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LOADSENSOR KIT EQUIPMENTS

- 1) Family kit basic loadsensor
- 2) Family LP kit for load control sensor ropes.
- 3) Family FN load control kit with pre-calibrated sensors for ropes (calibrated weightless in the cabin)
 - Sensor SN single sensor for ropes
 - Sensor SC compression sensor under cabin

1) Family kit basic loadsensor

Kit equipments matched with :

- digital electronic part 2CAX.**
- digital electronic part 7CAD with internal display.**
- digital electronic part 7CRX with radio-controller.**

- **KIT CRL1 / 2CAX , deformation sensor + electronic + screw kit.**
- **Version electronic : KIT CRL1 / 7CAD or KIT CRL1 / 7CRX.**

- **KIT CRL2 / 2CAX , deformation sensor small length 70mm + electronic + screw kit.**
- **Version electronic : KIT CRL2 / 7CAD or KIT CRL2 / 7CRX.**

- **KIT PTG1 / 2CAX , sensor total plate for ropes + electronic.**
- **Version electronic : KIT PTG1 / 7CAD or KIT PTG1 / 7CRX.**

- **KIT PTG2 / 2CAX , sensor total plate for ropes -slim- + electronic.**
- **Version electronic : KIT PTG2 / 7CAD or KIT PTG2 / 7CRX.**

- **KIT SBOT / 2CAX , compression sensor SBOT + electronic.**
- **Version electronic : KIT SBOT / 7CAD or KIT SBOT / 7CRX.**

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- **digital electronic part 7CAD with internal display.**
 - **digital electronic part 7CRX with radio-controller.**
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2) Family LP kit for load control sensor ropes.

-digital electronic part 8CAD with internal display.

- **KIT LP / 8CAD small single sensor for ropes LP "slim" in connection with sequential + digital electronic part 8CAD with internal display.**

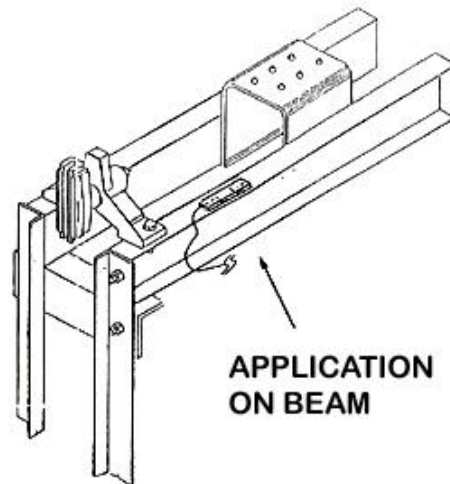
3) Family FN load control kit with pre-calibrated sensors for ropes (calibrated weightless in the cabin)

- **KIT FN SN , single sensor for ropes + electronic + programming tool FNBOX**
- **KIT FN SC , compression sensor under-cab , under-floor + electronic + programming tool FNBOX**

KIT CRL1 / 2CAX

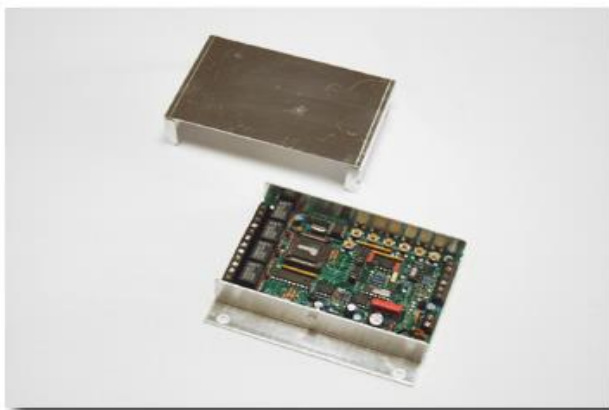
Composed by : deformation sensor CRL1 , electronic part 2CAX and screws fix kit.

Device for easy installation and calibration - Sensor in high strength steel, which is small (90x25xH20 mm) - applied directly to beams or metal structures - does not require any structural intervention for the application - Very high sensitivity to deformation – excellent measurement accuracy - standard cable 1m, with 5 wires - Protection against temperature, humidity, dust - Supplied with the kit screws needed to fix.



Fully digital electronic device, without trimmer or analogue settings - Available from 1 to 4 programmable thresholds.

The electronics box comes in handy flange, with convenient spring-loaded cover - Compact size 120x110x30h mm including flanges - The storage of zero threshold, takes place automatically by pressing the buttons - Fitted with lights, which show step-by-step stages of calibration and control - power supplied either in DC or AC voltage with a very wide range - ability to calibrate set points with weights lower than the value of full load (calibration percentage) - ability to modify the threshold values, without applying any weight - the board has a serial data output , analog output , and other possibility.



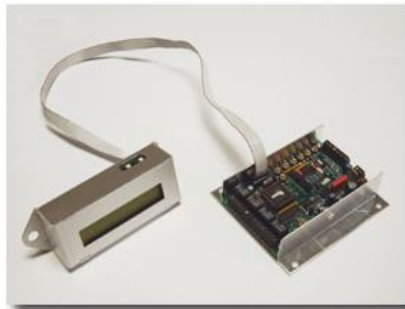
Technical specification , complete kit with sensor and electronic part.

PARAMETER	VALUE	UNIT
POWER RANGE VCC	16...30	V
POWER RANGE VAC	12...22	V
TYPICAL POWER CONSUMPTION	0,2	A
LINEARITY	$\pm 0,005$	% del FS
TEMPERATURE RANGE	0...50	°C
STABILITY OF ZERO POINT – TEMPERATURE RANGE	$\pm 0,5$	% del FS
STABILITY OF GAIN – TEMPERATURE RANGE	$\pm 0,2$	% del FS
UMIDITY MAX	93	% (not condensing)

The adjustment range of amplification, zero, and the threshold values, it is automatic and managed internally by the electronics. The values of linearity and variations in the temperature range, are related to the sensor in direct measurement.

OPTIONAL - DISPLAY TYPE VISO-2C - UNA-TANTUM TOOL

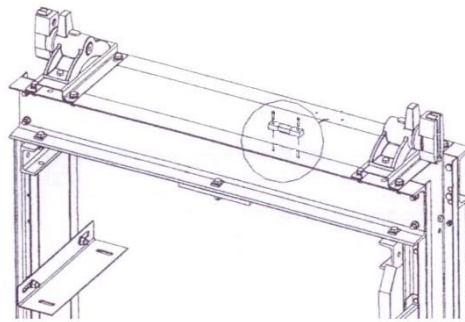
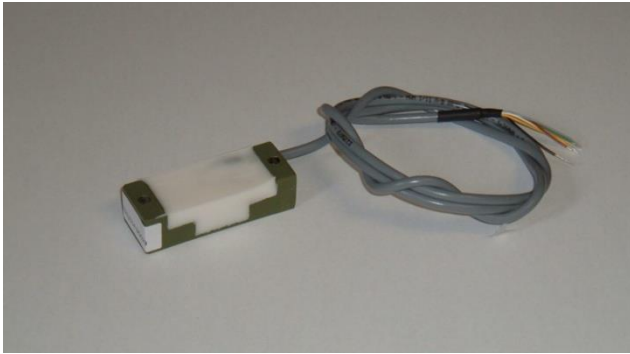
*Content using a box shock resistant - Can be connected to the serial port of the electronic part
2CAX - LCD Semi-graphic - Selecting Backlight - Displays the current weight - Ability to view all stored data.*



KIT CRL2 / 2CAX

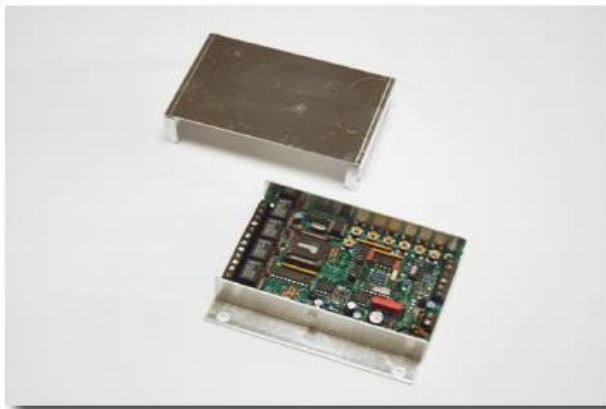
Composed by : deformation sensor CRL2 small length 70mm , electronic part 2CAX and screws fix kit.

Device for easy installation and calibration - Sensor in high strength steel, which is small (70x25xH20 mm) - applied directly to beams or metal structures - does not require any structural intervention for the application - Very high sensitivity to deformation – excellent measurement accuracy - standard cable 1m, with 5 wires - Protection against temperature, humidity, dust - Supplied with the kit screws needed to fix.



Fully digital electronic device, without trimmer or analogue settings - Available from 1 to 4 programmable thresholds.

The electronics box comes in handy flange, with convenient spring-loaded cover - Compact size 120x110x30h mm including flanges - The storage of zero threshold, takes place automatically by pressing the buttons - Fitted with lights, which show step-by-step stages of calibration and control - power supplied either in DC or AC voltage with a very wide range - ability to calibrate set points with weights lower than the value of full load (calibration percentage) - ability to modify the threshold values, without applying any weight - the board has a serial data output , analog output , and other possibility.



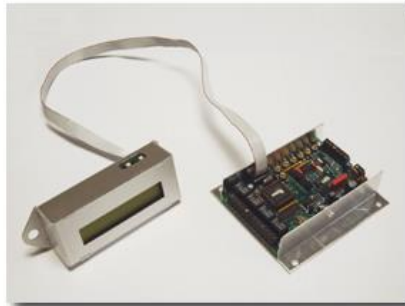
Technical specification , complete kit with sensor and electronic part.

PARAMETER	VALUE	UNIT
POWER RANGE VCC	16...30	V
POWER RANGE VAC	12...22	V
TYPICAL POWER CONSUMPTION	0,2	A
LINEARITY	$\pm 0,005$	% del FS
TEMPERATURE RANGE	0...50	°C
STABILITY OF ZERO POINT – TEMPERATURE RANGE	$\pm 0,5$	% del FS
STABILITY OF GAIN – TEMPERATURE RANGE	$\pm 0,2$	% del FS
UMIDITY MAX	93	% (not condensing)

The adjustment range of amplification, zero, and the threshold values, it is automatic and managed internally by the electronics. The values of linearity and variations in the temperature range, are related to the sensor in direct measurement.

OPTIONAL - DISPLAY TYPE VISO-2C - UNA-TANTUM TOOL

*Content using a box shock resistant - Can be connected to the serial port of the electronic part
2CAX - LCD Semi-graphic - Selecting Backlight - Displays the current weight - Ability to view all stored data.*



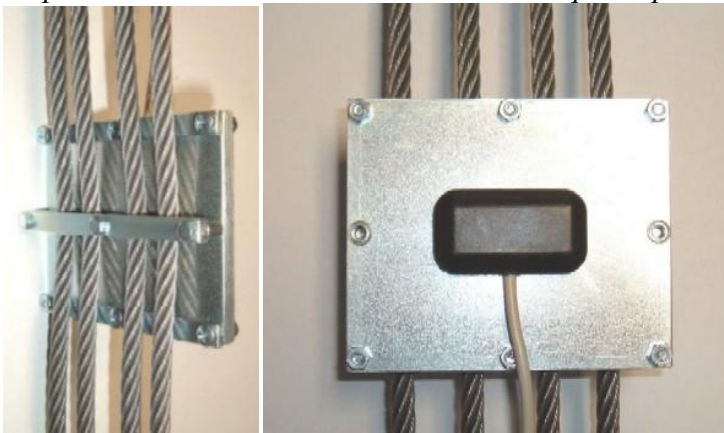
KIT PTG1 / 2CAX

Composed by : total plate for ropes PTG1 , electronic part 2CAX

Treated steel plate measuring 100 x 120 mm - Applicable to equipment with capacity 2500 Kg Max (the higher weight are possible, must be specified).

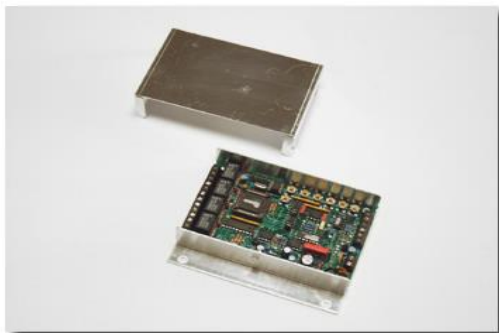
- **Version PTG1-5 for ropes 5 ... 6,5 mm - nr° 10 / 12 ropes**
- **Version PTG1-std for ropes 8 ... 11 mm - nr° 8 / 10 ropes**
- **Version PTG1-13 for ropes 12 ... 13 mm - nr° 6 ropes**

Calibration and installation extremely simple - Applies tightening 3 screws - do not require any structural intervention for the application - Very high sensitivity, measuring semi-direct - high accuracy of measurement - standard 2 meter cable, with 5 wires - Protection against temperature, moisture and dust - You can request special versions for special ropes or belts.



Fully digital electronic device, without trimmer or analogue settings - Available from 1 to 4 programmable thresholds.

The electronics box comes in handyflange, with convenient spring-loaded cover - Compact size 120x110x30h mm including flanges - The storage of zero threshold, takes place automatically by pressing the buttons - Fitted with lights, which show step-by-step stages of calibration and control - power supplied either in DC or AC voltage with a very wide range - ability to calibrate set points with weights lower than the value of full load (calibration percentage) - ability to modify the threshold values, without applying any weight - the board has a serial data output , analog output , and other possibility.



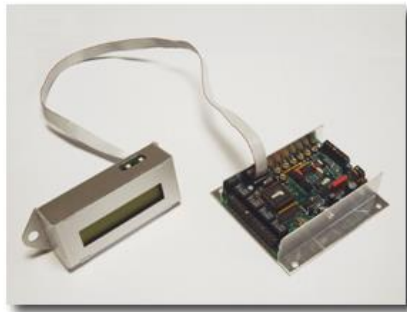
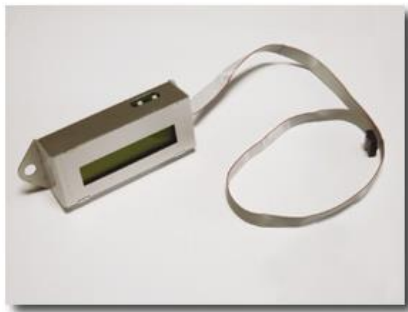
Technical specification , complete kit with sensor and electronic part.

PARAMETER	VALUE	UNIT
POWER RANGE VCC	16...30	V
POWER RANGE VAC	12...22	V
TYPICAL POWER CONSUMPTION	0,2	A
LINEARITY	$\pm 0,01$	% del FS
TEMPERATURE RANGE	0...50	°C
STABILITY OF ZERO POINT – TEMPERATURE RANGE	$\pm 0,5$	% del FS
STABILITY OF GAIN – TEMPERATURE RANGE	$\pm 0,5$	% del FS
UMIDITY MAX	93	% (not condensing)

The adjustment range of amplification, zero, and the threshold values, it is automatic and managed internally by the electronics. The values of linearity and variations in the temperature range, are related to the sensor in semi - direct measurement.

OPTIONAL - DISPLAY TYPE VISO-2C - UNA-TANTUM TOOL

Content using a box shock resistant - Can be connected to the serial port of the electronic part 2CAX - LCD Semi-graphic - Selecting Backlight - Displays the current weight - Ability to view all stored data.



KIT PTG2 / 2CAX

Composed by : total plate for ropes PTG2 - slim version - , electronic part 2CAX

Treated steel plate measuring 100 x 65 mm - Applicable to equipment with capacity 2500 Kg Max (the higher weight are possible, must be specified).

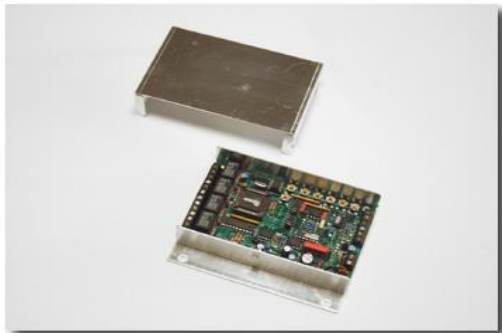
- **Version PTG2-5 for ropes 5 ... 6,5 mm - nr° 5 / 6 ropes**
- **Version PTG2-std for ropes 8 ... 11 mm - nr° 4 / 5 ropes**
- **Version PTG2-13 for ropes 12 ... 13 mm - nr° 3 ropes**

Calibration and installation extremely simple - Applies tightening 2 screws - do not require any structural intervention for the application - Very high sensitivity, measuring semi-direct - high accuracy of measurement - standard 2 meter cable, with 5 wires - Protection against temperature, moisture and dust - You can request special versions for special ropes or belts.



Fully digital electronic device, without trimmer or analogue settings - Available from 1 to 4 programmable thresholds.

The electronics box comes in handy flange, with convenient spring-loaded cover - Compact size 120x110x30h mm including flanges - The storage of zero threshold, takes place automatically by pressing the buttons - Fitted with lights, which show step-by-step stages of calibration and control - power supplied either in DC or AC voltage with a very wide range - ability to calibrate set points with weights lower than the value of full load (calibration percentage) - ability to modify the threshold values, without applying any weight - the board has a serial data output , analog output , and other possibility.



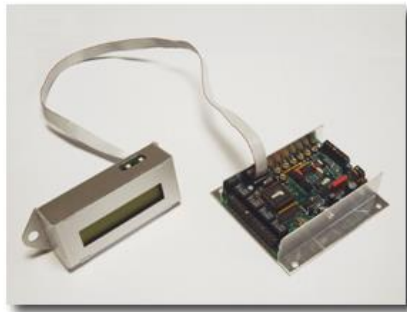
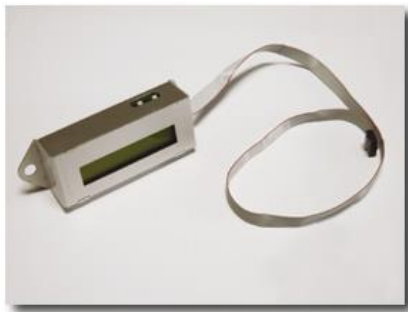
Technical specification , complete kit with sensor and electronic part.

PARAMETER	VALUE	UNIT
POWER RANGE VCC	16...30	V
POWER RANGE VAC	12...22	V
TYPICAL POWER CONSUMPTION	0,2	A
LINEARITY	$\pm 0,01$	% del FS
TEMPERATURE RANGE	0...50	°C
STABILITY OF ZERO POINT – TEMPERATURE RANGE	$\pm 0,5$	% del FS
STABILITY OF GAIN – TEMPERATURE RANGE	$\pm 0,5$	% del FS
UMIDITY MAX	93	% (not condensing)

The adjustment range of amplification, zero, and the threshold values, it is automatic and managed internally by the electronics. The values of linearity and variations in the temperature range, are related to the sensor in semi - direct measurement.

OPTIONAL - DISPLAY TYPE VISO-2C - UNA-TANTUM TOOL

Content using a box shock resistant - Can be connected to the serial port of the electronic part 2CAX - LCD Semi-graphic - Selecting Backlight - Displays the current weight - Ability to view all stored data.



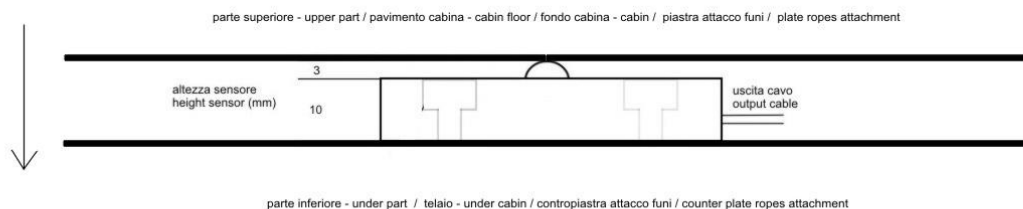
KIT SBOT / 2CAX

Composed by : compression sensor SBOT , electronic part 2CAX

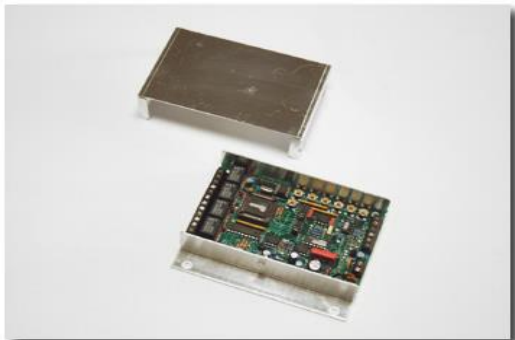
Sensor compression diameter 50mm , height 13mm - Load Max 1000 Kg. *Calibration and installation extremely simple - Applies tightening 4 screws - Very high sensitivity, measuring semi-direct - high accuracy of measurement - standard 2 meter cable, with 4 wires - Protection against temperature, moisture and dust .*



seniore a compressione SBOT - compression sensor SBOT



Fully digital electronic device, without trimmer or analogue settings - Available from 1 to 4 programmable thresholds. The electronics box comes in handy flange, with convenient spring-loaded cover - Compact size 120x110x30h mm including flanges - The storage of zero threshold, takes place automatically by pressing the buttons - Fitted with lights, which show step-by-step stages of calibration and control - power supplied either in DC or AC voltage with a very wide range - ability to calibrate set points with weights lower than the value of full load (calibration percentage) - ability to modify the threshold values, without applying any weight - the board has a serial data output , analog output , and other possibility.



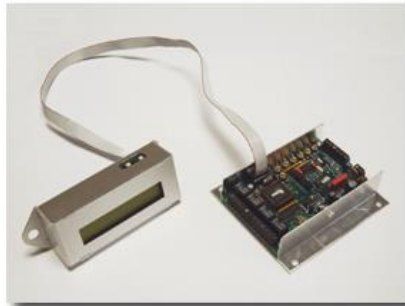
Technical specification , complete kit with sensor and electronic part.

PARAMETER	VALUE	UNIT
POWER RANGE VCC	16...50	V
POWER RANGE VAC	12...36	V
TYPICAL POWER CONSUMPTION	0,15	A
LINEARITY	$\pm 0,01$	% del FS
TEMPERATURE RANGE	0...50	°C
STABILITY OF ZERO POINT – TEMPERATURE RANGE	$\pm 0,5$	% del FS
STABILITY OF GAIN – TEMPERATURE RANGE	$\pm 0,5$	% del FS
UMIDITY MAX	93	% (not condensing)

The adjustment range of amplification, zero, and the threshold values, it is automatic and managed internally by the electronics. The values of linearity and variations in the temperature range, are related to the sensor in semi - direct measurement.

OPTIONAL - DISPLAY TYPE VISO-2C - UNA-TANTUM TOOL

Content using a box shock resistant - Can be connected to the serial port of the electronic part 2CAX - LCD Semi-graphic - Selecting Backlight - Displays the current weight - Ability to view all stored data.



The radio-controlled electronic 7CRX alternative to electronics traditional 2CAX.

All of KIT product obtained with the electronic control unit traditional 2CAX, can also be composed with the new electronic radio controlled 7CRX.

The load weighing kit stand out for easy installation of all models and for calibrating direct and intuitive. The electronic 2CAX and 7CRX are equipped percentage of the calibration function (using little weight).

Kit loadsensor with deformation sensor CR-L1 Version with radio-controlled electronic 7CRX

Version with
Electronic
Radio-controlled



RR

Kit loadsensor with deformation sensor CR-L2 small length 70mm Version with radio-controlled electronic 7CRX

Version with
Electronic
Radio-controlled



Kit loadsensor with total plate for ropes PTG1
Version with radio-controlled electronic 7CRX

**Version with
Electronic
Radio-controlled**



RR

Kit loadsensor with total plate for ropes -slim- PTG2
Version with radio-controlled electronic 7CRX

**Version with
Electronic
Radio-controlled**



RR

Radio Control RR, indispensable for the operation of the electronics 7CRX (but common for the operation of all electronic 7CRX). A tool UNA-TANTUM.

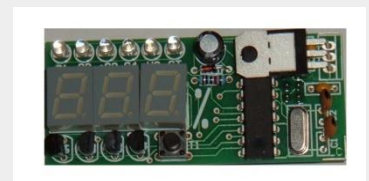
Electronic part 7CAD with internal display alternative to electronics traditional 2CAX.

All of KIT product obtained with the electronic control unit traditional 2CAX, can also be composed with the new electronic with internal display 7CAD.

The load weighing kit stand out for easy installation of all models and for calibrating direct and intuitive. The electronic 2CAX and 7CAD are equipped percentage of the calibration function (using little weight).

Kit loadsensor with deformation sensor CR-L1 Version with electronic 7CAD internal display

Electronic
version with
internal display



Internal display

Kit loadsensor with deformation sensor CR-L2 small length 70mm. Version with electronic 7CAD internal display

Electronic
version with
internal display



Internal display

Kit loadsensor with total plate for ropes PTG1 Version with electronic 7CAD internal display

Electronic
version with
internal display



Internal display

Kit loadsensor with total plate for ropes –slim- PTG2 Version with electronic 7CAD internal display

Electronic version
with internal
display



Internal display

Internal display : The display LED interior consists of 3 digit 7-segment, from 6 signaling LED and a button. The menu is of the rotary type, it displays in sequence all that has been stored. Normally displays the current value.

KIT 8CAD – LP

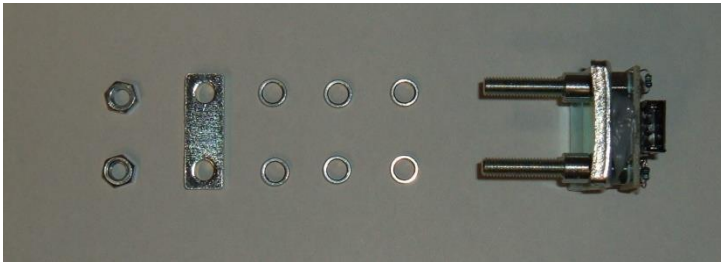
LOADSENSOR FOR ELECTRIC AND HYDRAULIC SYSTEMS

VERSION WITH SINGLE SENSOR ROPES LP

- DISPLAY INSIDE
- ANALOG OUTPUT
- REMOTE CONTROL AND DISPLAY

Use either diameter ropes 6 - 6,5 – 8 - 9 – 10 – 11 – 12 - 13 mm

Max nr°10 ropes



KIT 8CAD – LP

Composed of:

- Digital Electronic part 8CAD , equipped with wiring for connection to the first sensor.
- Single sensor for ropes LP , provided wiring for connection to the next sensor: applicable for 1 to 10 sensors
- Set screws and accessories , for each sensor

NOTEWORTHY FEATURES:

- Easy electrical connection : the sensors are connected in sequence to the electronics (see figure below). **SEQUENTIAL CONNECTION** .
- Easiness and speed of assembly, the sensor is applied to the rope with 2 nuts and relative accessories, cables (supplied in the kit).
- Easy and fast calibration, you can calibrate with 20% of the maximum load.
- You can display all the calibrated values, in addition to the current value and other parameters important for the proper functioning.
- The sensor LP , coupled with the electronics 8CAD, has a great thermic stability and durability.
- The analog output provides a proportional value between 0 and 10Vdc, relative to the relays 1 (S1 – RL1).
- The digital electronics 8CAD manages all operational parameters; it automatically optimizes signal's amplification, offset, polarity and hysteresis.

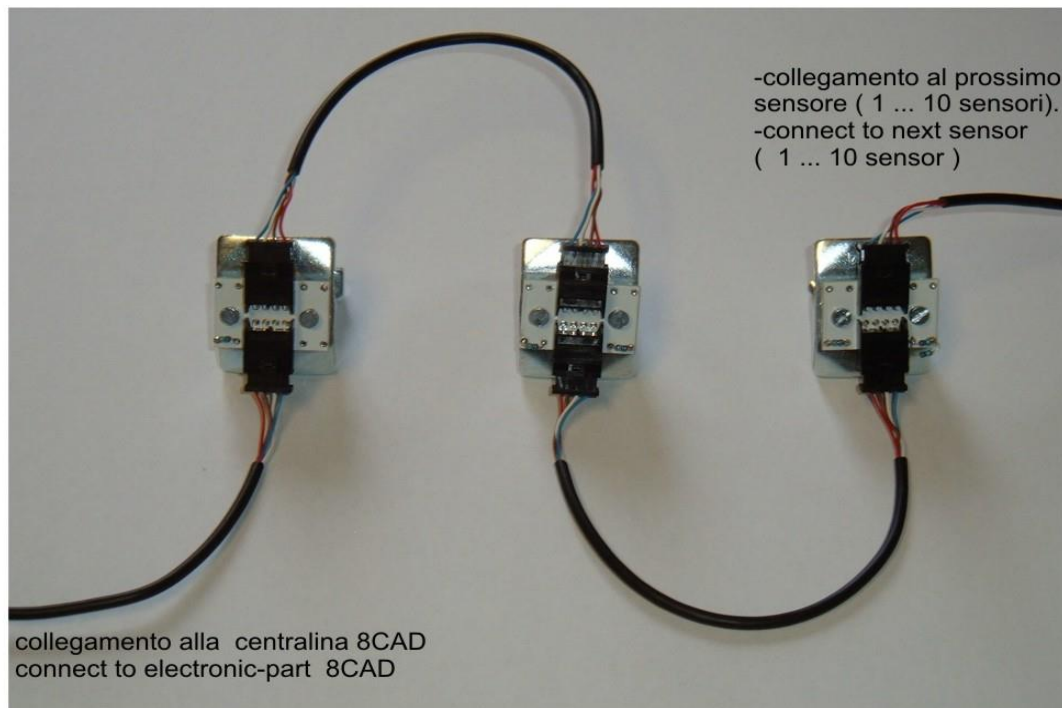


TABLE WITH TECHNICAL FEATURES ELECTRONIC 8CAD

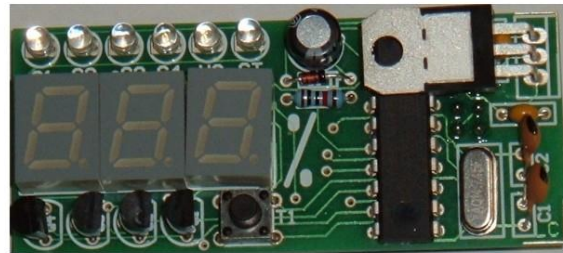
PARAMETER	VALORE	UNITA' DI MISURA
MAXIMUM RANGE OF VOLTAGE CC	16...30	V (1)
MAXIMUM RANGE OF VOLTAGE AC	12...24	V (1)
MAXIMUM ABSORPTION	0,5	A
RANGE OF AMPLIFICATION	automatic, it is internally managed by the microprocessor	
RANGE OF REGULATION OF ZERO	automatic, it is internally managed by the microprocessor	To 80% del FS
TEMPERATURE RANGE	0...50	°C
MAXIMUM VARIATION OF THE ZERO WITHIN THE TEMPERATURE RANGE	±0,5	% del FS
MAXIMUM VARIATION OF THE GAIN WITHIN THE TEMPERATURE RANGE	±0,5	% del FS
RANGE OF REGULATION OF THERSHOLD POINTS	automatic, it is internally managed by the microprocessor	
MAXIMUM DAMPNESS ADMITTED	93	% (3)

NOTES:

1. It is possible that the alimentations have not been stabilized from the transformer and obviously the polarity of connections can be casual (also for Vcc).
2. Continous tension is adjusted, i.e. not pulsing.
3. We don't refer to dampness deriving from condensation.

Electronic part 8CAD

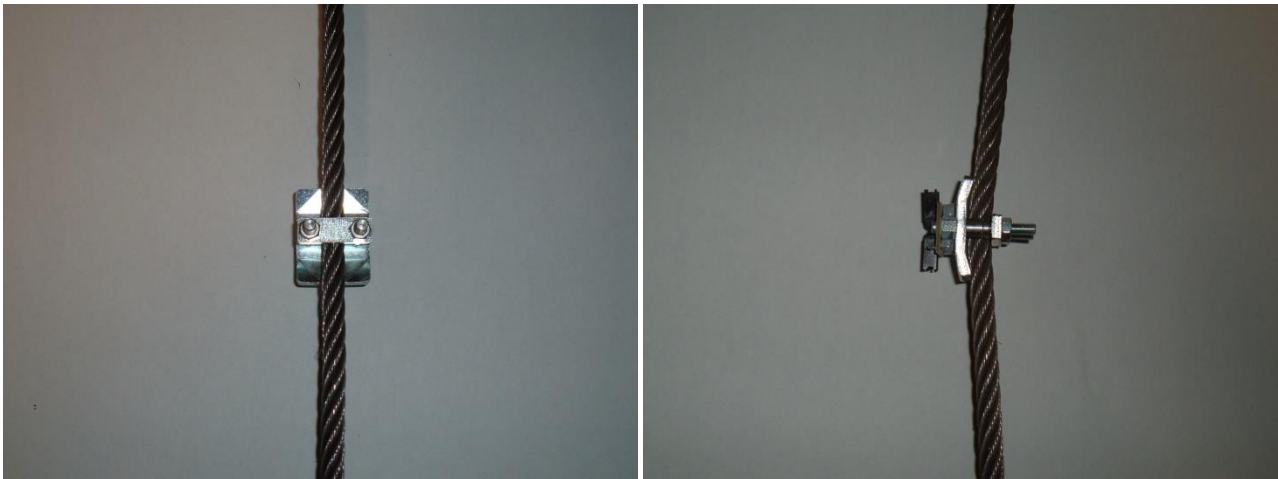
Internal display



Internal display : The display LED interior consists of 3 digit 7-segment, from 6 signaling LED and a button. The menu is of the rotary type, it displays in sequence all that has been stored. Normally displays the current value.

SENSOR LP - DIMENSIONS

Length-----	40mm
Width-----	30mm
Total depth, including screws for fastening the ropes-----	42mm



KIT FN / SN

Composed by : single sensor for ropes SN (1 to 6 sensor) , electronic parte FN , programming tool FN-BOX (una-tantum tool , use only at the programming procedure).

VERY IMPORTANT : Calibration without load

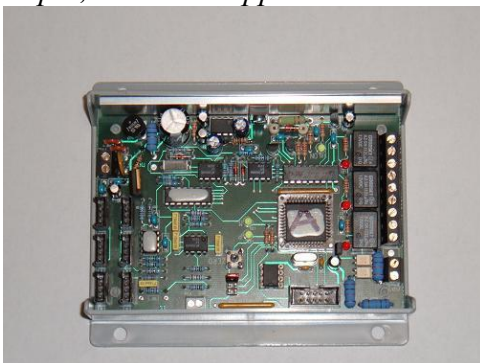
Sensor applied to each rope of system - Easy installation (just tighten two screws) - We should not force it, adapt, puncture or disassemble anything - Product preconfigured.

- **Version SNA-6 for ropes 5, 6, 6,5mm.**
- **Version SNA-std for ropes 7, 8, 9, 10, 11mm.**
- **Version SNA-13 for ropes 12, 13mm.**

Accuracy of measuring great - standard 2 meter cable - Protection against temperature, humidity, dust - very solid structure.



With this device does not need any kind of weight for calibration - fully digital electronic device, without trimmer or analogue settings to run - 3 set point - The electronic part is delivered from the flange comfortable, with a handy snap-on lid - The dimensions are contained 120x110x30h mm including flanges - Function block weighing - Can be calibrated completely through the serial line the box with FN programming - power can be supplied either in AC or DC power - points directly to programmable threshold kg - Possibility to change the threshold values, without applying any weight - the board has a serial data output, analog output, and other applications.



Technical information

Power range VCC	20...30 Vcc
Power range VAC	16...22 Vac
Max power , with programming BOX insert.	0,35 A
Max power , without programming BOX insert.	0,25 A
Power for block weight VCC	15...30 Vcc
Power for block weight VAC	12...25 Vac
Delay , of block weight	3 second
Temperature range	0...50 °C
Max. Umidity	93 % rh not condensing

Box kits for FN programming, una-tantum tool.

7 seg. viewer - Indications for immediate programming and tours – Once calibrated the electronic FN-A, box of programming is no longer needed - The dimensions are very small - Connects electronics FN-A with serial , once the program takes off the connector, kit and load control FN continues to operate independently.



KIT FN / SC

Composed by : compression sensor SC -iron- (use 4 or 6 sensor) , digital electronic part FN , programming tool FN-BOX (una-tantum , only use in programming step).

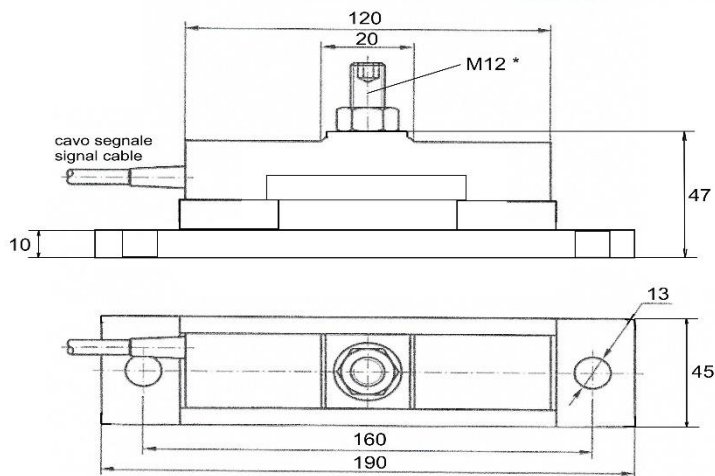
VERY IMPORTANT : Calibration without load

Sensor to be applied under the cab or under the floor - Mounts and make adjustments in the lower part of the frame-under the cabin.

The sensor SC support mechanically the cabin / floor

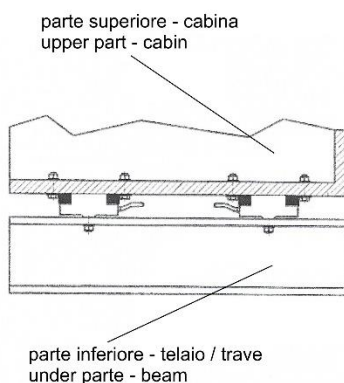
- Version SC , nominal load (each sensor) 800kg .
- Good accuracy - standard cable 2 meters - Protection from temperature , humidity, dust - Structure solid -iron- - dim. 190 x 45 h47 mm.

DIMENSIONI E MISURE IN mm - MEASURE AND DIMENSION mm

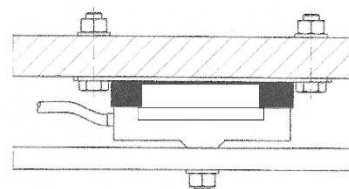


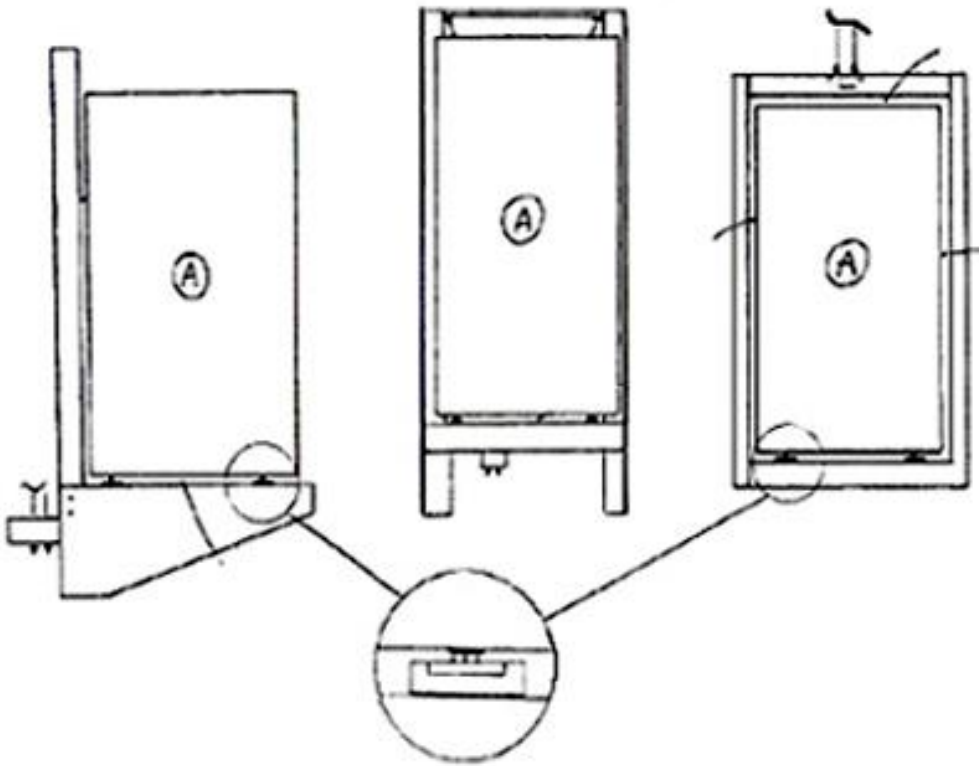
* regolazione altezza da 20 a 30 mm - regulation height 20 to 30 mm

APPLICAZIONE TIPICA DEL SENSORE
SENSOR - TYPICAL APPLICATION



PARTICOLARE DELL'APPLICAZIONE DEL SENSORE
SENSOR APPLICATION - DETAIL





Box kits for FN programming, una-tantum tool.

7 segment viewer - Indications for immediate programming and tours – Once calibrated the electronic FN-A, box of programming is no longer needed - The dimensions are very small - Connects electronics FN-A with serial , once the program takes off the connector, kit and load control FN continues to operate independently.

