C2Ai

Instrumentation et régulation des fluides

The FTS load cell is suitable for measurement of tensile and compressive loads and is well suited for use in weighing equipment and in a variety of industrial applications. For everything from filling and dispensing tasks to applications suitable for certified calibration, our sensor is the perfect solution when precision and easy fitting are required. Other advantages are its good dynamic characteristics and easy load transfer over the two threads.
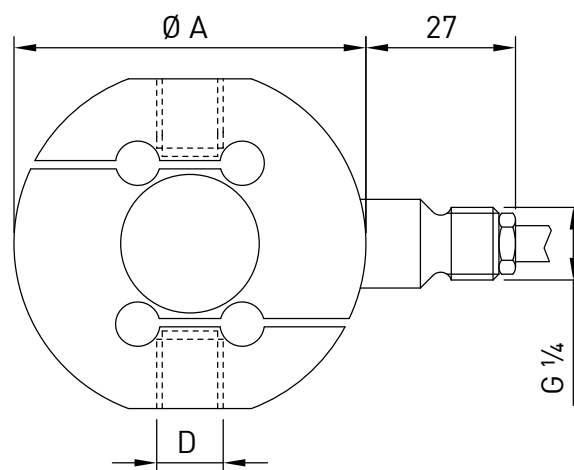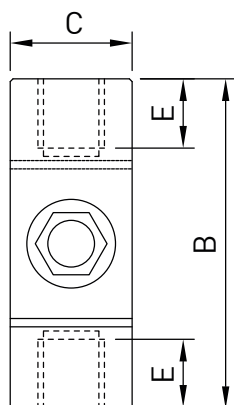
Performance features

- Measuring ranges from 10 kg to 7.5 t are available
- OIML R60, optionally also suitable for certified calibration
- Hermetically sealed by laser welding
- A large number of mechanical mounting aids are available
- Easy process integration
- A version with a built-in measurement amplifier is available
- Knuckle eyes for load transfer available as accessories

Type FTS

Options

- Special material 1.4542

Load	Dimensions [mm]				
	ØA	B	C	D	E
10 / 25 / 50 / 100 / 200 / 300 / 500 kg	63.5	59.5	22	M12 x 1.75	12
500 kg / 1 / 2 t	82	78	30	M16 x 2	20
2.5 t	82	78	30	M20 x 1.5	20
5 / 7.5 t	102	90	45	M24 x 2	21.5

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Technical data

FTS S-type load cell			
Maximum capacity (E~max~)	10 / 25 / 50 / 100 / 300 / 500 kg		500 kg
	1 / 2 / 2.5 / 5 / 7.5 t		1 / 2 / 2.5 t
Load transfer direction	Compression and tension		
OIML R60 accuracy class	C2	C3	C4
Maximum number of load cell intervals (n~max~)	2000	3000	4000
Rated characteristic value (C~nom~)	2 mV / V		
Minimum load cell verification interval (v~min~)	E~max~/10 000		E~max~/15 000
Material	Stainless steel		
Degree of protection EN 60529	IP68 (IP65 with E~max~ 10 / 25 / 50 kg)		
Encapsulation	Welded hermetically tight / silicone-sealed (for E~max~ 10 / 25 / 50 kg)		
Own weight	0.6 bis 2.6 kg		
Cable length	5 m		
Nominal displacement	0.2 mm		
Error limits			
Combined error	< 0.023 % of E~max~	< 0.018 % of E~max~	< 0.015 % of E~max~
Non-repeatability	< 0.015 % of E~max~	< 0.010 % of E~max~	< 0.010 % of E~max~
Zero return after 30 min at nominal load	< 0.025 % of E~max~	< 0.015 % of E~max~	< 0.010 % of E~max~
Creep (over 30 min)	< 0.025 % of E~max~	< 0.015 % of E~max~	< 0.015 % of E~max~
Creep (over 20 and 30 min)	< 0.005 % of E~max~	< 0.005 % of E~max~	< 0.003 % of E~max~
Temperature influence zero signal for each 10 °C	< 0.028 % of E~max~	< 0.010 % of E~max~	< 0.008 % of E~max~
Temperature effect on characteristic value per 10 °C	< 0.012 % of E~max~	< 0.010 % of E~max~	< 0.008 % of E~max~
Electrical data			
Input resistance	420 ± 20 Ω		
Output resistance	350 ± 2 Ω		
Insulation resistance	> 5 GΩ		
Zero signal tolerance	<1 % of C~nom~		
Supply voltage	1...15 V (typically 10 V)		
Operating voltage	1...18 V		
Maximum load			
Operating load	120 % of E~max~		
Load limit (E~lim~)	150 % of E~max~		
Breaking load	> 300 % of E~max~		
Lateral load limit	50 % of E~max~		
Maximum dynamic load	50 % of E~max~		
Temperature data			
Reference temperature	23 °C		
Nominal temperature range	-10...40 °C		
Operating temperature range	-20...70 °C		