

Universal force sensor / Load cell for load measurement on elevators



X-130

Ø 40 x 16 mm,
0 ... 0.5 kN/0 ... 50 kg
0 ... 1 kN/0 ... 100 kg
0 ... 4 kN/0 ... 400 kg
0 ... 8 kN/0 ... 800 kg

X-130

Ø 47 x 16 mm,
0 ... 12.5 kN/0 ... 1250 kg
0 ... 15 kN/0 ... 1500 kg
0 ... 25 kN/0 ... 2500 kg

Features

- Compact design in solid steel housing
- IP67 protection
- Fits to all X-Sensors load measurement devices and strain gauge amplifiers
- Small height of only 16 mm
- With central hole
- Optionally available with upper base plate and lower base plate for mounting

Application

The load cell X-130 is designed as an OEM load cell. It is suitable for load measurement in elevators, either at the fixpoint or under the cabin floor.

The large measuring range and the standardized design make it possible to cover a large range of car-weights and payloads.

When correctly mounted, the measuring signal is proportional to the payload in the cabin. The solid steel housing and sealed design (IP67) guarantee trouble-free operation, even under difficult environmental conditions.



Ordering code

Description	Measuring range	Output-signal	Contact area in mm	Specifications
X-130-0.5kN-M16-0	0 ... 0.5 kN	2.0 mV /V	Ø 40 x 16 mm	Page 3
X-130-1kN-M16-0	0 ... 1 kN	1.8 mV /V	Ø 40 x 16 mm	Page 3
X-130-4kN-M16-0	0 ... 4 kN	1.8 mV /V	Ø 40 x 16 mm	Page 3
X-130-8kN-M16-0	0 ... 8 kN	1.8 mV /V	Ø 40 x 16 mm	Page 3
X-130-12.5kN-M16-0	0 ... 12 kN	1.8 mV /V	Ø 47 x 16 mm	Page 4
X-130-15kN-M16-0	0 ... 15 kN	1.8 mV /V	Ø 47 x 16 mm	Page 4
X-130-25kN-M16-0	0 ... 25 kN	1.8 mV /V	Ø 47 x 16 mm	Page 4

Load cell X-130

Ø 40 x 16 mm

to 8 kN



Specifications

Performance

Measuring range / Output signal	0 ... 0.5 kN/2.0 mV/V 0 ... 1 kN /+1.8 mV/V 0 ... 4 kN /+1.8 mV/V 0 ... 8 kN /+1.8 mV /V
Linearity	Typ ±1.5 % FS Max ±2.0 % FS
Tolerance output signal	±20 %
Zero signal unmounted	-0.3 ...-0.1 mV /V

Electrical data

Resistance of strain gauge bridge	350 ohms
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Materials

Housing	Steel
Cable	PVC

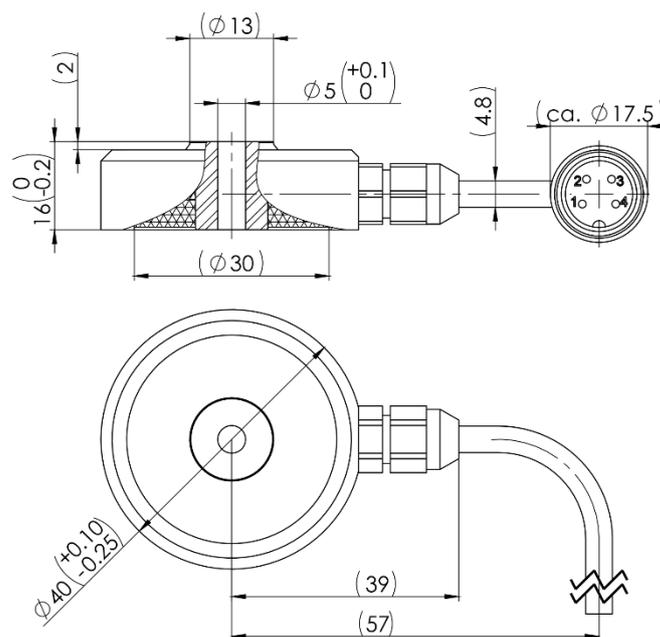
Mechanical data

Overload	125 % of full scale
Life endurance alternating 50 % load	10 million cycles
Deflection at full scale	<0.1 mm
Electrical connection	Connection cable
Cable length	0.6 m
Connector-type	M16 male (Amphenol C091A T3300 001)

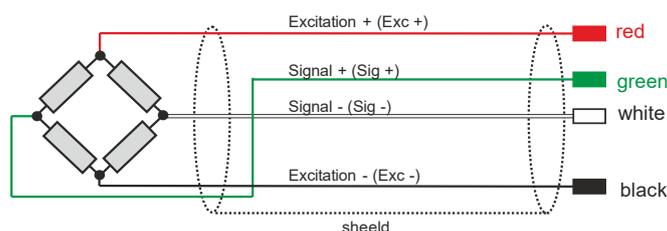
Environmental data

Ambient temperature	-10...65 °C
Protection rate	IP67

Mechanical dimensions



Wiring



Ordering code

For detailed ordering information see page 2.

Load cell X-130

Ø 47 x 16 mm

Up to 25 kN



Specifications

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Measuring range / Output signal	0 ... 12.5 kN /+1.8 mV/V 0 ... 15 kN /+1.8 mV/V 0 ... 25 kN /+1.8 mV/V
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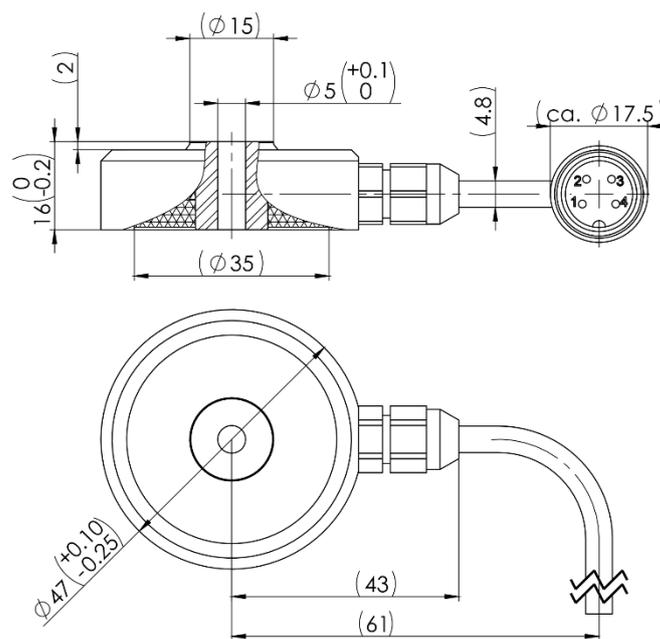
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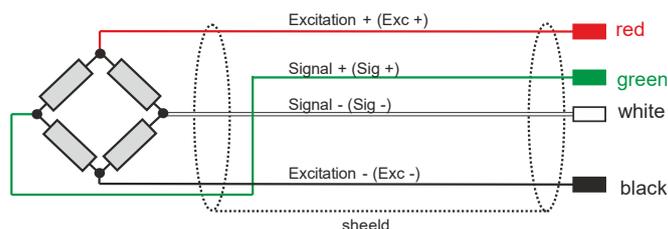
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Mechanical dimensions



Wiring



Ordering code

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Definition of accuracy

For force sensors, the following points should be noted with regard to accuracy:

1. Linearity, Repeatability and Hysteresis (combined error)

The linearity and hysteresis specifies the measurement deviation in reference to the ideal BFSL-characteristic curve. This maximum measurement error is given in reference to the full scale value. This means that an accuracy of 0.5% FS at a force transducer with a measuring range of 0 ... 250 kN corresponds to a maximum measuring deviation of only 1.25 kN over the entire measuring range.

2. Sensitivity

The data sheet specifies the sensitivity of the sensors (1.8 mV/V). However, the sensitivity is not always exactly the same. For this reason, the deviation of the sensitivity is specified.