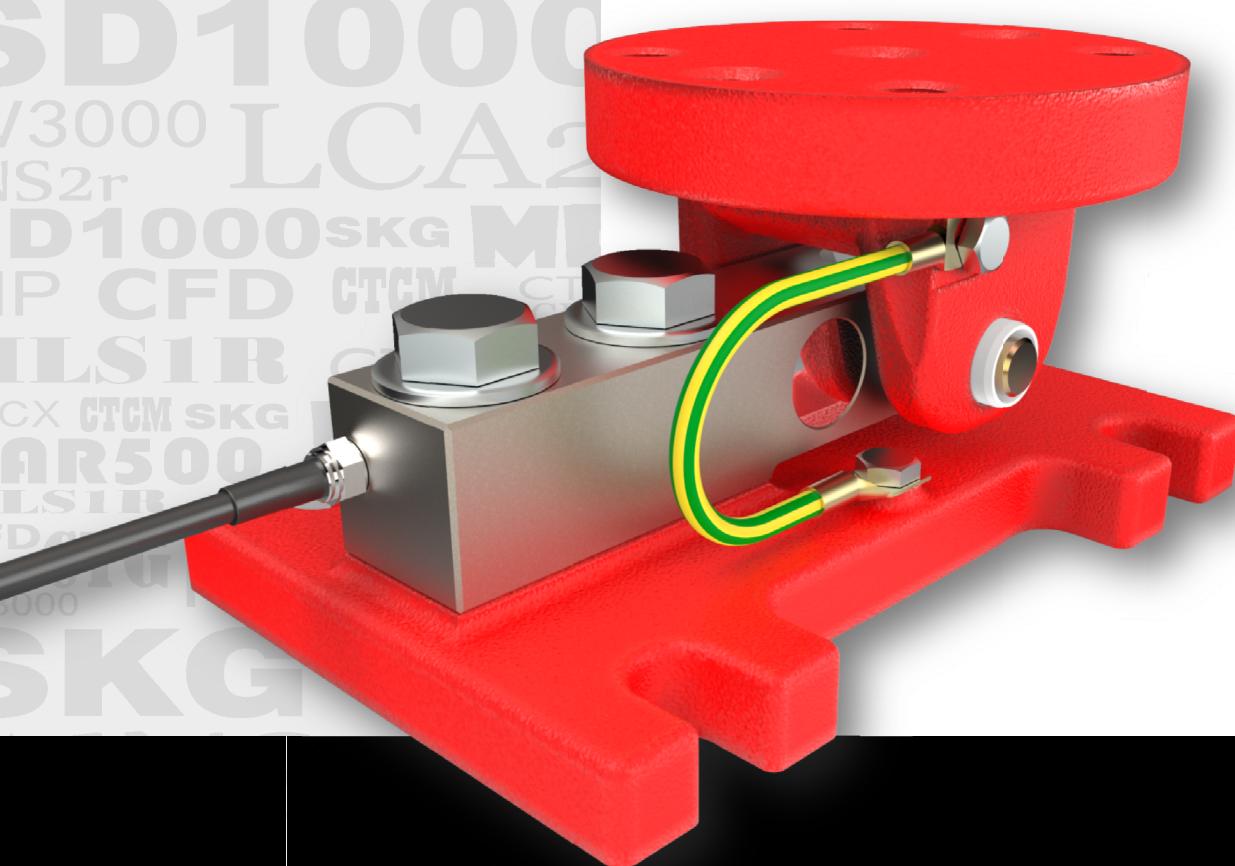


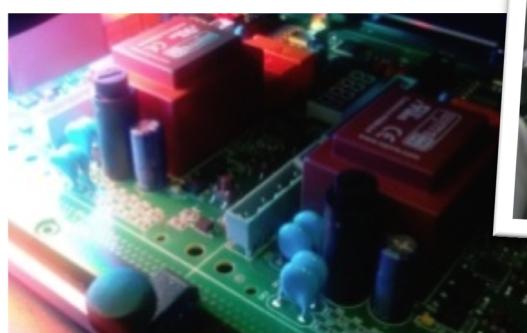
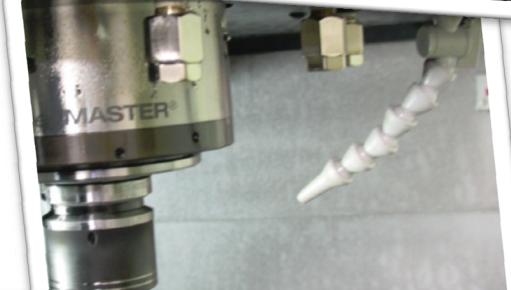


Dinacell Electrónica s.l.

Load Cells for Industrial Weighing



Made in Spain



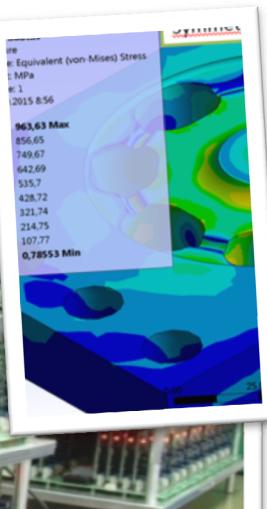
Since 1994 Dinacell Electrónica has developed several projects in the field of the load cells with applications in different industrial sectors, such as cranes, automotive industry, industrial weighing and handling, silos and elevators. The concept of our work involves the whole process of a load weighing system, including the design and manufacturing of the load cells as well as the electronic devices such as displays and controllers.

The company, located in Madrid (Spain), has in present day a world-wide distribution offering its high quality products with very competitive prices and a special customer service to several countries all around the world.

Dinacell counts on qualified and competent people who contribute with their large experience, around 20 years, to the continued improvement and development of the company to raise it to the top, working hard day by day.

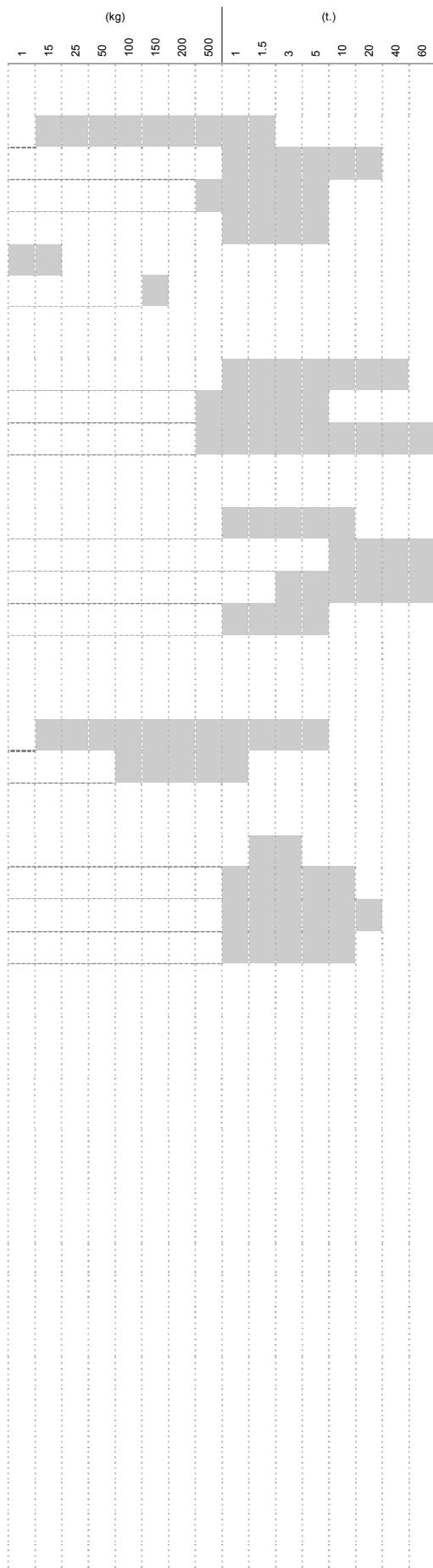
During these years the company has won its clients confidence by the good quality of the products and an effective post sales service where our customers are always friendly attended.

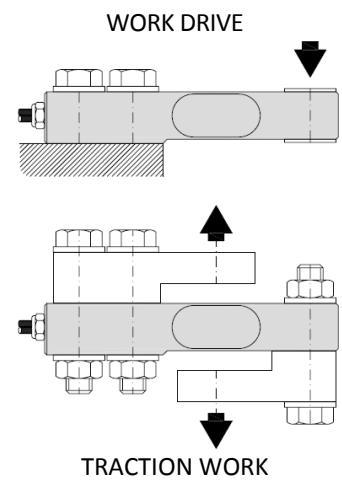
This quality is guaranteed by the exclusive selection of the materials and the professionalism of our staff, as well as the introduction of new technologies in the production line



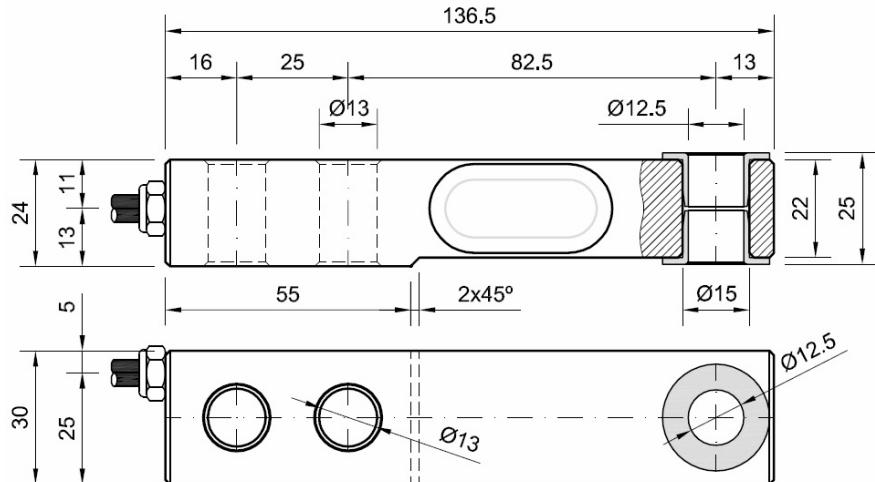
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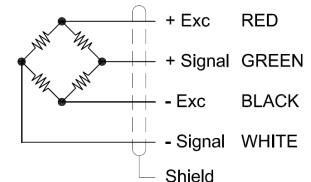


- Load cells specially designed to work in jutting out with shear or flexion sensor element
- Equipped with insulating cases of high mechanical resistance



Dimensions in mm

Wiring diagram



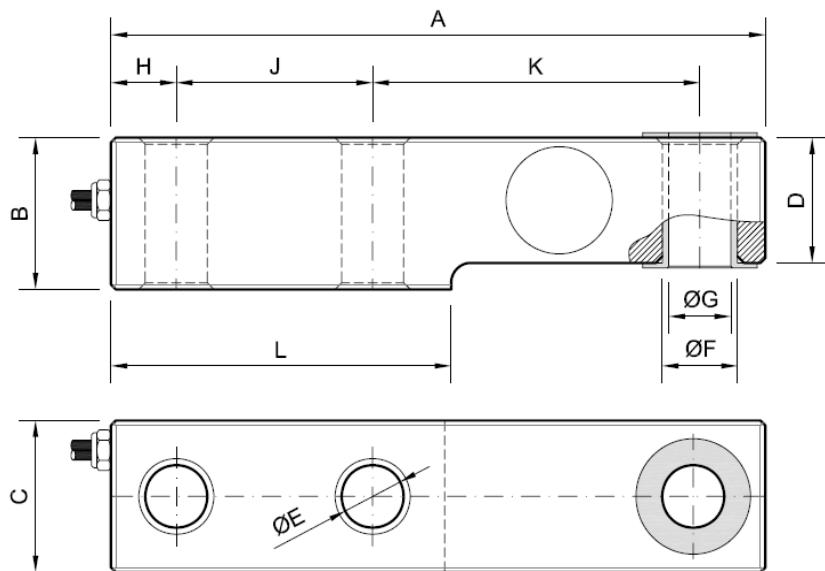
Technical Characteristics

Nominal load (nL)	15 – 30 – 50 – 75 – 100 – 150 – 200 – 250 – 300 – 500 – 750 – 1000 - 1500 kg.	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Sensibility	2,0 mV/V ± 0,1 %	Input impedance	380Ω ± 10 Ω
Zero Balance	2% F.S.	Output impedance	350Ω ± 1.5 Ω
Maximum excitation voltage	12V.	Creep (over 30 minutes)	0.03 % F.S.
Hysteresis error	0,033 % F.S.	Load Limit Without Loss of Characteristics	150 % F.S.
Maximum linearity error	0,02 % F.S.	Minimun breaking load	250% F.S.
Compensated temperature range	-10 ... 40 °C	Protection class	IP 67
Service temperature range	-20 ... 60 °C	Cable type	4x0,22 mm² Ø6
Storage temperature range	-20 ... 70 °C	Cable length	4 m.
Temperature effect on sensitivity	0,022 % F.S.	Material	Aluminum < 50 kg. Alloy steel ≥ 50 kg.
Temperature effect on zero	0,018 % / 5°C	Surface treatment	Chemical nickel (Only Alloy steel)

CFA



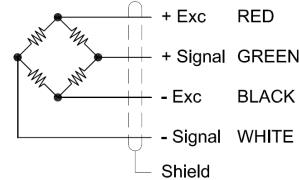
- Load cells specially designed to work in jutting out, with flexion or shear element
- Equipped with insulating cases of high mechanical resistance



nL (t)	1 - 2 - 3 - 5	7,5 - 10	15 - 20
A	200	275	280
B	46	58	65
C	46	58	65
D	38	48	55
ØE	19	25	29
ØF	23	25	29
ØG	19	-	-
H	20	25	30
J	60	80	80
K	100	140	140
L	104	140	140

Dimensions in mm

Wiring diagram



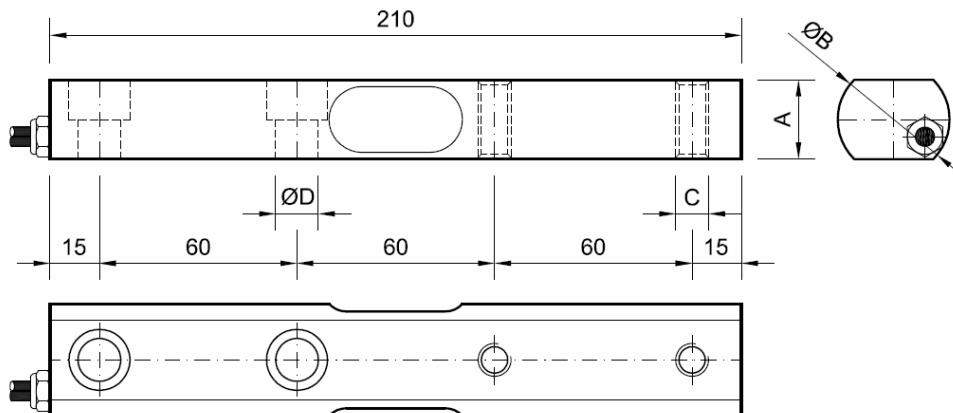
Technical Characteristics

Nominal load (nL)	1 - 2 - 3 - 5 - 7,5 - 10 - 15 - 20t	Maximum excitation voltage	12V
Sensibility	2 mV/V ± 0,1%	Insulation Resistance (V. Test = 100V)	4 GΩ
Zero Balance	1,5 % F.S.	Input impedance	380 Ω ±10 Ω
Non linearity	0,019 % F.S.	Output impedance	350 Ω ±1.5 Ω
Hysteresis error	0,020 % F.S.	Load Limit Without Loss of Characteristics	150 % F.S.
Creep (over 30 minutes)	0,017 % F.S.	Minimun breaking load	300 % F.S.
Temperature effect on sensitivity	0,023 % F.S.	Cable type	4x0,22 mm² Ø6
Temperature effect on zero	0,013 % / 5°C	Cable length	4 m
Compensated temperature range	-10 ... 40 °C	Protection class	IP 67
Service temperature range	-20 ... 60 °C	Material	Alloy steel
Storage temperature range	-20 ... 70 °C	Surface treatment	Chemical nickel

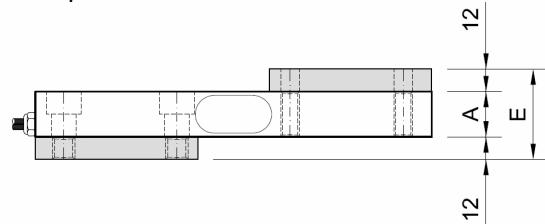


	Nominal load (nL) t	
	0,5 – 1 – 1,5	2 - 3
A	24	34
B	Ø34	Ø45
C	M-10	M-16
D	Ø13	Ø16,5
E	48	58

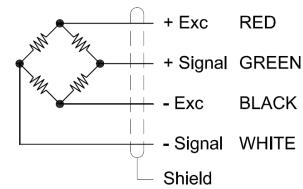
- Load cells specially designed to work in jutting out, with flexion or shear element



Optional accessories



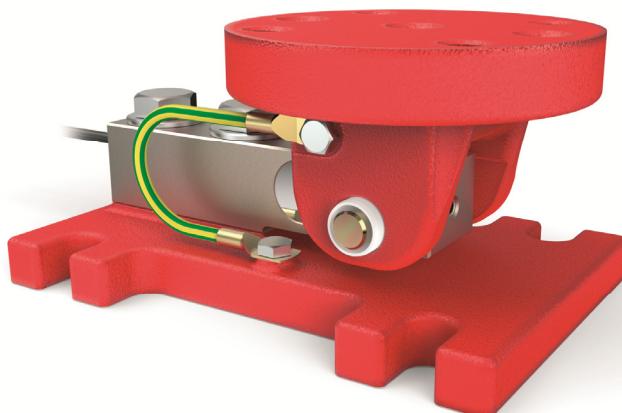
Wiring diagram



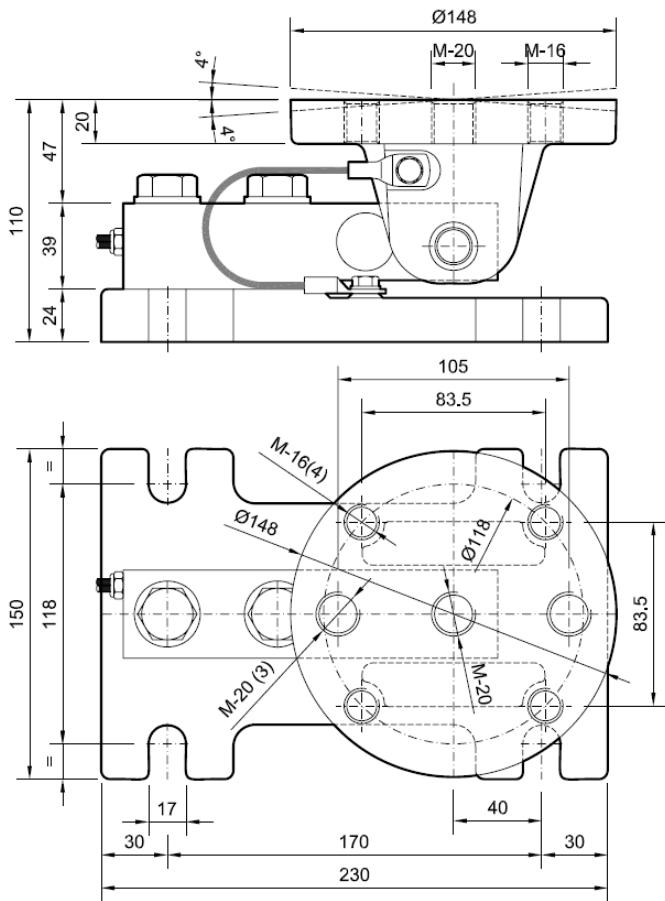
Technical Characteristics

Nominal load (nL)	0,5 – 1 – 1,5 – 2 - 3t	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Sensibility	2,0 mV/V ± 0,1 %	Input impedance	380 ± 10 Ω
Zero Balance	2% F.S.	Output impedance	350 ± 1.5 Ω
Maximum excitation voltage	12V.	Creep (over 30 minutes)	0,03 % F.S.
Hysteresis error	0,028 % F.S.	Load Limit Without Loss of Characteristics	120 % F.S.
Maximum linearity error	0,026 % F.S.	Break Load	>200% F.S.
Compensated temperature range	-10 ... 40 °C	Protection class	IP 67
Service temperature range	-20 ... 60 °C	Cable type	4x0,22 mm² Ø6
Storage temperature range	-20 ... 70 °C	Cable length	3 m.
Temperature effect on sensitivity	0,032 % F.S.	Material	Alloy steel
Temperature effect on zero	0,022 % / 5°C	Surface treatment	Chemical nickel

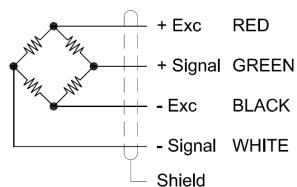
CFRT



- Load cell with anti-overturn support specially designed for weighing in silos.
- Casting support treated with corrosion-resistant paint.
- Available with capacities from 1000 kg to 6000kg.
- Electrical insulation between load cell and support.
- The top bracket allows to receive any type of support, either a round or rolled leg in any format.
- Available accessories:
 - Concrete sleeve anchors.
 - Screws, nuts and washers.



Wiring diagram



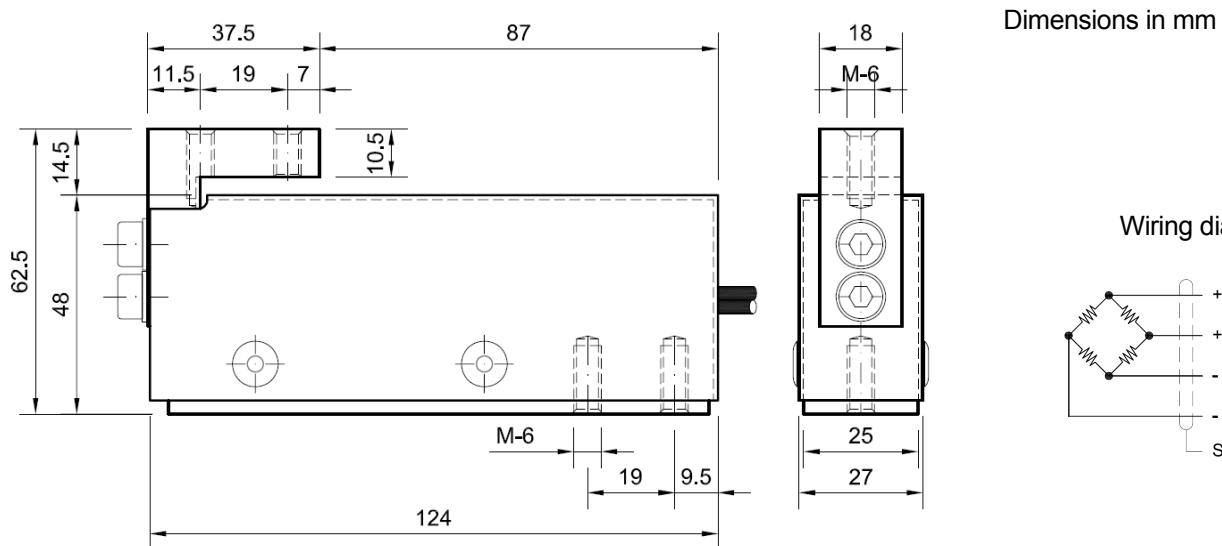
Dimensions in mm

Technical Characteristics

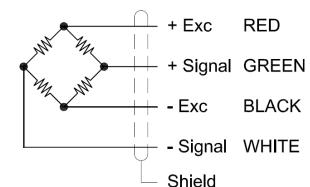
Nominal load (nL)	1 - 2 - 3 - 4 - 5 - 6 t	Insulation Resistance (V. Test = 100V)	4 GΩ
Sensibility	2 mV/V ± 0.1%	Input resistance	380 ±10 Ω
Zero Balance	2% F.S.	Output resistance	350 ±1,5 Ω
Maximum excitation voltage	12V	Creep (over 30 minutes)	0,03 % F.S.
Hysteresis error	0,033 % F.S.	Maximum Working Load	150 % F.S.
Non linearity	0,02 % F.S.	Load Limit Without Loss of Characteristics	200 % F.S.
Compensated temperature range	-10 ... 40 °C	Protection class	IP 67
Service temperature range	-20 ... 60 °C	Cable type	4x0,22 mm² Ø6
Storage temperature range	-20 ... 70 °C	Cable length	6 m
Temperature effect on sensitivity	0,022 % F.S.	Material	Alloy steel
Temperature effect on zero	0,018 % / 5°C	Surface treatment	Chemical nickel



- Load cell specially designed to work in jutting out, with flexion element.
- It is manufactured in aluminum with a baking painting metal housing.



Wiring diagram



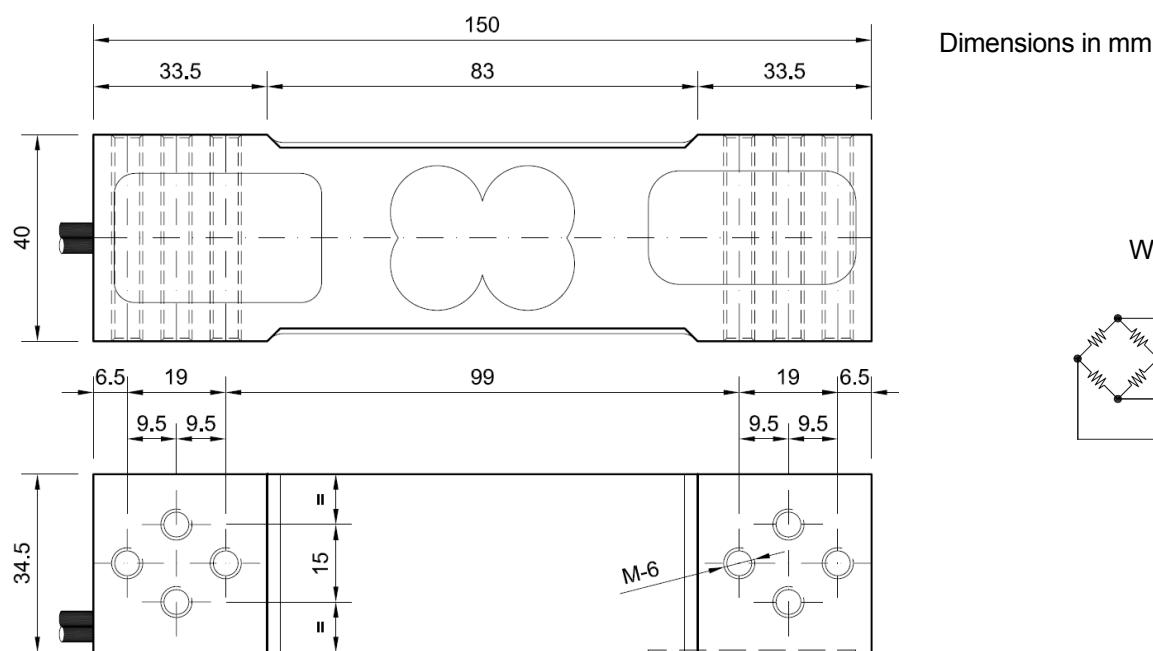
Technical Characteristics

Nominal load (nL)	1 – 2 – 3 – 4 – 5 – 6 – 10 – 15 - 20 kg	Input resistance	$380\Omega \pm 30\Omega$
Sensibility	2.0 mV/V $\pm 10\%$	Output resistance	$350\Omega \pm 2\Omega$
Zero Balance	2% F.S.	Insulation Resistance (V. Test = 100V)	>4 G Ω
Non linearity	0,021 % F.S.	Maximum Working Load	150 % F.S.
Hysteresis	0,023 % F.S.	Load Limit Without Loss of Characteristics	200 % F.S.
Non repeability	0,012 % F.S.	Protection class	IP 44
Creep (over 30 minutes)	0,019 % F.S.	Maximum excitation voltage	12V.
Temperature effect on sensitivity	0,026 % F.S.	Cable type	4x0,22 mm ² Ø6
Temperature effect on zero	0,015 % F.S.	Cable length	5 m.
Compensated temperature range	-10 ... 40 °C	Material	Aluminum

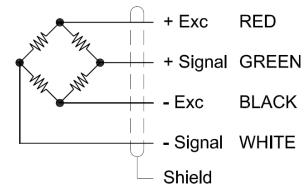
MP150



- Load cells specially designed to work in jutting out, with flexion sensor element.

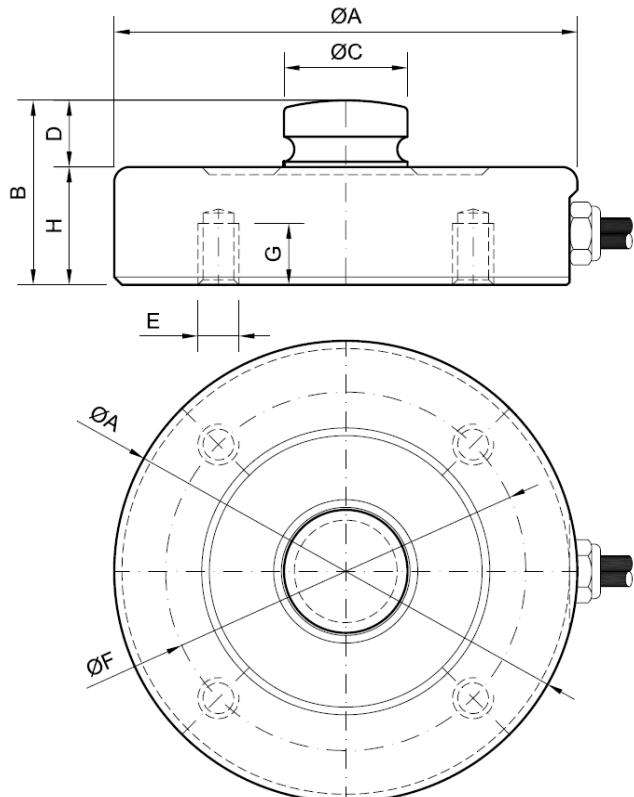


Wiring diagram



Technical Characteristics

Nominal load (nL)	150 kg	Input resistance	$380\Omega \pm 30\Omega$
Sensibility	$2,0 \text{ mV/V} \pm 10\%$	Output resistance	$350\Omega \pm 2\Omega$
Zero Balance	2% F.S.	Insulation Resistance (V. Test = 100V)	>4 GΩ
Non linearity	0,021 % F.S.	Maximum Working Load	150 % F.S.
Hysteresis	0,023 % F.S.	Load Limit Without Loss of Characteristics	200 % F.S.
Non repeability	0,012 % F.S.	Protection class	IP 44
Creep (over 30 minutes)	0,019 % F.S.	Maximum excitation voltage	12V.
Temperature effect on sensitivity	0,026 % F.S.	Cable type	$4 \times 0,22 \text{ mm}^2 \phi 6$
Temperature effect on zero	0,015 % F.S.	Cable length	5 m.
Compensated temperature range	-10 ... 40 °C	Material	Aluminum

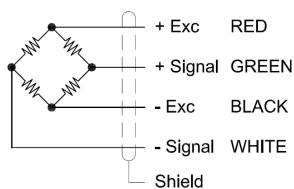
BP


Dimensions in mm

- Compression load cell developed to work with off-center loading.
- Low profile sensing element.

Note: this load cell can be supplied with a button lid.

Wiring diagram



nL (t)	ØA	B	ØC	D	E	ØF	G	H
1 – 2 – 3 – 4 – 5	90	36	24	13	M-8 (4)	70	12	23
10 – 15 – 20	115	42	32	13	M-12 (4)	90	16	29
30 – 40	155	68	44	16	M-16 (4)	125	20	52

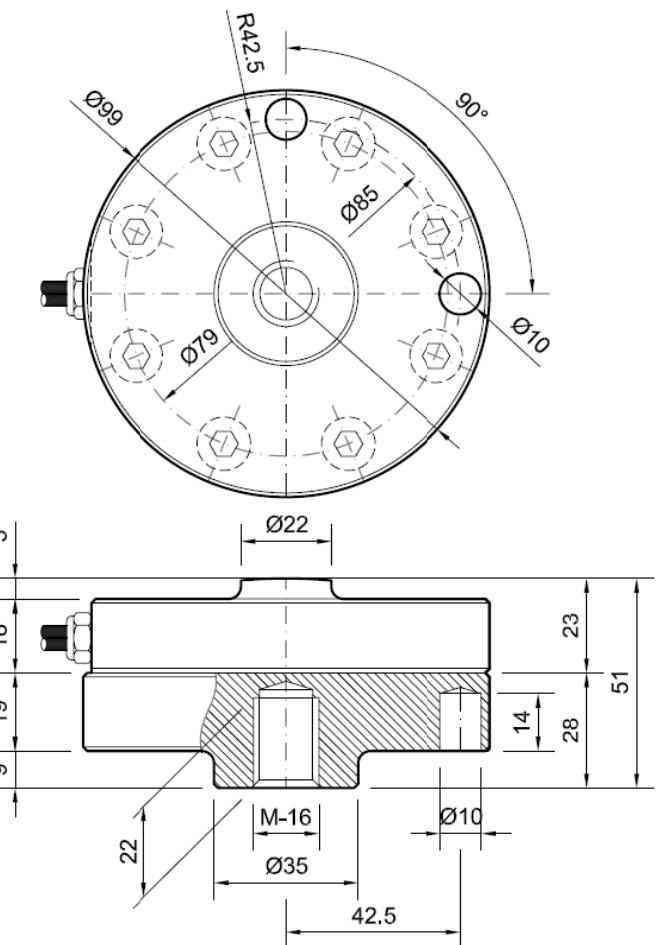
Características técnicas

Nominal load (nL)	1 ... 40 t	Creep (over 30 minutes)	0,06% F.S.
Sensitivity	1,4 ... 2,0 mV/V	Maximum excitation voltage	12 V
Zero Balance	5 % F.S.	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Temperature effect on sensitivity	0,044% F.S.	Maximum Working Load	150 % F.S.
Temperature effect on zero	0,035% F.S.	Break Load	>300 % F.S.
Compensated temperature range	-10 ... 40 °C	Protection class	IP67
Service temperature range	-20 ... 60 °C	Cable type	4x0,22 mm² Ø6
Input resistance	350 ± 3Ω	Cable length	4 m
Output resistance	350 ± 2Ω	Material	Alloy steel
Hysteresis error	0,067 % F.S.	Surface treatment	Chemical nickel
Non linearity	0,04% F.S.		

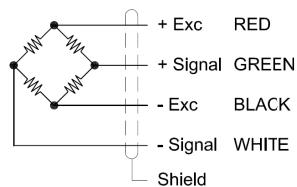
BP2093



- Load cell specially designed to work in compression.
- Commonly used in the automotive industry.

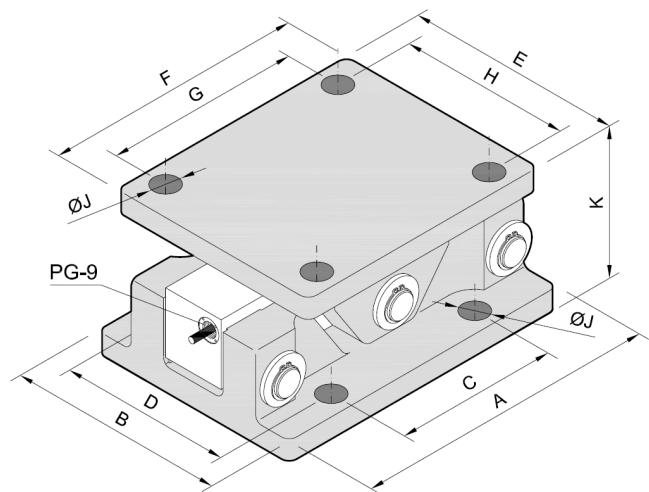


Wiring diagram



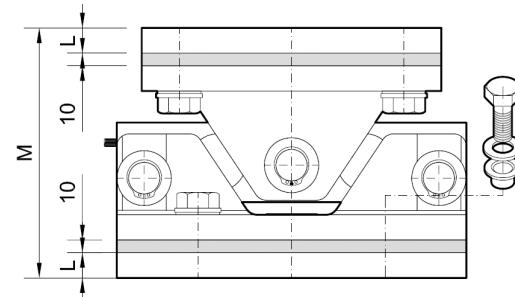
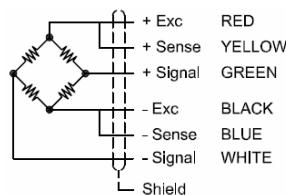
Dimensions in mm

Technical Characteristics			
Nominal load (nL)	0,5 – 1 – 3 – 5 t	Maximum excitation voltage	12 V
Sensibility	2,0 mV/V ± 0,4 %	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Zero Balance	5 % F.S.	Maximum Working Load	150 % F.S.
Compensated temperature range	-10 ... 40 °C	Break Load	>300 % F.S.
Service temperature range	-20 ... 60 °C	Protection class	IP67
Non linearity	0,044% F.S.	Cable type	4x0,22 mm² Ø6
Hysteresis error	0,047 % F.S.	Cable length	4 m
Input resistance	380 ± 10Ω	Material	Alloy steel
Output resistance	350 ± 2Ω	Surface treatment	Chemical nickel



- Load cell specially designed for weighing silos, with anti-overturn support.
- Manufactured with double shear element. Made of stainless steel or alloy steel with chemical nickel protection.
- Support incorporates a low profile, treated with highly corrosion resistant paint.

Wiring diagram

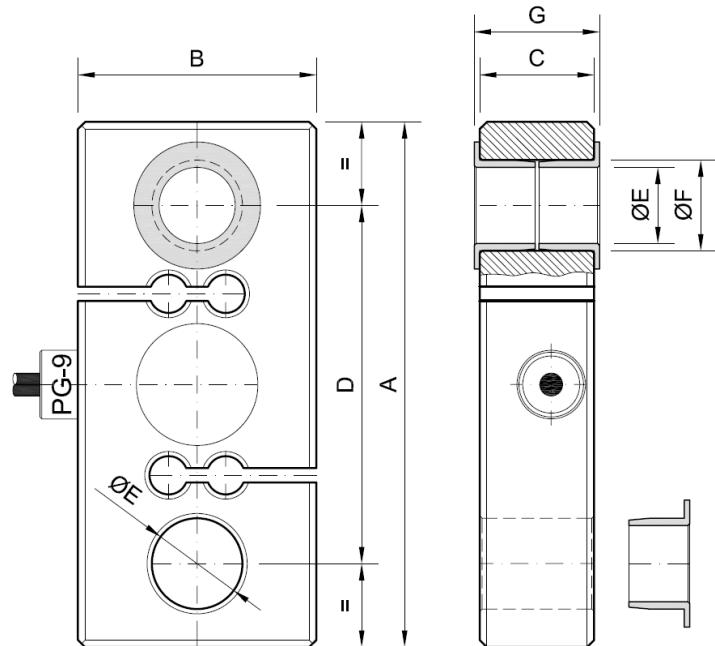


Model	Nominal load (nL) t.	Dimensions in mm											
		A	B	C	D	E	F	G	H	J	K	L	M
SKP	1 - 2 - 3 - 4 - 5 - 6	180	140	130	100	140	140	100	100	18	75	15	125
SKM	8 - 10 - 15	240	160	130	120	160	170	130	120	21,5	100	15	150
SKG	20 - 25 - 30 - 40 - 50 - 60	280	200	150	158	200	240	180	158	25	138	20	198

Technical Characteristics

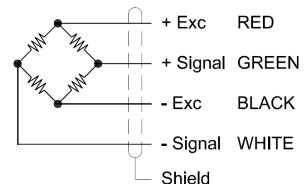
Sensibility	2 mV/V	Compensated temperature range	-10 ... 40 °C
Tolerance sensibility adjustment	± 0,1 % F.E.	Input resistance	760 ± 20Ω
Zero Balance	± 1,5 % F.E.	Output resistance	700 ± 4Ω
Maximum excitation voltage	24 V	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Non linearity	± 0,02 % F.E.	Maximum Working Load	150 % F.E.
Non repeability	± 0,012 % F.E.	Load Limit Without Loss of Characteristics	180 % F.E.
Combined error	± 0,029 % F.E.	Break Load	300 % F.E.
Hysteresis	± 0,033 % F.E.	Cable type Shielded / Length	6 x 0,22 mm ² Ø6 / 8 m.
Creep (over 30 minutes)	± 0,025 % F.E.	Protection class	IP67
Temperature effect on sensitivity	± 0,023 % F.E.	Material (Load cell)	Alloy steel
Temperature effect on zero	± 0,018 % / 5°C	Surface treatment	Chemical nickel

CT



- Load cells specially designed to work in traction, with shear sensor element
- Equipped with insulating cases of high mechanical resistance (750-5000 kg.)
- Used with shackles

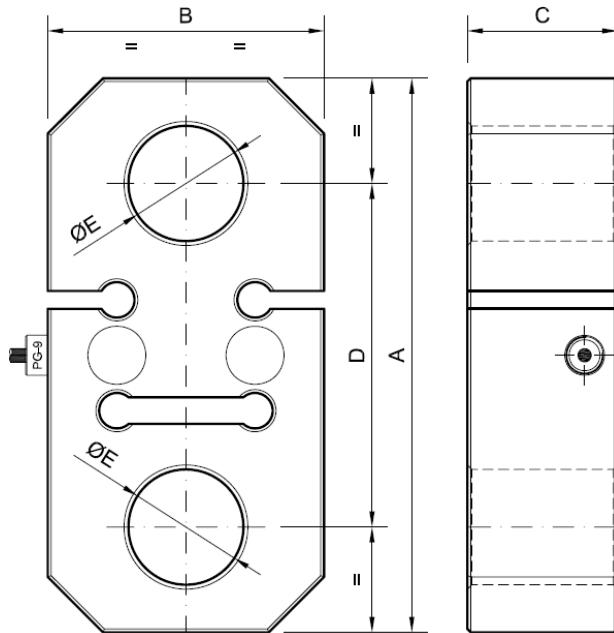
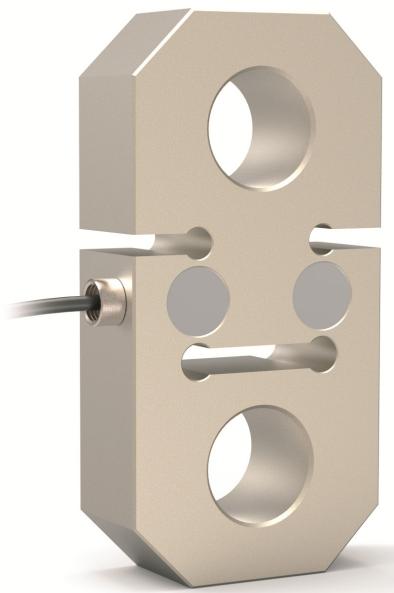
Wiring diagram



nL (kg.)	A	B	C	D	ØE	ØF	G	Cable type	Cable length
750 – 1000 - 1500	110	50	24	75	19	17	26		
2000 - 3000	140	60	30	90	25	21	33		4 m
5000	180	70	34	120	30	26	38		
7500 – 10000 - 12000	220	110	48	130	45	--	--		5 m

Technical Characteristics

Nominal load (nL)	0,75 – 1 – 1,5 – 2 - 3 - 5 – 7,5 - 10 - 12 t	Maximum excitation voltage	12 V
Sensibility	2,0 mV/V \pm 0,1%	Insulation Resistance (V. Test = 100V)	4 G Ω
Zero Balance	1,5 % F.S.	Input resistance	380 \pm 10 Ω
Non linearity	0,021 % F.S.	Output resistance	350 \pm 2 Ω
Hysteresis	0,020 % F.S.	Maximum Working Load	150 % F.S.
Creep (over 30 minutes)	0,017 % F.S.	Load Limit Without Loss of Characteristics	180 % F.S.
Temperature effect on sensitivity	\pm 0,023 % F.S.	Break Load	300 % F.S.
Temperature effect on zero	\pm 0,018 % F.S.	Protection class	IP67
Compensated temperature range	-10 ... 40 °C	Material	Alloy steel
Service temperature range	-20 ... 60 °C	Surface treatment	Chemical nickel

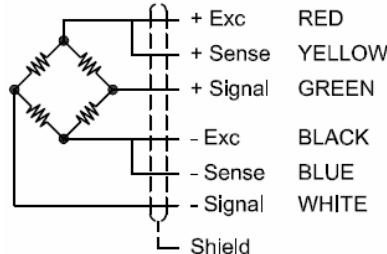
CTDC


- Load cells specially designed to work in traction, with shear sensor elements
- Double shear load cell for higher resistance to the break
- Used with shackles

Dimensions in mm

nL (t)	A	B	C	D	ØE
10	220	110	48	130	45
12					
15	250	125	68	155	52
20					
25	290	125	78	175	58
35					
50	330	150	90	195	72

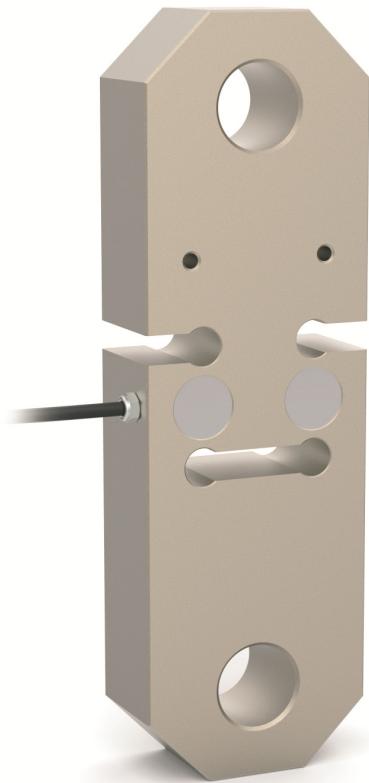
Wiring diagram



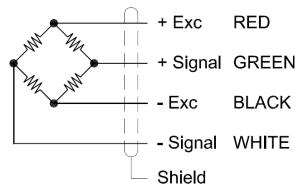
Technical Characteristics

Nominal load (nL)	10 – 12 – 15 – 20 – 25 – 35 – 50 t	Insulation Resistance (V. Test = 100V)	4 GΩ
Sensibility	2,0 mV/V ± 0,1%	Input resistance	760 ± 20 Ω
Zero Balance	1,5 % F.S.	Output resistance	700 ± 2 Ω
Non linearity	0,022 % F.S.	Maximum Working Load	150 % F.S.
Hysteresis	0,027 % F.S.	Load Limit Without Loss of Characteristics	180 % F.S.
Creep (over 30 minutes)	0,02 % F.S.	Break Load	400 % F.S.
Temperature effect on sensitivity	± 0,023 % F.S.	Protection class	IP67
Temperature effect on zero	± 0,019 % F.S.	Cable type	6x0,25 mm² Ø6
Compensated temperature range	-10 ... 40 °C	Cable length	8 m
Service temperature range	-20 ... 60 °C	Material	Alloy steel
Maximum excitation voltage	12 V	Surface treatment	Chemical nickel

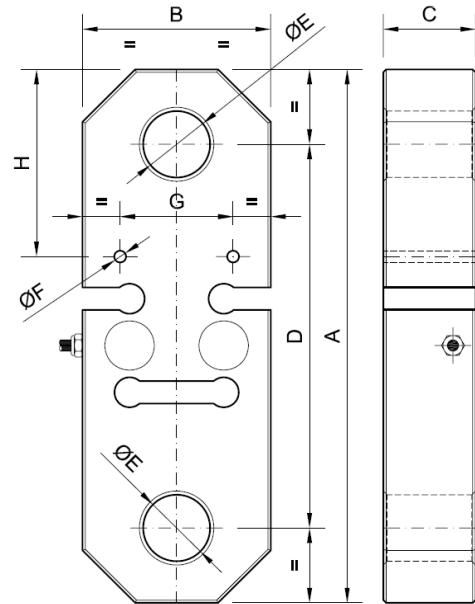
CTG



Wiring diagram



Dimensions in mm

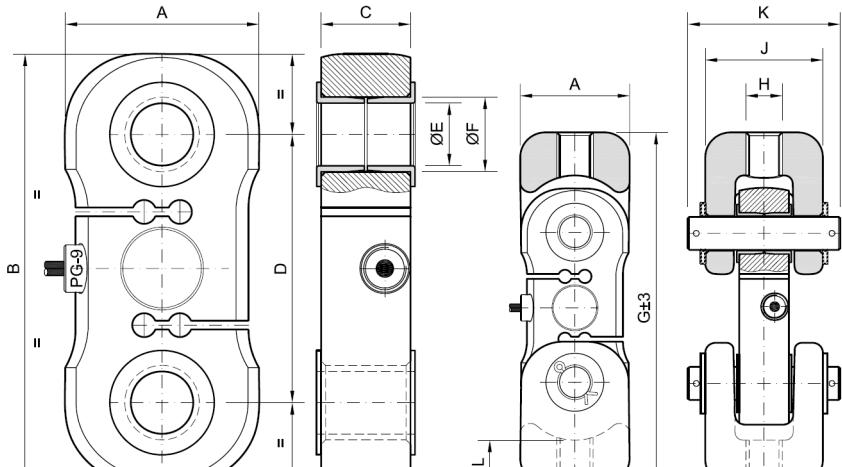


(**) SC Simple Cut
DC Double Cut

nL (t)	A	B	C	D	ØE	ØF	G	H	(**)
3,2	250	80	26	199.5	21.5			70	
6,3	270		36	210	27			80	SC
12	C 285			49	205	35.5	6.25	100	
	L 320	100			242.5				
16	C 300			57.5	209	43		115	
	L 360				269				
25	C 360		110		240	53	8.5	130	
	L 400				280			140	DC
35	C 400		130		270	59	12.5	162	
	L 440				310			155	
40			512	160	90	350	72	100	
50								191	

Technical Characteristics

Nominal load (nL)	3,2 - 6,3 – 12 – 16 – 25 – 35 – 40 - 50 t	Input resistance (**)	SC	380 Ω ± 10 Ω
Sensibility	1,4 ... 2,0 mV/V		DC	760 Ω ± 20 Ω
Zero Balance	2% F.S.	Output resistance (**)	SC	350 Ω ± 2 Ω
Number of intervals (n)	3000		DC	700 Ω ± 4 Ω
Temperature effect on sensitivity	±0,022 % F.S.	Minimum insulation resistance (V.Test = 100V)		4 GΩ
Compensated temperature range	-10 ... 40 °C	Load Limit Without Loss of Characteristics		150 % F.S.
Service temperature range	-20 ... 60 °C	Break Load		300% F.S.
Storage temperature range	-30 ... 70 °C	Protection class		IP 67
Hysteresis error	0,033 % F.S.	Cable type		4x0,22 mm² Ø6
Non linearity	0,022 % F.S.	Cable length		1,5 m
Creep (over 30 minutes)	0,030 % F.S.	Material		Alloy steel
Maximum excitation voltage	12V	Surface treatment		Chemical nickel



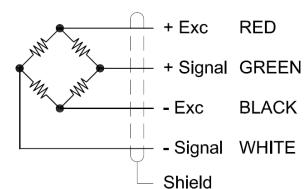
Dimensions in mm

- Load cells specially designed to work in traction, with shear sensor element.
- Equipped with insulating cases of high mechanical resistance.
- It could be used with standard shackles or special clamping systems manufactured in forge (own production) for each capacity.

Nominal load (nL) t	A	B	C	D	$\varnothing E$	$\varnothing F$	G	H (1)	J	K	L
0,75											
1	52	114	24	75	16	19	163	M-16	50	66	17
1,5											
2	65	144	30	90	20	25	212	M22	71	92	26
3											
5	75	184	34	120	25	30	264	M-24	80	103	31

(1) Other metric on demand according to customer requirements

Wiring diagram



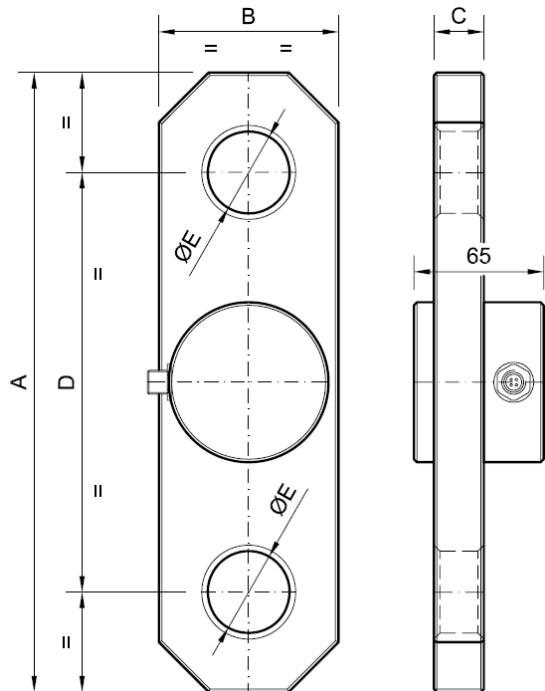
Technical Characteristics

Nominal load (nL)	0,75 – 1 – 1,5 – 2 – 3 – 5t.	Maximum excitation voltage	12V.
Sensibility	2 mV/V ± 0,1%	Insulation Resistance (V. Test = 100V)	>4 GΩ
Zero Balance	1,5 % F.S.	Input resistance	380Ω ± 10 Ω
Non linearity	0,020 % F.S.	Output resistance	350Ω ± 1,5 Ω
Hysteresis error	0,022 % F.S.	Maximum Working Load	150 % F.S.
Creep (over 30 minutes)	0,018 % F.S.	Break Load	>300% F.S.
Temperature effect on sensitivity	±0,025 % F.S.	Protection class	IP 67
Temperature effect on zero	±0,017 % F.S. / 5°C	Cable type	4x0,22 mm² Ø6
Compensated temperature range	-10 ... 40 °C	Cable length	4 m.
Service temperature range	-20 ... 60 °C	Material	Alloy steel
Storage temperature range	-30 ... 70 °C	Surface treatment	Chemical nickel

TLCX



- Load cell specially designed to work in traction
- Manufactured in alloy steel
- Anti-corrosion treatment of chemical nickel
- Also available in stainless steel (depending on the capacity)
- Dimension depending on customer requirements load



Connection options

By output cable or M12 connector panel

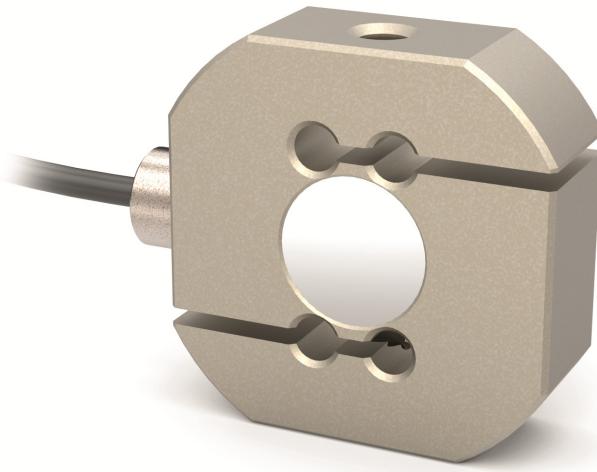
Output; several options (mV, mA, V)

Wiring diagram	M12 connection												
	<table border="1"> <tr> <td>+Vcc 10 ... 30</td> <td>1</td> <td>CONNECTOR M-12</td> </tr> <tr> <td>N.C.</td> <td>2</td> <td></td> </tr> <tr> <td>GND</td> <td>3</td> <td></td> </tr> <tr> <td>4-20 mA</td> <td>4</td> <td></td> </tr> </table>	+Vcc 10 ... 30	1	CONNECTOR M-12	N.C.	2		GND	3		4-20 mA	4	
+Vcc 10 ... 30	1	CONNECTOR M-12											
N.C.	2												
GND	3												
4-20 mA	4												

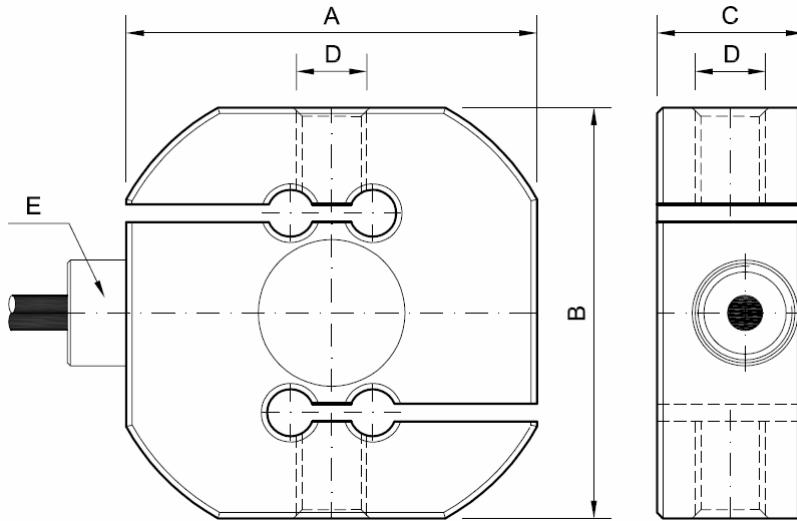
Bench mark chart to fill up	
Kg.	Nominal load nL (kg.)
A	
B	
C	
D	
ØE	

Technical Characteristics

Nominal load (nL)	1 ... 60 t	Creep (over 30 minutes)	<0,037 % F.S.
Sensibility	Aprox. 1,5 mV/V	Insulation Resistance (V. Test = 100V)	>5000 GΩ
Zero Balance	2% F.S.	Input resistance	350 Ω ± 3 Ω
Temperature effect on zero	<0,034 % / 5°C	Output resistance	350 Ω ± 1,5 Ω
Temperature effect on sensitivity	5 % F.S.	Maximum Working Load	150 % F.S.
Compensated margin of temperature	-10 ... 40 °C	Load Limit Without Loss of Characteristics	200 % F.S.
Power supply	10 to 30 Vdc	Break Load	>300% F.S.
Non linearity	<0,034 % F.S.	Protection class	IP 66
Combined error	<0,034 % F.S.	Material	Alloy steel
Combined error	<0,07 % F.S.	Surface treatment	Chemical nickel
Hysteresis	<0,07 % F.S.		



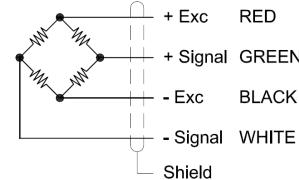
- Load cells specially designed to work in traction and compression



nL (kg)	A	B	C	D	E
15					
25	60	60	20	M-10	-
50					
75					
100					
150					
200	70	70	25	M-12	PG-9
250					
300					
500					
750					
1000					
1500	80	80	25	M-16	PG-9
2000					
2500					
3000	94	89	42	M-22x2.5	PG-9
5000					

Dimensions in mm

Wiring diagram



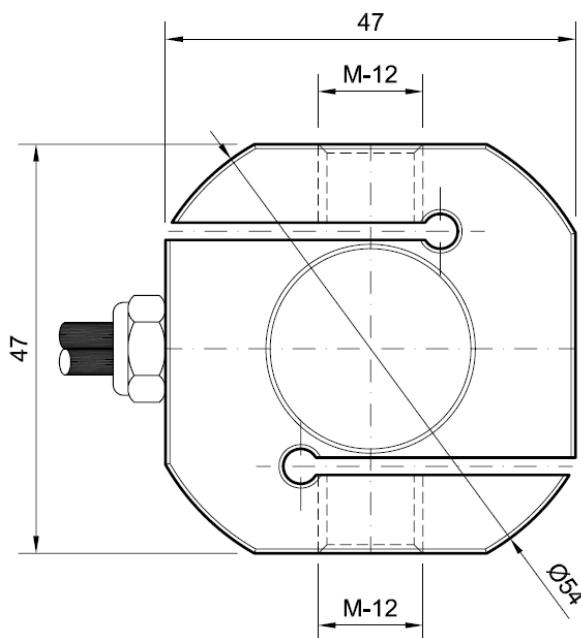
Technical Characteristics

Nominal load (nL)	15 5000 kg.	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Sensibility	2,0 (mV/V) ± 0,1 %	Input impedance	380Ω ± 10 Ω
Zero Balance	1,5 % F.S.	Output impedance	350Ω ± 1,5 Ω
Maximum excitation voltage	12V.	Load Limit Without Loss of Characteristics	150 % F.S.
Hysteresis error	0,023 % F.S.	Minimun breaking load	250% F.S.
Creep (over 30 minutes)	0,019 % F.S.	Protection class	IP 67
Maximum linearity error	0,021 % F.S.	Cable type	4x0,22 mm² Ø6
Compensated temperature range	-10 ... 40 °C	Cable length	4 m.
Service temperature range	-20 ... 60 °C	Material	15 75 Kg. Aluminum
Storage temperature range	-20 ... 70 °C		75 5000 Kg. Alloy steel
Temperature effect on sensitivity	0,026 % F.S.	Surface treatment	15 75 Kg. Natural
Temperature effect on zero	0,015 % / 5°C		75 5000 Kg. Chemical nickel

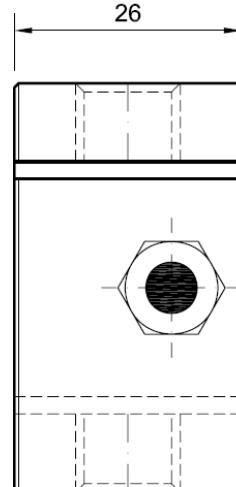
CTCM



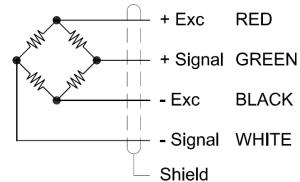
- Load cells specially designed to work in traction and compression.
- Manufactured in alloy steel or stainless steel. Anticorrosion treatment of chemical nickel (only alloy steel).



Dimensions in mm

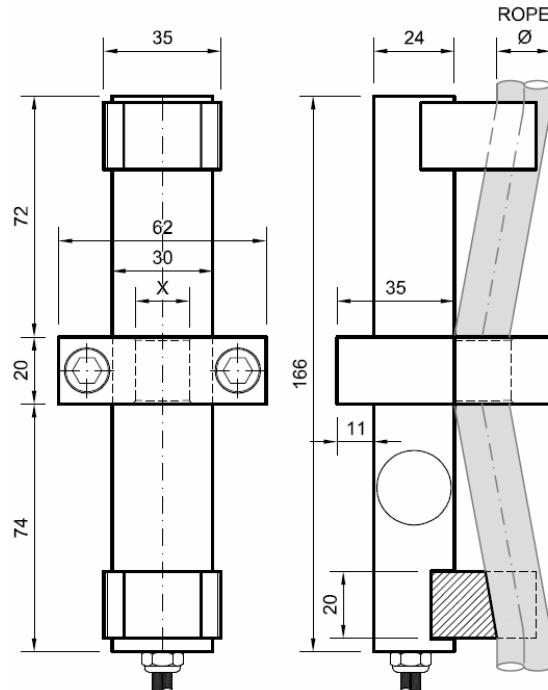
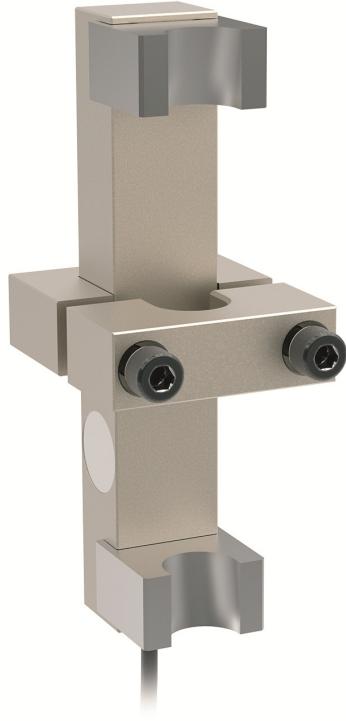


Wiring diagram

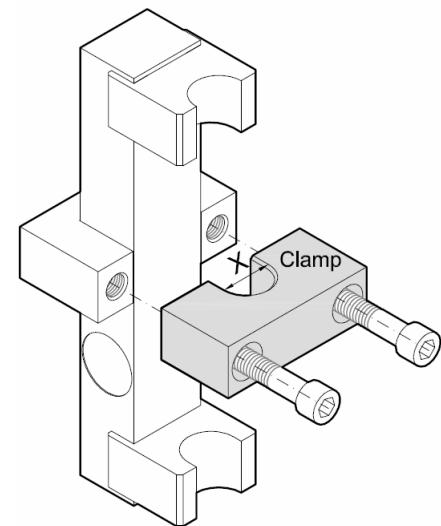


Technical Characteristics

Nominal load (nL)	100 - 150 - 200 - 250 - 300 - 500 - 600 - 700 - 750 - 800 - 1000 Kg	Temperature effect on zero	0,020 % / 5°C
Sensibility	2,0 (mV/V) ± 0,1 %	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Zero Balance	1,5 % F.S.	Input impedance	380Ω ± 10 Ω
Maximum excitation voltage	12V.	Output impedance	350Ω ± 1,5 Ω
Hysteresis error	0,025 % F.S.	Load Limit Without Loss of Characteristics	150 % F.S.
Creep (over 30 minutes)	0,021 % F.S.	Minimun breaking load	250% F.S.
Maximum linearity error	0,023 % F.S.	Protection class	IP 67
Compensated temperature range	-10 ... 40 °C	Cable type	4x0,22 mm² Ø6
Service temperature range	-20 ... 60 °C	Cable length	4 m.
Storage temperature range	-20 ... 70 °C	Material	Alloy steel Stainless steel
Temperature effect on sensitivity	0,028 % F.S.	Surface treatment	Chemical nickel (Only Alloy steel)



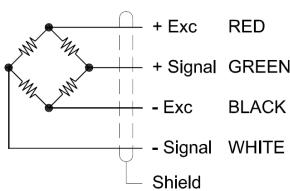
Dimensions in mm



Ref. Clamp groove size "X"	Cable Groove	Range Rope Ø application
8	Ø6-8	6 ... 8mm.
13	Ø8-13	8 ... 13mm.
16	Ø14-16	14 ... 16mm.
20	Ø17-20	17 ... 20mm.
23	Ø21-23	21 ... 23mm.

- Load limiter design for measuring the load on a single steel rope (traction ropes) with Ø 16 to 22mm.

Wiring diagram



Optional USB connector


Remarks:

To manage the orders, please specify the following information:

Ø of ropes

Technical Characteristics

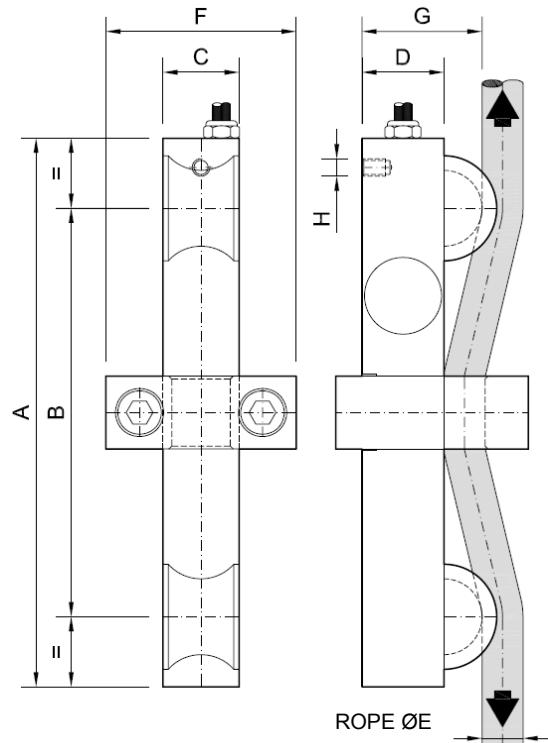
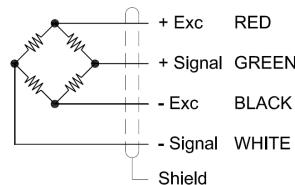
Nominal load (nL)	1,6 - 3 t	Input resistance	350 ... 400 Ω
Sensibility	1,4 ... 2,0 (mV/V)	Output resistance	350Ω ± 2 Ω
Zero Balance	10 % F.S.	Maximum Working Load	150% F.S.
Non linearity	0,11 % F.S.	Load Limit Without Loss of Characteristics	200 % F.S.
Accuracy	0,25 % F.S.	Protection class	IP 65
Service temperature range	-20 ... 60 °C	Cable type	4x0,09 mm ² Ø4.3 USB
Maximum excitation voltage	12V.	Cable length	2 - 4 m.
Insulation Resistance (V. Test = 100V)	>4 GΩ	Material	Aluminum

LM

Optional USB connector



Wiring diagram



Dimensions in mm

- Load limiter designed for measuring the tension on steel ropes that work on traction.

Remarks:

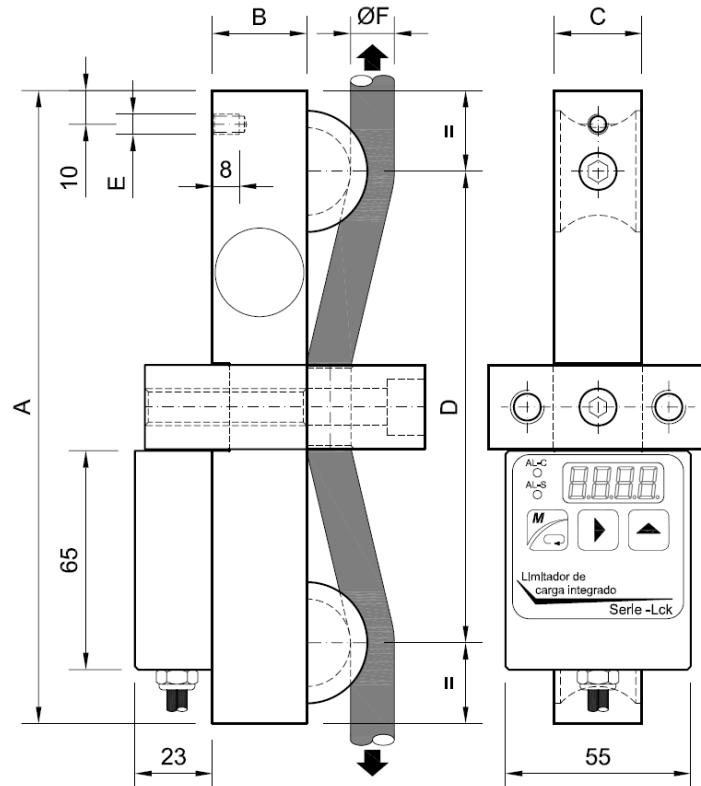
To manage the orders, please specify the following information:

Ø of ropes

Mod.	nL (t)	A	B	C	D	ØE	F	G	H
LMP	1 - 2 - 3,5 - 7	188	140	26	28	7 ... 26	65	41	M-6
LMG	8 - 10 - 15 - 20	305	260	36	32	12 ... 44	88	45	M-8
	25 - 30 - 40	400	350	42	36			49.5	

Technical Characteristics

Nominal load (nL)	LMP	1 – 2 – 3,5 – 7 t	Minimum insulation resistance (V.Test = 100V)	4 GΩ
	LMG	8 – 10 – 15 – 20 – 25 – 30 – 40 t	Input resistance	350 ... 400 Ω
Sensibility		1 ... 2 mV/V	Output resistance	350 ± 1.5 Ω
Zero Balance		±10 % F.S.	Maximum Working Load	150 % F.S.
Non linearity (in working range)		0,108 % F.S.	Protection class	IP65
Accuracy		0,2 % F.S.	Cable type	4x0,22 mm² Ø6
Maximum excitation voltage		12 V	Cable length	5 m.
Service temperature range		-20 ... 60 °C	Material	Alloy steel
Compensated temperature range		-10 ... 40 °C	Surface treatment	Chemical nickel



Dimensions in mm

- Load cell specially designed for measuring loads in steel cables.
- Integrated controller with great precision and stability and two programmable relays.
- Slack rope detection.
- Supplied with clamps adapted to the cable diameter.
- Dynamic loads limitation.

Wiring diagram

Cable connection

Red	Power supply (+) 24-48 Vdc
Black	Power supply (-)
Yellow /Blue	Relay contact 1
Green / White	Relay contact 2

Model	nL (t.)	A	B	C	D	E	ØF
LMPK	1 2 3,5 7	188	28	26	140	M-6	7 ... 28
LMGK	15 20	322	32	36	260	M-8	19 ... 32

Remarks:

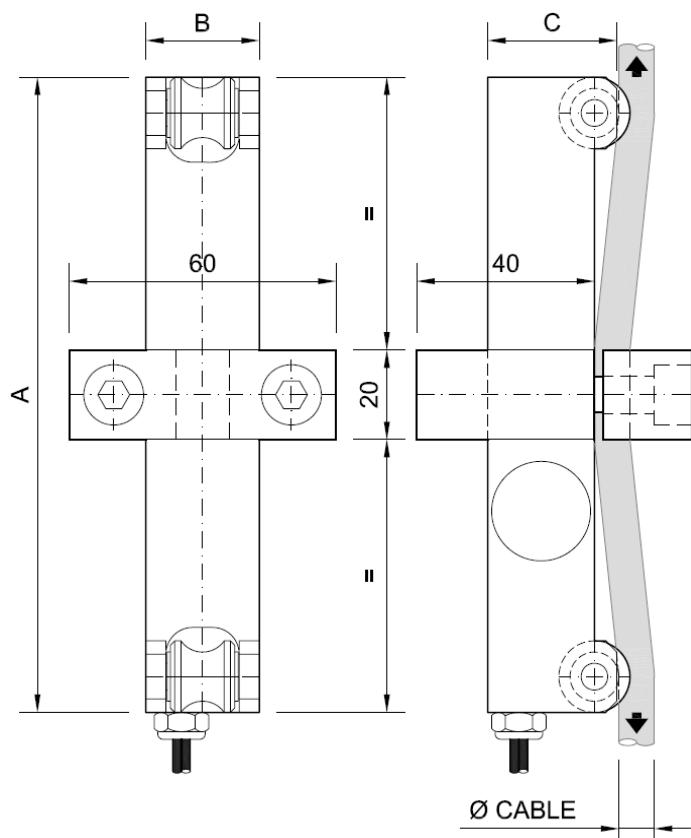
To manage any request is necessary to specify:

Ø of ropes

Technical Characteristics

Nominal load (nL)	LMPK	1 – 2 – 3,5 - 7 t	Maximum Working Load	150 % F.S.
	LMGK	15 - 20 t	Load Limit Without Loss of Characteristics	200 % F.S.
Non repeability		<0,1 % F.S.	Protection class	IP 66
Accuracy		0,2 %	Cable type	6x0,22 mm ² Ø6
Service temperature range		-20 ... 60 °C	Cable length	4 m.
Power supply		24V.	Material	Alloy steel
Voltage		< 100 mA	Surface treatment	Chemical nickel

LMS



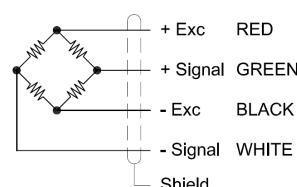
- Load limiter designed for measuring the tension on steel ropes that work on traction

Remarks:

To order this sensor it is necessary to specify the following details:

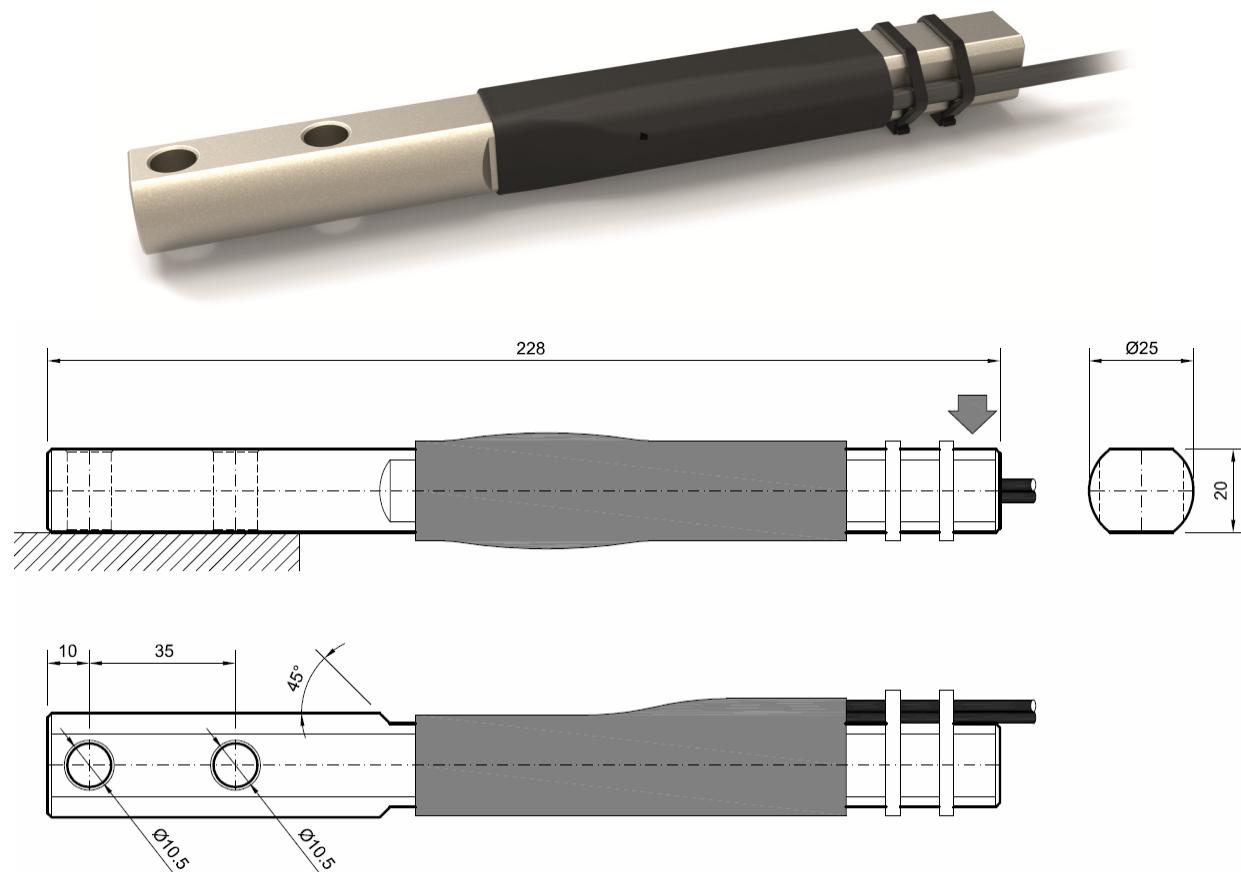
Ø of ropes

Mod.	LMS1	LMS2	LMS3	LMS4
nL (t.)	1 - 2	4	6	8 10
Rope Ø	6 - 7 - 8	9 - 10 - 11 - 12	13 - 14 - 16	18 - 20 22
A	125	142	165	185
B	25.5		31	
C	29		31	
Clamp	LMS12 Ø5 ... 12		LMS34 Ø13 ... 22	

Wiring diagram


Technical Characteristics

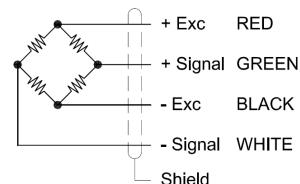
Nominal load (nL)	1 – 2 – 4 – 6 – 8 – 10 t	Minimum insulation resistance (V.Test = 100V)	4 GΩ
Sensibility	1 ... 2 mV/V	Input resistance	350 ... 400 Ω
Zero Balance	±10 % F.S.	Output resistance	350 ±1.5 Ω
Non linearity (in working range)	0,108 % F.S.	Maximum Working Load	150 % F.S.
Accuracy	0,2 % F.S.	Protection class	IP65
Maximum excitation voltage	12 V	Cable type	4x0,22 mm ² Ø6
Service temperature range	-20 ... 60 °C	Cable length	4 m.
Compensated temperature range	-10 ... 40 °C	Material	Aluminum



Dimensions in mm

- Load cells specially designed for a torque measure of the brake tester

Wiring diagram



Technical Characteristics

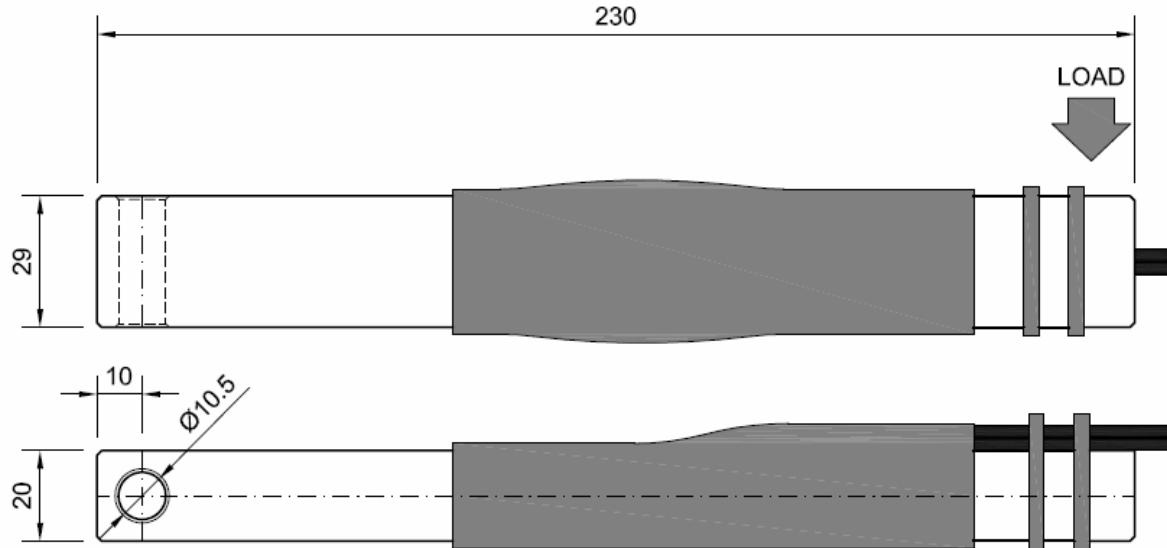
Nominal force (nF)	250 kF.	Input resistance	$350 \Omega \pm 3\Omega$
Sensibility	2 mV/V	Output resistance	$350 \Omega \pm 1,5\Omega$
Tolerance adjust sensitivity	10% F.S.	Maximum Working Load	125% F.S.
Zero Balance	5 % F.S.	Load Limit Without Loss of Characteristics	150% F.S.
Tension of excitation	12 V	Break Load	>300% F.S.
Non linearity	$\leq 0,09\% \text{ F.S.}$	Protection class	IP-65
Non repeability	$< 0,15\% \text{ F.S.}$	Cable type	$4 \times 0,25 \text{ mm}^2 \varnothing 4$
Combined error	$< 0,3\% \text{ F.S.}$	Cable length	3.5m.
Hysteresis	$< 0,2\% \text{ F.S.}$	Material	Alloy steel
Insulation Resistance (V. Test = 100V)	$> 5000 \text{ } 10^3 \Omega$	Surface treatment	Chemical nickel



PAR 750 - 1200



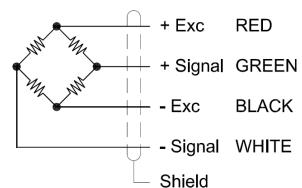
Model	Nominal force (nF)
PAR-750	500 kgF
PAR-1200	1700 kgF



Dimensions in mm

- Load cells specially designed for a torque measure of the brake tester

Wiring diagram



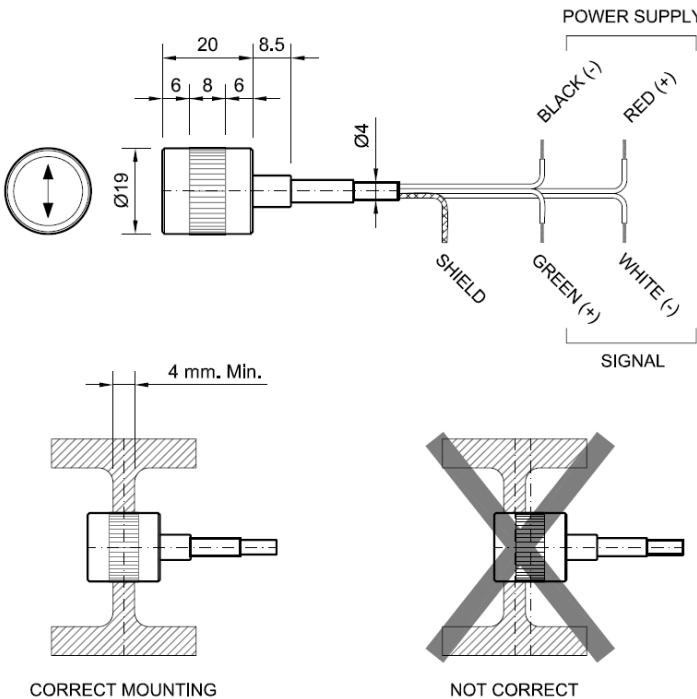
Technical Characteristics

Sensibility	2 mV/V	Insulation Resistance (V. Test = 100V)	>5000 10 ³ Ω
Tolerance adjust sensitivity	10% F.S.	Maximum Working Load	125% F.S.
Zero Balance	5 % F.S.	Load Limit Without Loss of Characteristics	150% F.S.
Tension of excitation	12 V	Break Load	>300% F.S.
Non linearity	≤0,09 % F.S.	Protection class	IP-65
Non repeability	<0,15 % F.S.	Cable type	4x0,25mm ² Ø4
Combined error	<0,3% F.S.	Cable length	3,5m.
Hysteresis	<0,2% F.S.	Material	Alloy steel
Input resistance	350 Ω ± 3Ω	Surface treatment	Chemical nickel
Output resistance	350 Ω ± 1,5Ω		

SD1000



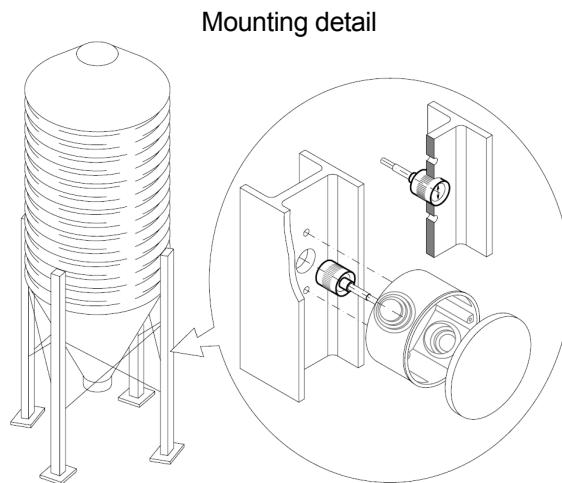
Deformation $1000\mu\epsilon$



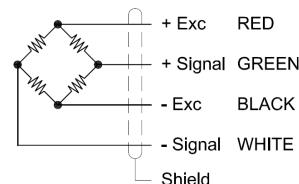
Dimensions in mm

- Load sensor specially designed to measure deformations in steel beams.
- The most usual applications of the sensor SD-1000 are for the level measure in silos, chutes, bins... supported by metallic structures.

Sensor content	Installation tools
<ul style="list-style-type: none"> 1 SD1000 Sensor 1 Connection box 2 Screw hex. M6x30 2 Nut M6 2 Washer M6 	<ul style="list-style-type: none"> SD1000 tool Drill Ø6.5 mm. Drill Ø10 mm. Drill Ø18.5 mm Reamer Ø19 mm.H7



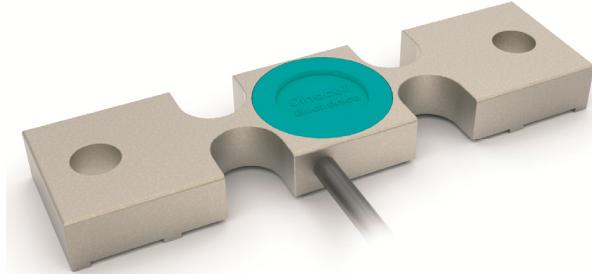
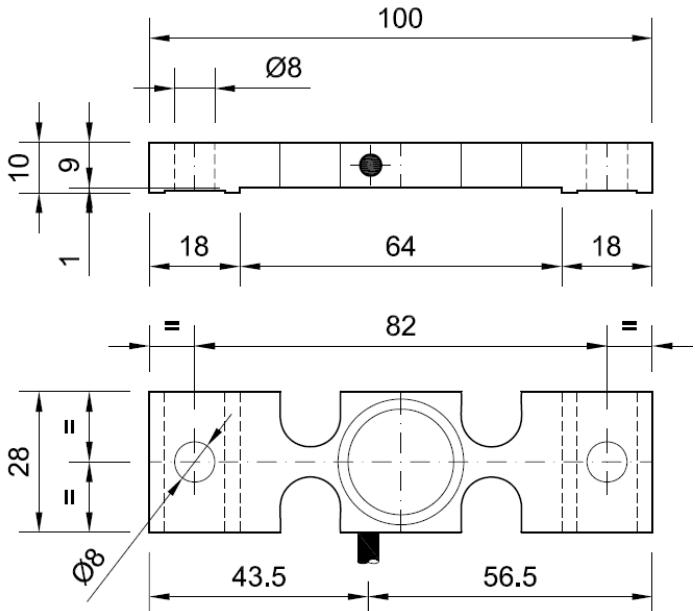
Wiring diagram



Technical Characteristics

Sensibility	2 mV/V / $1000\mu\epsilon$	Temperature effect on zero	<0,024 % / 5°C
Tolerance sensibility adjustment	1%	Compensated margin of temperature	-10°C / +40°C
Zero Balance	10 % F.S.	Input resistance	$700 \pm 2 \Omega$
Excitation voltage	12 V	Output resistance	$700 \pm 2 \Omega$
Non linearity	<0,034 % F.S.	Insulation resistance (V. Test = 100V)	$>5000 \cdot 10^6 \Omega$
Non repeability	<0,034 % F.S.	Maximun deformación	200% F.S.
Combined error	<0,7 % F.S.	Break load	>500 %
Hysteresis	<0,07 % F.S.	Material	Stainless steel
Temperature effect on sensitivity	<0,034 % F.S.		

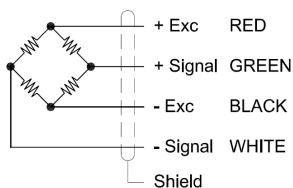
SV3000

Deformation 3000 $\mu\epsilon$ 

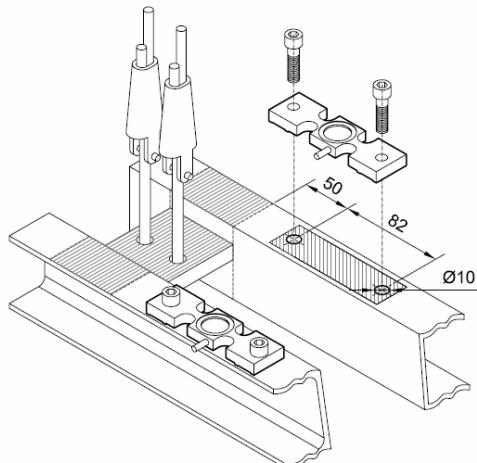
Dimensions in mm

- Sensor designed to work on traction and compression, especially for weighing depending on the deformations of steel beams.
- Easy to install and suitable for any type of beam.
- Application: load limitation on metallic structures, elevation systems (lifts, elevators, freight elevators...).

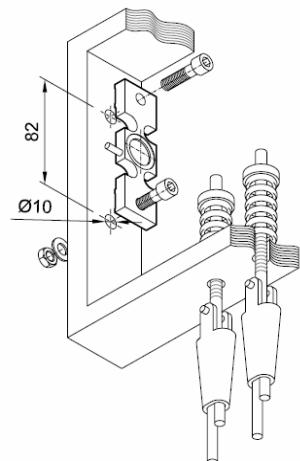
Wiring diagram



Optional USB Connection



On the crosshead beam

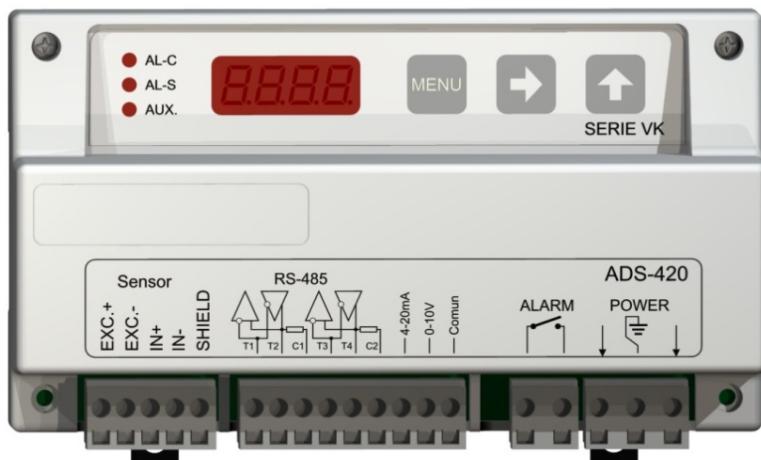


Mounting on fixed point

Technical Characteristics

Sensibility	2 mV/V @ 3000 $\mu\epsilon$	Minimum insulation resistance (V.Test = 100V)	4 G Ω
Service temperature range	-20 ... 60 °C	Input resistance	350 ± 2 Ω
Tolerancia Sensibility	± 20 % F.S.	Output resistance	350 ± 2 Ω
Zero Balance	± 10 % F.S.	Cable type	4 x 0,14 mm ² Ø4
Maximum excitation voltage	12 V	Cable length	6 m
Maximum deformation	150 % F.S.	Material	Alloy steel
Accuracy	0,2 %	Surface treatment	Chemical nickel

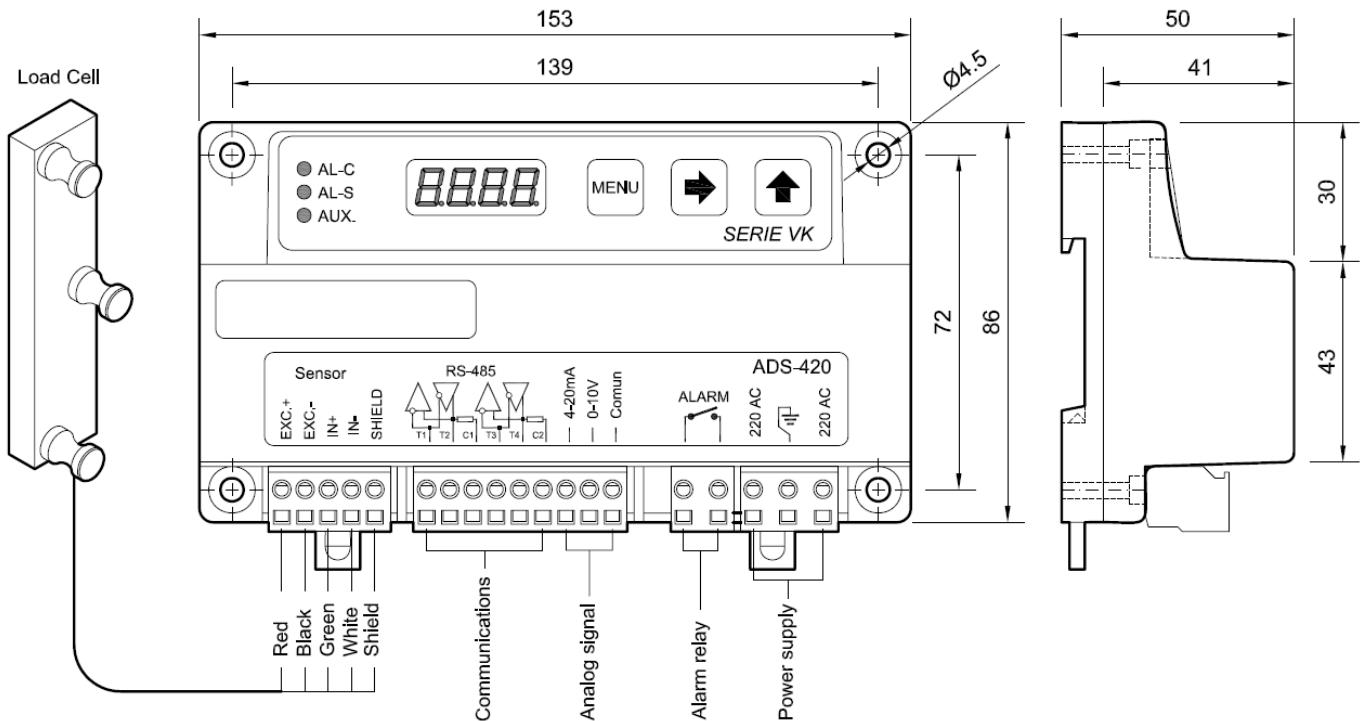
ADS420



- **ADS-420** Specially designed for signal conditioner of load cells.

- Flexibility in the attachment of the unit (rail din or fixed by screws).
- Adjust of the load without necessity of introducing a well known weight.
- Feeding capacity of up to 8 load cells.
- Compact box manufactured in ABS fireproof material.
- Keyboard programming.
- 4 digits display with decimal point.
- Calibrated in the factory.

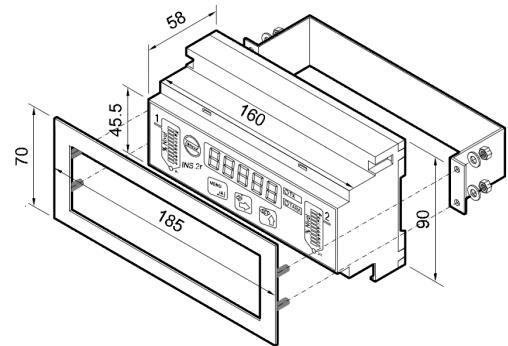
Dimensions in mm



Technical Characteristics

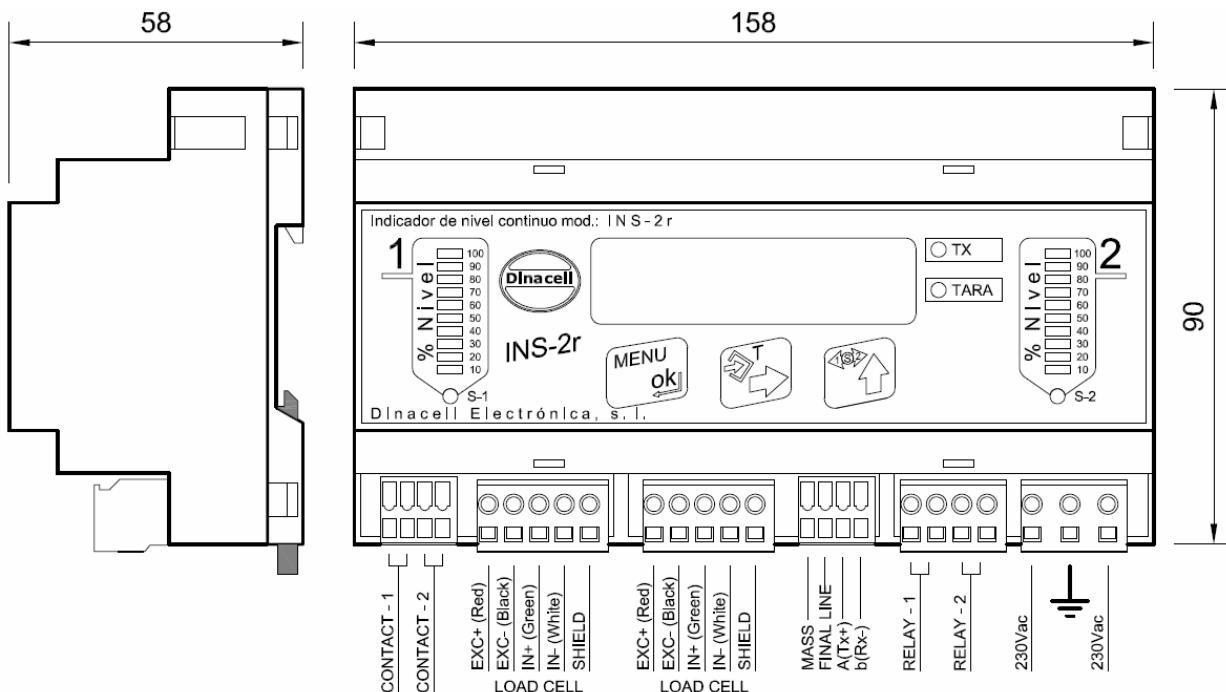
Cell signal measure range	±3,2 mV/V	Alarm of relay	3A /250V
Accuracy	0.016 %	Box material	Fire proof ABS
Resolution of analog output 0-10V	14 Bits	Protection class	IP-50
Resolution of analog output 4-20mA	15 Bits	RS-485 2 or 4 wire	40 access /seg.
Factory standard tolerance adjustment	0.3%	Working temperature	-10 ... 60°C
Power supply	230 Vac / 50-60 Hz	Maximum number of 350Ω cells	8

INS2r



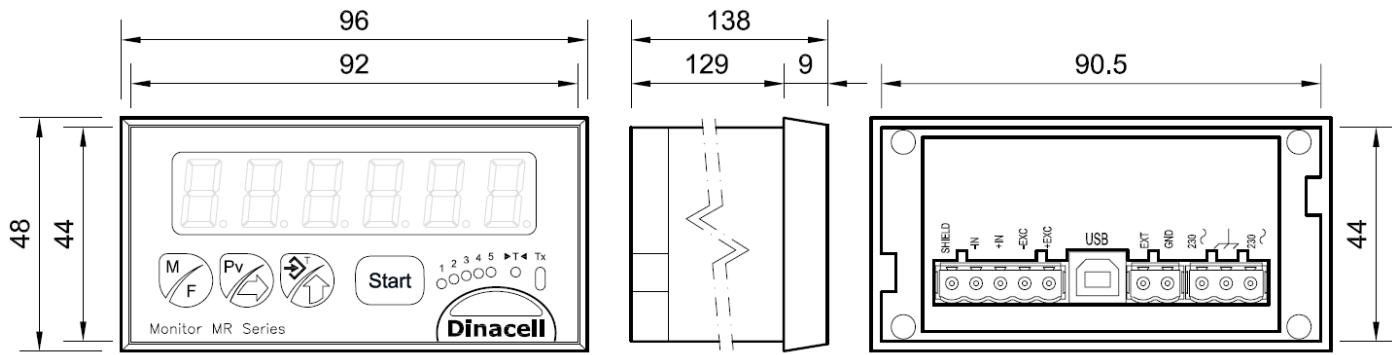
Dimensions in mm

- INS-2r** is a controller to visualize accurately and continuously the status of the load and the level content of silos and bins. The load is measured by load cells (SK, CFRT, SD-100 ...).
- It is possible to feed up to 8 load cells, so this allows to control 1 or 2 silos at the same time.
- The display can show the weight of each silo individually or the total sum of both.
- The device gives the possibility of setting a temporary zero to test an upload or a download



Technical Characteristics

Power supply	230 Vac	Input channels	2 for two silos
Number of alarms	2	User interface	Display 5 digits & 3 keys
Relay contacts	250V / 3A	Programming	By keyboard
Accuracy	0,01% F.S.	Box Material	Fire proof ABS
Temperature range	-10 ... 60 °C	Protection class	IP-50
Resolution	±32000 points	Fixing	DIN rail
Communications	RS-485		



Features	Technical characteristics	
<ul style="list-style-type: none"> • Low energy consumption • Easy programmable • 3 Different operating modes <ul style="list-style-type: none"> ○ Scale. ○ Pick value reading. ○ Pulse counter. • 6 Digits display • Possibility of adjustment without weight • ADC with 16,000,000 points • USB communication 	Power supply	230 V
	Maximum power consumption	5 W
	Relay contact voltage	250 Vac
	Relay contact current	10 A
	Load cell input accuracy	0,01 % F.S.
	Max. Nº load cells to connect	12 Load cells of 350 Ω



MR1

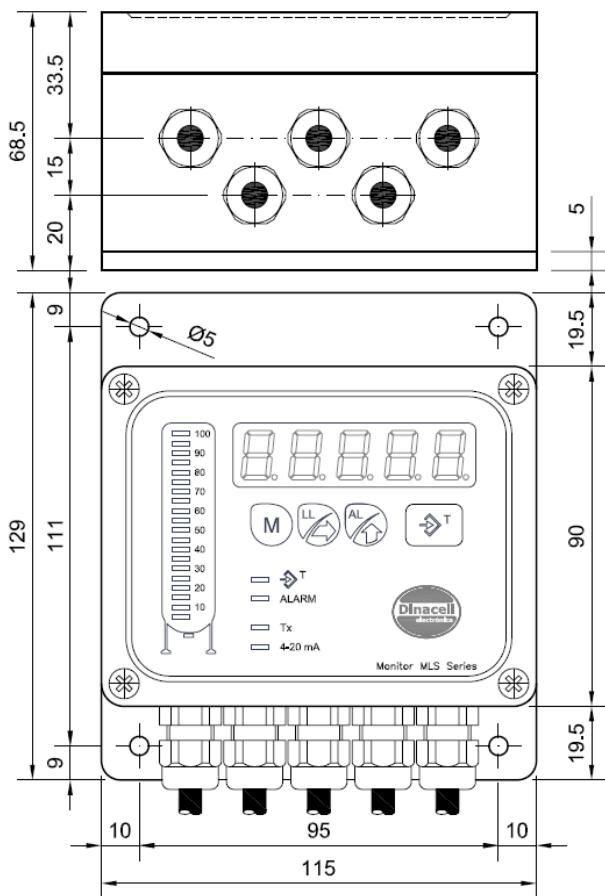


Dimensions in mm

Features	Technical characteristics	
<ul style="list-style-type: none"> • Low Energy Consumption • Easy programmable • 5 Different Operating Modes <ul style="list-style-type: none"> ◦ Scale. ◦ Pick value reading. ◦ Pulse counter. ◦ Tank unload. ◦ Dosing. • 6 Digits Display • Possibility of adjustment without weight • ADC with 16,000,000 points • USB Communication • 5 alarms with Relays. • Analogical Out • External input for cycle starting 	Power supply	230 V
	Maximum power consumption	5 W
	Relay contact voltage	250 Vac
	Relay contact current	10 A
	Load cell input Accuracy	0,01 % F.S.
	Analogical out	0-20 Ma 4-20 mA 0-10 V
	Max. Nº Load Cells to connect	12 Load Cells of 350 Ω



Dimensions in mm

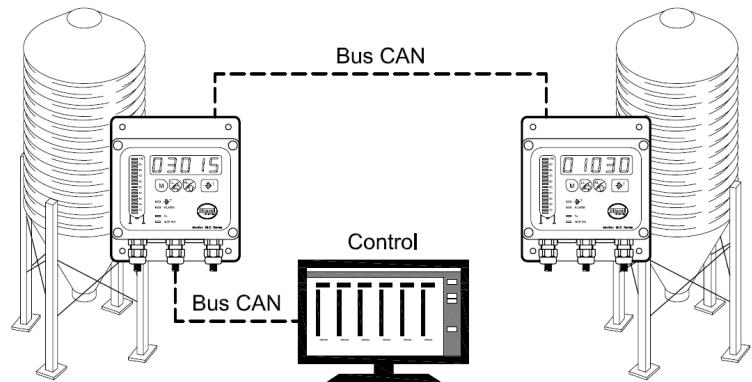


- Load weighing and monitoring device specially designed for installation in cabinet on the base of silos.
- The weight of the tank is shown numerically in display as well as in percentage terms through of the LEDs bar.
- It is provided with one single throw relay for one alarm level selectable by user..
- Equiped with a CAN communication bus to link all the devices of an installation with several silos and the control office.

Features

- Five digit display
- Percentage LEDs bar
- Up to 8 load cells can be connected
- TARE function using a independant button.
- Display last charge made.
- CAN communication.
- One single throw relay for one alarm level selectable by user.
- Selectable analog output: 4-20 mA o 0-10 V

Connection of several devices to a central computer

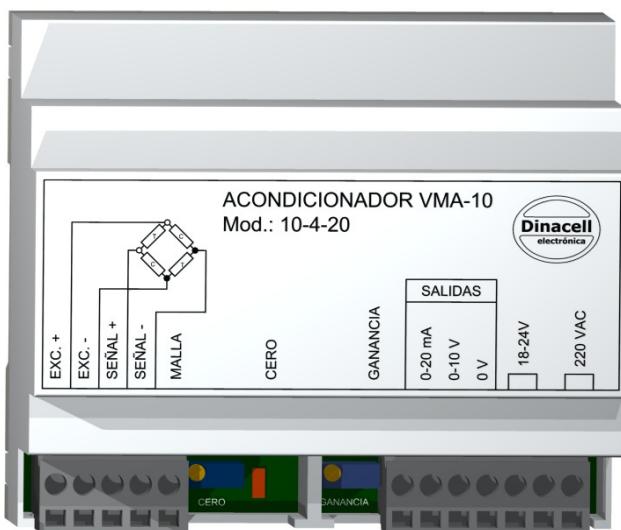


Technical characteristics

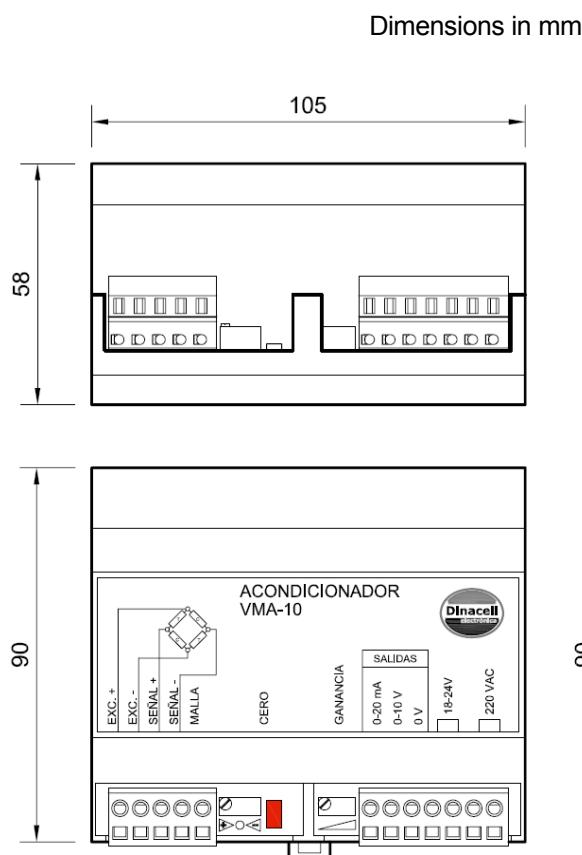
Power supply	80-260 Vac
Maximum power consumption	3 W
Maximum voltaje of the relay contacts	250 Vac
Maximum current of the relay contacts	3 A
Load cell input accuracy	± 0,01% F.S.
Selectable analog output	4-20 mA 0-10 V
Maximum number of connectable cells	8 Load cell of 350 Ω



VMA10



- The setting of zero and sensitivity adjustment is by potentiometers.
- 14 bits accuracy.



Signal conditioner

Power supply

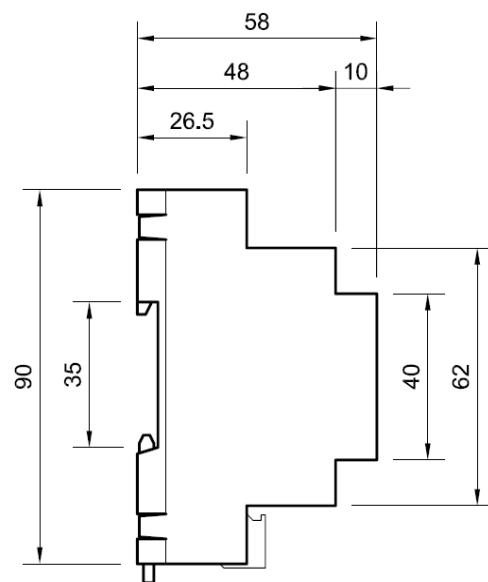
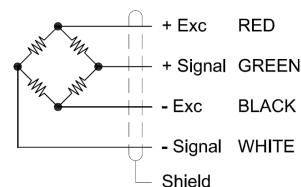
It has two Inputs:

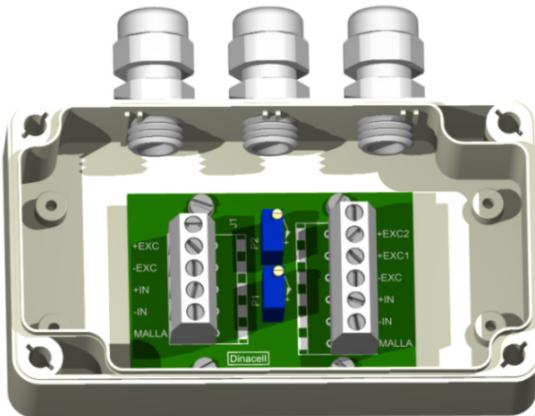
- 18-24 VDC
- Depending version:
 - 48VAC
 - 115VAC
 - 230VAC

Analog outputs

0-10V	(Optional 0-5V)
4-20mA	(Optional 0-20mA)

Wiring diagram



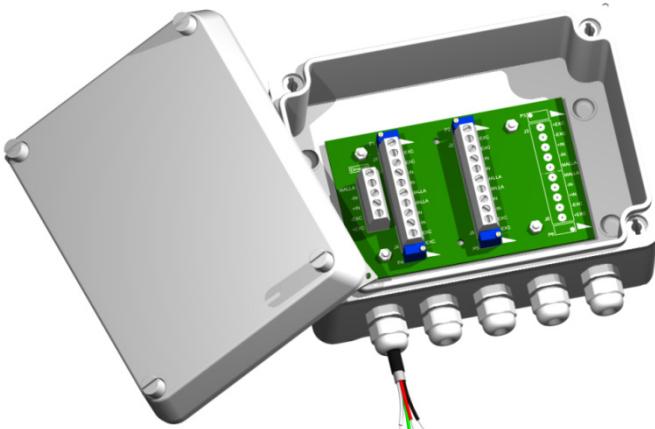


Sums Box Mododel 2C-3R

Device for connection of two load cells with output for devices to measure the sum of the applied loads. There are two potentiometers (P1 and P2) to adjust the individual output signal from each load cell

50Ω Resistor potentiometers

Dimensions 115x65x38mm..

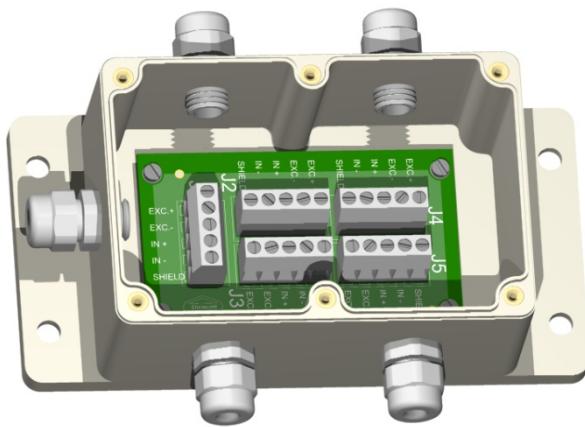


Sums Box Model 4C-5R

Device for connecting four load cells providing an output to devices that have to measure the sum of the applied loads. It is equipped with attenuators potentiometers for individual adjustment signal each two connected load cell.

50Ω Resistor potentiometers

Dimensions 160x120x74.5mm.



Junction Box Model 4-SP

The junction box function is to merge the load cells near where they are located in order to carry a single cable to the measuring device, making easier the wiring to the equipment.

Dimensions 161x81x67mm.

NOTE: Every connected load cell must have the same nominal load characteristics and output impedance.

Technical Characteristics

Material Box.	ABS fireproof
Protection class.	IP-67
Box fixing with external screws in order to ensure the tightness.	

Notes



Dinacell Subsidiaries

Dinacell Hong Kong



In new global expansion scenery, Dinacell has the commitment to enhance the service to our Asian clients. Since 2013, the Hong Kong subsidiary is offering a quick response to the demand supplying directly from its warehouse based in Hong Kong covering the Asian market and assisting our clients in their most suitable product for their needs.

The subsidiary brings the opportunity to have the highest European quality product with a short delivery time, with a competitive and more than satisfactory customer relationship. Both are the sign of identity of Dinacell Electrónica.

Our new office is located in the building of Admiralty Centre-Tower II situated in the heart of Admiralty area Hong Kong Island.

11/F, Admiralty Centre Tower II,
18 Harcourt Road, Admiralty,
Hong Kong

Phone.: +852 3975 3014

Fax : +852 3975 3000

www.dinacell.com

e-mail: dinacell.hk@dinacell.com / imartinez@dinacell.com

Dinacell Uruguay

Our company Dinacell Electrónica has established in 2013 a subsidiary in Montevideo (Uruguay), able to expand and promote our business in the American countries like Argentina, Brazil, Chile, Uruguay, Mexico and other countries from MERCOSUR.

Dinacell Uruguay subsidiary will also cover up the demand and the logistic supply of the materials to all Latin American countries.

Calle Zabala 1327, Edificio Zurich,
Oficina 210
11000 Montevideo (Uruguay)

Phone.: +598 291 667 44
Fax : +598 291 661 64
Celular : +598 937 254 28
www.dinacell.com

e-mail: dinacell.ur@dinacell.com
adiez@dinacell.com





● **Dinacell Electrónica S.L.**
Madrid (Spain)
Headquarters

▲ **Dinacell Electrónico, Limited.**
Hong Kong (HK)
Asian Delegation

▲ **Dinacell Electrónica S.A.**
Montevideo (Uruguay)
South American Delegation

Dinacell Electrónica s.l.

Pol. Ind. Santa Ana C / El Torno N° 8 – 28522 - Rivas Vaciamadrid - Madrid

Tel.: +34 913 001 435 - Fax.: +34 913 001 645

E-mail: dinacell@dinacell.com - <http://www.dinacell.com>

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