



ELEVATOR OVERLOAD CONTROL SYSTEMS

Dear colleagues!

My name is Petro Syniehub. I am the owner of the «OVZ «VAGAR» and the group of companies «SVIT VAG» in Ukraine.

For more than 20 years we are manufacturing and selling weighing equipment: trade scales, commodity packing scales, crane scales, platform scales and warehouse scales, elevator overload control systems, weighing systems in motion, weighing shelves for retail chains, innovative solutions to increase sales and «Out-Of-Stock».

Since 2008 we have been a developer of elevator overload control systems. To the present day, more than 60,000 devices of our design have been delivered to our customers around the world, directly or through representatives. Among our developments, there are ready-made solutions for overload control systems with various places and methods of installation, overall dimensions, and sensors, including: under the cab, in the cab frame, in ropes, and in various suspension systems. The key characteristics of our products are reliability (less than 0.1% of complaints, 3 years warranty), measurement accuracy and competitive price. For more than three years we sell weight kits to Europe and have experience in developing and modifying existing overload control devices to suit all the customer requirements. It is also possible to organize OEM production.

We have experience, a product, a professional team, production facilities, factories, and warehouses of components in Ukraine and China, as well as a desire to continue working and developing in Europe and the world. My team and I are ready to consider any request, choose an analog from our range or develop an overload control system according to your terms of reference.



With all respect,
Owner of «OVZ «VAGAR»,
«SVIT VAG» (Kyiv, Ukraine),
Petro Syniehub

ABOUT US



23+

Years
in weighing
industry

15+

Years in elevator
overload
controlling field

50+

Elevator
manufacturers
use our solutions

60000+

Device
kits sold

100%
control

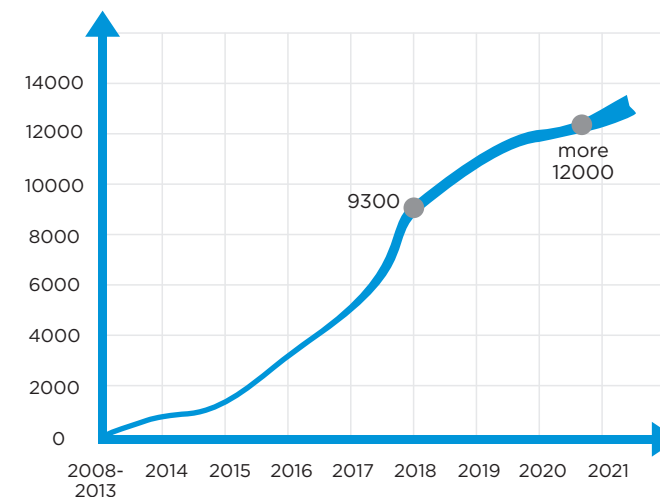
100% quality
control of finished
kits before shipment

3

Years
of warranty

SALES FOR MAIN CLIENTS

2008...2013	Σ 4300
2014	1200
2015	1300
2016	3700
2017	4800
2018	9300
2019	11000
2020	12000
2021	12500



BENEFITS

of using elevator overload systems

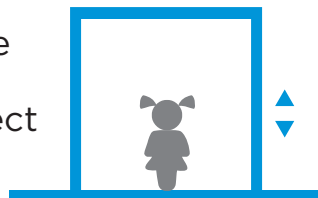
Security - elevator protection from overload



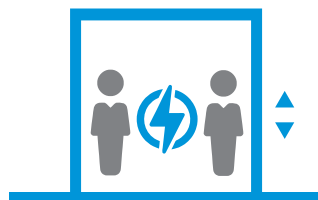
Comfort of elevator - the elevator does not stop to pick up passengers when fully loaded



Determination of the presence of passengers' weight < 15 kg. It means the elevator will detect even a child



Energy saving. Power regulation of engine depend from loading of the elevator



ADVANTAGES

of elevator overload systems



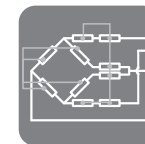
Factory production - guarantees high accuracy and reliability of the system



Load cells have IP67 degree of protection against water and dust



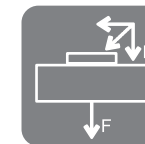
Rubber damper - protects from dynamic overload and provides equal load of load cell



The presence of temperature compensation allows work without errors in different climatic conditions



The presence of a full Wheatstone bridge allows significantly improve the accuracy of work and thus accurately determine presence of a passenger in the elevator



The round shape of the load cells. As a result, the readings of the load cells do not depend on the angle of application of the load. This form allows to compensate for parasitic non-axial force effects



The presence of a sealed cable gland - protects the wires from pulling, bending and rubbing, which increases the reliability and durability



Each kit comes with a technical passport



Metal housing - provides additional strength and protection from electromagnetic interference

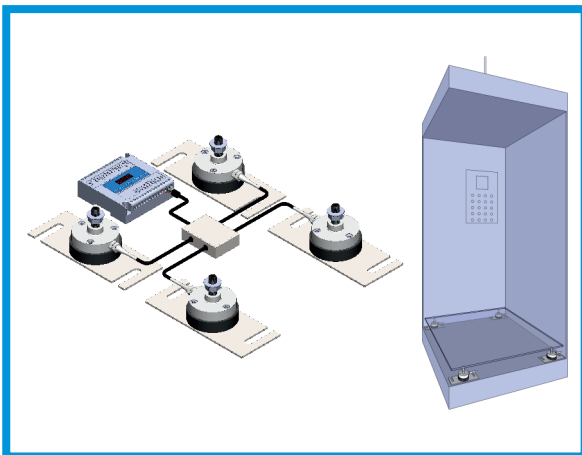


Warranty - 3 years

ELEVATOR WEIGHING KITS

1

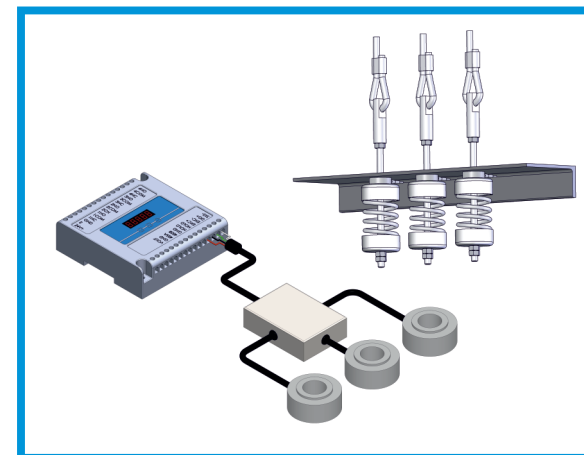
under cabin



- detect overload situation
- detect childs (weight under 15kg)
- load-dependent motion control (additional relays)

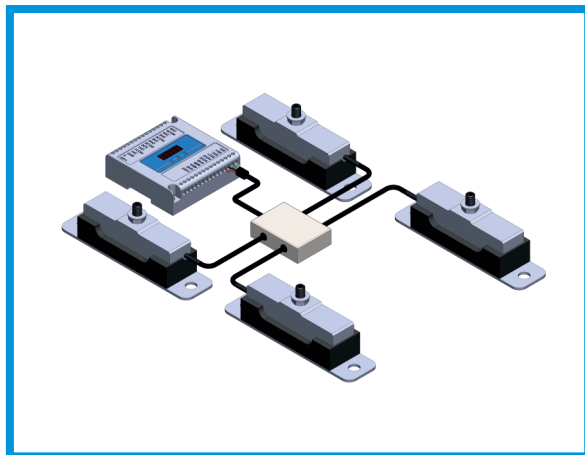
2

under springs/into springs



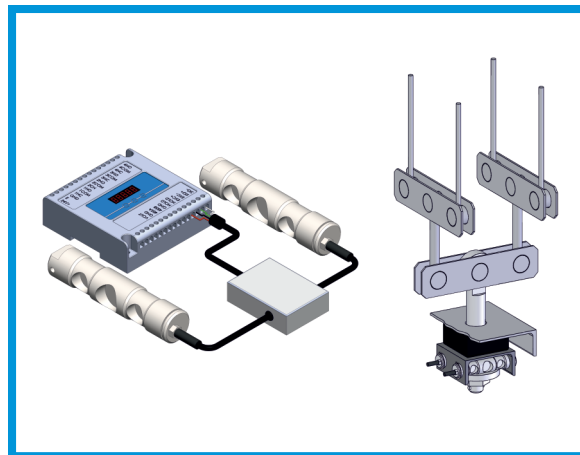
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under cabin



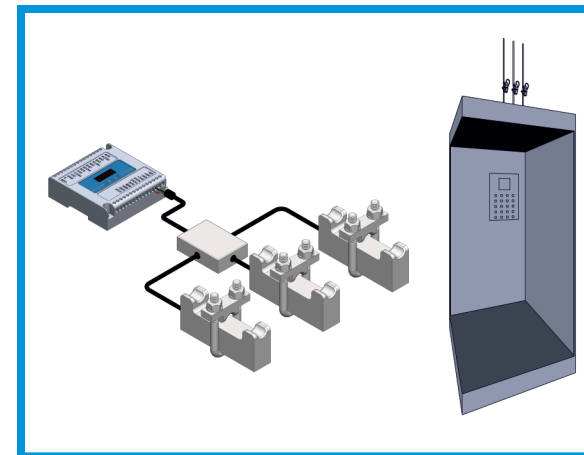
4

in the balance suspension



5

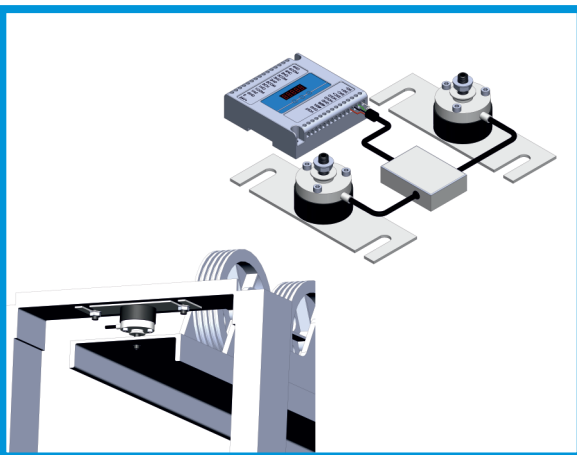
in ropes



ELEVATOR WEIGHING KITS

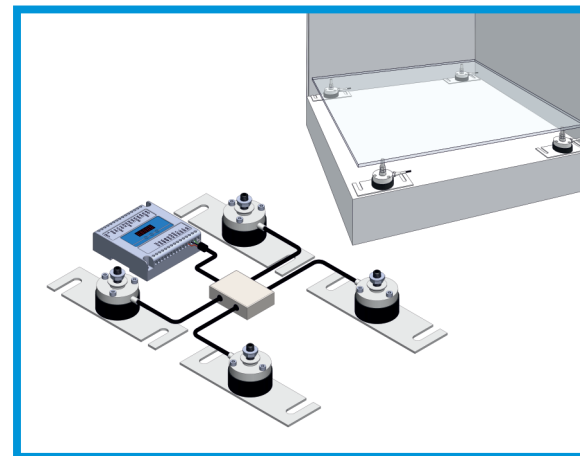
6

in frame



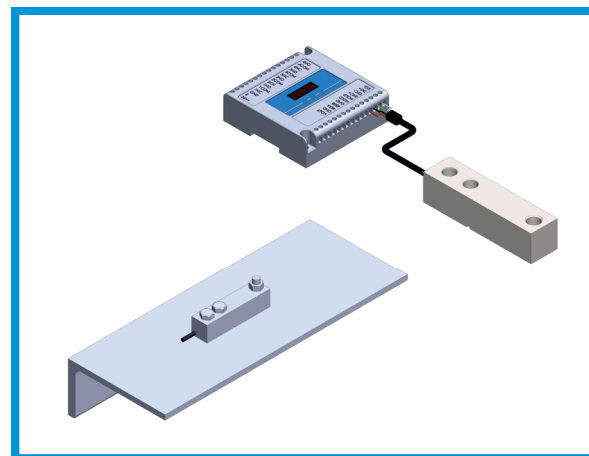
7

under the cab floor



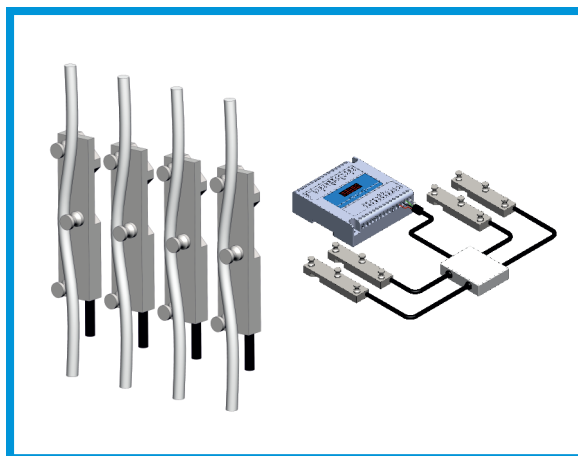
8

instalation in a base frame



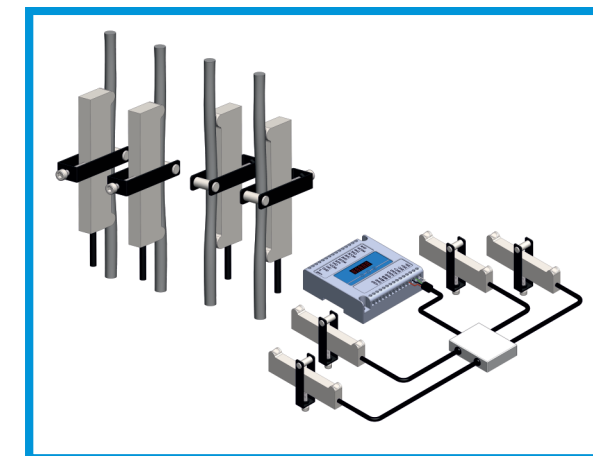
9

in ropes



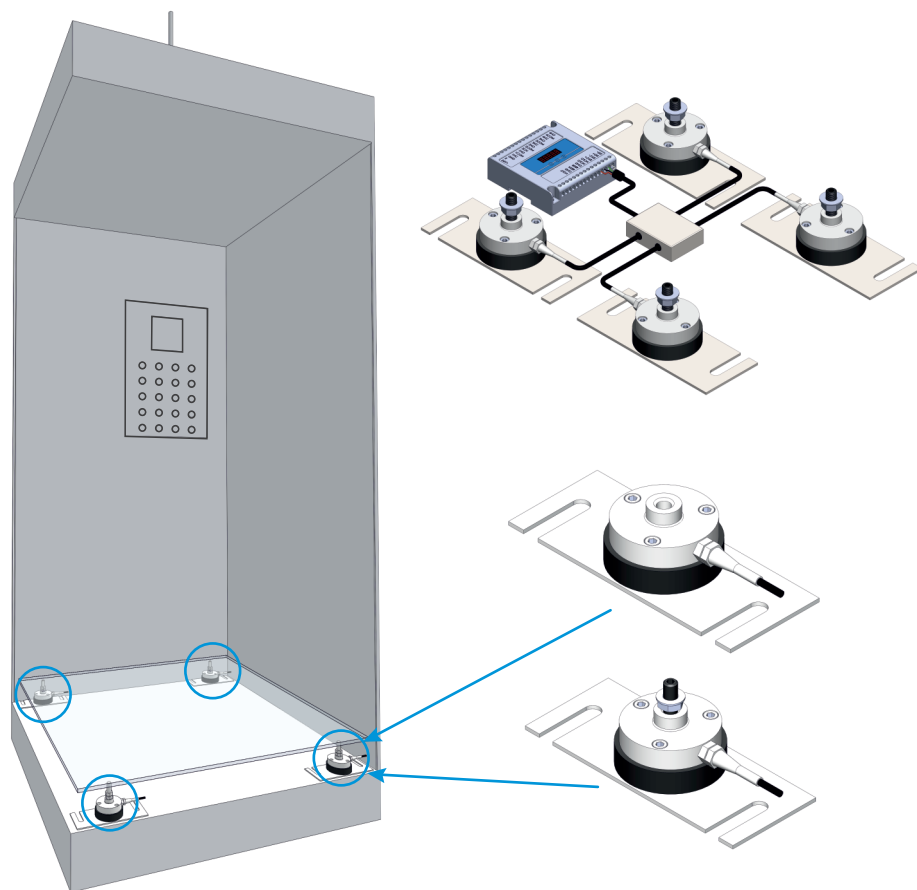
10

in ropes



- detect overload situation
- detect childs (weight under 15kg)
- load-dependent motion control (additional relays)

Elevator overload control system EOS-C(1) (installation under the cab floor)



Set Contains

Quantity, pcs.	Component description
4 / 6 / 8 / 12	Load Cell
1	IP65 Junction Box
1	Indicator

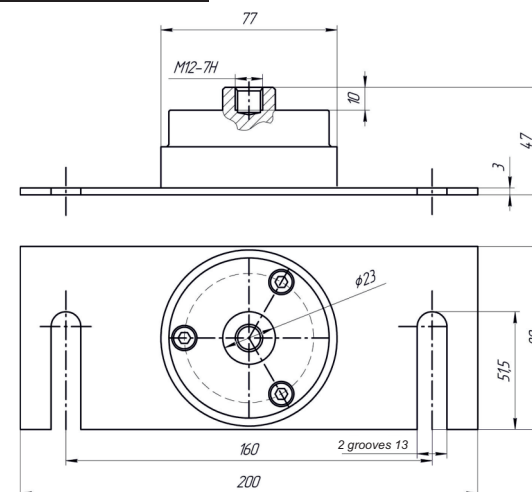
Technical characteristics

The set of load cells designed to install under the elevator cabin. The rated loading capacity of the load cell is 1 ton. The load cells have a protective sleeve against cable bending and a fixing gland to provide the IP 67 degree of protection. The load cells are mounted on shock absorbers to protect against dynamic influences during the movement of the elevator and provide an equal load of the load cells. The round shape of the load cell makes it possible to compensate for parasitic non-axial forces.

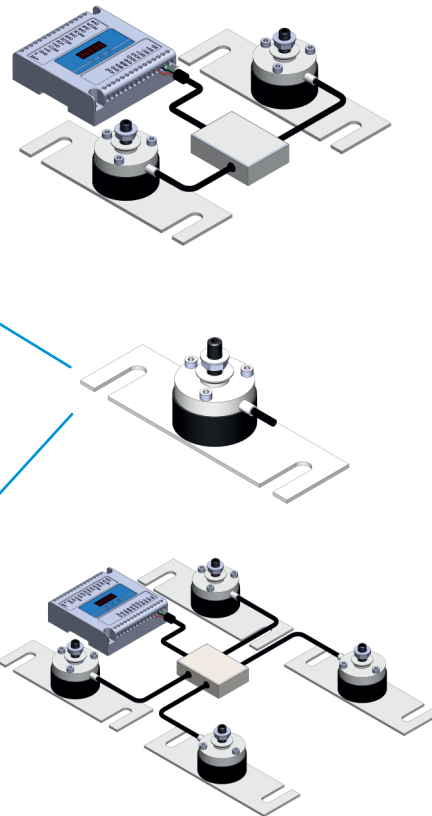
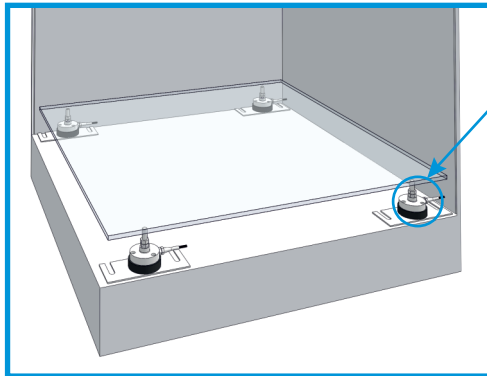
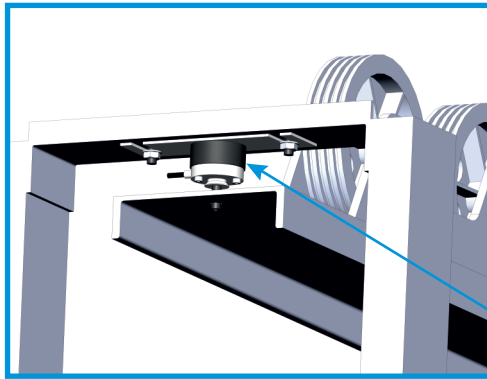
Studs and nuts are included in the kit EOS-C(1). Kit EOS-C is fully the same, but without studs and nuts.

Capacity	4000kg, 6000kg, 8000kg, 12000kg
Maximum short-time overload	12000kg, 18000kg, 24000kg, 36000kg
Load cell capacity	1000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 - Indicator IP67 - Load cells
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-CS (installation under the cab floor, under the cab, in frame)



Set Contains

Quantity, pcs.	Component description
2 / 4	Load Cell
1	IP65 Junction Box
1	Indicator

Technical characteristics

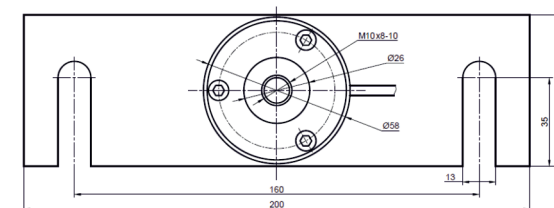
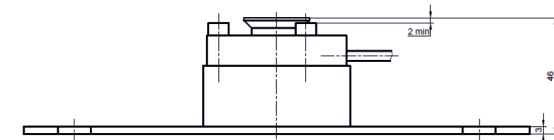
The set of load cells designed to install under the elevator cabin and in the elevator frame. The rated loading capacity of the load cell is 1 ton. The load cells are mounted on shock absorbers to protect against dynamic influences during the movement of the elevator and provide an equal load of the load cells. The round shape of the load cells makes it possible to compensate for parasitic non-axial forces. Studs and nuts are included in the kit.

The load cells have reduced overall dimensions in comparison with elevator overload control system EOS-C, which allows them to be installed in elevators with limited installation space.

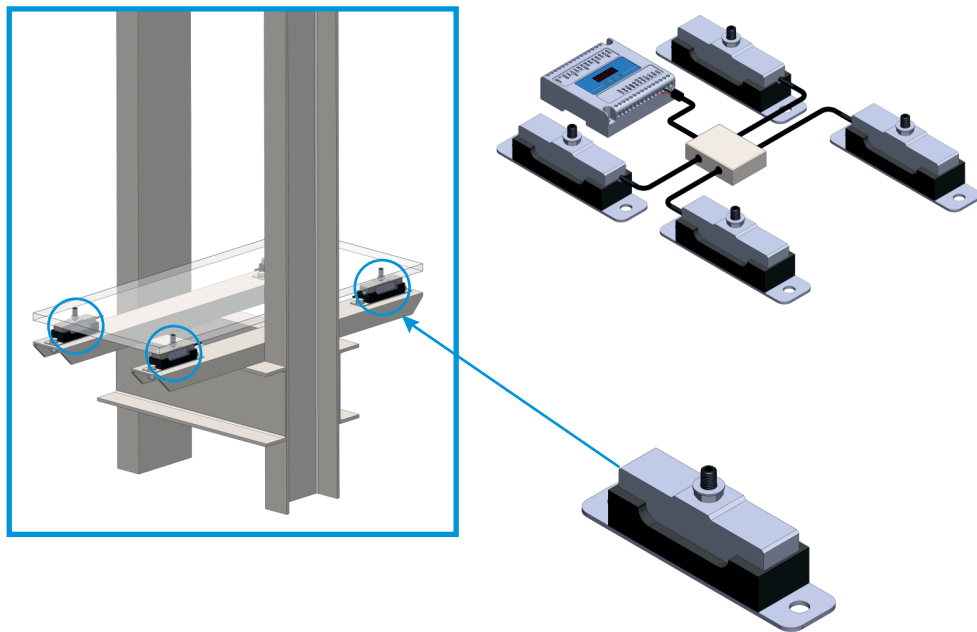
This set of load cells could be installed in other parts of the elevator structure, such as under motor frame.

Capacity	2000kg, 4000kg
Maximum short-time overload	6000kg, 12000kg
Load cell capacity	1000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 IP67
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-B (installation under the cab floor)



Set Contains

Quantity, pcs.	Component description
4	Load Cell
1	IP65 Junction Box
1	Indicator

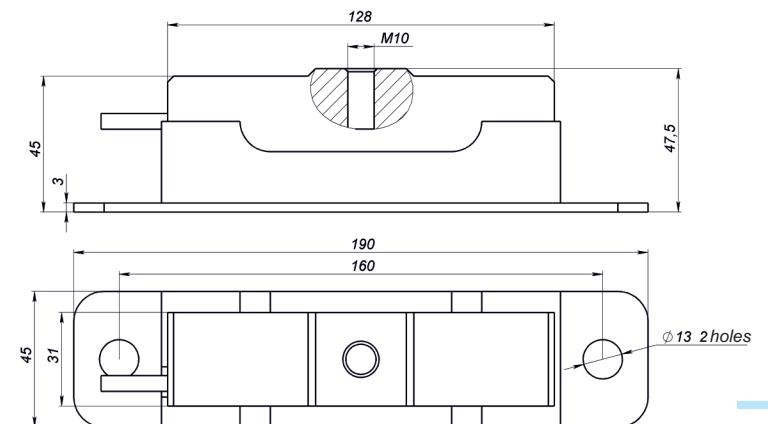
Technical characteristics

The set of load cells designed to install under the elevator cabin and in the elevator frame. The rated loading capacity of the load cell is 800 kg. The load cells are mounted on shock absorbers to protect against dynamic influences during the movement of the elevator and provide an equal load of the load cells. Studs and nuts are included in the kit.

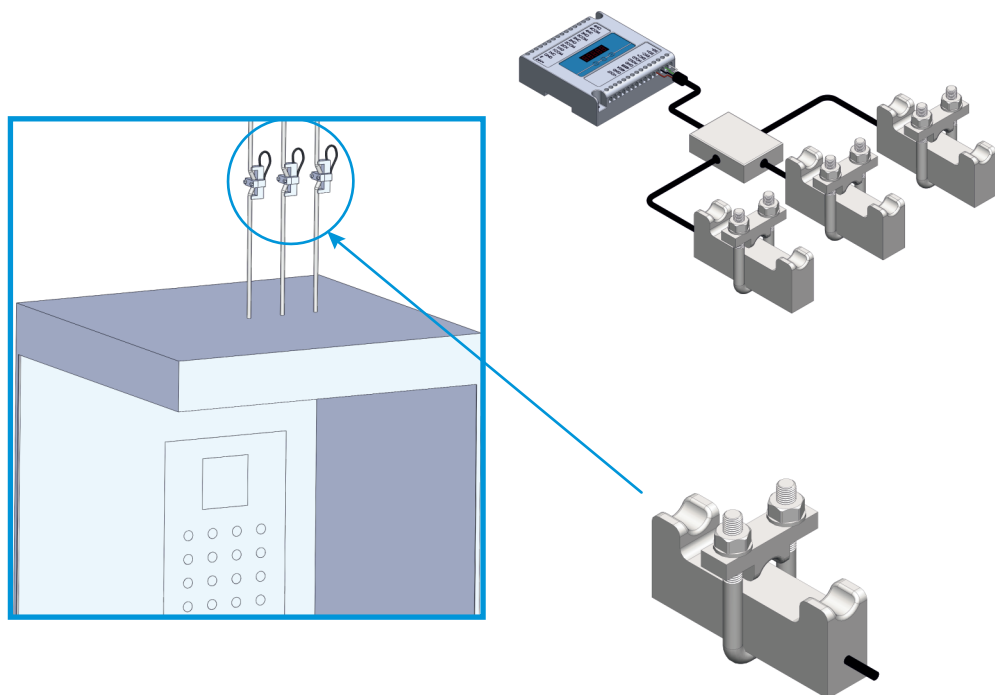
The load cells have reduced overall dimensions in comparison with elevator overload control system EOS-C and EOS-CS, which allows them to be installed in elevators with limited installation space.

Capacity	3200kg
Maximum short-time overload	8000kg
Load cell capacity	800kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	- Indicator - Load cells
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-R (installation in ropes)



Set Contains

Quantity, pcs.	Component description
1/2/3/4/5/6	Load Cell
1	IP65 Junction Box
1	Indicator

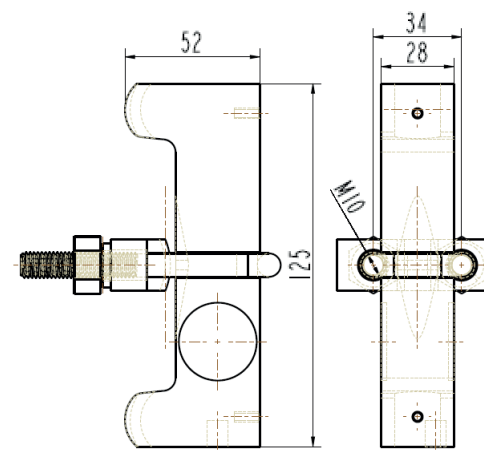
Technical characteristics

The set of load cells designed to install in a rope. The rated load capacity of the load cell is 3 tons. It is possible to produce a set with the number of load cells from 1 to 8 pcs at the request of the customer. The load cells are designed to be installed without the need to unload ropes. The nominal diameter of the cable for the load cell is from 4 to 16 mm.

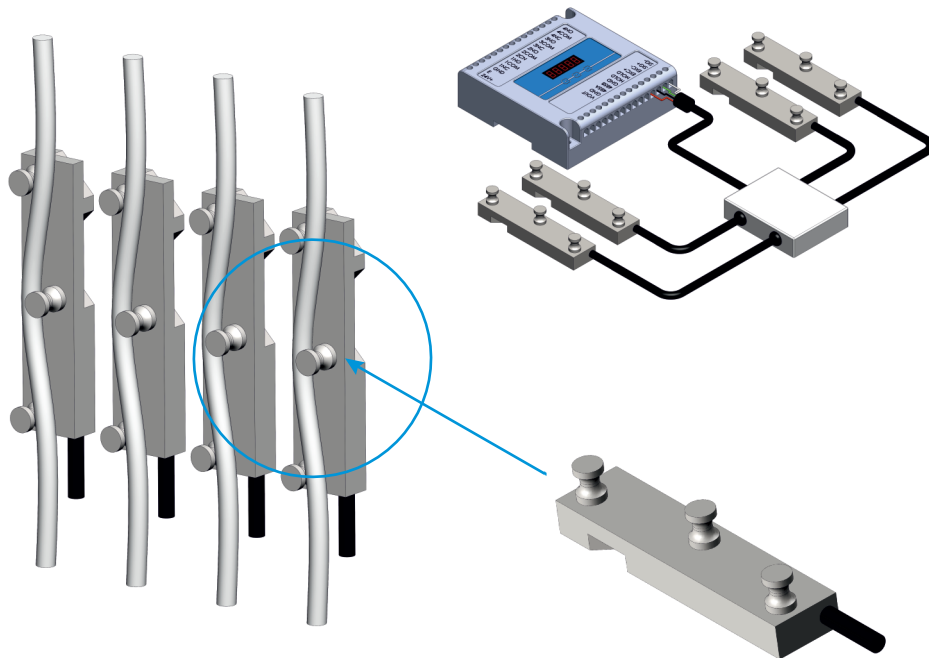
This kit is recommended for elevators where installation of other types of load cells is impossible or difficult, as well as for elevator modernization programs where overload control devices have not been installed before.

Capacity (per load cell)	3000kg
Maximum short-time overload (per load cell)	5000kg
Suitable rope diameter	4-16mm
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	~230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 - Indicator - Load cells
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-R (V2) (installation in ropes)



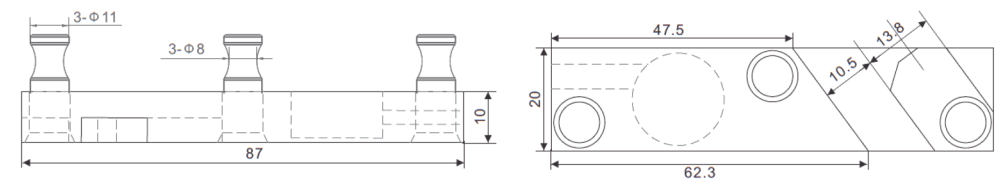
Technical characteristics

The set of load cells designed to install in a rope. The rated load capacity of the load cell is 1 ton. It is possible to produce a set with the number of load cells from 1 to 8 pcs at the request of the customer. The load cells are designed for fast installation in ropes. The nominal diameter of the cable for the load cell is from 6 to 8 mm.

This kit is recommended for elevators where installation of other types of load cells is impossible or difficult, as well as for elevator modernization programs where overload control devices have not been installed before. The load cells have reduced overall dimensions in comparison with elevator overload control system EOS-R, which allows them to be installed in elevators with limited installation space and have a quicker installation procedure.

Capacity (per load cell)	1000kg
Maximum short-time overload (per load cell)	2000kg
Suitable rope diameter	6-8mm
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	- Indicator - Load cells
Warranty	3 years

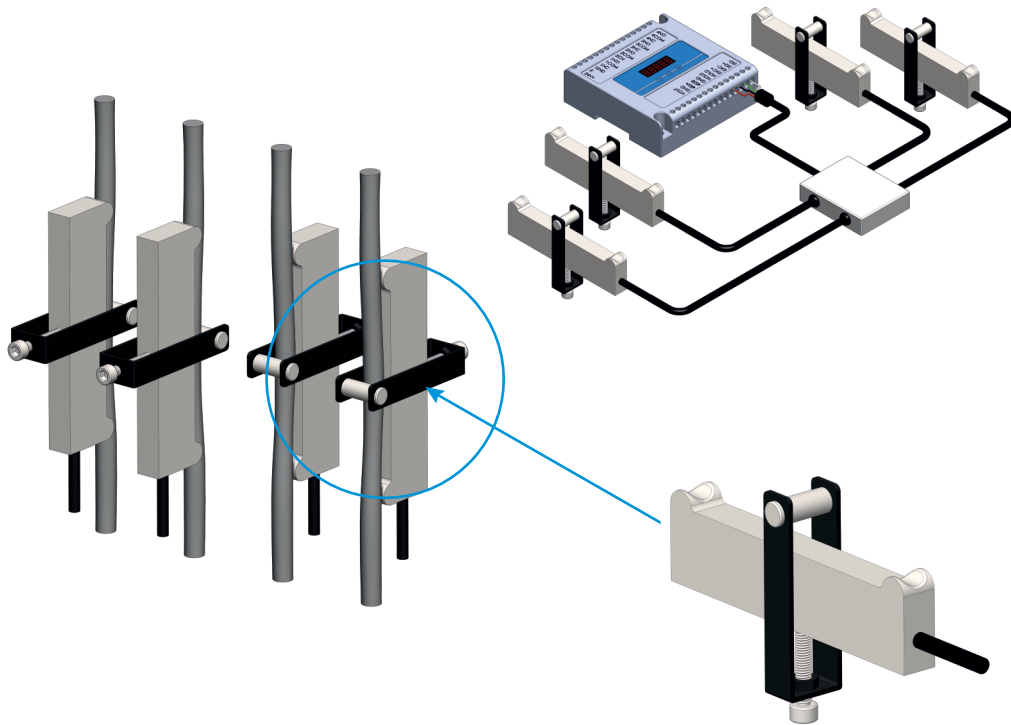
Overall dimensions (mm)



Set Contains

Quantity, pcs.	Component description
1/2/3/4/5/6	Load Cell
1	IP65 Junction Box
1	Indicator

Elevator overload control system EOS-R (V3) (installation in ropes)



Set Contains

Quantity, pcs.	Component description
1/2/3/4/5/6	Load Cell
1	IP65 Junction Box
1	Indicator

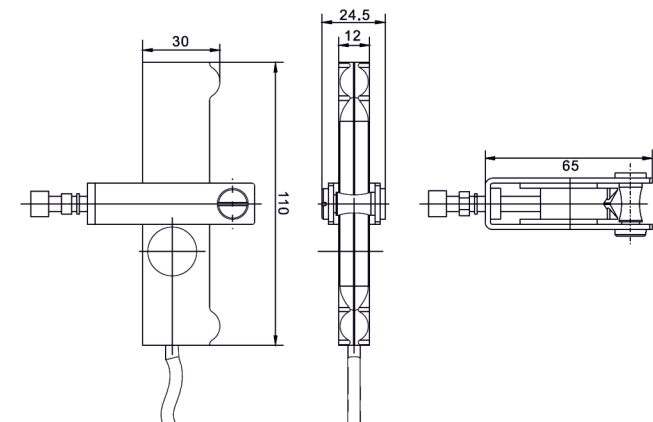
Technical characteristics

The set of load cells designed to install in a rope. The rated load capacity of the load cell is 1 ton. It is possible to produce a set with the number of load cells from 1 to 8 pcs at the request of the customer. The load cells are designed for fast installation in ropes. The nominal diameter of the cable for the load cell is from 6 to 13 mm.

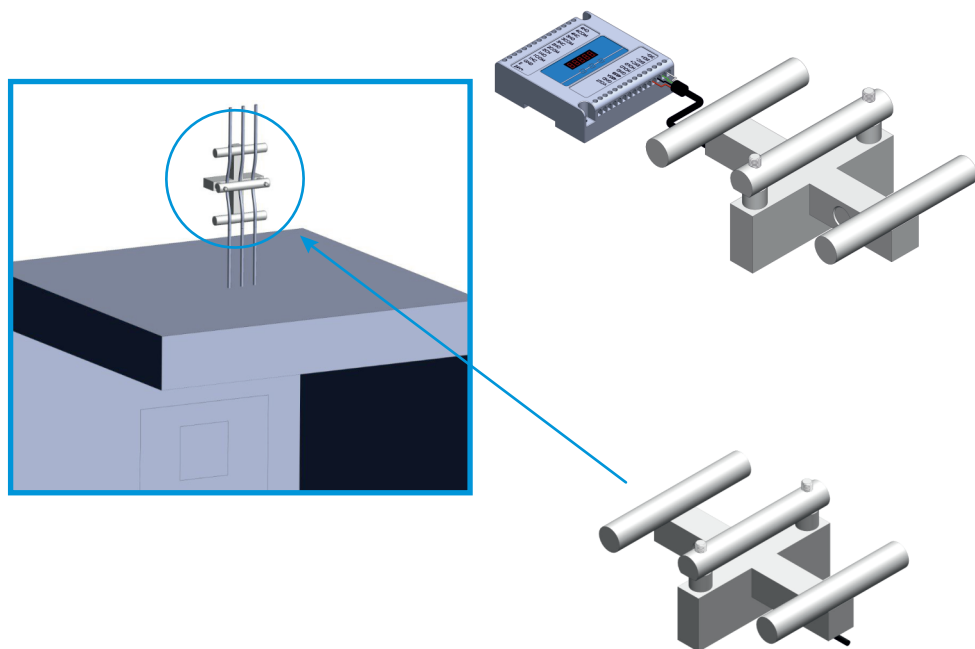
This kit is recommended for elevators where installation of other types of load cells is impossible or difficult, as well as for elevator modernization programs where overload control devices have not been installed before. The load cells have a smaller overall dimensions in comparison with elevator overload control system EOS-R, which allows them to be installed in elevators with limited installation space.

Capacity (per load cell)	1000kg
Maximum short-time overload (per load cell)	2000kg
Suitable rope diameter	6-13mm
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 IP67
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-R1 (installation in ropes)



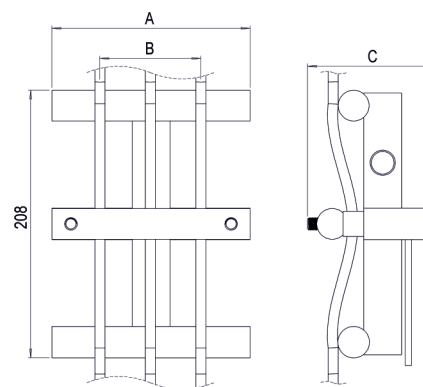
Technical characteristics

The set is designed for installation on several elevator ropes at ones. The rated loading capacity of the load cell is 3 or 4.5 tons depending on the selected model. The load cell is suitable for ropes with diameter from 6 to 23 mm. The standard model of the load cell can be installed on elevators with a center-to-center distance between the outer ropes of 114 mm (available sizes of other load cell models are given in the section with overall dimensions). To install the load cell on the required rope diameter, it is better to use a spacer of a suitable height. The load cells are supplied with a set of 6, 8, 10 and 12 mm height spacers. It is possible to manufacture kits with more than one load cell to increase the rated load capacity or for needed amount of ropes.

This kit is recommended for elevators where installation of other types of load cells is impossible or difficult, as well as for elevator modernization programs where overload control devices have not been installed before.

Capacity (per load cell)	3000kg or 4500kg
Maximum short-time overload (per load cell)	4500kg or 6750kg
Suitable rope diameter	6-23mm
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 IP67
Warranty	3 years

Overall dimensions (mm)



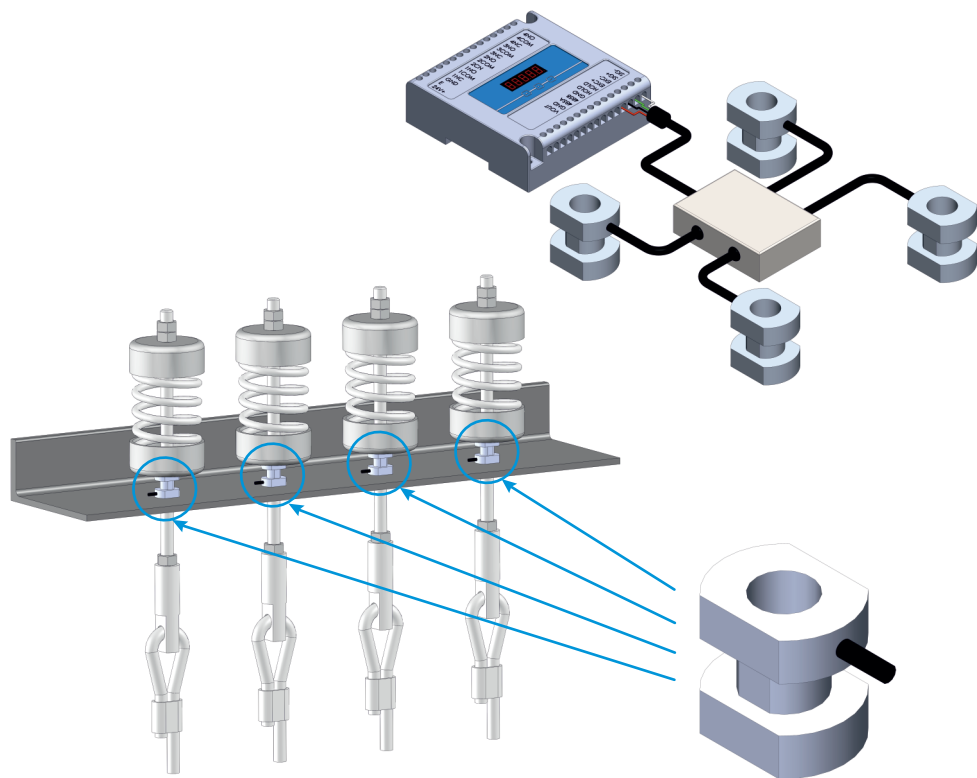
Model	R1 (V1)	R1 (V2)	R1 (V3)
A	157	230	306
B	114	187	264
C	103	133	133
Capacity, kg	3000	3000	4500



Set Contains

Quantity, pcs.	Component description
1+	Load Cell
1	IP65 Junction Box
1	Indicator

Elevator overload control system EOS-W1 (installation under springs)



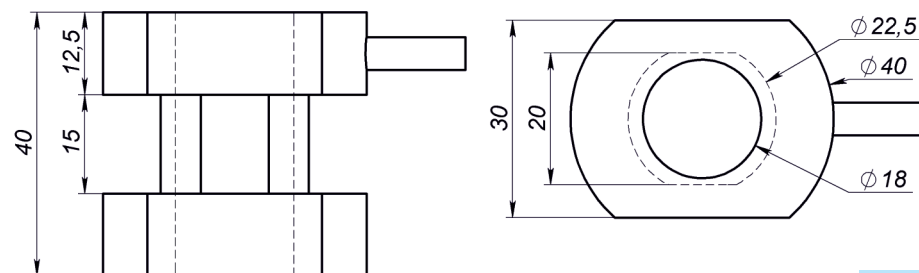
Technical characteristics

The set of load cells is intended for installation in a spring suspension at the rope terminal fixed point. The rated loading capacity of the load cell is 1 ton. The round shape of the load cells makes it possible to compensate for parasitic non-axial forces.

This set of load cells has special reduced dimensions, which allows them to be installed in elevator suspensions where the ropes are located close to each other. It is possible to manufacture a set with a different number of load cells at the request of the customer.

Capacity	4000kg
Maximum short-time overload	6000kg
Load cell capacity	1000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 IP65
Warranty	3 years

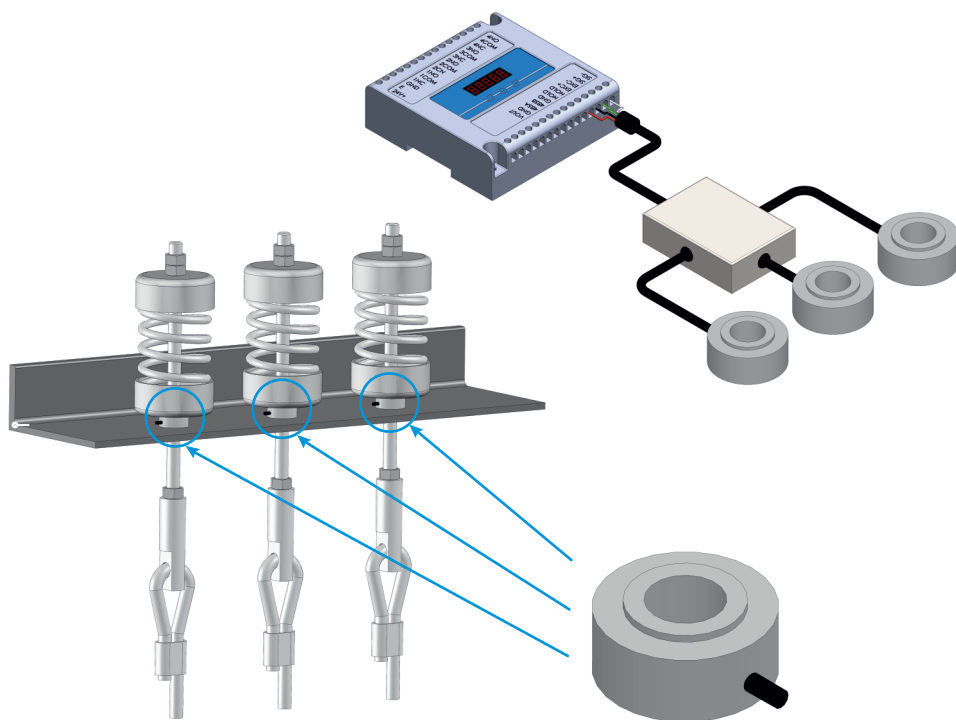
Overall dimensions (mm)



Set Contains

Quantity, pcs.	Component description
4	Load Cell
1	IP65 Junction Box
1	Indicator

Elevator overload control system EOS-W (installation under springs)



Set Contains

Quantity, pcs.	Component description
3	Load Cell
1	IP65 Junction Box
1	Indicator

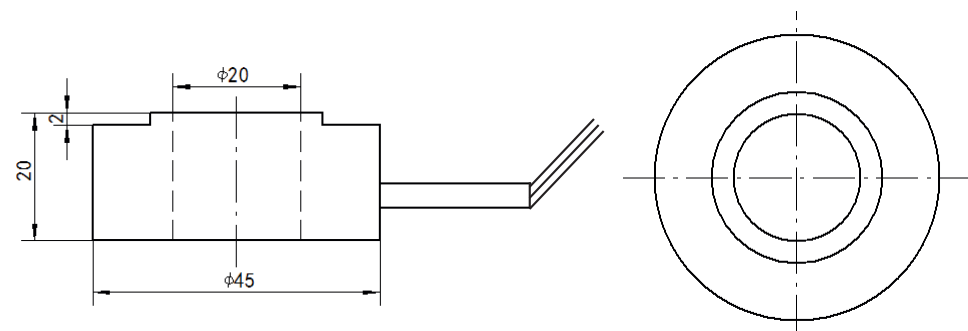
Technical characteristics

The set of load cells is intended for installation in a spring suspension at the rope terminal fixed point. The rated loading capacity of the load cell is 1 ton. The round shape of the load cells makes it possible to compensate for parasitic non-axial forces.

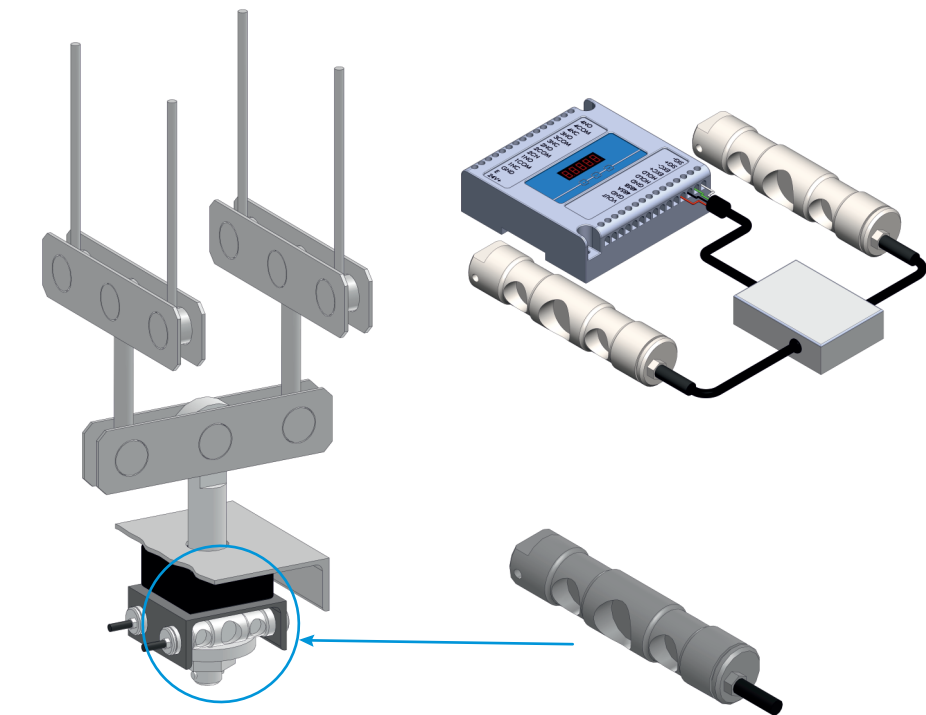
This set of load cells has small dimensions, which allows them to be installed in elevators where the installation space is limited. It is possible to manufacture a set with a different number of load cells at the request of the customer.

Capacity	3000kg
Maximum short-time overload	4500kg
Load cell capacity	1000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	IP20 IP67
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-A (installation in a balance suspension)



2000 kg

IP67

230 Vac

3

5 W

4

24 Vdc

CAN RS-232 RS-485

0...20 mA 0...10 V

HOLD

Set Contains

Quantity, pcs.	Component description
2	Load Cell
1	IP65 Junction Box
1	Indicator

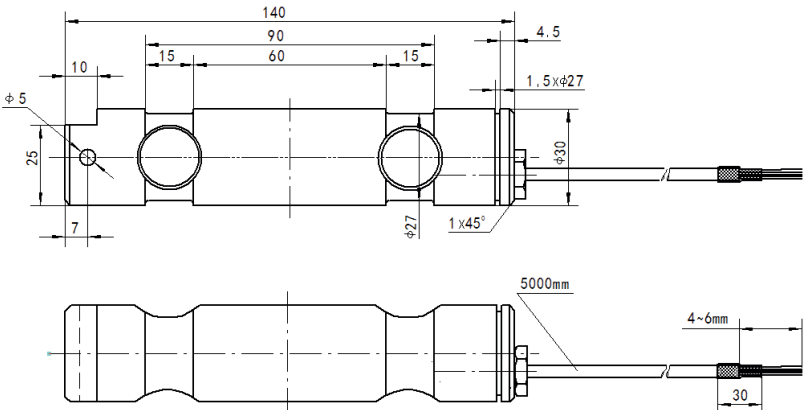
Technical characteristics

The set of load cells designed to install in a balancer suspension of elevator cabin. The rated loading capacity of the load cell is 1 ton. The load cells have a cable gland to provide the IP 67 degree of protection.

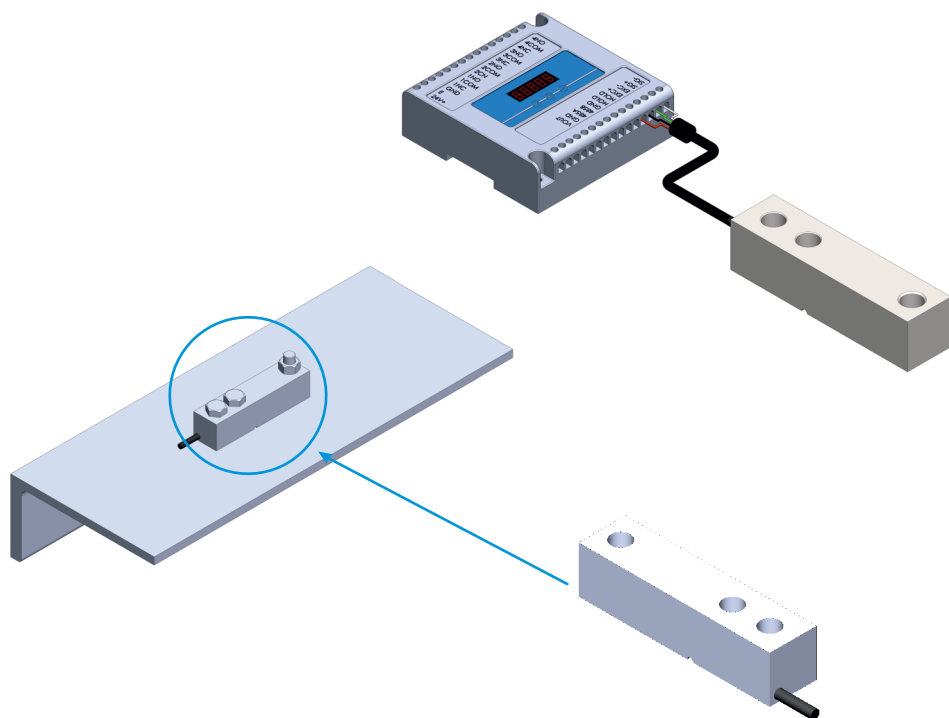
This set of load cells is also installed in other parts of the elevator structure, such as under motor bed frame, using special assemblies. It is possible to manufacture a set with a different number of load cells at the request of the customer.

Capacity	2000kg
Maximum short-time overload	3000kg
Load cell capacity	1000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	- Indicator - Load cells
	IP20 IP67
Warranty	3 years

Overall dimensions (mm)



Elevator overload control system EOS-B1 (installation in a base frame)



Set Contains

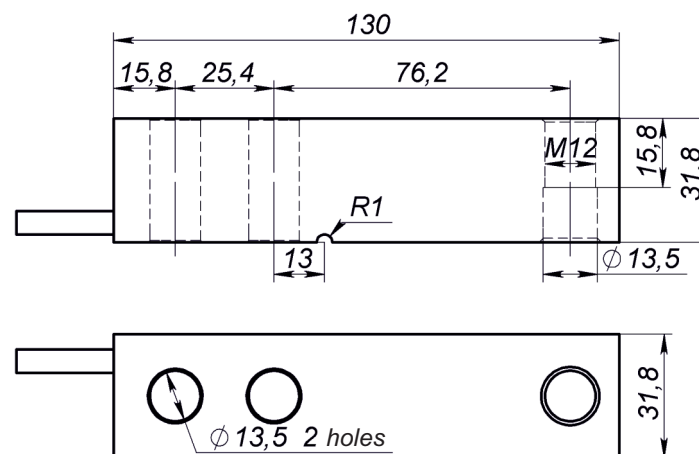
Quantity, pcs.	Component description
1	Load Cell
1 (for kits with more than 1 load cell)	IP65 Junction Box
1	Indicator

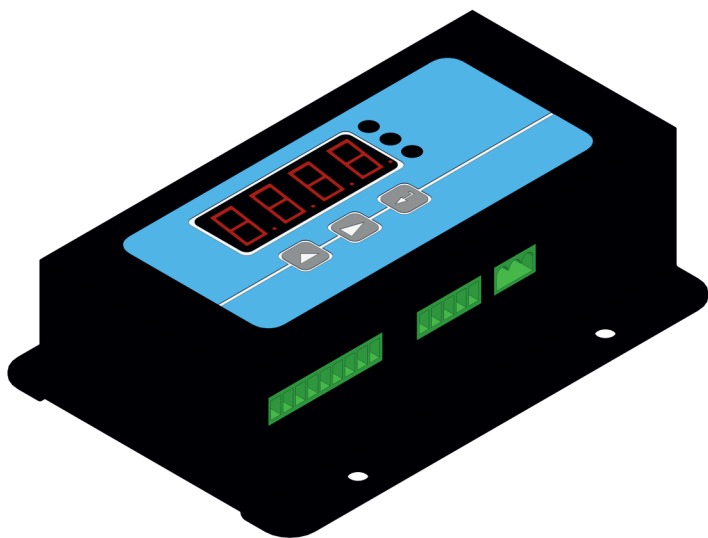
Technical characteristics

The set is designed for installation on the elevator support frame beam. The rated loading capacity of the load cell is 2,5 tons. The load cell has a cable gland to provide the IP 67 degree of protection. It is possible to manufacture kits with two load cells to increase the accuracy.

Load cell capacity	2500kg
Maximum short-time overload	5000kg
Accuracy class	0,5%
Quantity of relay outputs	3
Levels of relay outputs	15 kg (presence of a passenger) 90% (move without stopping) 110% (overload)
Supply voltage	-230±20V 50±1Hz -24±4V (option)
Working temperature range	-10...+50°C
Protection class	- Indicator - Load cells
Warranty	3 years

Overall dimensions (mm)





Indicator	Status	Key	Functions
110%	LED Overload		Reset button / Scroll parameter / Increase value
90%	LED 90% Load		Select a digit / Scroll menu
	LED Child only in elevator		Turn on and off the display / Enter

Technical characteristics

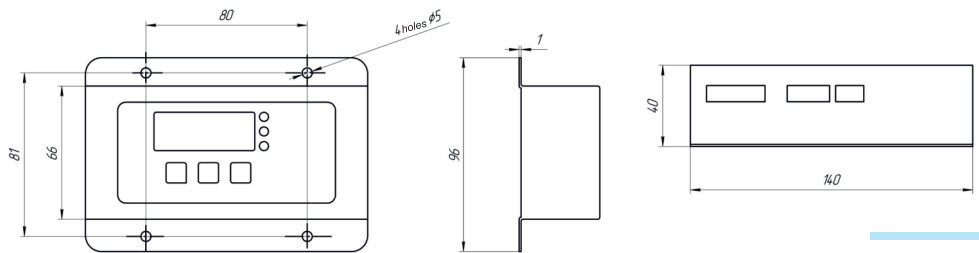
The load control indicator has 3 configurable relays and a metal housing that protects it from mechanical damage and electromagnetic interference. The device is powered by 230 V AC voltage.

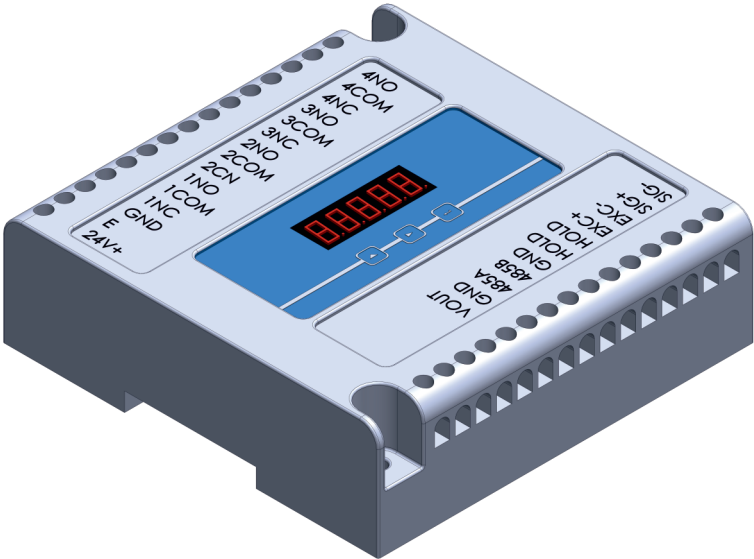
It is possible to manufacture an indicator with additional options at the request of the customer:

- additional fourth relay (50 % load);
- CAN / RS-232 / RS-485 output interface;
- analog output 0-20mA;
- analog output 0-10V;
- HOLD input (prevents the measuring of control unit during travel);
- 24 V DC power supply;
- special software modifications at the request of the customer.

Full Scale Input Signal	-11,7...+11,7 mV (-3,9...+3,9 mV/V)
Loadcell Excitation Voltage	3,0 ± 3% Vdc (typ.)
Number of Loadcells	8x350 Ohm / 16x700 Ohm
System Linearity	±10 ppm -1 (typ.)
System Input Error	10 µV (typ.)
System Offset Drift	15 nV/°C (typ.)
System Gain Drift	7 ppm-1 /°C (typ.)
Power Supply	230 Vac +/-10% / 50-60Hz or 24 +/-10% Vdc
Fusing	1,10A resettable
Power Consumption	6W (max.)
Operating Temperature	-10...+40°C
Storage Temperature	-20...+50°C
Operating Humidity	0-90% at 20°C
Enclosure Dimensions	14.0 x 9.6 x 4.0 cm
Indicator Net Weight	0,60 kg

Overall dimensions (mm)





Indicator	Status	Key	Functions
110%	LED Overload		Reset button / Scroll parameter / Increase value
90%	LED 90% Load		
50%	LED 50% Load		Select a digit / Scroll menu
LED Child only in elevator			
%	Load displayed in «%» from elevator capacity		Turn on and off the display / Enter
kg	Load displayed in «kg»		

Technical characteristics

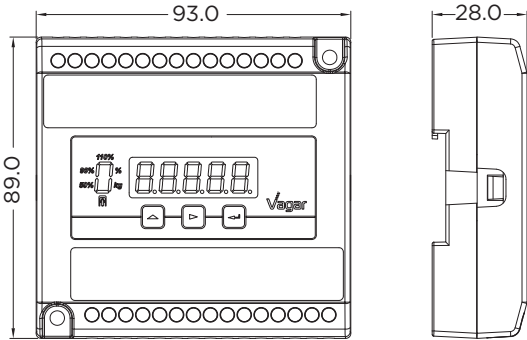
The load control indicator has 3 configurable relays and a plastic housing that makes device simpler, smaller and lighter. The device is powered by 230 V AC voltage. The indicator can display the weight in kg and in % of the rated load. The housing of the device has reduced overall dimensions in comparison with EOS-2 indicator, which allows it to be installed in elevators with limited installation space. The device comes with a built-in mount for installation on a DIN rail.

It is possible to manufacture an indicator with additional options at the request of the customer:

- 24 V DC power supply;
- HOLD input (prevents the measuring of control unit during travel);
- additional fourth relay (50 % load);
- analog output: 0-20mA or 0-10V;
- digital CAN / RS-232 / RS-485 output interface;
- special software modifications at the request of the customer.

Full Scale Input Signal	-12.9 ~ +12.9 mV (-3.9 ~ +3.9 mV/V)
Loadcell Excitation Voltage	3.3±3% Vdc (typ.)
Number of Loadcells	8 x 350Ω / 16 x 700Ω
System Linearity	±10 ppm (typ.)
System Input Error	10 μV (typ.)
System Offset Drift	15 nV/degC (typ.)
System Gain Drift	7 ppm/degC (typ.)
Display	5-digit LED, 0.36inch/9.14mm 7-segment
Keypad	3-key flat tact switch
Power Supply	230 Vac / 50-60Hz or 24 +/-10% Vdc
Fusing	0.12 A resettable
Power Consumption	5W (max.)
Operating Temperature	-10 ~ +40 degC (+14 ~ +104 degF)
Operating Humidity	0 ~ 90 % at 20 degC (rel.)
Enclosure Material	ABS Plastic
Indicator Net Weight	0.16 kg

Overall dimensions (mm)



LOAD CELL ADVANTAGES



Material for production: aluminum or steel with anti-corrosion coating, which ensures durability, mass and accessibility.



Physical thermal compensation allows the sensor to operate with maximum accuracy over a wide range of operating temperatures.



Availability of a complete WHITSTON BRIDGE significantly increases the Measurement Accuracy.



Degree of protection of the sensors IP65 ... IP67 allows operation in severe natural conditions. We guarantee 3-years of non-problematic sensor's operation.



The characteristics of the sensor are independent of the angle of application of the load due to the design of the elastic element, which provides a possibility to compensate for parasitic off-axis forces.



Higher permissible load in standard size (up to 1t) .



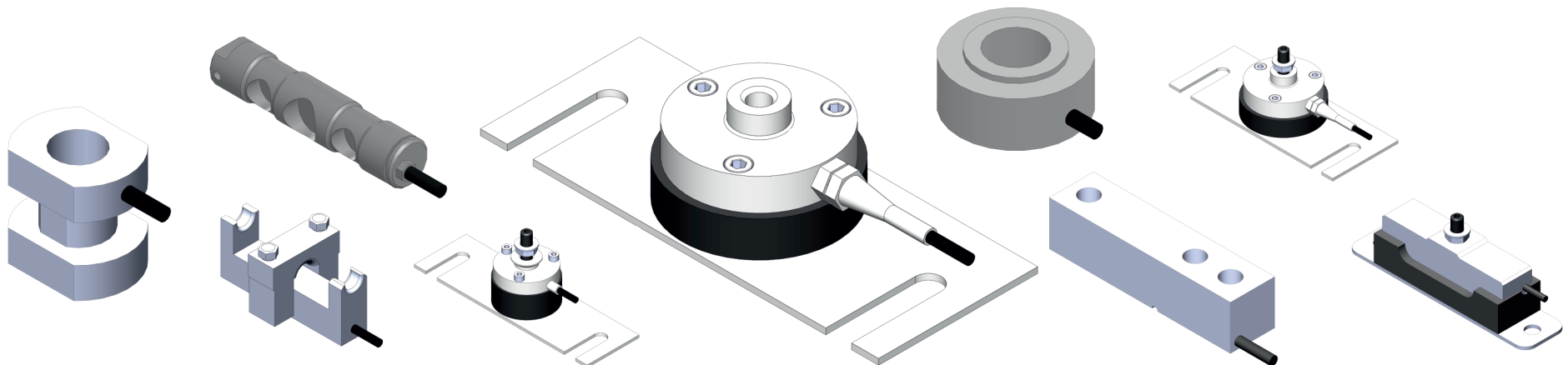
Permissible short-term overload 300% (protection against dynamic impacts when the elevator lands on bumpers or safety catches)



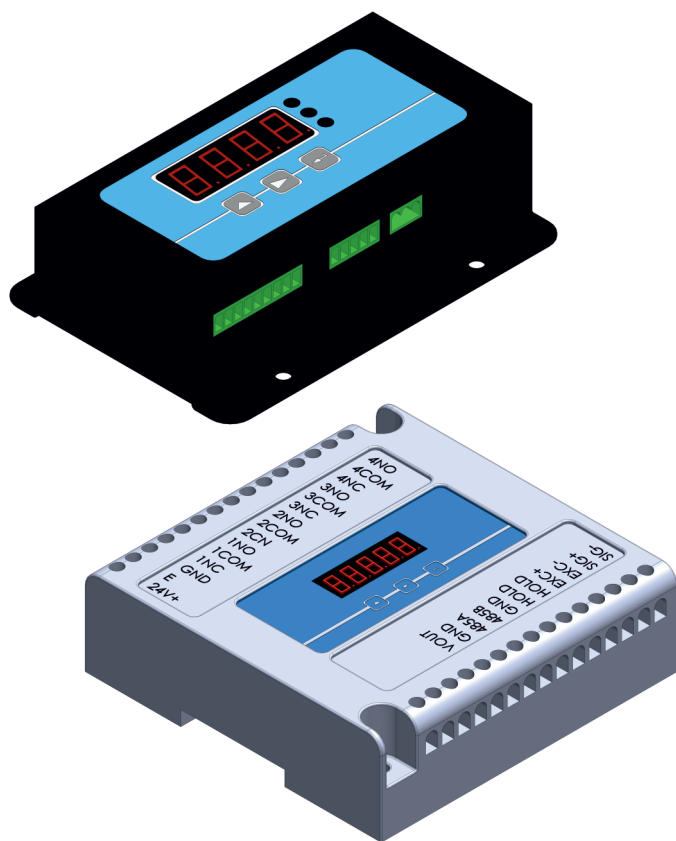
Minimum overall and mounting dimensions. Various types of sensors are available to order.



Built-in cable kink protection for longer service life.



INDICATOR ADVANTAGES



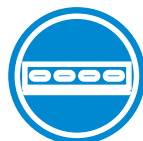
More technical
information and
specifications
here



Compact dimensions
(installation dimensions
of the device LxHxW from
90x28x90 mm).



Metal housing with protection
against electromagnetic
interference.



Possibility of mounting
the device on a DIN rail.



Various power supply
options for the device
(220 VAC, 24 VAC, 24 VDC).



The 24-charger ADC
provides high speed
and accuracy.



Weight indication on the
device, light and sound
indication availability
of the loading level.



Possibility of setting to any
maximum weight, zeroing
the accumulated weight and
zeroing the weight of the cabin.



Possibility of improving the
work algorithm up to special
customer requests.



Additional functions on
request (4 relays,
disconnecting input,
analog outputs, CAN output).



Two-level menu with
password protection to
eliminate the possibility
of unauthorized changes
to the parameters.



Energy efficiency.

KITS ADVANTAGES

- ✓ 100% quality control of finished kits before shipment.
- ✓ The level of dust and moisture protection IP65 ensures working capacity in dusty and humid rooms.
- ✓ The rubber damper design protects the sensors from dynamic overload and ensures that they are equally loading action (but not for all models).
- ✓ The device uses industrial shielded cables and chokes with kink-protected fittings.
- ✓ Unification and standardization. Ease of installation and quick replacement of components.
- ✓ Possibility of choosing the types of sensors for different places of their installation and types of connectors for connecting the thermometric sensor.
- ✓ The possibility of factory calibration of the finished product.
- ✓ Electronic base of technical documentation and commissioning instructions.
- ✓ An ability to customize the device as a whole and its individual components.

BENEFITS

- ✓ Price - you get the quality that meets your expectations.
- ✓ Direct communication with the manufacturer guarantees:
 - prompt technical support,
 - adaptation to customer conditions,
 - the possibility of improving settings up to individual requests,
 - the possibility of customization.
 - delivery times and constant availability in the warehouse.
- ✓ The devices are durable and adaptable to any conditions.
- ✓ The quality of the devices is constant with a 3-year factory warranty.
- ✓ Flexibility and an individual approach to cooperation with each customer.



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