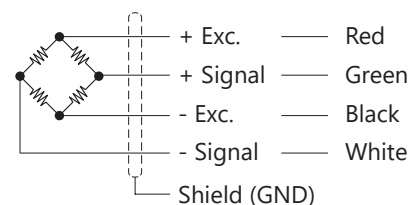
6 m

OPTIONAL cable termination:

USB



Wiring connection







Supplied material

2

2.1 Sensor bag contents

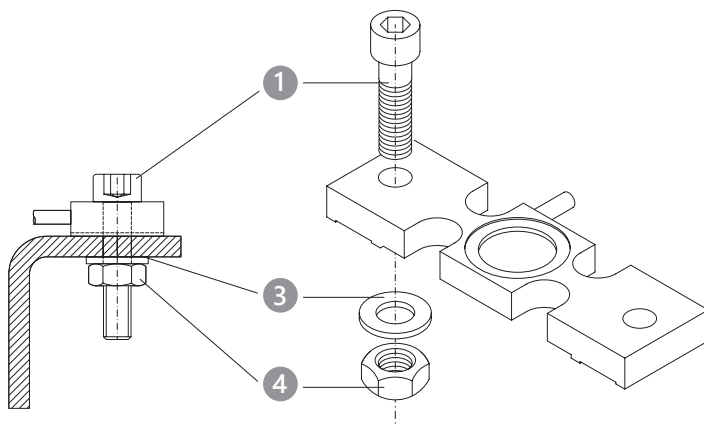


SV-3000 Sensor

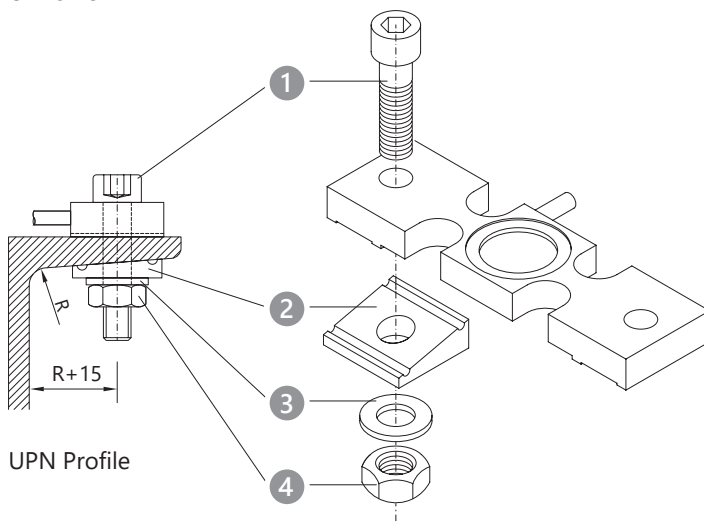
	Quantity	Description	Item	Norm
	x2	Allen 8x40 Screws Quality 12.9	1	DIN 912
	x2	Wedge washers 8% M8	2	DIN 985
	x2	M8 Flat Washers	3	DIN 434
	x2	Safety Nuts M8 Quality 10.0	4	DNI 125

2.2 Installation depending on the type of beam

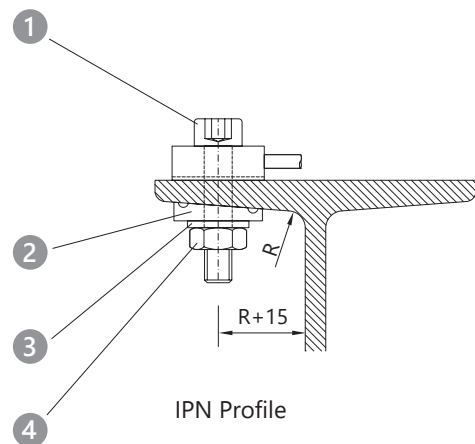
In UPN profile beams such as IPNs, have an inclination that must be corrected by adding the wedge washer to the installation so that the nut support is perpendicular to the screw.



U Profile



UPN Profile



IPN Profile

3.1 Installation scheme for 1:1 suspension

FIGURE 1 shows a typical installation with 1:1 suspension. In this installation the sensors position is important and should be about 50mm on the support beam from where the load can be measured.

- Where the sensor is installed must be clean, smooth and without any coatings.
- To improve accuracy you may install and connect additional sensors to the load weighing control device. Order the correct sensors and/or INTERFACE device based upon the load weighing control connection requirements.

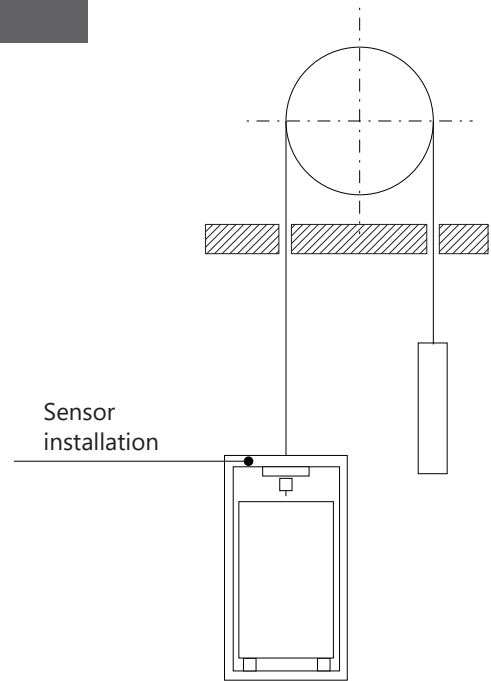
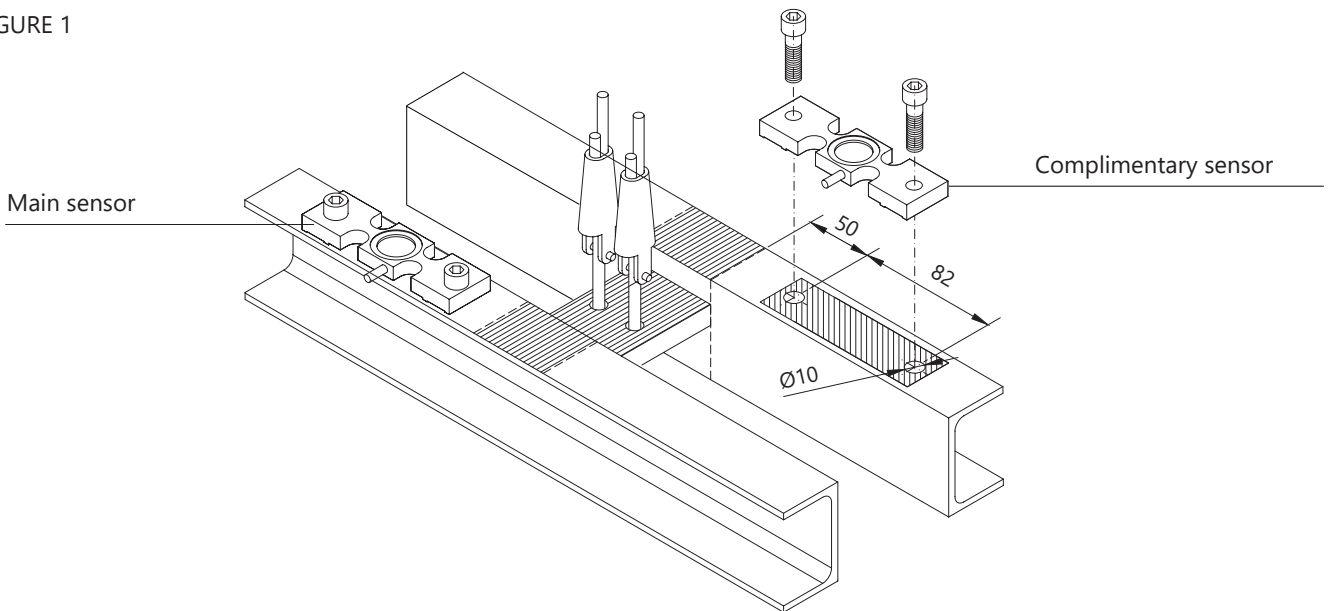


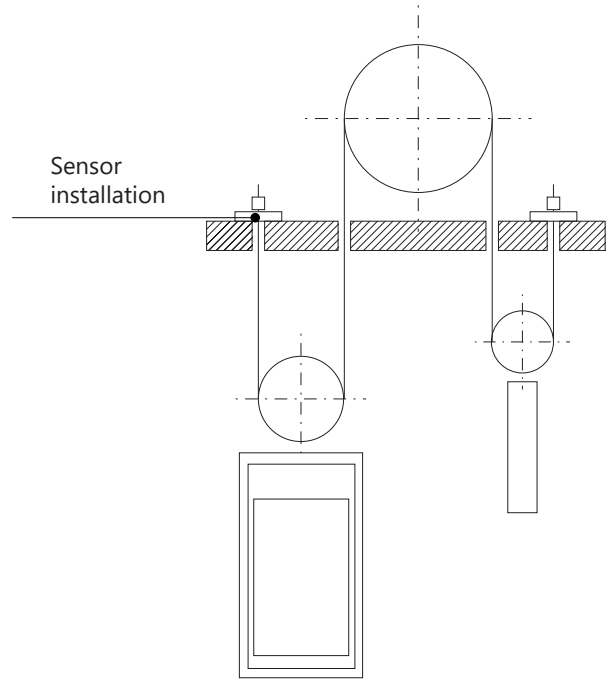
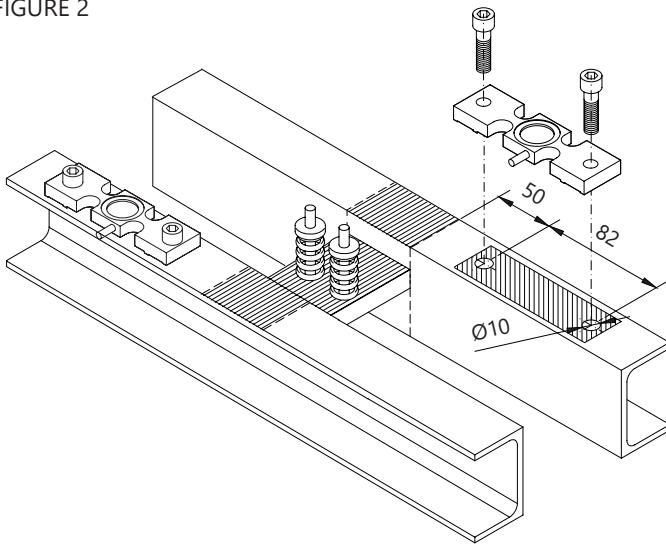
FIGURE 1



3.2 Installation scheme for 2:1 or multiple suspension

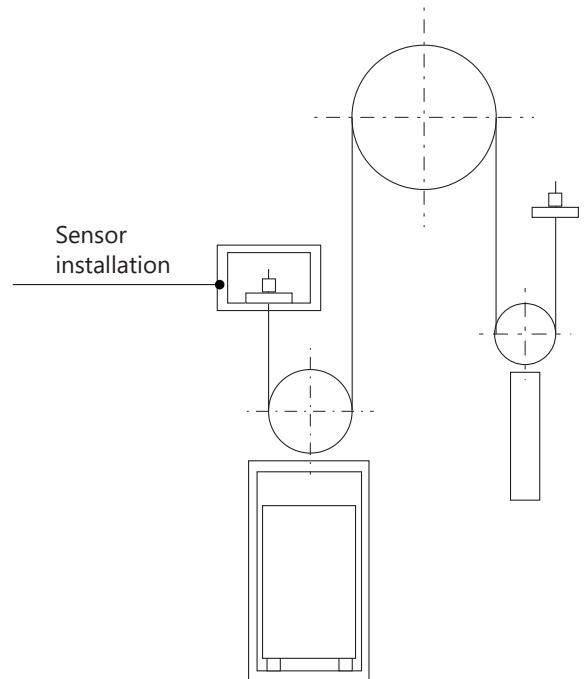
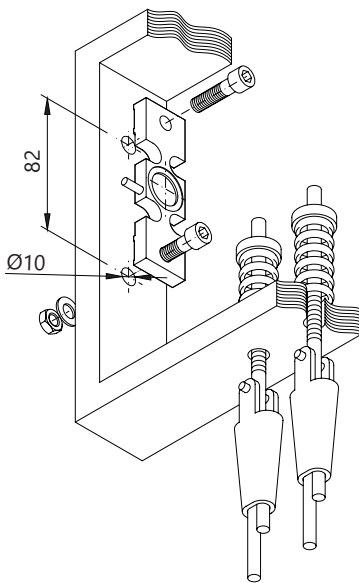
FIGURE 2 shows a typical assembly scheme for a 2:1 installation where the sensor could be installed on the structure and also at the fixed point.

FIGURE 2



In this example, FIGURE 3 shows an unusual installation. Where the fixed point is placed on a plate.

FIGURE 3



For the placement of the SV-3000, it is important to place it at a position where you can measure the deformation variations of the bearing structure.

In this example we propose an installation on an elevator with pulleys, in FIGURE 4 we show different examples of standard installations.

i The typical installation only requires one main sensor. Only in installations where greater accuracy or installations with very stiff beams will you need to add a secondary sensor.

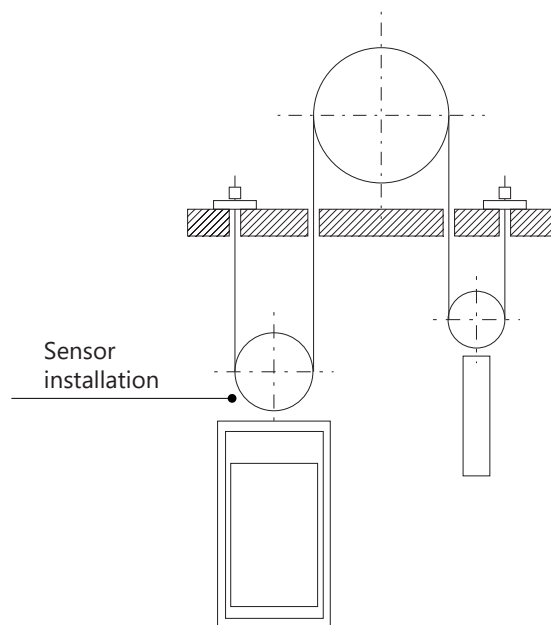
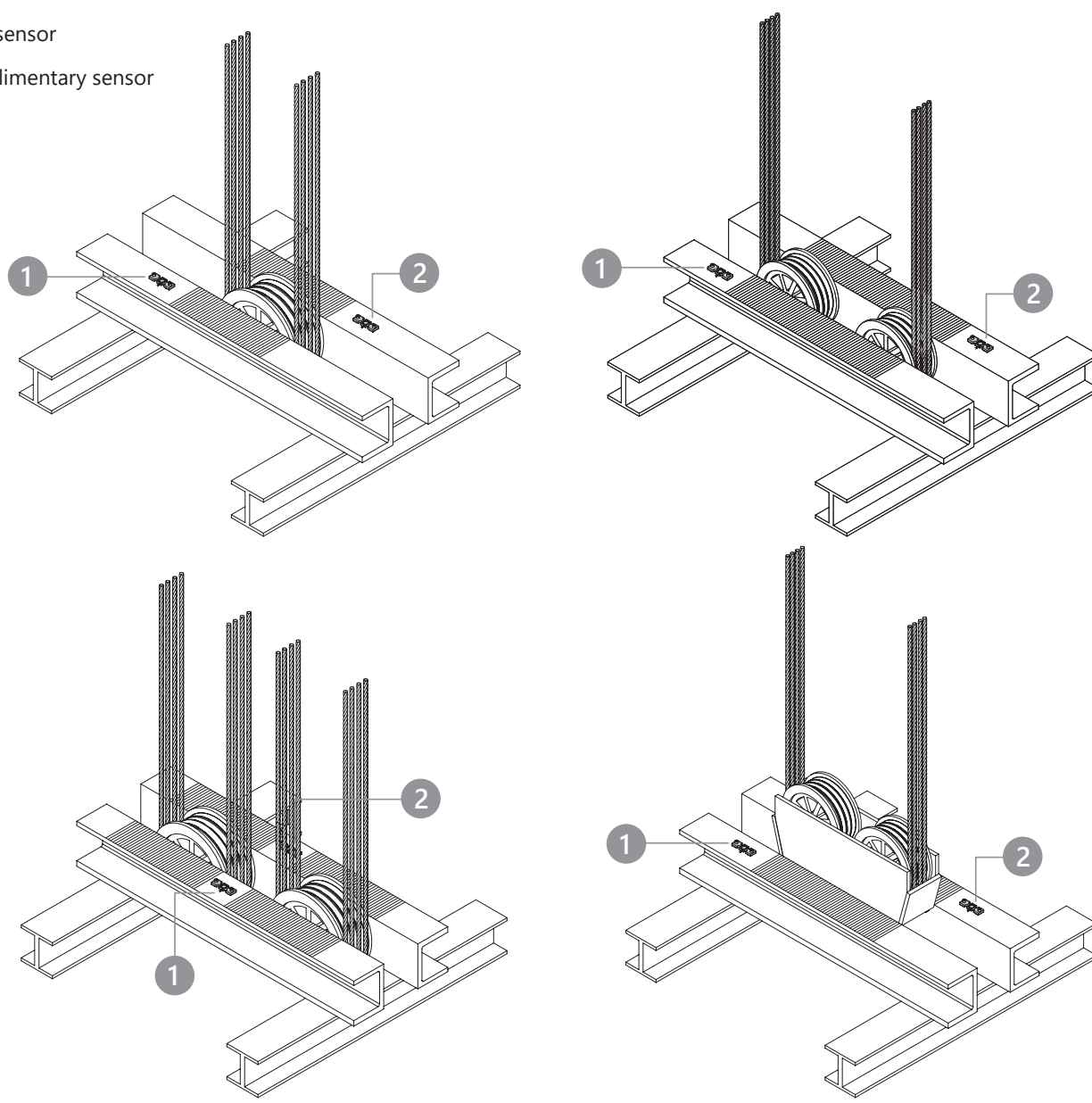


FIGURE 4

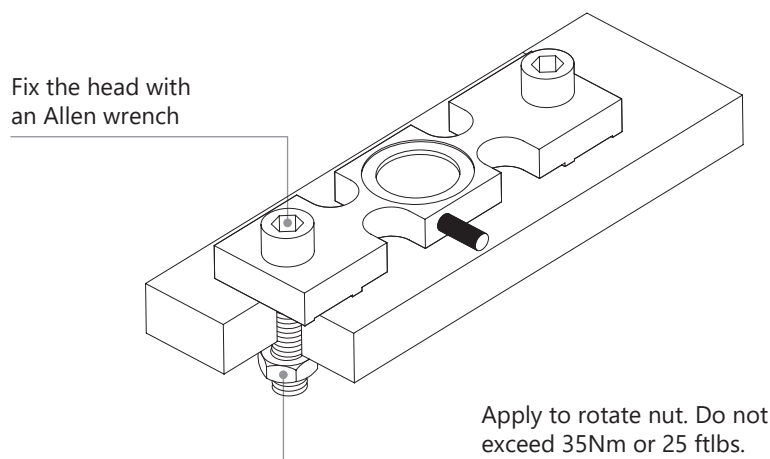
- 1 Main sensor
- 2 Complimentary sensor



3.3 Step by step installation

- i** Read all the points in the manual before starting with the installation.
- (1) It is recommended to install the sensor with the elevator located on the ground floor and with an empty cabin. As this is where the measurement point supports less load.
 - (2) Mark the fixing holes as close as possible to the beam anchor. In the case of mounting it on the main beam, take into account the position shown in FIGURE 1. (At the top of the beam, and about 50 mm from the support that holds the beam).
 - (3) Drill the two holes with a 10mm drill bit, and perpendicular to the surface where the sensor will be installed. Ensure that the sensor is as close to the beam anchor as possible.
 - (4) Once the holes have been made, all the waste must be cleaned and the paint removed from the areas where it will support the sensor (especially if the paint is very thick). Holes must be well-placed, for screws to be easily inserted into holes without adding additional forces to the sensor.
 - (5) Place the screw on the top of the sensor, leaving the head located on it, and the washers on the opposite side. In case of a UPN beam, use the wedge washer so that the nut support is perpendicular to the screw shaft. Once the washers (flat and wedged in the case of UPN) and nut are placed on the opposite side of the sensor, the head is fastened with an allen wrench, so as not to twist the sensor, when the nut is tightened on the opposite side as shown in FIGURE 5 at 35Nm or 25 ftlbs.
 - (6) To finish you will need to connect the sensor to the load weighing control device. The sensor may have a USB cable connection or wire connection depending on the input of the load weighing control device. In order to calibrate it, you must refer to the manual of the load weighing control device.
- i** To improve accuracy you may install and connect additional sensors to the load weighing control device. Order the correct sensors and/or INTERFACE device based upon the load weighing control connection requirements.

FIGURE 5



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OFFICIAL USA DISTRIBUTOR OF DINACELL ELECTRÓNICA S.L.

ELEVATOR MOTOR CORPORATION. (EMCO)

80 Carolyn Boulevard, Farmingdale, NY 11735 USA

Phone: +1 6312934440

Fax: +1 6312932714

info@elevatormotors.com

www.elevatormotors.com