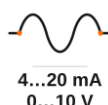


AMPLIFIED LOAD CELL



- STAINLESS STEEL, COMPLETELY LASER WELDED
- LOW PROFILE LOAD CELL
- ACCURACY 0.03 %
- OUTPUT 4 – 20 mA · 0...5 V · 0...10 V
- IP68 PROTECTION RATING



NOMINAL LOAD (FS)

kg / t (E _{max})	kN	NET WEIGHT (kg)	DISPLACEMENT AT FN	FIXING SCREWS	TIGHTENING TORQUE
100 kg	1	1.3	0.06 mm	M8 · 12.9	80 Nm
250 kg	2.5	1.3	0.06 mm	M8 · 12.9	80 Nm
500 kg	5	1.3	0.06 mm	M8 · 12.9	80 Nm
1 t	10	1.3	0.06 mm	M8 · 12.9	80 Nm
2.5 t	25	1.3	0.06 mm	M8 · 12.9	80 Nm
5 t	50	1.3	0.06 mm	M8 · 12.9	80 Nm
7.5 t	75	1.3	0.06 mm	M8 · 12.9	80 Nm
10 t	100	1.3	0.06 mm	M8 · 12.9	80 Nm
20 t	200	3.4	0.16 mm	M8 · 12.9	80 Nm
30 t	300	3.4	0.16 mm	M8 · 12.9	80 Nm
50 t	500	9.4	0.23 mm	M16 · 12.9	230 Nm
75 t	750	9.4	0.23 mm	M16 · 12.9	230 Nm
100 t	1000	9.4	0.23 mm	M16 · 12.9	230 Nm
150 t	1500	18.2	0.36 mm	M16 · 12.9	230 Nm
200 t	2000	18.2	0.36 mm	M16 · 12.9	230 Nm



TECHNICAL DATA

PRECISION

Accuracy	0.03 %
Nominal sensitivity	4 – 20 mA (3 wires) · 0...5 V · 0...10 V
Calibration tolerance	< ± 0.1 %
Non-linearity	± 0.03 %
Non-repeatability	± 0.01 %
Temperature coefficient on zero	± 0.024 % / 10 °C
Temperature coefficient on sensitivity	± 0.017 % / 10 °C
Zero balance	1 %
Response frequency	1 kHz
Compensated temperature range	-10...+40 °C
Operating temperature range	-20...+70 °C
Storage temperature range	-20...+80 °C
Reference temperature	+23 °C

MECHANICAL PROPERTIES

Material	Stainless steel, laser welded
Protection rating	IP68 (EN 60529) · 100 h at 1 m water column
Cable length	5 m (on request 10 m)

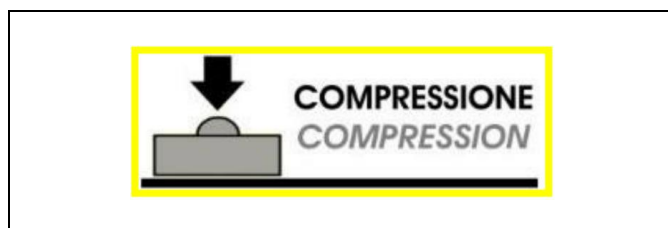
MECHANICAL LIMITS

Minimum load	0 %	Lowest load for which the specified accuracy applies.
Service load	120 %	Load without any permanent deformation or change in calibration.
Safe overload	150 %	The highest static load that may be applied once or briefly without mechanical damage.
Breaking load	> 300 %	Load at which permanent deformation or mechanical failure (fracture) occurs.
Max. transverse load (side)	50 %	Maximum lateral or shear load that can be applied (e.g. due to misalignment or friction).
Max. permissible dynamic load	50 %	For cyclic or oscillating loads, the amplitude should not exceed this load to prevent fatigue failure.

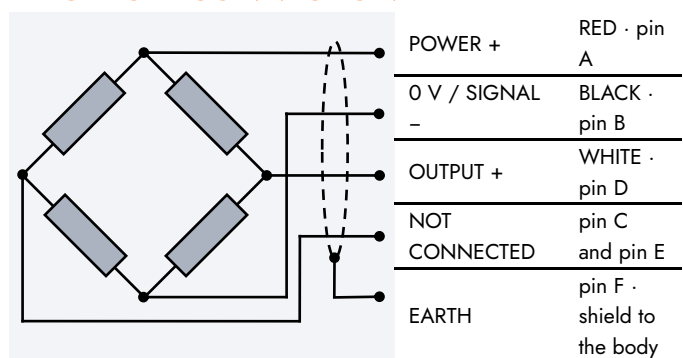
ELECTRICAL PROPERTIES

Nominal power supply	12...24 Vdc (0...5 V) · 18...24 Vdc (4 – 20 mA and 0...10 V)
Max. power supply	28 Vdc
Max. absorption (without load)	30 mA
Loading resistance	tension min. 3 k Ω · current 0 to 470 Ω
Insulation resistance	> 2 G Ω
Cable	PVC 105 °C, Ø 5.2 mm, 4 × 0.35 mm ² tinned

LOAD DIRECTION



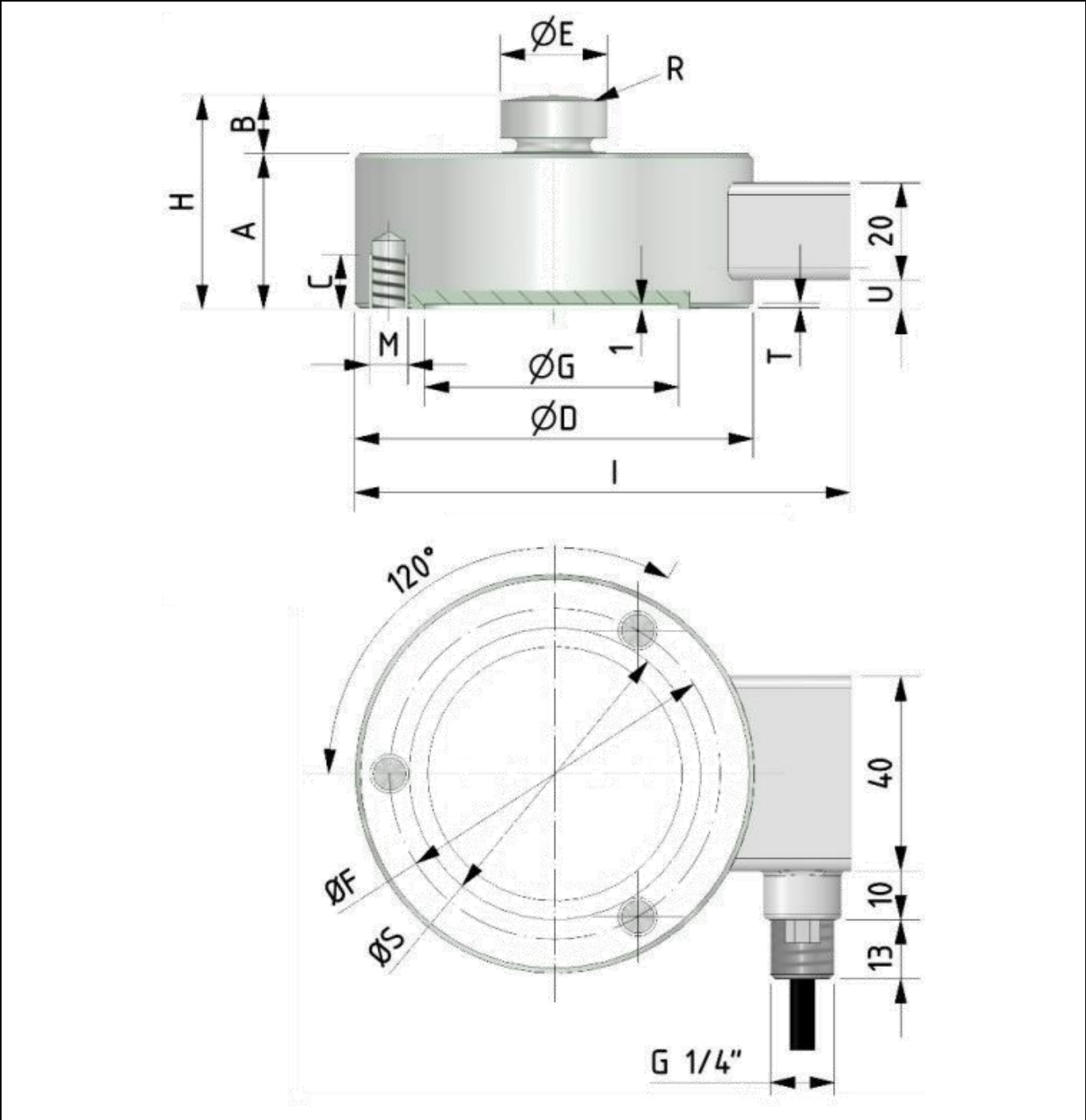
ELECTRICAL CONNECTION



WARNING: Protect POWER + by using an external 100 to 200 mA fast-blow fuse.



DIMENSIONS (mm)



Load	A	B	C	Ø D	Ø E	Ø F	Ø G	H	I	M	n° M	R	Ø S	T	U	U
100 kg – 10 t	32	12	11	82	22	68	52.3	44	102	M8	3	50	60	0.3	6	6
20 – 30 t	50	14	12	126	35	90	77.3	64	148	M8	3	160	93	0.5	15	15
50 – 100 t	60	20	20	165	60	130	92.3	80	188	M16	4	300	115	1	17	17
150 – 200 t	80	30	20	200	80	152	107	110	223	M16	4	300	128	1	21	23



LKAD	CODE	ACCESSORIES	Z	X	A	B	H
100, 250, 500 kg	CTIC22	Loading head	59	57	23	9	24
1, 2.5, 5, 7.5, 10 t	CPB120D82	Mounting plate	/	/	/	/	/
	CUPC2	Weighing unit	/	/	/	/	/
20, 30 t	CTIC35	Loading head	82	76	36	12	30
	CUPC3	Weighing unit	/	/	/	/	/
50, 75, 100 t	CTIC60	Loading head	106	126	61	12	38
	CUPC5	Weighing unit	/	/	/	/	/
150, 200 t	CTIC80	Loading head	157	128	81	21	68



① Testa di carico / *Loading head*
② Piastra base / *Mounting plate*



③ Unità di pesatura
Weighing unit

WEIGHING UNIT LMAAA

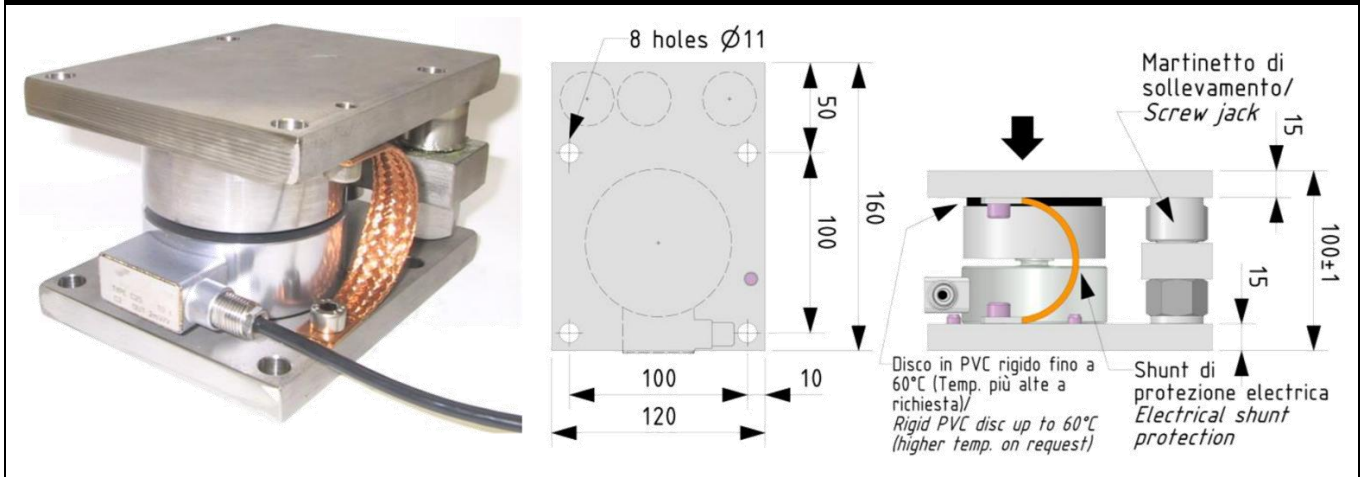
The weighing unit, completely made of stainless steel (AISI 304) with a very robust structure, eases the installation of weighing and dosing systems in tanks, bins and in static or vibrating hoppers. Paired with a LKAD load cell it reaches an accuracy class of 1000, 2000 or 3000 divisions and an IP68 protection class. Load self-alignment and transverse shift compensation keep the metrological performance even with settling, thermal expansion, positioning errors, transverse thrusts and deformation of the structure.

Weighing unit		LMAAA (10 t)	LMAAA (30 t)	LMAAA (100 t)
Nominal load	t	10	30	100
Max. permissible horizontal force	kN	25	50	120
Max. permissible lifting force	kN	40	80	210
Weight (load cell not included)	kg	7	14	31

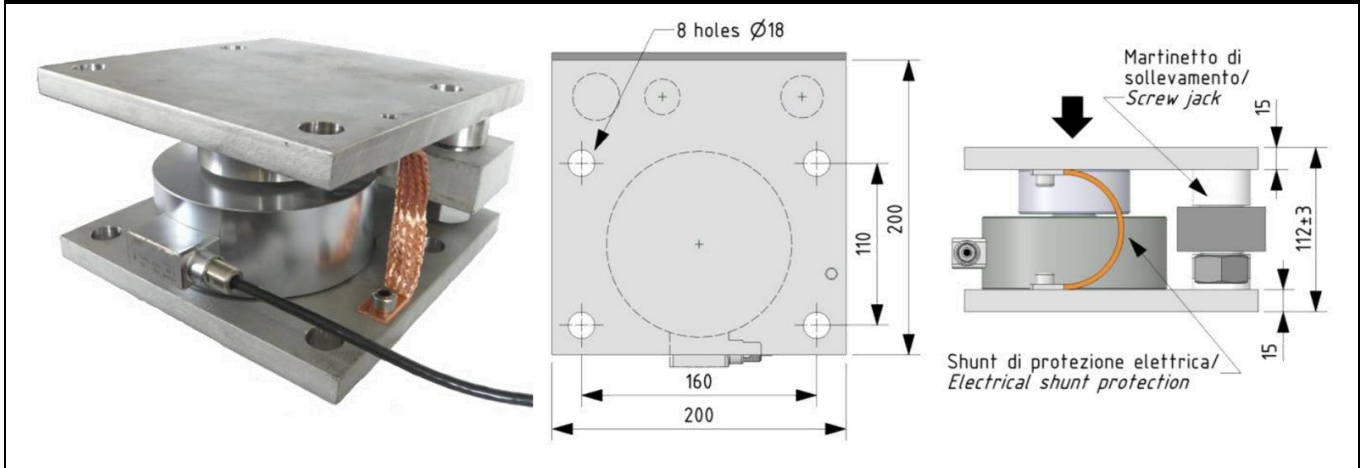


WEIGHING UNIT LMAAA — dimensions (mm)

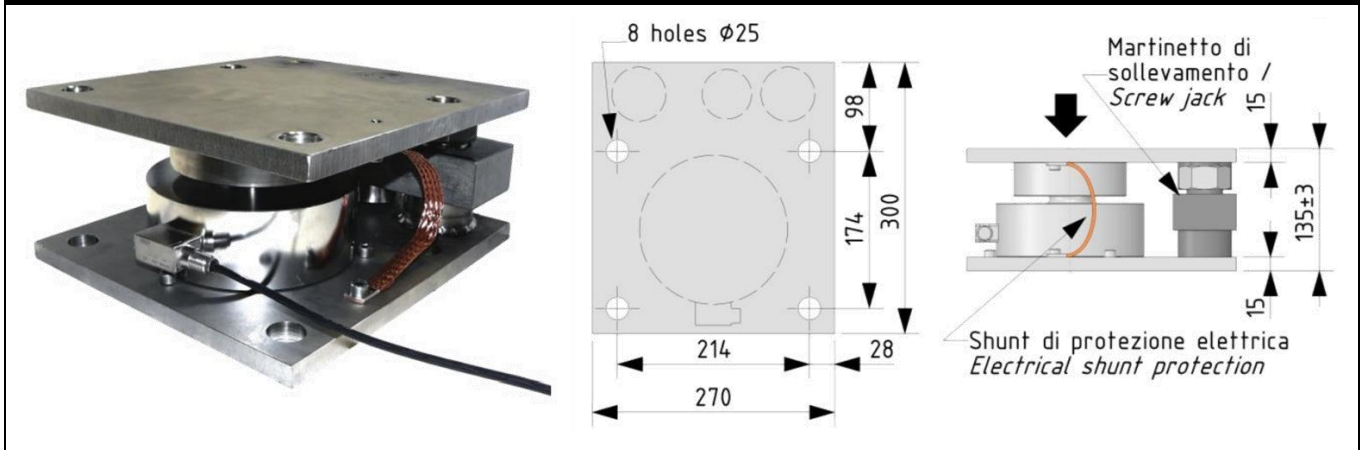
LMAAA — 10 t



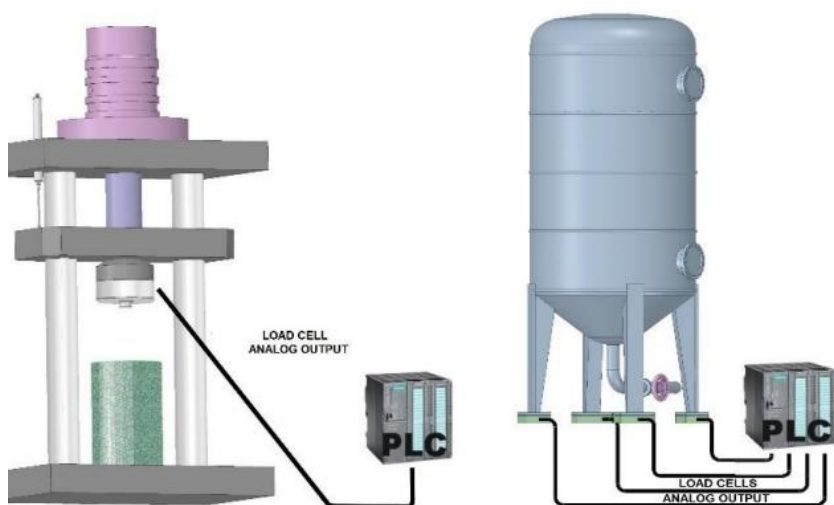
LMAAA — 30 t



LMAAA — 100 t

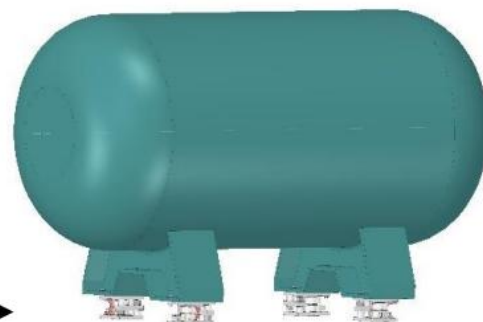
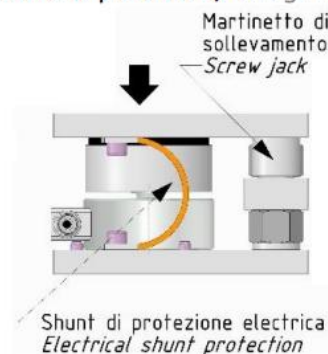


EXAMPLES OF INSTALLATION



Sistema di pesatura serbatoio a 4 punti di appoggio
Weighing system for tank with 4 supporting points.

③ Unità di pesatura / Weighing unit



Circular system with 3 supporting points	Square system with 4 supporting points

It is recommended to follow the cell disposition shown in the figures, because it optimises the anti-shifting function.

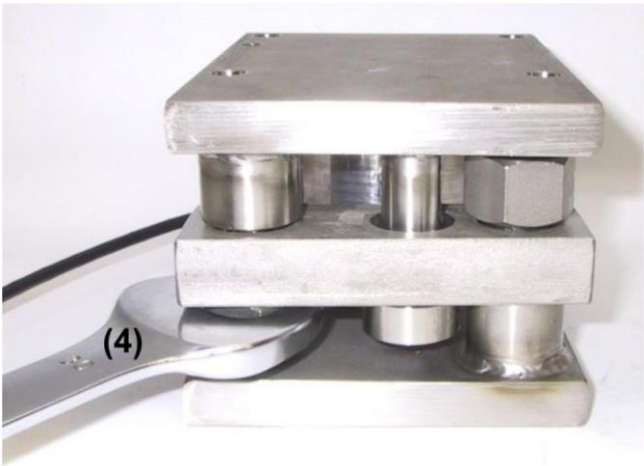
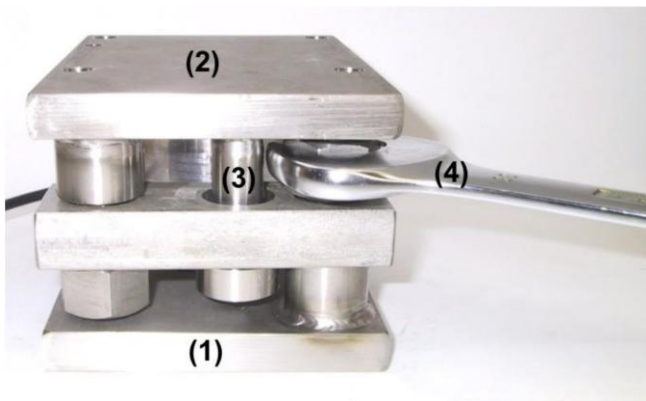


ASSEMBLY INSTRUCTIONS

- 1. Fix the LMAAA loading plate ① to the structure or to the ground and check that the plane is well finished; if not, install counter-plates.
- 2. Place the system to be weighed on the upper plates ② and take care that the load cells are not overloaded.
- 3. Adjust horizontally and fix the upper plate ② so that it is parallel to and in axis with the lower plate ①.
- 4. Check that the shift limiter ③ is centred inside the hole, even after the system has been loaded several times, in order to avoid friction that can alter the weighing.

LOAD CELL REPLACEMENT

- 1. Lift the upper plate ② of the weighing unit by alternately unscrewing the two lifting jacks ④, so that the upper plate never gets inclined. The weighing system must be unloaded.
- 2. Replace the load cell.
- 3. Screw the two jacks ④ until the weight is applied onto the load cell only.



WARNING

- Take care to avoid accidental overloads of the load cells while assembling the unit.
- Be sure that current does not pass through the load cell.
- During welding operations, place the mass pliers on the upper part of the weighing unit.
- AEP transducers recommend to always observe scrupulously all the safety laws present in the country where the unit has to be installed.
- The installer shall perform a careful environmental risk analysis (seismic zones, wind etc.).
- The installer must provide for an anti-rollover device.

COMPLIANCE AND CERTIFICATION

Protection Rating	IP68 (EN 60529) · 100 h at 1 m water column
Compliance	CE, RoHS, EAC
Calibration	Factory-calibrated
Manufacturer approvals	ATEX production quality assurance notification TÜV CY 17 ATEX 0205891 Q · ISO 17025 accredited laboratory (optional) · EN ISO 9001:2015 (Dasa-Rägister IQ-1100-01)
HS-CODE	9031.80.80 (octogon)



ACCESSORIES (TO BE PURCHASED SEPARATELY)

CMIL6MF

- Direct output connector MIL6M



CMIL6FV5

- Female 6 poles straight MIL6M connector complete with PVC cable, shielded, length 5 m



CONNM12MF

- Direct output connector M12



CONNM12FV5

- Female 5 poles straight M12 x 1 connector complete with PVC molded cable, shielded, length 3 m

