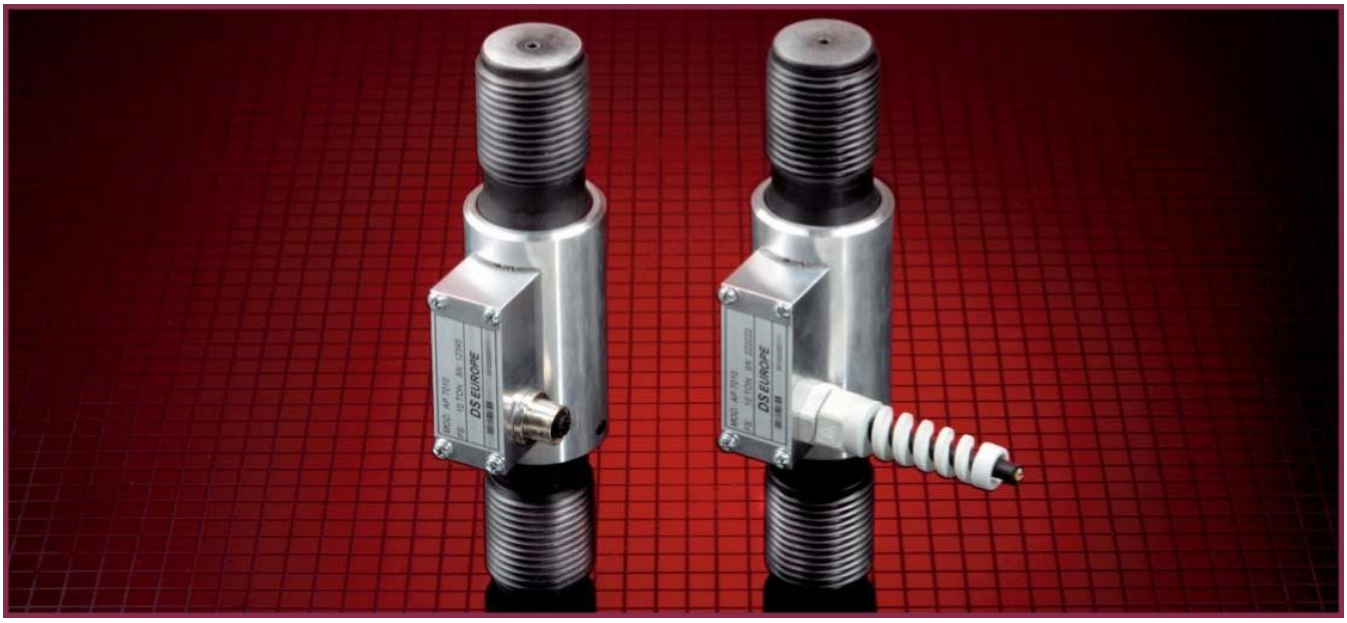
S2 Tech Srl

Smart Solutions

LOAD CELLS SERIES AP7000



DESCRIPTION

AP7000 strain gauge load cells can be used to measure tension or compression forces and they can be installed at the end of actuators, ropes, silos and in cranes where hanged weights are involved and whenever it is necessary a rugged and reliable load cell for heavy duty industrial applications. These load cells are extremely compact and they can be installed even in very low spaces.

Their innovative measuring principle allows to accept high overloads (with compression static forces which are aligned on the measuring axis).
Series AP7000 is designed to be used in industrial environments with dust and humidity. Each load cell has an environmental protection of IP65.

For measuring ranges from 10 to 100 tons, it is possible to add an analog or digital electronics into the load cells. It allows:

- Cost reduction: it can be avoided electronics calibration costs. In fact, it is supplied already calibrated by S2Tech. The costs for cabling and packaging can be avoided. Digital electronics allows to reduce electronic costs (PLC, computer) that receives the signal, because it is possible to parallel different load cells compared to a single digital input
- High resolution: internal electronics is shielded from the body of the load cell and it is near to the strain gauge measuring bridge avoiding electromagnetic noise. The transmission of analog amplified signal allows a better signal/noise ratio and a differential digital transmission is free from electrical noise on electrical cables
- Digital electronics:
  - *RS485 electronics*: it has an A/D 24 bit converter (= high resolution); high sample rate; zeroing through remote control; parallel up to 32 systems connected to a single input; digital differential filtering of noises
  - CANopen: like RS485 electronics, but with digital alarm levels; automatic signal of failure; connection plug and play, more than 100 bow. Sample rate: from 7,5 up to 1920 Hz according to A/D sample rate.

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ISO 9001:2015 - Cert. n.6687

Visit WWW.S2TECH.IT for updated documents and specifications

TECHNICAL CHARACTERISTICS

Measuring ranges: AP7001S - 250-500 Kg; AP7001 - 1 Ton; AP7003 - 3 Ton; AP7005 - 5 Ton; AP7010 - 10 Ton; AP7025 - 25 Ton; AP7050 - 50 Ton; AP7100 - 100 Ton

Strain gauge bridge sensitivity: 1 mV/V

Total error: <±0,2% FS

Zero thermal variation: within 5°K <±0,1% FS

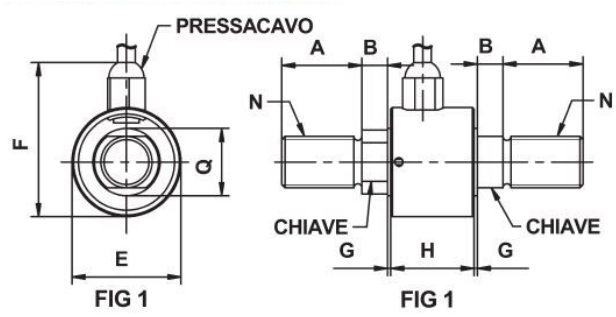
Creep: < ±0,15%FS within 4 hours test at FS

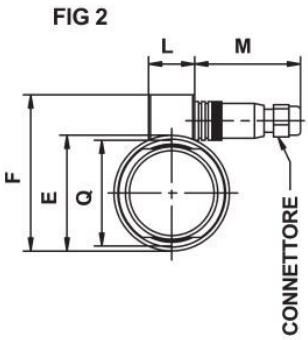
Return to zero from full load: < ±0,07%FS after 30 min at FS

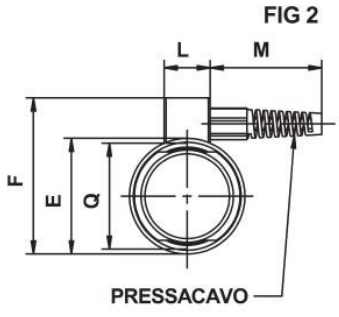
Environmental protection: IP65

Electrical connection: through cable gland (connector available on request only for versions from 10 to 100 tons

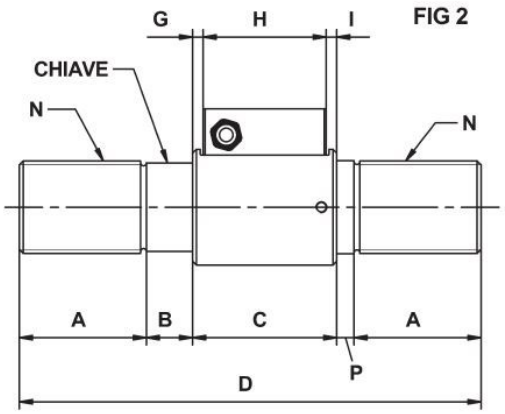
OVERALL DIMENSION



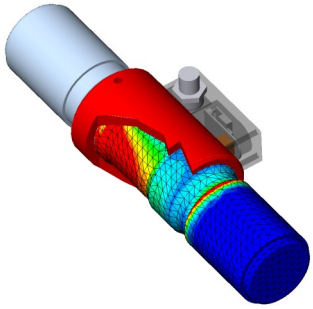




C	AP7001-S	AP7001	AP7003	AP7005	AP7010	AP7025	AP7050	AP7100
A	16	25	25	25	57	66	88	101
B	7	8	8	10	18	24	18	31
C					75	75	74	76
D	74	94	94	96	210	240	270	330
E	38	38	38	42	45	60	75	100
F	40	48	48	48	66	81	96	121
G	0	0	0	0/1	4.5	5.5	5	6
H	28	28	28	26	64	64	64	64
I					6.5	5.5	5	6
L					25	25	25	25
M					55	55	55	55
N	M 10X1	M 16X1.5	M 16X1.5	M 18X1.5	M 36X3	M 48X3	M 64X4	M 90X4
P					3	9	2	17
Q	16	20	20	24	40	55	75	100
Chiave	13	16	16	18	34	46	65	90
Sovraccarico	2	2	2	2	1.5	1.5	1.5	1.5
N° Disegno	FIG.1	FIG.1	FIG.1	FIG.1	FIG.2	FIG.2	FIG.2	FIG.2



DEVELOPMENT AND MANUFACTURING OF CUSTOM PRODUCTS



S2Tech technical department, with 30 years of experience acquired with DS Europe, can develop products accordingly to customers technical specifications with the following tools

- **3D** mechanical design CAD software stations
- Finite element analysis **FEA** software stations
- Digital and analog electronic development accordingly to EMC (=CE) stricter industrial marking regulations
- Software and embedded firmware development accordingly to most popular industrial bus system (CANopen, Modbus, PROFIBUS)
- Fast prototyping

S2Tech develops new products or modifies existing ones, in order to realize the fittest and more convenient product.