SensorsX

SX-FLAMB Series

Low-Profile Load Cell

Force & Weighing | Low-Profile Load Cell



50 kg – 20 t Rated Capacity (110 – 44,092 lb)	**≤ ±0.1% F.S.** Non-Linearity / Hysteresis / Repeatability	**1.5 – 2.0 mV/V ±10%** Output Sensitivity
IP65 Ingress Protection	**−30 to +80 °C** Operating Temp. (−22 to +176 °F)	**5 – 12 V DC** Recommended Excitation (max 15 V DC)

■ PRODUCT OVERVIEW

The SX-FLAMB Series is a compact, low-profile load cell for force measurement in automotive press-fitting and automation equipment. It features stainless steel construction and good resistance to off-center loading. The load cell provides an mV/V bridge output, with optional transmitter modules for conditioned analog or digital outputs. Output configuration and supply requirements depend on the selected model and transmitter module.



■ KEY FEATURES

◆ Compact, Low-Profile Design	◆ Good Resistance to Off-Center Loading
◆ Stainless Steel Construction	◆ IP65-Rated Protection

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■ TYPICAL APPLICATIONS

Application Fields

- Automotive Press-Fitting
- Automation Equipment
- Automation Equipment

■ PERFORMANCE SPECIFICATIONS

Measurement	
Rated Capacity	50, 100, 200, 500, 1,000 … 20,000 kg (110, 220, 441, 1,102, 2,205 … 44,092 lb)
Output Sensitivity	1.5–2.0 mV/V ±10%
Accuracy	
Non-Linearity	≤ ±0.1% F.S.
Hysteresis	≤ ±0.1% F.S.
Repeatability	≤ ±0.1% F.S.
Creep	±0.05% F.S. / 30 min
Temperature Sensitivity Drift	±0.05% F.S. / 10 °C (±0.05% F.S. / 18 °F)
Zero Point Temperature Drift	±0.05% F.S. / 10 °C (±0.05% F.S. / 18 °F)
Zero Output	< ±1% F.S.
Overload	
Safe Overload	120% F.S.
Ultimate Overload	150% F.S.

■ ELECTRICAL SPECIFICATIONS

Excitation	
Recommended Excitation Voltage	5–12 V DC
Maximum Excitation Voltage	15 V DC
Bridge	
Input Resistance	750 ± 10 Ω
Output Resistance	700 ± 3 Ω
Insulation Resistance	≥ 5,000 MΩ
Output Signal	
Signal Output Options	Optional transmitter modules are available for signal conditioning, with output options including 4–20 mA, 0–5 V, 0–10 V, PROFIBUS, Modbus, CANopen, and RS-485.
Electrical Connection	
Cable	Integral cable, 3,000 mm (118 in / 9.8 ft)

Note: These excitation ratings apply to the mV/V-output load cell. Supply requirements for configurations with a transmitter depend on the selected transmitter module.

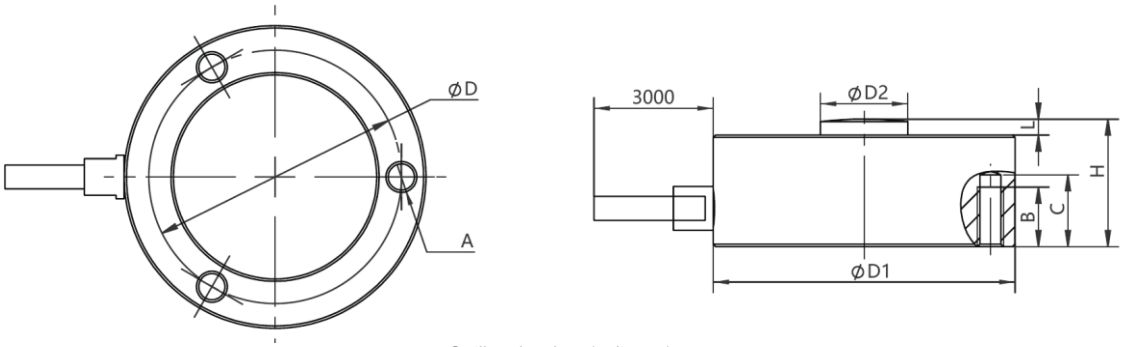
■ ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating Temperature	−30 to +80 °C (−22 to +176 °F)
Mechanical & Environmental	
Ingress Protection	IP65
Housing	
Material	Stainless steel

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■ MECHANICAL DIMENSIONS

Dimensions



Outline drawing (unit: mm)

Dimension Table — mm (in)

CAP (kN)	D1	D2	H	L	A	B	C	D
1 – 10 (225 – 2,248 lbf)	32 (1.26)	8.1 (0.32)	10 (0.39)	1.8 (0.07)	M4×0.7	5 (0.20)	7 (0.28)	25.4 (1.00)
20 – 50 (4,496 – 11,240 lbf)	38 (1.50)	11 (0.43)	16 (0.63)	2.0 (0.08)	M4×0.7	7 (0.28)	9 (0.35)	31.8 (1.25)
60 – 100 (13,489 – 22,481 lbf)	51 (2.01)	15 (0.59)	25 (0.98)	3.0 (0.12)	M4×0.7	7 (0.28)	9 (0.35)	41.3 (1.63)
200 (44,962 lbf)	76 (2.99)	20 (0.79)	38 (1.50)	4.6 (0.18)	M4×0.7	7 (0.28)	9 (0.35)	60.3 (2.37)

Note: All dimensions are in millimeters, with inch equivalents in parentheses, unless otherwise specified. Cable length: 3 m (9.8 ft). Thread A: M4 × 0.7 (metric).

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■ ORDERING INFORMATION

Complete model number example: SX-FLAMB-500kg24I0L

Rated Capacity	
50kg	50 kg (110 lb)
100kg	100 kg (220 lb)
200kg	200 kg (441 lb)
500kg	500 kg (1,102 lb)
1000kg	1,000 kg (2,205 lb)
20000kg	20,000 kg (44,092 lb)
Power Supply	
05	5 V DC
10	10 V DC
12	12 V DC
24	24 V DC
Output	
I	4–20 mA
V1	0–5 V
V2	0–10 V
RS	RS-485
L	1.2–2.0 mV/V
Electrical Connection	
0	Cable outlet
Mounting	
L	Bolt mounting
Customization Options	
D	Custom configuration — specify requirements when ordering

Example: SX-FLAMB-500kg24I0LD — SX-FLAMB Series, 500 kg rated capacity, 24 V DC supply, 4–20 mA output, integral cable, bolt mounting, and custom configuration.

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