

Catalogue

Load Weighing Devices



Dinacell Electrónica S.L.



Dinacell Electrónica S.L.



THINK UNIC



Staging the reference

Dinacell Electronica is a reference in the national and international market, established in values such as innovation and quality, above all, based on the trust placed by our customers. We are always looking for new horizons, learning every day and innovating to continue leading the industry with cutting-edge technology. Investing every year in the most advanced technology of the sector and in the research and development that we carry out in our I + D + I department.

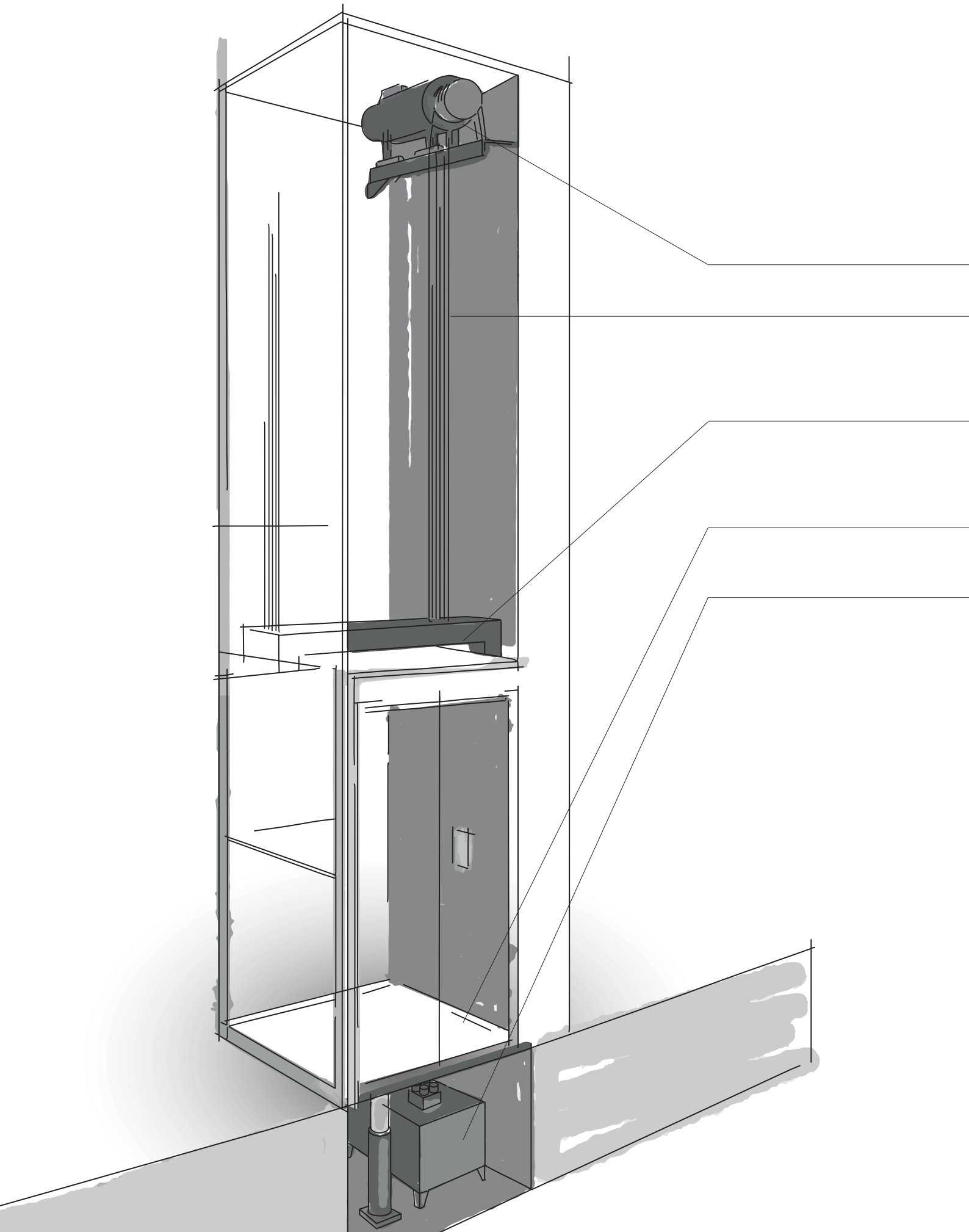


The difference,
is what we can do
and develop together

Based on the experienced of our professional engineering department on which could give ideas and support for any demand needed on your projects.

Trust the end results

The manufacture and control of all our processes has been a fundamental pillar in the growth of the entity. Thanks to this, it can offer the appropriate personalization to each client, the quality and safety of the shortest delivery times. Backed in turn by a strong stock distributed in warehouses around the world.



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Load cells

Load cells designed to install
under motor bed frame

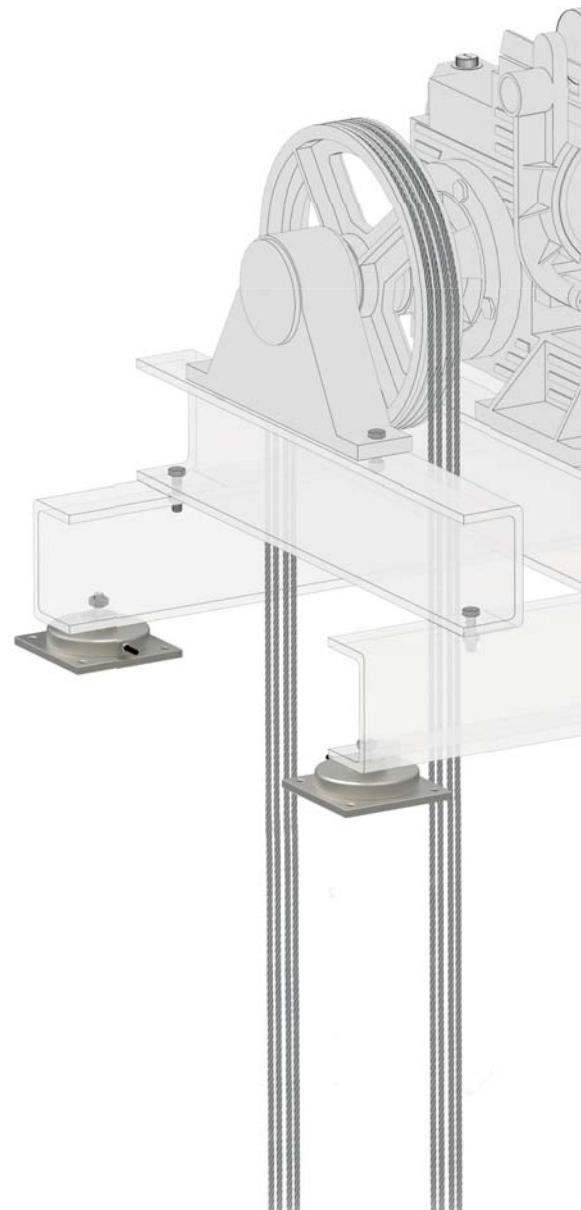


BPP Compression load cell

BPP load cell is specially designed to be installed under motor bed frame.
Dinacell has developed two different models:

- BPP is installed supporting motor weigh.
- BPP-CB supports motor weight and it is bolted to the motor shaft.

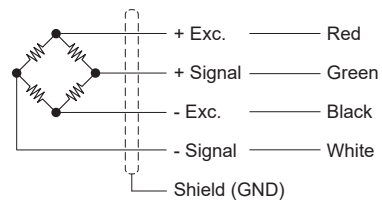
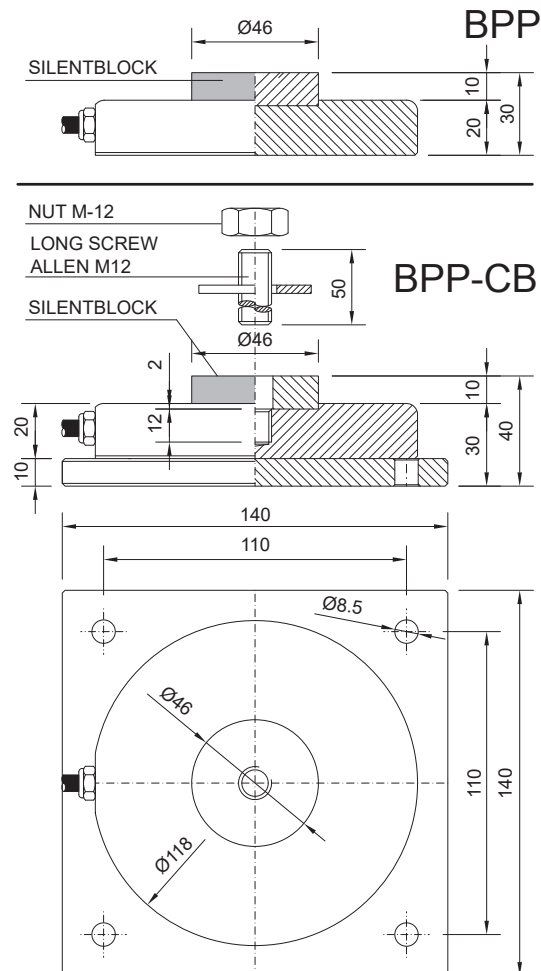
Load cells are provided with a silent-block avoiding possible vibrations transmissions.
We highly recommend install at least two load cells, placed in the point with highest pressure, obtaining the best load weighing accuracy.



Specifications

Parameter		Units	Specifications	
Model		-	BPP	BPP-CB
Nominal Load (N.L.)		t	1.5 / 3 / 5 / 6.5	
Nominal Sensibility (N.S.)		mV/V	1.4 ... 2.0	
Accuracy		-	0.2%	
Zero balance		mV/V	± 0.20	
Maximum excitation voltage		V	12	
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)	
	Operating		-20 ... +60 (-4 ... +140)	
	Storage		-20 ... +70 (-4 ... +154)	
Min. insulation resistance (V.Test = 100V)		G Ω	4	
Input resistance		Ω	350 \pm 3	
Output resistance		Ω	350 \pm 2	
Load limit	Safe	%N.L.	150	
	Broken		>300	
Cable	Type	-	4 x 0.22 mm ² Ø6	
	Standard length	m	4	
	Material	-	Polurethane (PU)	
Sensor	Material	-	Alloy Steel	
	Surface treatment	-	Chemical Nickel	
Protection class		-	IP67	

Dimensional Drawings (mm) and Wiring Diagram



Individual sensor for lift ropes application



SWK Load Sensor for lift ropes

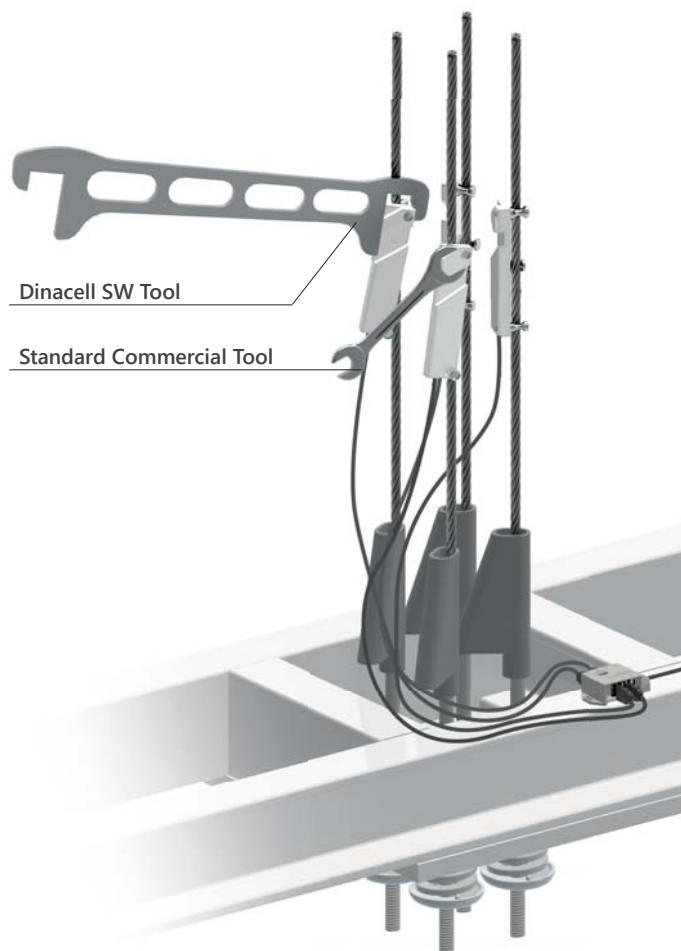
These sensors are installed individually on the lift ropes to measure the load supported on each rope. A wide range of SWK covers rope diameter from 4 up to 16 mm, each one with their respective nominal load.

One of the most remarkable characteristics of this sensor is the fast and easy installation, by using Dinacell SW Tool or any standard tool. Other of its advantages is the capability of being installed in already finished installations.

For a complete load weighing installation

These sensors have a USB connector output. This feature allows to use multiple-input in control unit, as OMEGA Control until, and be able to obtain individual information from each sensor.

For installations with the special requirement of connecting a set of sensors to a load limiter with only one input, sets could be conformed with a *INTERFACE*¹. This accessory provide a wired or USB output, which makes them suitable with any device, regardless of the load limiter input type.

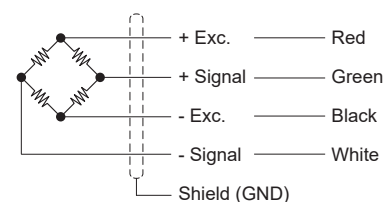
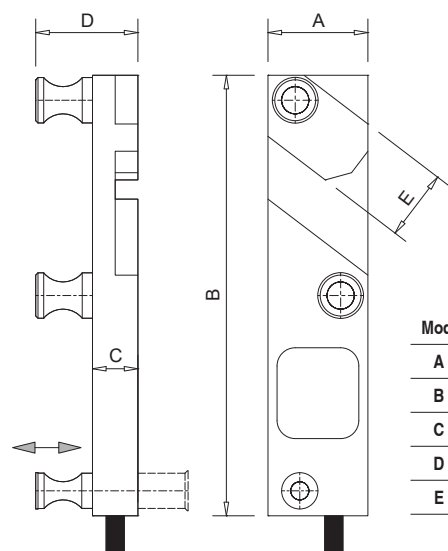


1- INTERFACE.

Specifications

Parameter		Units	Specifications												
Model		-	SWK4	SWK5	SWK6	SWK6.5	SWK8	SWK9	SWK10	SWK11	SWK12	SWK13	SWK14	SWK15	SWK16
Nominal Load (N.L.) vs Rope Ø	Ø 4	kg	150	250											
	Ø 5		130	200	300										
	Ø 6			150	250	350									
	Ø 6.5				200	250	400								
	Ø 8					200	350	500							
	Ø 9						250	400	550						
	Ø 10							300	450	650					
	Ø 11								350	550	750				
	Ø 12									450	650	900			
	Ø 13										550	800	1050		
	Ø 14											700	950	1200	
	Ø 15												850	1100	1350
	Ø 16													1000	1250
Nominal Sensibility (N.S.)		mV/V	1.3 ... 2.0												
Accuracy		-	0.25%												
Zero balance		mV/V	± 0.20												
Maximum excitation voltage		V	12												
Minimum distance to hitch point		cm	25												
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)												
	Operating		-20 ... +60 (-4 ... +140)												
	Storage		-20 ... +70 (-4 ... +158)												
Min. insulation resistance (V.Test = 100V)		GΩ	4												
Input resistance		Ω	350 ... 400												
Output resistance		Ω	350 ±1.5												
Load limit	Working	%N.L.	120												
	Safe		150												
Cable	Type	-	4 x 0.14mm ² Ø4.3												
	Connector	-	USB												
	Standard length	m	2												
	Material	-	Polurethane (PU)												
Sensor	Material	-	Aluminum												
	Surface treatment	-	Anodized												
Protection class		-	IP65												

Dimensional Drawings (mm) and Wiring Diagram



Mod.	SWK4	SWK5	SWK6	SWK6.5	SWK8	SWK9	SWK10	SWK11	SWK12	SWK13	SWK14	SWK15	SWK16
A	12.5	18	20				22		24		28		
B	70	80	87				97		107		110		130
C	8	10									12		
D	14	18.5			21		22.5		25		30.5		
E	10	14					15.5		17.5		-		

Individual sensor for lift ropes application



SWR Load sensor for lift ropes

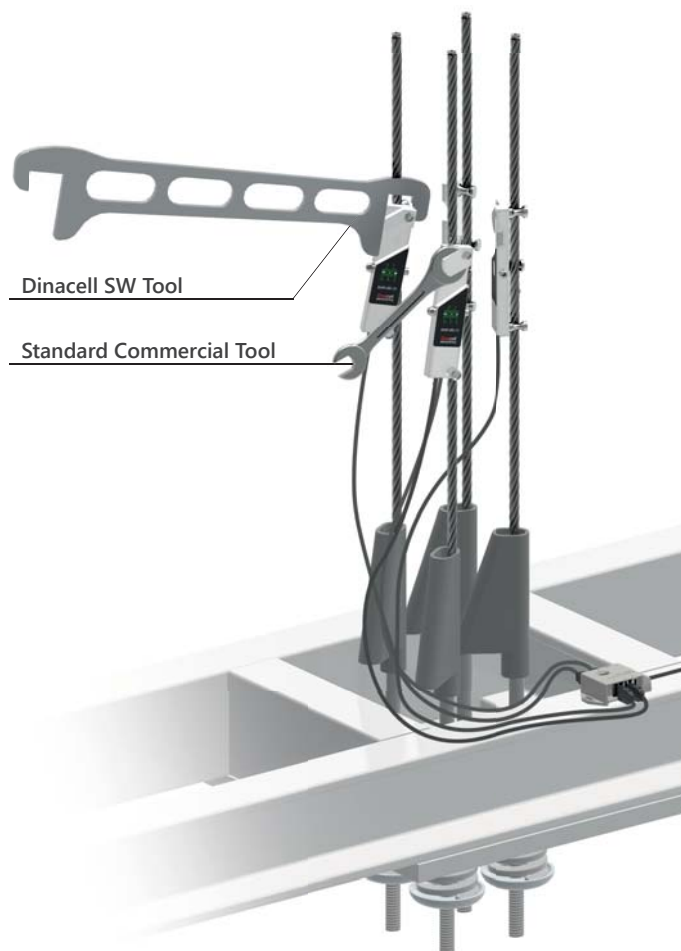
These sensors are installed individually on the lift ropes to measure the load supported on each rope. The SWR retractable central pulley allows to cover a range from diameter 5 up to 13 mm, with their respective nominal load in a single format.

One of the most remarkable characteristics of this sensor is the fast and easy installation, by using Dinacell SW Tool or any standard tool. Other of its advantages is the capability of being installed in already finished installations.

For a complete load weighing installation

These sensors have a USB connector output. This feature allows to use multiple-input in control unit, as OMEGA Control until, and be able to obtain individual information from each sensor.

For installations with the special requirement of connecting a set of sensors to a load limiter with only one input, sets could be conformed with a *INTERFACE*¹. This accessory provide a wired or USB output, which makes them suitable with any device, regardless of the load limiter input type.

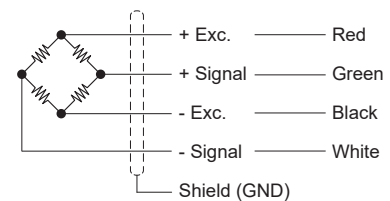
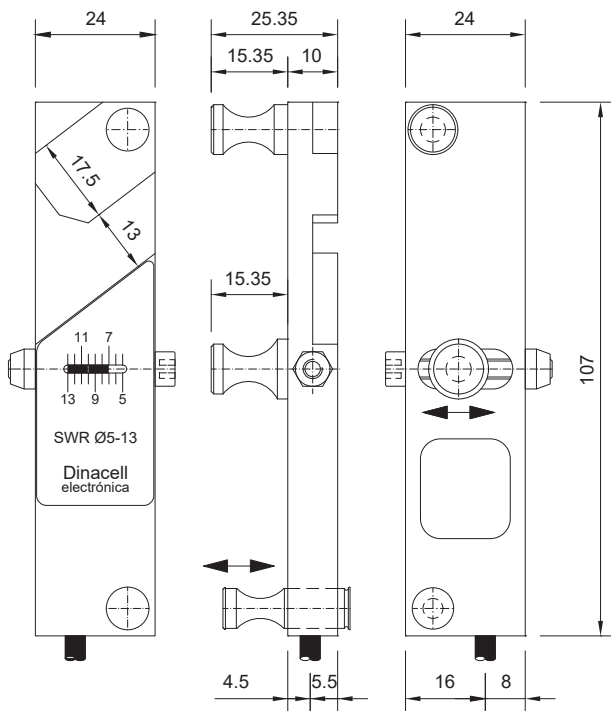


1- INTERFACE.

Specifications

Parameter		Units	Specification									
Model		-	SWR									
Nominal Load (N.L.)		kg	200	250		300	350	400	450	550	650	800
Rope Ø		-	5	6	6.5	7	8	9	10	11	12	13
Nominal Sensibility (N.S.)		mV/V	0.5 ... 2.0									
Accuracy		-	0.25%									
Zero balance		%mV/V	± 0.20									
Maximum excitation voltage		V	12									
Minimum distance to hitch point		cm	25									
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)									
	Operating		-20 ... +60 (-4 ... +140)									
	Storage		-20 ... +70 (-4 ... +158)									
Min. insulation resistance (V.Test = 100V)		GΩ	4									
Input resistance		Ω	350 ±1.5									
Output resistance		Ω	350 ±1.5									
Load limit	Working	%N.L.	120									
	Safe		150									
Cable	Type	-	4 x 0.14 mm ² Ø4.3									
	Connector	-	USB									
	Standard length	m	0.5 / 2 / 4									
	Material	-	Polurethane (PU)									
Sensor	Material	-	Aluminum									
	Surface treatment	-	Anodized									
Protection class		-	IP65									

Dimensional Drawings (mm) and Wiring Diagram



Load cell designed for elevator ropes installation



LCA Load sensor on ropes

The sensor LCA is installed in the elevator ropes to measure the totality of the load supported. LCA come with clamp in order to cover different number of ropes from 3 up to 8 ropes and several diameters from $\varnothing 6\text{mm}$ up to $\varnothing 16\text{mm}$, depending on the characteristics type of the lift configuration & installation.

Get the best of performance and advantages

These types of LCA sensors have an optional cable output; 5 wires or with a USB connector, depending on the type of input connection of the controllers:

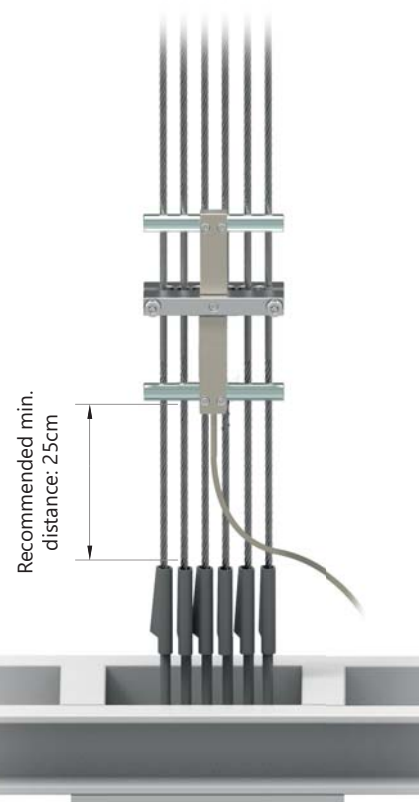
- For LCA with T-USB output, the recommended devices are *RCU*¹.
- For LCA with wiring connection, we recommend our *VK*² devices.



1- RCU.
(For sensors with USB connector).



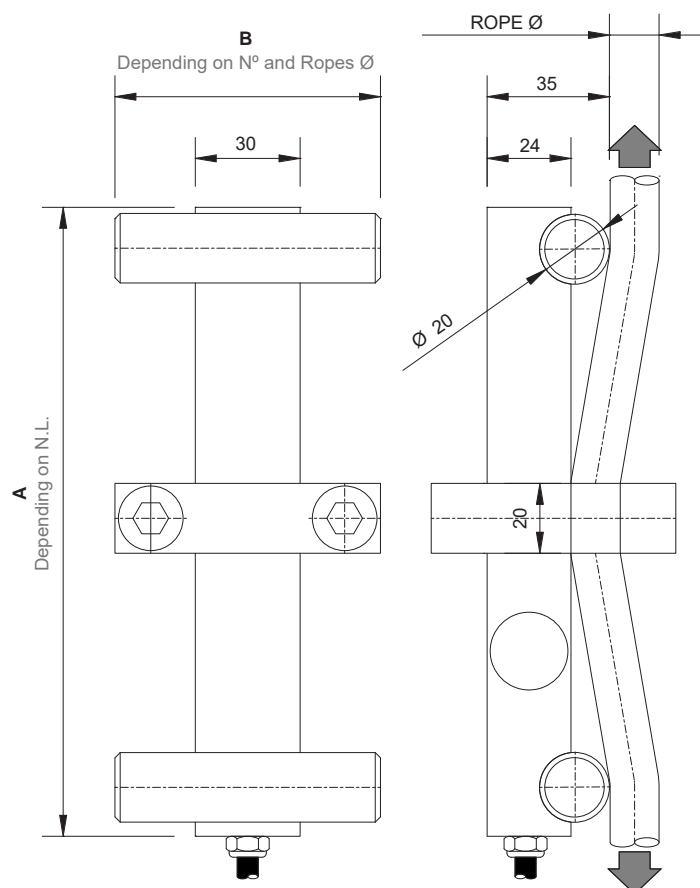
2- VK.
(For sensors with wiring connection).



Specifications

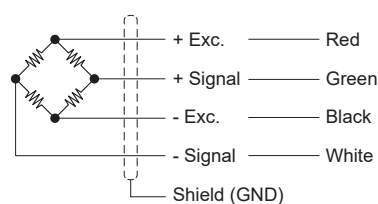
Parameter		Units	Specification	
Model		-	LCA	
Nominal Load (N.L.)		t	1.6 / 4 / 6	
Nominal Sensibility (N.S.)		mV/V	1.4 ... 2.0	
Accuracy		-	0.25%	
Zero balance		%mV/V	± 0.20	
Maximum excitation voltage		V	12	
Minimum distance to hitch point		cm	25	
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ...+104)	
	Operating		-20 ... +60 (-4 ... +140)	
	Storage		-20 ... +70 (-4 ... +158)	
Min. insulation resistance (V.Test = 100V)		GΩ	4	
Input resistance		Ω	350 ... 400	
Output resistance		Ω	350 ± 2	
Load limit	Working	%N.L.	150	
	Safe		200	
Cable	Type	-	4 x 0.22 mm² Ø6	
	Connector	-	Wiring connection	USB
	Standard length	m	2	4
	Material	-	Polurethane (PU)	
Sensor	Material	-	Aluminum	
	Surface treatment	-	Anodized	
Protection class		-	IP65	

Dimensional Drawings (mm) and Wiring Diagram



N.L. (t)	A Depending on N.L.
1.6	166
4	
6	180

B Depending on N° and Ropes Ø				
N° Ropes	Ropes Ø			
	3 ... 5	6 ... 8	8 ... 13	14 ... 16
1	76			
2				
3	76	96	126	96
4				126
5	96	126	156	186
6				
7	-	126	156	186
8	-	126	156	186



Complete Integrated Load weighing system



LCK Load limiter on ropes



LCK is a complete load limiter system, composed by a load cell and unit control. These are installed on lift ropes measuring the totality of the load. LCK devices come with clamp in order to cover different number of ropes and several diameters, depending on the characteristics of the installation. Dinacell has developed a new universal clamp which better adaptation to the installation, preserving tensions. It is available from 2 to 9 ropes.

Features:

- LCK comes with integrated electronic and it does not require any well-known weight in cabin in order to proceed to adjustment.
- Optionable to calculate Chain compensation.
- Cabin display output for full load and overload indications.
- CANopen-Lift CiA 417 standards under request.

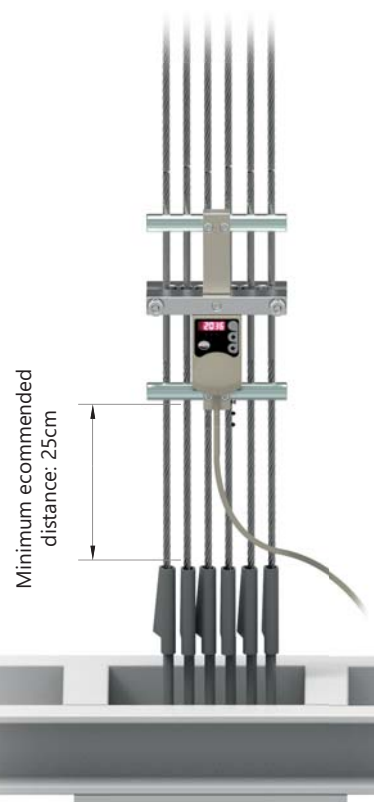
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Within LCK product line, some models integrates Dinacell NG technology. This technology allows firmware updating and the possibility of connecting our device GD-WiFi¹. This accessory enables to configurate, calibrate and get accurate information of the installation status in any compatible device with Tools ng 2 App.



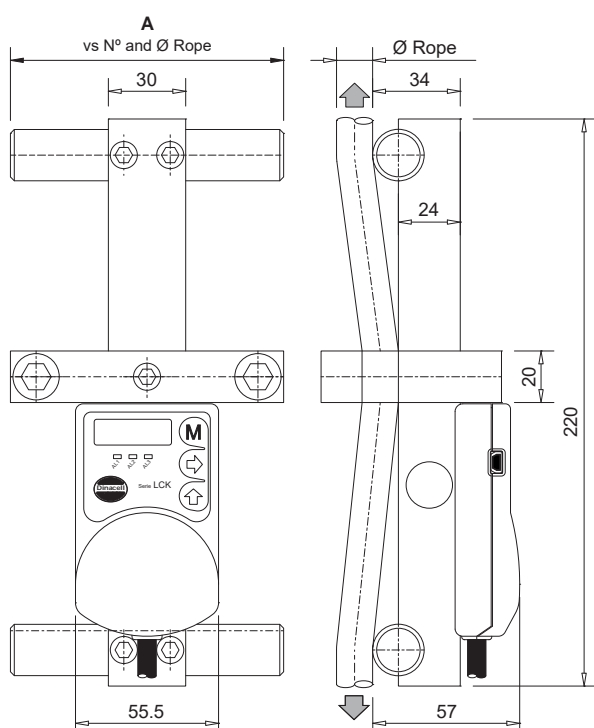
1. GD-Wifi
(For NG technology devices)



Specifications

Parameter		Units	Specifications				
Model		-	LCK-2RM	LCK-2Ra	LCK-3R	LCK-C	LCK-Ca
Nominal Load (N.L.)		t	3 / 4 / 6				
Accuracy		-	0.25%				
Power supply		VDC	24 (18 ... 40)				
Maximum current consumption		mA	65				
Minimum distance to hitch point		cm	25				
Temperature range	Working	°C (°F)	-20 ... +60 (-4 ... +140)				
	Storage		-20 ... +70 (-4 ... +158)				
Min. insulation resistance (V.Test = 100V)		GΩ	4				
Relay	Maximum voltage	VAC	250				
	Maximum current	A	2				
	Number		2	2	3	-	-
CANopen CIA 417		-	-	-	-	✓	✓
Analog outputs 0-10V / 4-20mA / 0-20mA		-	-	✓	-	-	✓
Cabin display MB output		-	✓	-	-	-	-
NG technology (with USB for firmware upgrade)			✓				
Hold Input		VAC/DC	12 ... 125				
Load limit	Working	%N.L.	150				
	Safe		200				
Interface	Display digits	-	5				
	Keys	-	3				
	LEDs	-	3				
Cable	Type	-	10 x 0.22mm ² Ø6				
	Standard length	m	2				
Load cell	Material	-	Aluminum				
	Surface treatment	-	Anodized				
Box material		-	Fireproof plastic ABS				
Protection class		-	IP50				

Dimensional drawings (mm) and wiring diagram



A	156	186
N° Rope	2 ... 7	2 ... 9
Ø Rope	8 ... 13	

	LCK-2RM	LCK-2Ra	LCK-3R	LCK-C	LCK-Ca
Black	Gnd				
Red	24VDC				
Purple	Relay 1			Can HIGH	
Blue				Can LOW	
Pink	Relay 2			-	
Brown					
White	Hold (+)				
Gray	Hold (-)				
Green	Cabin disp. +	4-20/0-20mA	Relay 3	-	4-20/0-20mA
Yellow	Cabin disp. -	0-10V		-	0-10V

SV-3000

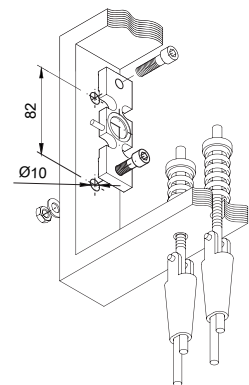
Sensor designed by measuring beam structure deformation



SV-3000 Crosshead/Beam sensor

SV-3000 are designed to work with traction and compression. Designed for measuring the load limits in beams of metallic structures deformations (steel beams) or in elevation systems such as elevator or freight lift, where the variations of the load thru the entrance or the exit of load in the cabin, transmits the variation of the beam structure deformation measured by the sensor.

SV-3000 is easy to install, on a clear part of the load-beam structure. This load weighing system could be used in finished lift constructed installation, making it the easy integration of the load limiter in the elevator or freight lift.

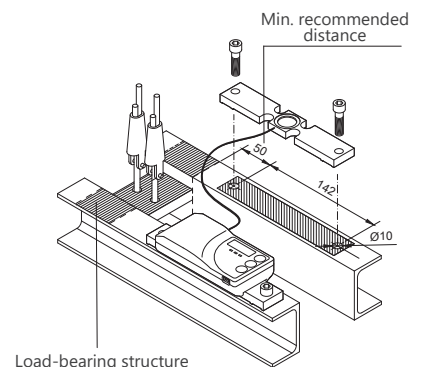


Setting in a vertical hitch point

For a complete installation

The sensor has a USB output or wired output depending on the control unit. It is possible to improve the quality of the measurement by adding more than one sensor.

For installations with special specifications of connecting a set of sensors in a control unit with only one input, *INTERFACE*¹ could be used for these cases. *INTERFACE* provides a USB output or wired output, making them compatible with any Dinacell device, regardless of the control unit input.



Setting in horizontal steel beam

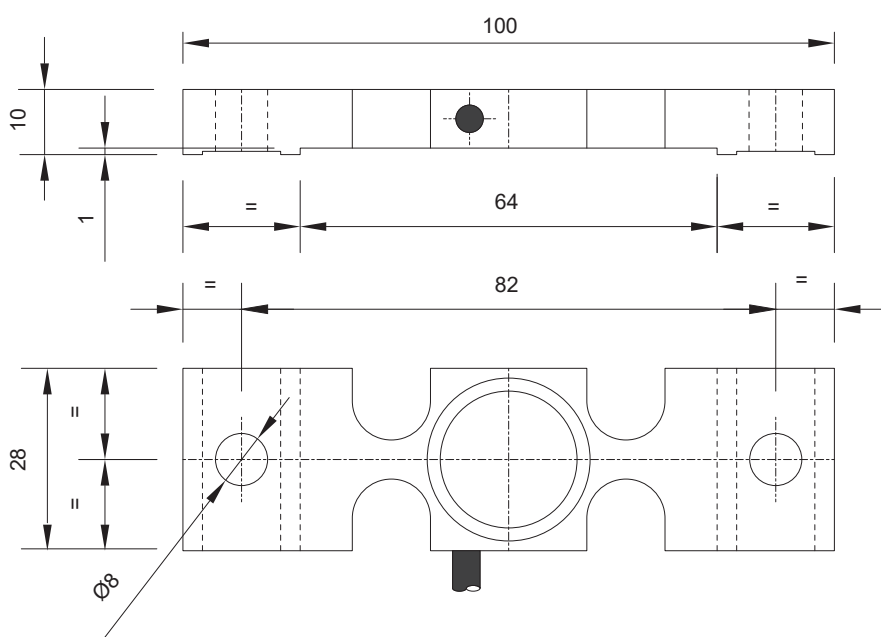


1- INTERFACE.

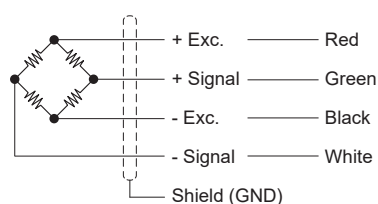
Specifications

Parameter		Units	Specifications	
Model		-	SV-3000	
Nominal Deformation (N.D.)		$\mu\epsilon$	3000	
Nominal Sensibility (N.S.)		mV/V	2	
Accuracy		-	0.2%	
Zero balance		%D.N.	0.20	
Maximum excitation voltage		V	12	
Temperature range	Compensated	$^{\circ}\text{C}$ ($^{\circ}\text{F}$)	-10 ... +40 (+14 ... +104)	
	Operating		-20 ... +60 (-4 ... +140)	
	Storage		-20 ... +70 (-4 ... +158)	
Min. insulation resistance (V.Test = 100V)		G Ω	4	
Input resistance		Ω	350 \pm 2	
Output resistance		Ω	350 \pm 2	
Maximum deformation		%D.N.	150	
Cable	Type	-	4 x 0.14 mm ² \varnothing 4	
	Connector	-	Wiring connection	USB
	Standard length	m	6	
	Material	-	Poliurethane (PU)	
Sensor	Material	-	Alloy steel	
	Surface treatment	-	Chemical nickel	
Protection class		-	IP65	

Dimensional drawings (mm)



Wiring diagram



Load limiter designed on elevator beam crosshead



SVD Load limiter on structure



The SVD is a complete load limitation system, consisting of Load cell and unit control. Designed to measure the weight on the deformations in metal structures (steel beams) or in lifting systems such as elevators or freight lifts, where the variations of load thru the entrance or exit of the load in the cabin, transmits the variation of the beam structure deformation measured by the sensor.

The installation of the SVD system can be done easily by placing it in a clean area of the supporting beam structure. Also, to improve the quality of the measurement on the weighing installation, the system integrates an additional USB input that allows the addition of a second SV-3000 beam sensor.

This system allows for the installation in a already finished lift constructed installation, making for an easy integration on load limiter in the elevator or freight lift.

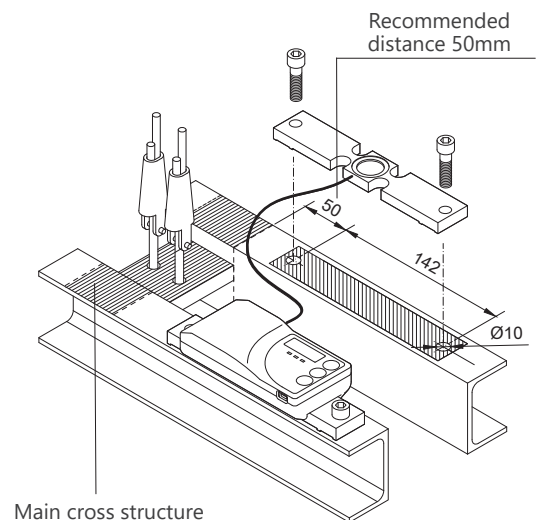
Get the best of performance by using app Tools ng 2



Within SVD product line, some models integrate DinaCell NG technology. This technology allows firmware updating and the possibility of connecting our device *GD-WiFi*¹. This accessory enables to configurate, calibrate and get accurate information of the installation status in any compatible device with Tools ng 2 App.



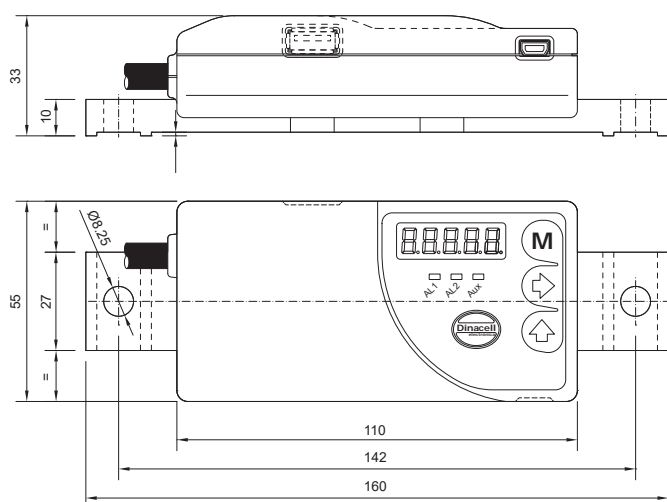
1- GD-WiFi.
(For NG technology devices).



Specifications

Parameter		Units	Specifications				
Model		-	SVD-2RM	SVD-2Ra	SVD-3R	SVD-C	SVD-Ca
Nominal Deformation (N.D.)		με	3000				
Nominal Sensibility (N.S.)		mV/V	2				
Accuracy		-	0.25%				
Power supply		VDC	24 (18 ... 40)				
Maximum current consumption		mA	250				
Temperature range	Working	°C (°F)	-20 ... +60 (-4 ... +140)				
	Storage		-20 ... +70 (-4 ... +158)				
Min. insulation resistance (V.Test = 100V)		GΩ	4				
Relay	Maximum voltage	VAC	250				
	Maximum current	A	2				
	Number		2	2	3	-	-
CANopen CIA 417		-	-	-	-	✓	✓
Analog outputs 0-10V / 4-20mA / 0-20mA		-	-	✓	-	-	✓
Cabin display MB output		-	✓	-	-	-	-
NG technology (with USB for firmware upgrade)			✓				
Hold Input		VAC/DC	12 ... 125				
Maximum deformation		%N.D.	150				
Interface	Display digits	-	5				
	Keys	-	3				
	LEDs	-	3				
Cable	Type	-	10 x 0.22mm² Ø6				
	Standard length	m	2				
Sensor	Material	-	Alloy steel				
	Surface treatment	-	Chemical nickel				
Box material		-	Fireproof plastic ABS				
Protection class		-	IP50				

Dimensional drawings (mm) and wiring diagram



	SVD-2RM	SVD-2Ra	SVD-2R	SVD-C	SVD-Ca
Black	Gnd				
Red	24 VDC				
Purple	Relay 1			Can HIGH	
Blue				Can LOW	
Pink	Relay 2			-	
Brown					
White	Hold (+)				
Gray	Hold (-)				
Green	Cabin disp. +	4-20/0-20mA	Relay 3	-	4-20/0-20mA
Yellow	Cabin disp. -	0-10V		-	0-10V

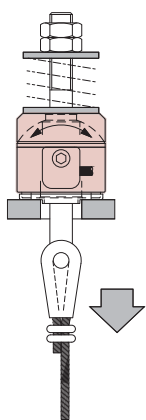
Sensor designed for the terminals fixed point



PF Compression load cell

PF compression sensors are a weighing solution at the rope terminal fixed point of the traction elevators. These sensors are installed on each of the terminal fixed point receiving the weight individually from each rope.

It works on a compression load way of measurement, on which it provides the system with great reliability and mechanical robustness. With a compact design and occupying a minimal space, these sensors could support up to a thousand kilograms.



For a complete installation

These sensors are installed at the terminal fixed point and have a USB cable output. In order to have an independent weight reading on each cable, we recommend using our OMEGA control unit. For installations that need to connect a set of sensors to a load limiter, with one single input:

PF sensors assemblies can be formed by joining these sensors to a INTERFACE¹. The INTERFACE offer cable output without a wiring connection (5wires) or with USB (depending on the type of input of the controllers).

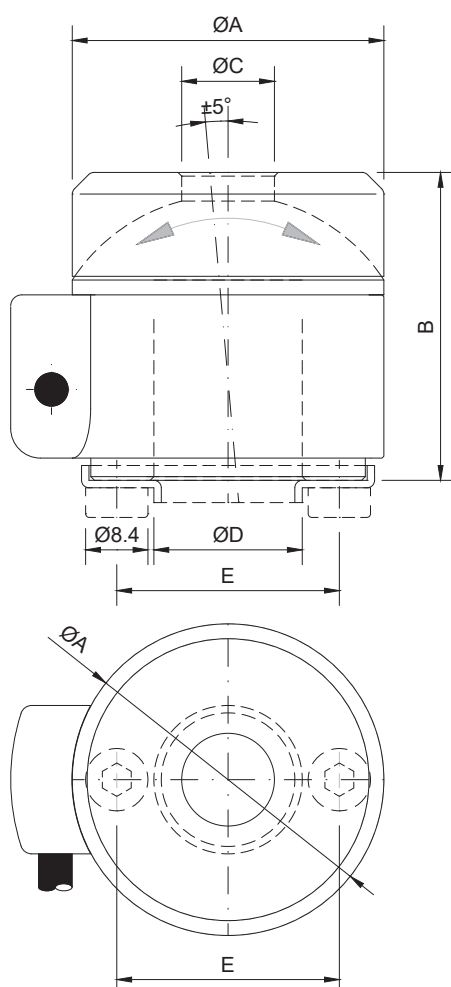


1- INTERFACE.

Specifications

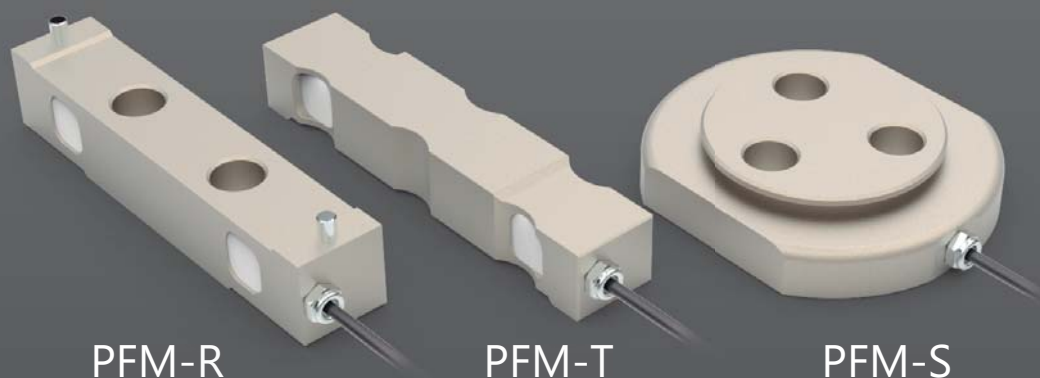
Parameter		Units	Specification		
Model		-	PF-300	PF-500	PF-1000
Nominal Load (N.L.)		kg	300	500	1000
Accuracy		-	0.1%		
Zero balance		%mV/V	± 0,020%		
Maximum excitation voltage		V	12		
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)		
	Operating		-20 ... +60 (-4 ... +140)		
	Storage		-20 ... +70 (-4 ... +158)		
Min. insulation resistance (V.Test = 100V)		GΩ	4		
Input resistance		Ω	350 ... 400		
Output resistance		Ω	350 ± 3		
Load limit	Working	%N.L.	150		
	Safe		300		
Cable	Type	-	4 x 0.14 mm ² Ø4.3		
	Connector	-	USB		
	Standard length	m	2		
	Material	-	Polurethane (PU)		
Sensor	Material	-	Aluminum		
	Surface treatment	-	Anodized		
Protection class		-	IP50		

Dimensional Drawings (mm)



Model	ØA	B	ØC	ØD	E
PF-300	42	42	12.5	20	30
PF-500	47	45	16.5	20	32
PF-1000	54	50.5	25	30	39

Sensor designed for the fixed or hitch point

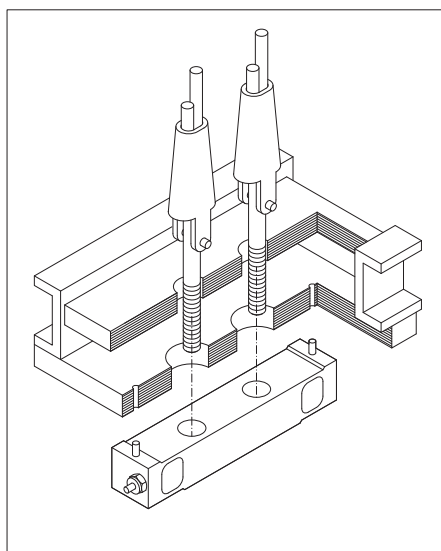


PFM Compression load cell

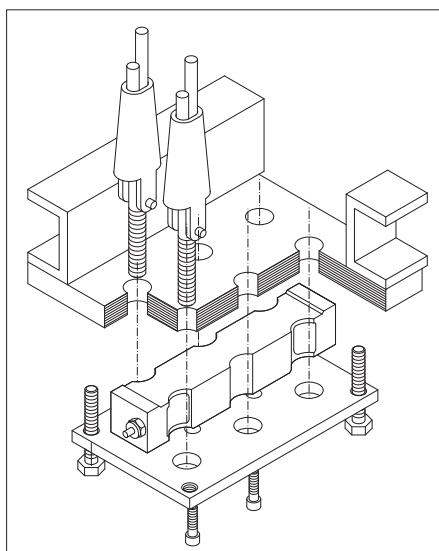
The PFM series of sensors are a solution of sensors to be installed at the terminal fixed point of the cables in traction elevators. These sensors are installed to receive the weight of the fixed point in its entirety. The PFM models can be adapted to any arrangement of the cable terminals support plate, making it available to the builder for a complete solution.

The layout and design is for compressive loads of the sensors, on which it provides the system with great reliability and mechanical robustness.

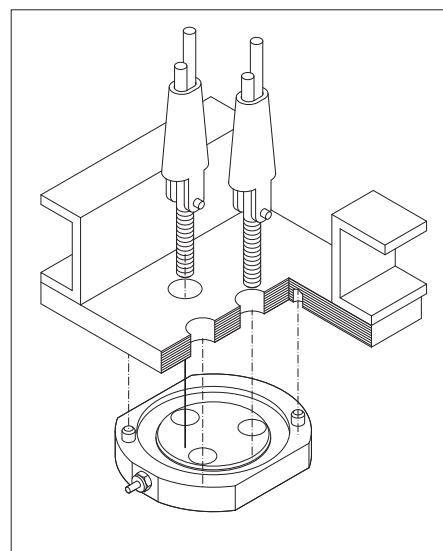
Within the design of PFM models, we have developed a PFM-T model that allows the sensors to be installed or removed by loosening the traction cables without having to disassemble them completely, on which it makes easy for installation and maintenance. The aluminum or stainless-steel sensor bodies provide anti-corrosion resistance to extend the lifetime use.



PFM-R



PFM-T

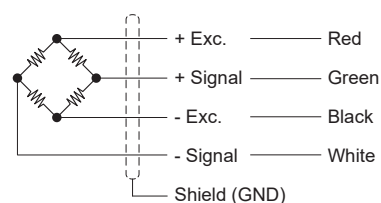


PFM-S

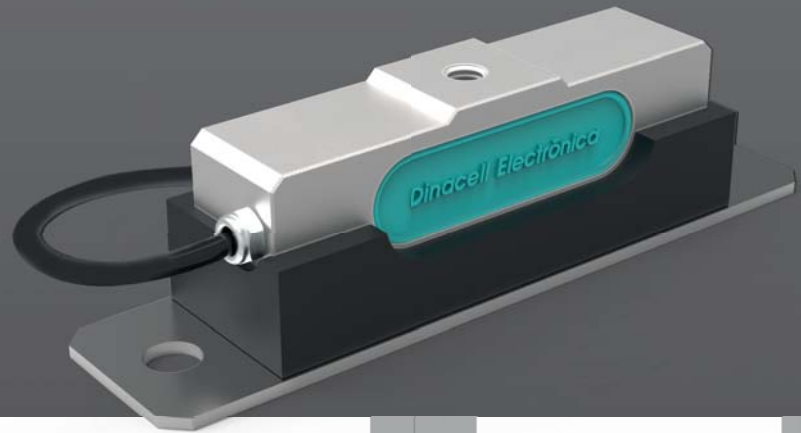
Specifications

Parameter		Units	Specification		
Model		-	PFM-R	PFM-T	PFM-S
Nominal Load (N.L.)		t	1 / 3 / 6		
Accuracy		-	0.2%		
Zero balance		%mV/V	±0.20		
Maximum excitation voltage		V	12		
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)		
	Operating		-20 ... +60 (-4 ... +140)		
	Storage		-20 ... +70 (-4 ... +158)		
Min. insulation resistance (V.Test = 100V)		GΩ	4		
Input resistance		Ω	350 ±3		
Output resistance		Ω	350 ±2		
Load limit	Safe	%N.L.	150		
	Break		>250		
Cable	Type	-	4 x 0.22mm ² Ø6		
	Standard length	m	4		
	Material	-	Polurethane (PU)		
Sensor	Material	-	Alloy steel / Aluminum		
	Surface treatment	-	Chemical nickel (alloy) / Anodized (aluminum)		
Protection class		-	IP67		

Wiring Diagram



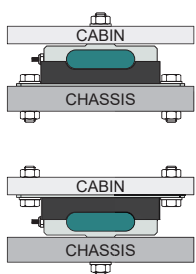
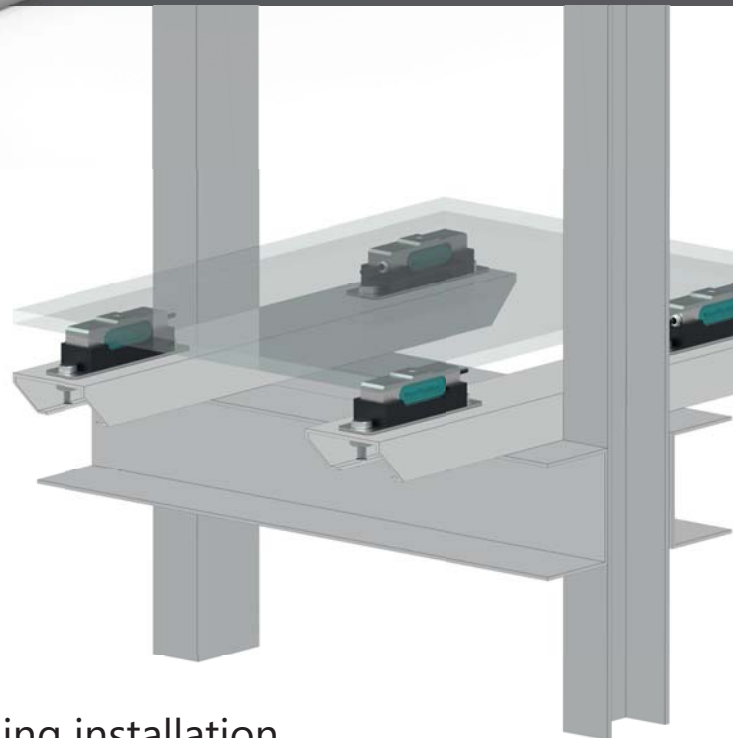
Load sensor designed for under cabin installation



TCA Load compression sensor

High-accuracy load sensor developed for an optimum functioning on lift chassis. Once this sensor is connected to a control unit, adjustment with well-know weight is not necessary. The sensor is mounted over a silent block of different degrees of hardness in order to avoid the possible transmission of vibrations to the cabin.

It is possible to combine active sensors TCA with dummy TCA (inactive sensors) complementing the installation.



For a complete Load weighing installation

TCA sensors are installed under the lift cabin. Usually are installed in set of 2 or 4 sensors. It is possible to buy this kind of sensors as a set, joined through a *CONNECTION BOX*¹ with wired or USB output.

On the other hand, individual TCA has USB output as an option. In this case, sensors should be connected to an *INTERFACE*² with wired or USB output as well, depending on the input of the control unit.



1- CONNECTION BOX.

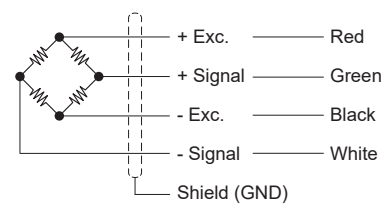
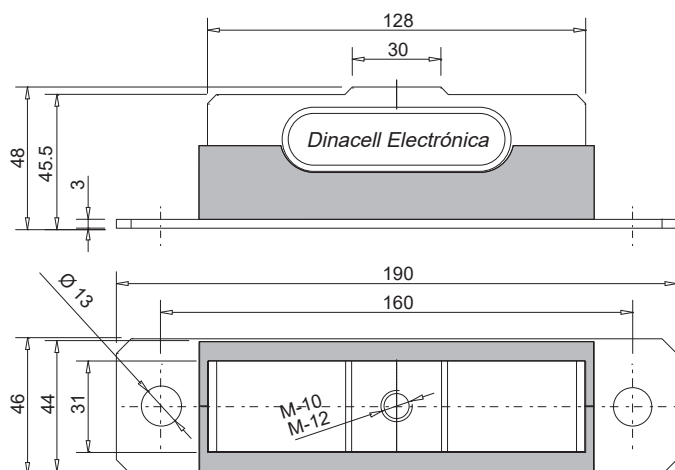


2- INTERFACE.

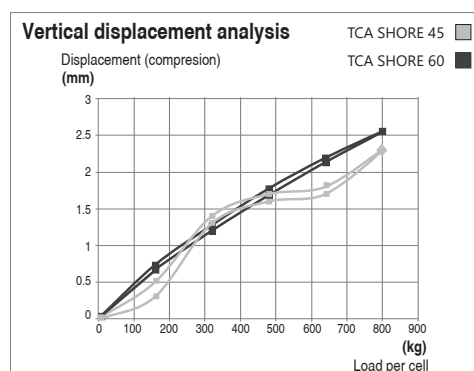
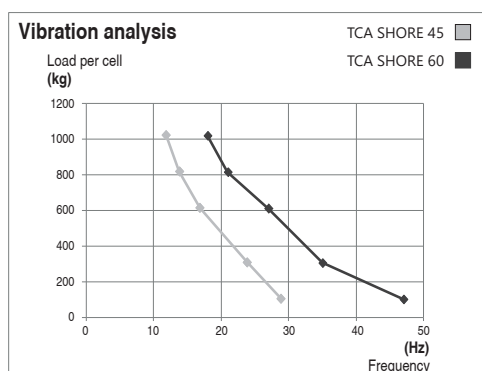
Specifications

Parameter		Units	Specifications	
Model		-	TCA-800	TCA-HM
Nominal Load (N.L.)		kg	800	
Nominal Sensibility (N.S.)		mV/V	$2 \pm 0,1\%$	
Accuracy		-	$\pm 0,06\%$	
Zero balance		mV/V	$\pm 0,020\%$	
Maximum excitation voltage		V	12	
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)	
	Operating		-20 ... +65 (-4 ... +150)	
	Storage		-20 ... +70 (-4 ... +158)	
Min. insulation resistance (V.Test = 100V)		GΩ	4	
Input resistance		Ω	1050 ± 60	
Output resistance		Ω	1000 ± 5	
Load limit	Working	%N.L.	150	
	Safe		180	
Silentblock hardness		SHORE	60	45
Cable	Type	-	4 x 0.22 mm² Ø6	
	Connector	-	Wiring connexion / USB	
	Standard length	m	2 / 5	
	Material	-	Polurethane (PU)	
Sensor	Material	-	Aluminum	
	Surface treatment	-	Anodized	
Protection class		-	IP66	

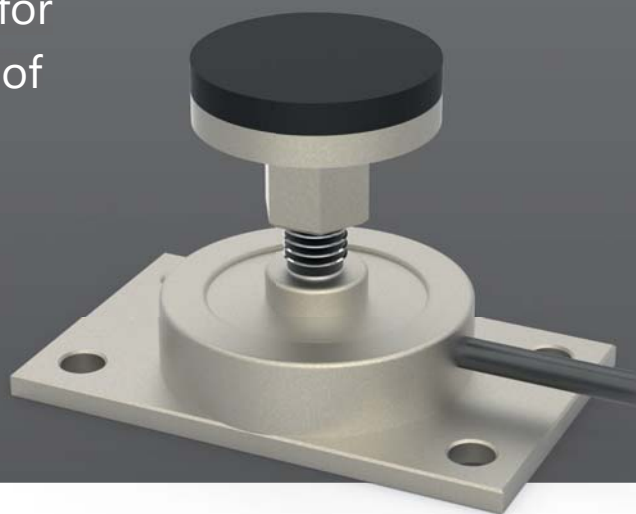
Dimensional Drawings (mm) and Wiring Diagram



Silentblock characteristic



Load cell specially designed for the installation in the center of under cabin chassis

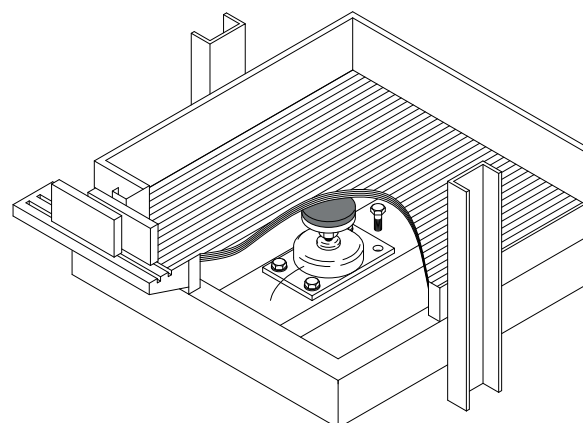


BPP-LR Compression load cell

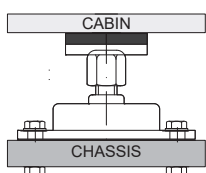
The BPP-LR's are a sensor solution to be installed under the cabin of the lifts. The sensors are installed on the center of the lift chassis and receiving the weight pressure of the cabin floor.

The BPP-LR design embody a base to anchor to the chassis and in the head of the sensor, it equipped with silent-block to avoid possible vibrations to the cabin.

This type of compression sensors provides great reliability and enormous mechanical robustness supporting loads of up to three tons.



For a complete installation



These types of sensors are placed in the elevator chassis and have an output of USB cable or 5 wires termination. For installations that requires more than one sensor, it is possible to connect the sensors to a *INTERFACE* that also offers the option of USB output or 5 wires termination (depending on the type of unit controllers input).

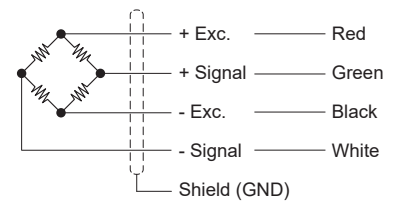
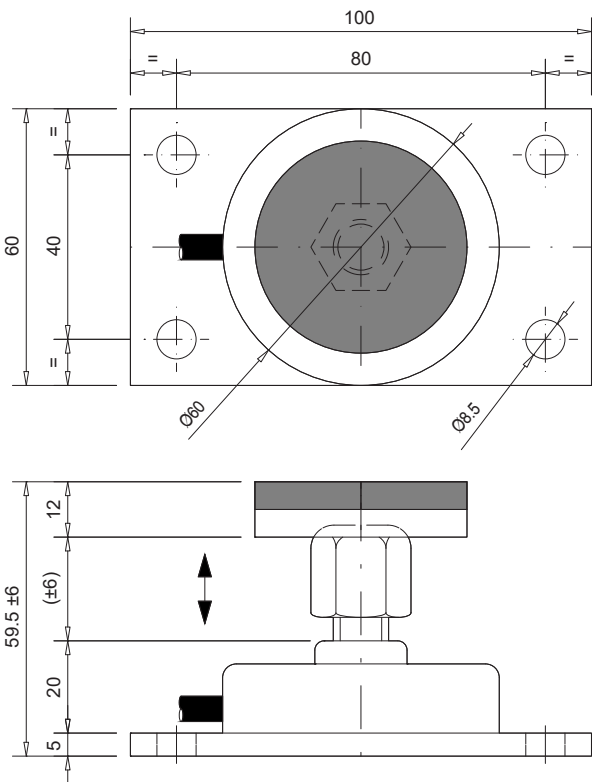


1- INTERFACE.

Specifications

Parameter		Units	Specifications	
Model		-	BPP-LR	
Nominal Load (N.L.)		t	1.2	3
Nominal Sensibility (N.L.)		mV/V	1.4 ... 2.0	
Accuracy		-	0,4%	
Zero balance		mV/V	± 0,20%	
Maximum excitation voltage		V	12	
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)	
	Operating		-20 ... +65 (-4 ... +150)	
	Storage		-20 ... +70 (-4 ... +158)	
Min. insulation resistance (V.Test = 100V)		GΩ	4	
Input resistance		Ω	350 ± 3	
Output resistance		Ω	350 ± 2	
Maximum working load		%N.L.	150	
Cable	Type	-	4 x 0.22 mm ² Ø6	
	Connector	-	Wiring connection / USB	
	Standard length	m	4	
	Material	-	Polurethane (PU)	
Sensor	Material	-	Alloy steel	
	Surface treatment	-	Chemical nickel	
Protection class		-	IP67	

Dimensional Drawings (mm) and Wiring Diagram



Pressure sensor for hydraulic elevators



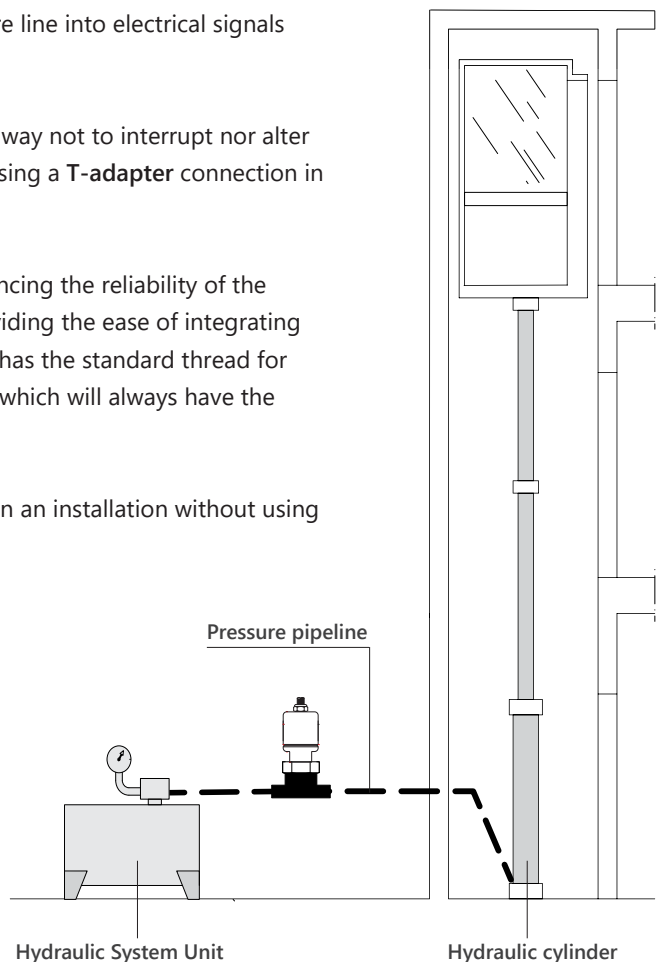
CH-100 Hydraulic pressure sensor

The hydraulic pressure sensor CH-100, has been developed to measure and control the load of hydraulic elevators. The variations of load in cabin by the entrance or exit of loads or passengers, turn into variations of pressure that converts the hydraulic pressure line into electrical signals measured by the integrated control system.

The CH-100 occupy a minimum space, on which it is installed in a way not to interrupt nor alter the flow of the hydraulic fluid. Installation can be done easily by using a **T-adapter** connection in any position of the pressure pipeline.

The CH-100 sensor is a robust and compact design without influencing the reliability of the pressure system, it has the measuring range of 0 to 100 bars, providing the ease of integrating a load limiter into the elevator or freight lift. The hydraulic sensor has the standard thread for the proper fitting and adapters are offered to other measures, on which will always have the solution for your installation.

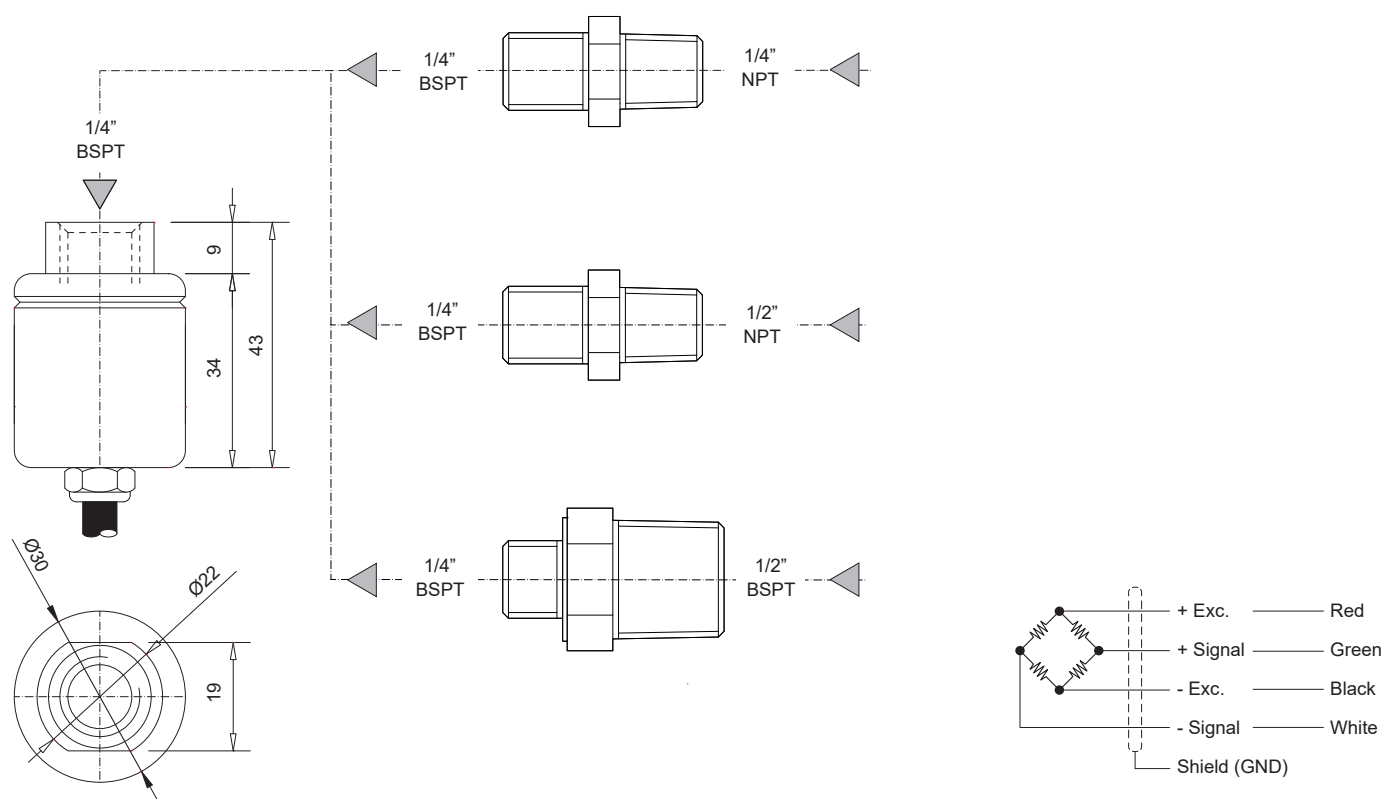
These sensors are factory calibrated, so they can be used directly in an installation without using a well-known weight to calibrate it.



Specifications

Parameter		Units	Specifications
Model		-	CH-100
Nominal Pressure (N.P.)		bar	100
Accuracy		-	<0.4%
Maximum excitation voltage		V	12
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)
	Operating		-20 ... +60 (-4 ... +140)
	Storage		-20 ... +70 (-4 ... +158)
Min. insulation resistance (V.Test = 100V)		GΩ	4
Input resistance		Ω	350 ± 1%
Output resistance		Ω	350 ± 1%
Pressure limit	Working	%N.P.	150
	Safe		200
Cable	Type	-	4 x 0.22 mm ² Ø6
	Connector	-	USB
	Standard length	m	4
	Material	-	Polurethane (PU)
Sensor	Casing	Material	Stainless Steel
		Treatment	Aluminum
			Anodized
Protection class		-	IP67

Dimensional drawings (mm) and wiring diagram



Load limitation system for hydraulic lifts



CHD Load limiter pressure sensor



The CHDs are a complete limitation system, composed of a pressure sensor and a limiting device. The variations of load in cabin by the entrance or exit of loads or passengers, turn into variations of pressure that converts the hydraulic pressure line into electrical signals measured by the integrated control system.

The CHD occupy a minimum space, on which it is installed the way not to interrupt nor alter the flow of the hydraulic fluid. Installation can be done easily by using a **T-adapter** connection in any position of the pressure pipeline.

The CHD sensor is a robust and compact design without influencing the reliability of the pressure system, it has the measuring range of 0 to 100 bars, providing the ease of integrating a load limiter into the elevator or forklift. The hydraulic sensor has the standard thread for the proper fitting and adapters are offered to other measures, on which will always have the solution for your installation.

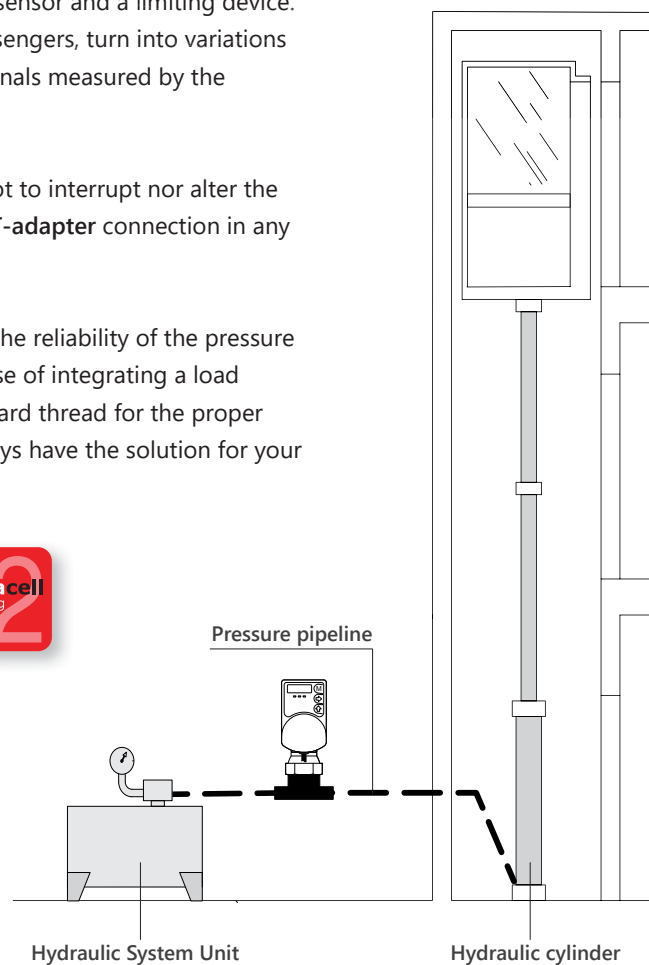
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Within CHD product line, some models integrates Dinacell NG technology. This technology allows firmware updating and the possibility of connecting our device *GD-WiFi*¹. This accessory enables to configurate, calibrate and get accurate information of the installation status in any compatible device with Tools ng 2 App.



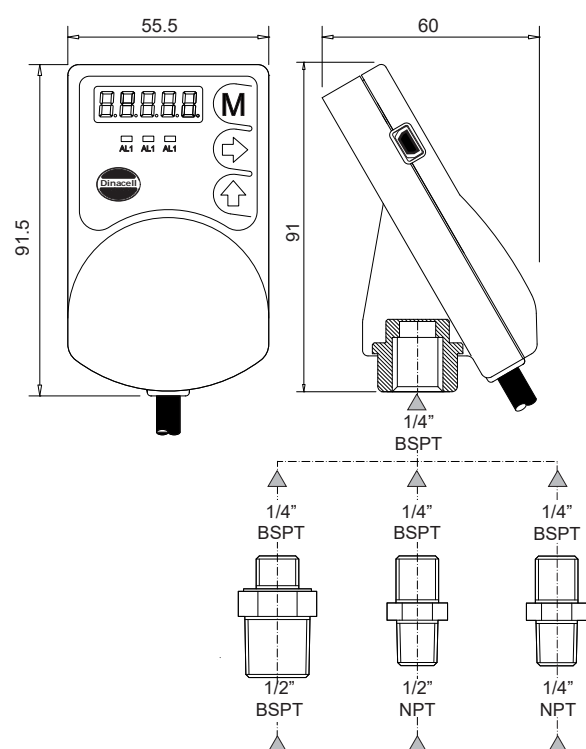
1- GD-WiFi.
(For NG technology devices).



Specifications

Parameter		Units	Specifications				
Model		-	CHD-2RM	CHD-2Ra	CHD-3R	CHD-C	CHD-Ca
Nominal Pressure (N.P.)		bar	100				
Accuracy		-	0.25%				
Power supply		VDC	24 (18 ... 40)				
Maximum current consumption		mA	65				
Temperature range	Working	°C (°F)	-20 ... +60 (-4 ... +140)				
	Storage		-20 ... +70 (-4 ... +158)				
Min. insulation resistance (V.Test = 100V)		GΩ	4				
Relay	Maximum voltage	VAC	250				
	Maximum current	A	2				
	Number	-	2	2	3	-	-
CANopen CIA 417		-	-	-	-	✓	✓
Analog outputs 0-10V / 4-20mA / 0-20mA		-	-	✓	-	-	✓
Cabin display MB output		-	✓	-	-	-	-
Technology NG (with USB for firmware upgrade)		-	✓				
Hold Input		VAC/DC	12 ... 125				
Pressure limit	Working	%N.P.	150				
	Safe		200				
Interface	Display digits	-	5				
	Keys	-	3				
	LEDs	-	3				
Cable	Type	-	10 x 0.22mm ² Ø6				
	Standard length	m	2				
Sensor	Material	-	Stainless Steel				
	Casing	Material	Aluminum				
		Treatment	Anodized				
Box material		-	Fireproof plastic ABS				
Protection class		-	IP50				

Dimensional drawings (mm) and wiring diagram



	CHD-2RM	CHD-2Ra	CHD-2R	CHD-C	CHD-Ca
Black	Gnd				
Red	24VDC				
Purple	Relay 1			Can HIGH	
Blue				Can LOW	
Pink	Relay 2			-	
Brown					
White	Hold (+)				
Gray	Hold (-)				
Green	Cabin disp. +	4-20/0-20mA	Relay 3	-	4-20/0-20mA
Yellow	Cabin disp. -	0-10v		-	0-10v

Load cell specially designed for hydraulic elevators

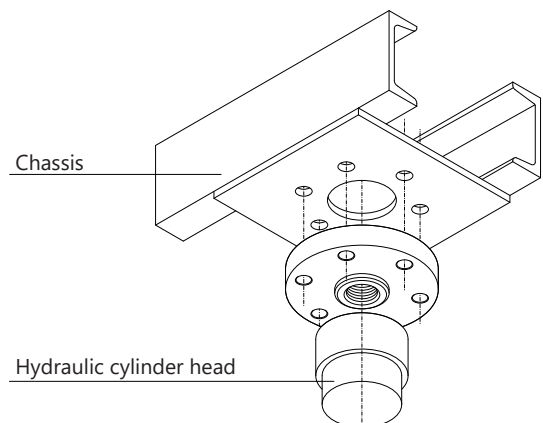


BPH Load sensor works in compression

BPH load cell are developed & designed to be used for hydraulic elevators. The BPH sensor is installed between the hydraulic cylinder head and the elevator chassis, occupying a minimum space. There are two different models:

- BPH-GD is installed below hydraulic cylinder head and it is fixed by compressing support.
- BPH-PM is installed below hydraulic cylinder and it is fixed by thread screws.

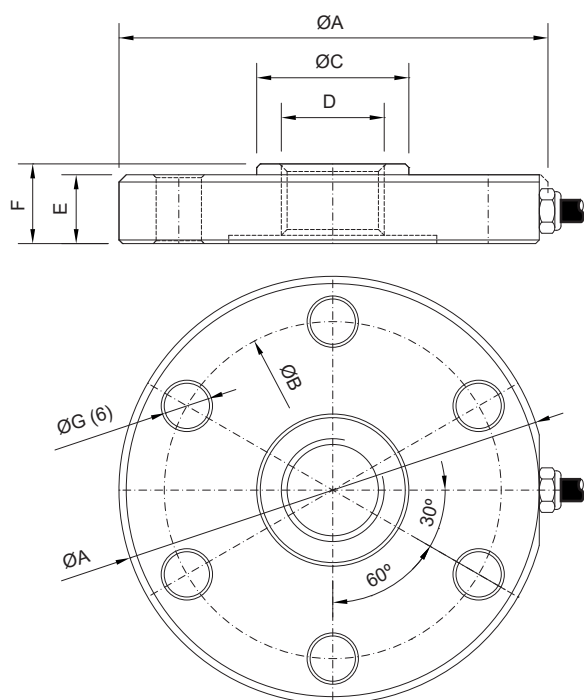
BPH load cells have a compact design, supporting up to 6 Tons, without influencing the reliability in pressure system and facilitating the integration of load cell in installation.



Specifications

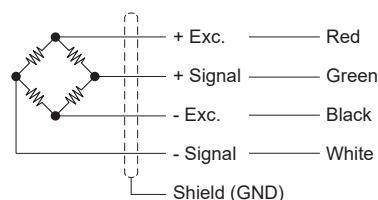
Parameter		Units	Specifications		
Model		-	BPH-GD25	BPH-PM24	BPH-PM30
Nominal Load (N.L.)		t	3 / 6		
Accuracy		-	0.2%		
Zero balance		%mV/V	± 0.20		
Maximum excitation voltage		V	12		
Temperature range	Compensated	°C (°F)	-10 ... +40 (+14 ... +104)		
	Operating		-20 ... +60 (-4 ... +140)		
	Storage		-20 ... +70 (-4 ... +158)		
Min. insulation resistance (V.Test = 100V)		GΩ	4		
Input resistance		Ω	350 ±3		
Output resistance		Ω	350 ±2		
Load limit	Safe	%N.L.	150		
	Broken		>300		
Cable	Type	-	4 x 0.22 mm ² Ø6		
	Standard length	m	4		
	Material	-	Polurethane (PU)		
Sensor	Material	-	Alloy Steel		
	Surface treatment	-	Chemical Nickel		
Protection class		-	IP67		

Dimensional Drawings (mm)



	BPH-PM24		BPH-PM30		BPH-GD25	
C.N.	3	6	3	6	3	6
ØA	118				145	
ØB	93				12.5	
ØC	36		42		36	
D	M-24		M-30		Ø25	
E	19				25	
F	22				30	
ØA	12.5				15	

Wiring Diagram



Load limiting device

An affordable Load Limiting device for elevators



RCU Load limiting device

The RCUs have been specially designed for load limitation in elevators. These units have low energy consumption and can be connected in any type of installation by using different type of sensor application like on ropes, fixed point, under cabin & etc...

The RCUs are affordable units due to the price & quality ratio and an excellent solution for limiting the load of an elevator. Among its wide variety of range, you will find these main features:

- 4-20mA, 0-20mA, 0-10V analog outputs..
- Can Bus communication: CANopen-Lift CiA 417.
- NG technology, with firmware update via USB.
- Internal chain compensation function.

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Within the RCU family, some models integrate Dinacell NG technology. This technology allows firmware updating and the possibility of connecting our device *GD-WiFi*¹. This accessory enables to configurate, calibrate and get accurate information of the installation status in any compatible device with Tools ng 2 App.

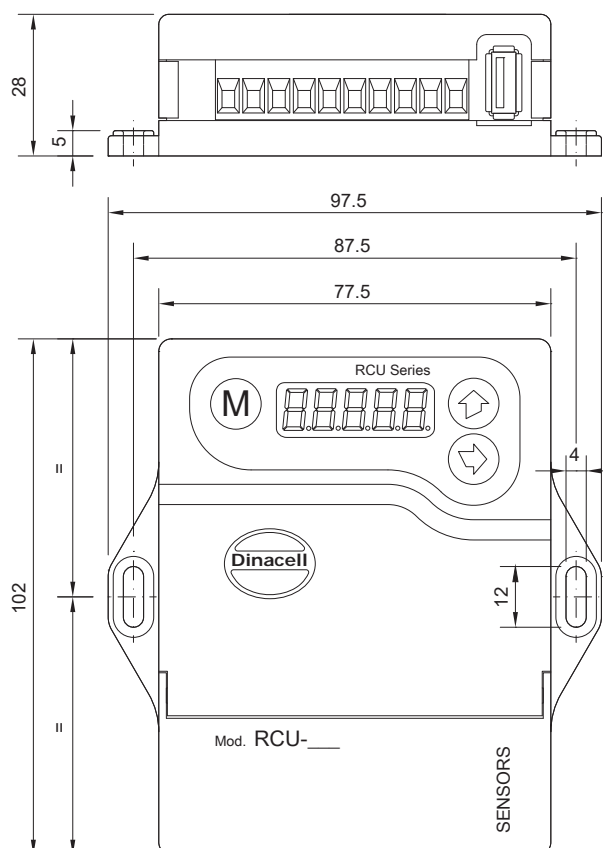


1- GD-WiFi.
(For NG technology devices).

Specifications

Parameter		Units	Specifications			
Model		-	RCU-210	RCU-250	RCU-2Ra	RCU-C
Cell signal	Input range	mV/V	± 3.9			
	Input channel	-	1 USB			
Accuracy		-	0.1%			
Power supply		VDC	24			
Maximum power consumption		W	2			
Maximum number of 350 Ω cells		-	8			
Temperature range	Working	°C (°F)	-10 ... +40 (+14 ... +104)			
	Storage		-20 ... +70 (-4 ... +158)			
Relay		-	2			
Alarm		-	2			
Analog outputs	4-20 mA	-	-	-	✓	-
	0-20 mA	-	-	-	✓	-
	0-10 V	-	✓	-	✓	-
	0-5 V	-	-	✓	-	-
CANopen-Lift CIA 417		-	-	-	-	✓
NG technology (with USB for firmware upgrade)		-	-	-	✓	✓
Hold input		VAC/DC	24 ... 125			
Interface	Display digits	-	5			
	Keys	-	3			
Box material		-	Fireproof plastic ABS			
Protection class		-	IP50			

Dimensional drawings (mm)



Load limiter device for elevators



VK Load limiter device

VK Load limiter devices, with the accuracy of 0.1%, are distinguished in the market for their great versatility in adapting and resolve any potential requirement as load limiter device for elevators.

Although this device only has one input channel, it could be used in scenarios with several load cells or sensors by using Dinacell summing boxes. This limiter is applicable in any measuring system like in ropes, chassis, under cabin, under bedframe, etc.

Among the wide variety of VK unit, different firmware's included. Based on each model, different main features are included as:

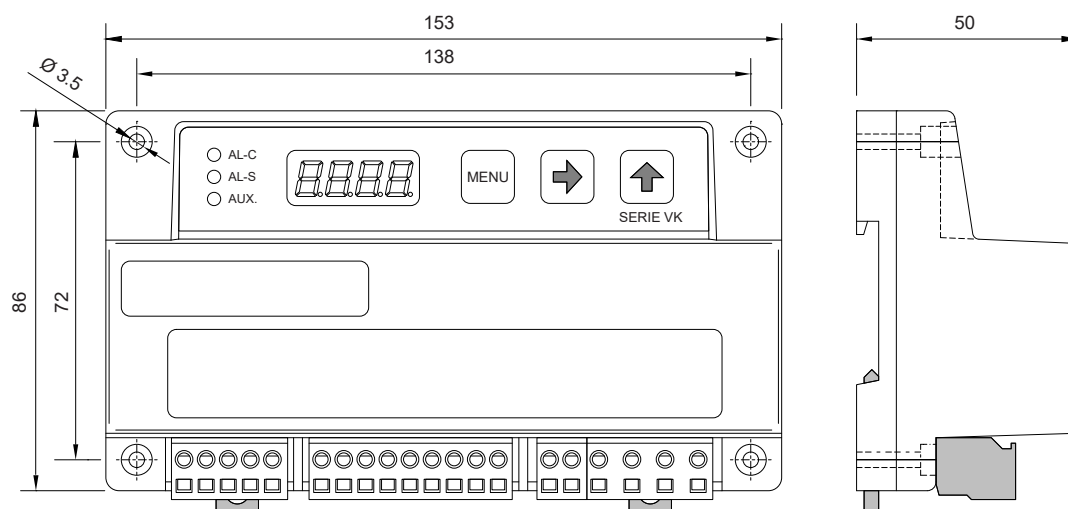
- Error detection
- Chain compensation.
- Three alarm relays.
- Inhibition input (Hold).
- Short-circuitable power supply (no fuse required).

Specifications

Parameter		Units	Specifications				
Model		-	VK-3	VK-3SV *1	VK-3V	VK-3i	VK-30C
Cell signal	Input range	mV/V	± 3.2				
	Input channel	-	1				
Accuracy		-	0.1%				
Power supply	Alternate current	VAC	230 / 115 / 48				230
		Hz	50 ... 60				
	Direct current	VDC	-	24			-
Maximum power consumption		W	5				
Maximum number of 350 Ω cells		-	8				
Temperature range	Working	°C (°F)	-10 ... +40 (+14 ... +104)				
	Storage		-20 ... +70 (-4 ... +158)				
Relay	Max. voltage	VAC	250				
	Max. current	A	3				
	Number	-	3				
	Contact	-	Switching	Normally open			
Alarm		-	3				
Analog output	4-20 mA	-	-	-	-	✓	-
	0-10 V	-	-	-	✓	-	-
Cabin display MB output		-	✓				
Hold input		VAC/DC	24 ... 230				
Interface	Display digits	-	4				
	Keys	-	3				
	LEDs	-	3				
Box material		-	Fireproof plastic ABS				
Fixing		-	DIN rail				
Protection class		-	IP50				

1-VK-3SV device especially designed to work with SV sensors.

Dimensional drawings (mm)



Load weighing unit for elevators, with individual data reading on each sensor



OMEGA Load limiting device

Omega devices are load limiters and rope tension control units. These controllers could obtain the individual data reading up to 12 sensors. The unit is connected to any controller through relay alarms or analogue outputs, as well as CAN communication. Features:

- 4 relays and 5 alarms
(full-load, overload, empty cabin, slack ropes, broken rope)
- NG technology, with firmware updating via USB.
- Sensor failure detection.
- Chain compensation via software or hardware.
- Short circuitable power supply: fuse not required.
- Adjust the rope tension with a well known weight.

Get the best of performance by using app Tools ng 2



Within the OMEGA range of products, some of them integrates Dinacell NG technology. The technology allows firmware updating and the possibility of connecting our device GD-WiFi¹. This accessory enables to configure, calibrate and get accurate information of the installation status in any device compatible with Tools ng 2 App.

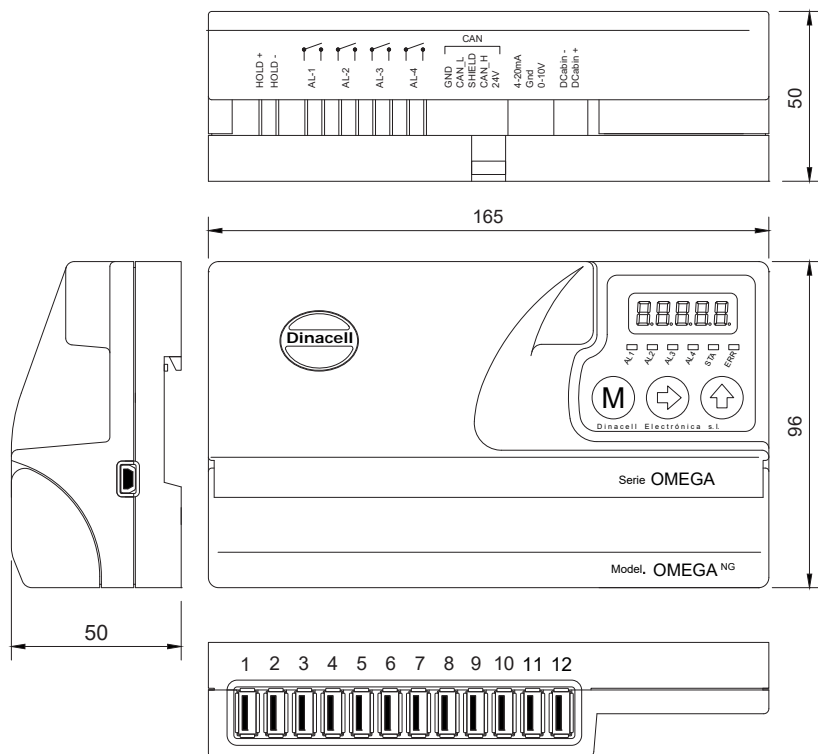


1- GD-WiFi.
(For NG technology devices).

Specifications

Parameter		Units	Specifications							
Model		-	OMEGA6-4RMA	OMEGA6-4R	OMEGA6-C	OMEGA6-Ca	OMEGA12-4RMA	OMEGA12-4R	OMEGA12-C	OMEGA12-Ca
Cell signal	Input range	mV/V	± 3.1							
	Input channel	-	6 USB				12 USB			
Accuracy		-	0.03%							
Power supply		VDC	10 ... 40							
Maximum power consumption		mA	< 200							
Maximum number of 350 Ω cells		-	6				12			
Temperature range	Working	°C (°F)	-10 ... +40 (+14 ...+104)							
	Storage		-20 ... +70 (-4 ... +158)							
Relay	Max. voltage	VAC	250							
	Max. current	A	3							
	Number	-	4		-		4		-	
Alarm		-	5		-		5		-	
Analog output 4-20 mA / 0-20 mA / 0-10 V		-	✓	-	-	✓	✓	-	-	✓
CANopen-Lift CIA 417		-	-	-	✓	✓	-	-	✓	✓
Cabin display MB output		-	✓	-	-	-	✓	-	-	-
NG technology (USB for firmware upgrade)			✓							
Hold input		VAC/DC	12 ... 125							
Interface	Display digits	-	5							
	Keys	-	3							
	LEDs		6							
Box material		-	Fireproof plastic ABS							
Fixing		-	DIN rail							
Protection class		-	IP50							

Dimensional drawings (mm)



Tension measurement tools

Rope tension testing and supervision Sensor.



RTM Rope tension sensor.

These sensors are specially designed to measure rope tension. Its tightening system enables installing and uninstalling quickly and easily. It includes a LED to indicate the optimum rope tension.

It is a factory calibrated sensor with two available versions to cover a wide range of ropes (5 to 20 mm).

Make the most out of your sensors

Kit format is available. These sensors and DELTA device form a kit tool for measuring and checking the tension in cables.

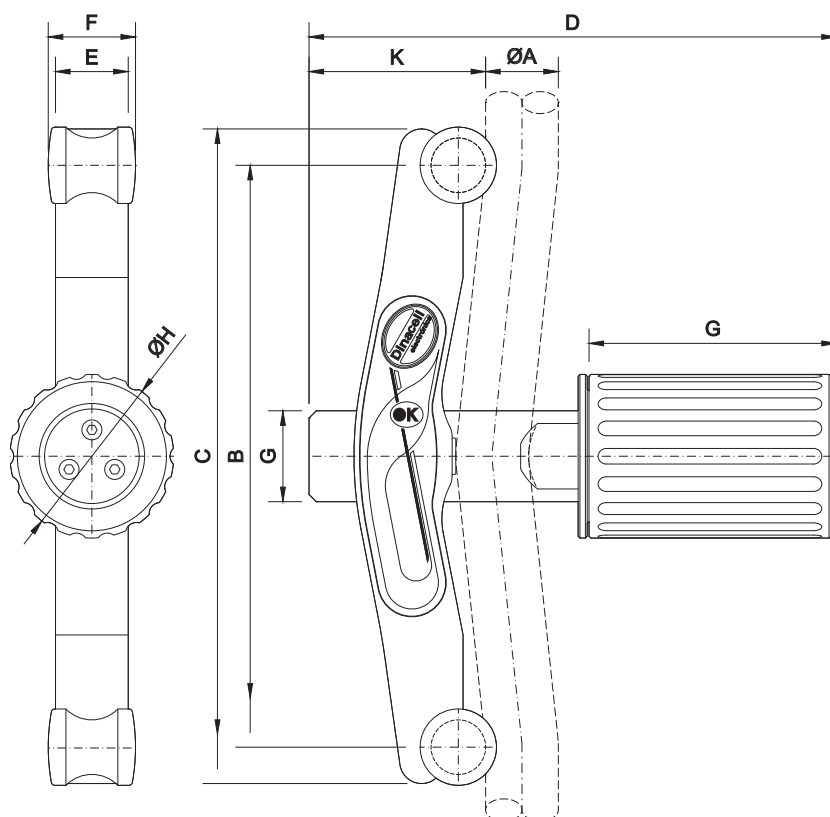
There are 8 and 16 sensor kits, both with RTM-1 and RTM-2 sensors.



Specifications

Parameter		Units	Specifications														
Model		-	RTM-1								RTM-2						
Nominal Load (N.L.)		kg	200	250	350	400	450	550	650	800	950	1100	1250	1450	1600	1700	1800
Ø Rope		mm	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20
Minimum distance to the socket		cm	30														
Maximum excitation voltage		V	12														
Hysteresis error		%N.L.	<0.05														
Maximum linearity error		%N.L.	<0.15														
Non repeatability		%N.L.	<0.15														
Combined error		%N.L.	<0.2														
Temperature range	Compensated	°C (°F)	-10 ... +40								(+14 ... +104)						
	Operating		-20 ... +60								(-4 ... +140)						
	Storage		-20 ... +70								(-4 ... +158)						
Minnimum insulation resistance (V.Test = 100V)		GΩ	5														
Input resistance		Ω	350 ... 480 ±2														
Output resistance		Ω	350 ±2														
Load limit	Safe	%N.L.	150														
	Ultimate		200														
Material	Cable	-	Polyurethane (PU)														
	Load cell	-	Aluminum														
Surface treatment		-	Anodized														
Protection		-	IP50														

Dimensional Drawings (mm)



	RTM-1	RTM-2
ØA	5 ... 13	13 ... 20
B	121	160
C	142.5	180
D	115	145
E	14	20
F	19	24
G	54.5	68
H	40	45
J	17.5	22.5
K	41	48.5

Check and diagnosis device for ropes and belts



DELTA, Tension diagnosis device

It is a new Dinacell Electrónica generation measurement device. It is intended for the control and diagnosis of individual ropes or belt tension. It can measure and check individually up to 16 ropes or belts.

The DELTA is a stand-alone device that opens up more comfortable and independent use of the power supply system at the installation. The connectivity of this device is through integrated WiFi. In order to ensure the best possible control of each installation, the "Tools ng 2" app, available for computer and tablet, communicates with your device and allows you to create result report.



Diagnosis and checking App Tools ng 2



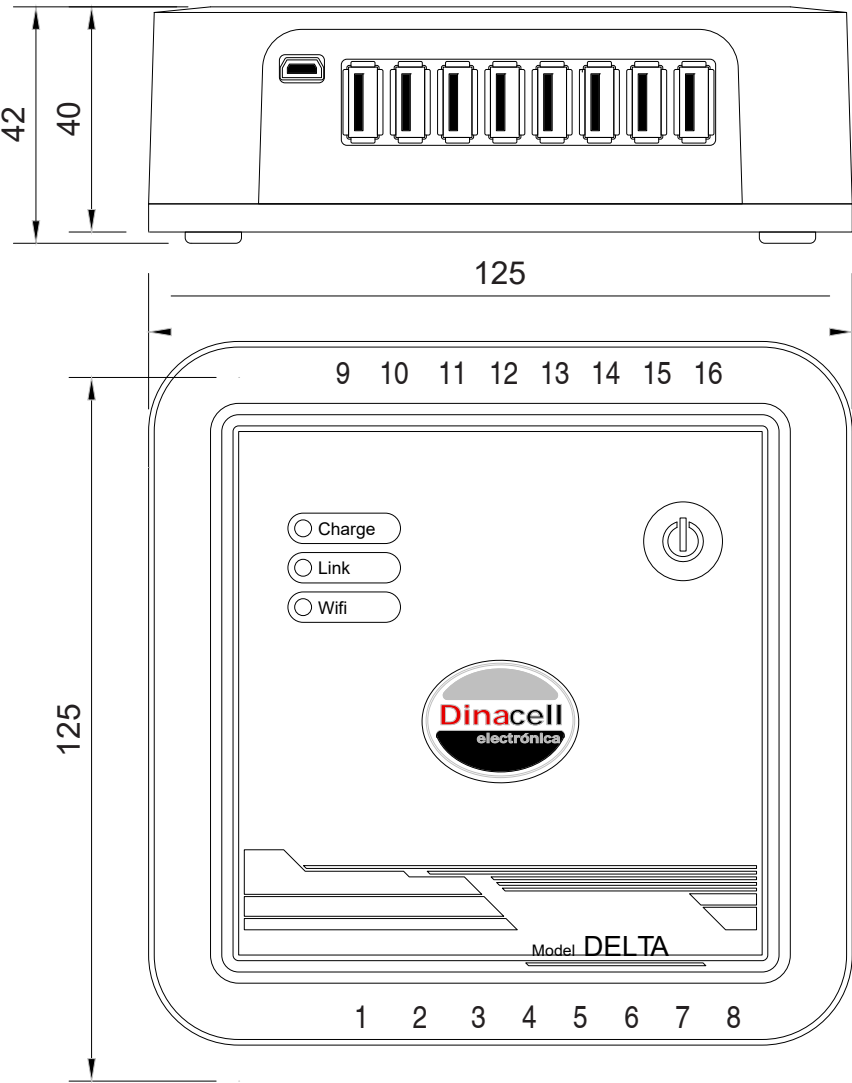
The software "Tools ng 2" to control the tension and leveling of ropes or belts can be connected to your device for free. This application is compatible with Android, iOS and Windows. Once the adjustment is made, a report with the final result can be generated.



Specifications

Parameter		Unit of measure	Specifications	
Model		-	DELTA-8S	DELTA-16S
Maximum number of sensors		-	8	16
Rechargeable battery		Vdc / mAh	3.7 / 4500	
Estimated battery service	For 8 sensors	h	24	
	For 16 sensors	h	16	
Power supply	Input	Vac / Hz	100 - 240 / 50/60	
	Output	Vdc / A	5 / 2.1	
Accuracy (Sensor dependant)		%	0.1	
Temperature range	Operating	°C (°F)	-10 ... +40 (+14 ... +104)	
	Storage		-20 ... +65 (+4 ... +150)	
Conectivity		-	Wifi	
		-	USB OTG	
Box	Material	-	ABS	
	Protection	-	Fireproof V0	
Protection		-	IP-50	
Fixing		-	Magnet	

Dimensional Drawings mm and wiring diagram

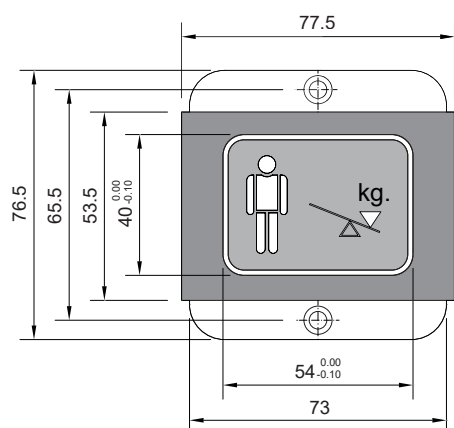


Accessories

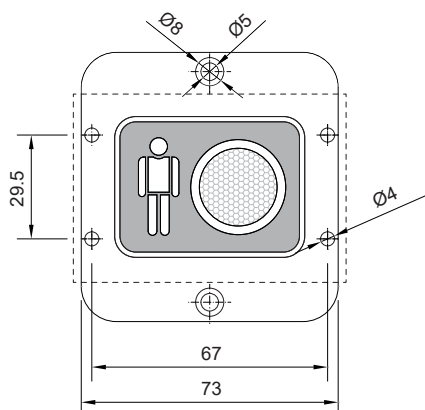
Cabin display

The cabin display MB models are designed to indicate visually the load inside the cabin.

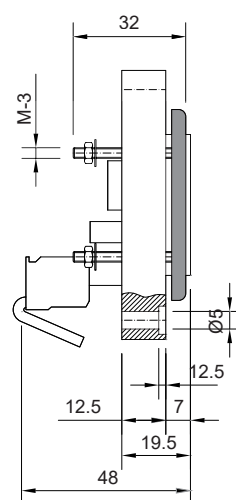
It shows a progressive luminous indication based on the weight loaded inside the cabin. Also, this accessory is compatible with any Dinacell device that has a cabin display input.



· MB-N1
· MB-N6



· MB-NL1
· MB-NL6

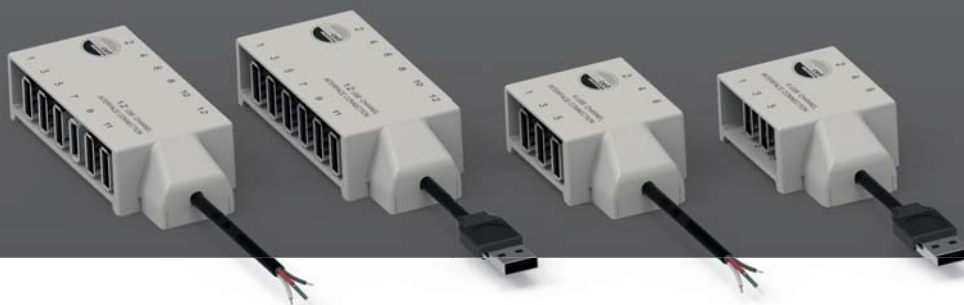


	MB-N1	MB-N6	MB-NL1	MB-NL6
Visual progressive load indication	-	-	✓	✓
Visual indicator of full load	✓	✓	✓	✓
Visual and sound indicator of overload	✓	✓	✓	✓
Emergency lighting	-	✓	-	✓
Connections without polarity	-	-	✓	✓
Front panel made of stainless steel	✓	✓	✓	✓
Ref.	007415	012455	012454	012456

For other designs and special dimensions, contact with our commercial department.

Connection box up to 6 or 12 USB-HUB

These INTERFACE allow to connect a set of up to 12 load cells in a single output. These allows sets of sensors to be connected to a load limiter with one single input.

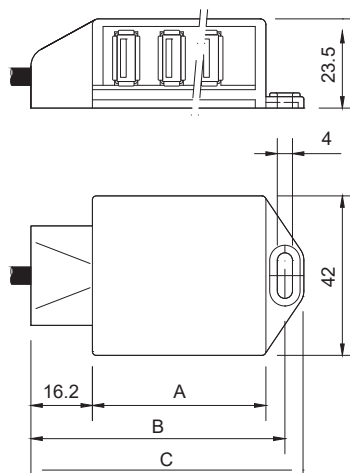


INTERFACE Connection boxes

There are 2 types of INTERFACE models on which depending on the number of USB-HUB connections, can be connected 1) up to six sensors or 2) up to twelve sensors in one group. These 2 models also depends on the cable output termination, could be with USB or with wired connection (5 wires).



Parameter	Units	Specifications			
Model	-	INTERFACE			
Temperature range	°C (°F)	-20 ... +60 (-4 ... +140)			
Material	-	Fire proof ABS			
Protection class	-	IP50			
Cable type	-	4 x 0.22 mm ² Ø4			
Cable lenght	m	5 + Ferrita			
USB port	-	6		12	
Connector	-	USB	Wired	USB	Wired
Ref.		007555	007274	007554	007275



Cotes mm			
	A	B	C
6 USB	48	69	74
12 USB	84	105	110

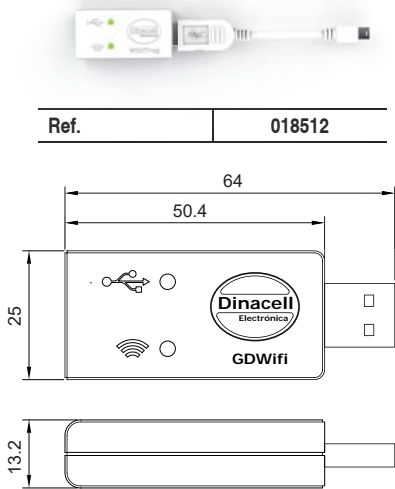
WiFi-USB gateway

This device is compatible with any controllers developed with Dinacell NG technology.

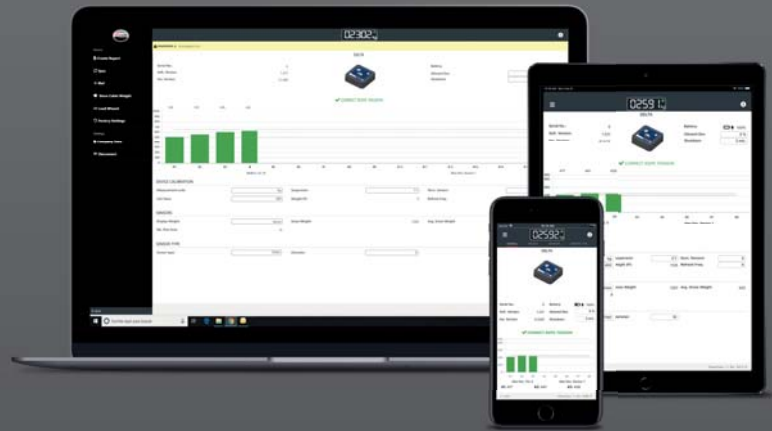


GD-WiFi Gateway device

The link of this device to the Dinacell unit controller will allows to configure, calibrate and obtain information on the installation status through the Tools ng 2 application.



Parameter		Units	Specifications
Model		-	GD-WiFi
Power supply		VDC	5
Rango de temp.	Operativo	°C (°F)	0 ... +70 (+32 ... +158)
	Almacenamiento		-10 ... +70 (-14 ... +158)
WiFi	Banda WiFi	GHz	2.4
	Output power	dBm	18
	Input sensivity	dB	-85
Conectividad USB	Interfaz	-	USB Tipo A + Adaptador OTG a mini USB
	Versión	-	2.0
Material de la caja		-	ABS ignifugo
Protección		-	IP50



Assembly Description

Part Name	Part Weight
01 Tower 0	0.0000 kg
Part Weight	0.0000 kg
Part Volume	0.0000 cm³
Part Mass	0.0000 kg
Part Volume	0.0000 cm³
Part Weight	0.0000 kg
Part Volume	0.0000 cm³
Part Weight	0.0000 kg
Part Volume	0.0000 cm³
Part Weight	0.0000 kg
Part Volume	0.0000 cm³
Part Weight	0.0000 kg
Part Volume	0.0000 cm³

The following attributes are displayed using these weights:

Part Name	Part Weight	Part Volume	Part Mass	Part Volume	Part Weight
01 Tower 0	0.0000 kg	0.0000 cm³	0.0000 kg	0.0000 cm³	0.0000 kg
Part Weight	0.0000 kg	0.0000 cm³	0.0000 kg	0.0000 cm³	0.0000 kg
Part Volume	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³
Part Mass	0.0000 kg	0.0000 kg	0.0000 kg	0.0000 kg	0.0000 kg
Part Volume	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³
Part Weight	0.0000 kg	0.0000 kg	0.0000 kg	0.0000 kg	0.0000 kg
Part Volume	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³	0.0000 cm³

ELEVATOR CATALOGUE

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Pieces colors or finishes may slightly vary with respect to original model.

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