

Compressive Force Sensors XCH-171



XCH-171

Cost-effective compressive Force Sensor for force measurement Inner diameter for M10 / M20 / M30

Features

- Through hole for easy measurement of compressive forces
- Inner diameter with common thread sizes
- High overload characteristics
- Specific measuring ranges available

Application

The miniature force transducers of the XCH-171 series are mounted on threaded rods or similar.

The compression force transducer comes with an inner diameter of M10, M20 or M30 mm and is therefore versatile.

The strain gauge force transducers are ideal for compressive force measurement as they measure accurately in the lower force range of 6 kN, as well as in the force range of 30 kN and 100 kN.

Ordering code

Description	Nominal measuring	Output-signal	Characteristic	Specifications
	range			
XCH-171-A-6.0kN-D10.5-M12/1.0m	06.0 kN	+ 1.0 mV/V	For M10 threaded rods	Page 3
XCH-171-C-30kN-D20.5-M12/1.0m	030.0 kN	+ 1.5 mV/V	For M20 threaded rods	Page 4
XCH-171-C-100kN-D30.5-M12/1.0m	0100.0 kN	+ 1.5 mV/V	For M30 threaded rods	Page 5

Compressive Force Sensor XCH-171-6.0kN

For M10 threaded rods



Specifications

Performance	
Load range	06.0 kN
Sensitivity at full scale	Δ + 1.0 mV/V
Zero Point	- 0.5 mV/V
Zero Point unmounted	± 2 % FS
Deviation output signal	± 5 % FS
Nonlinearity	≤ 2.0 % FS

Electrical data	
Power supply	515 VDC
Output signal at full scale	Δ + 1.0 mV/V
Bridge resistance	700 ohms

Mechanical data	
Overload	19 kN
Electrical connection	M12 plug IP67 4pol
Cable length	1 m

Environmental data	
Storage temperature	-40+70 °C
Ambient temperature	-10+65 °C
Protection rate	IP 54

Dimensions







Pin Assignment



Order information

For detailed ordering information, see page 2.

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Compressive force sensor XCH-171-30kN

For M20 threaded rods



Specifications

Performance		
Load range	030.0 kN	
Sensitivity at full scale	Δ + 1.5 mV/V	
Zero Point	- 0.5 mV/V	
Zero Point unmounted	± 2 % FS	
Deviation output signal	± 5 % FS	
Nonlinearity	≤ 2.0 % FS	

Electrical data	
Power supply	515 VDC
Output signal at full scale	Δ + 1.5 mV/V
Bridge resistance	700 ohms

Mechanical data	
Overload	19 kN
Electrical connection	M12 plug IP67 4pol
Cable length	1 m

Environmental data	
Storage temperature	-40+70 °C
Ambient temperature	-10+65 °C
Protection rate	IP 54

Dimensions







Pin Assignment



Order information

For detailed ordering information, see page 2.

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Compressive force sensor XCH-171-100kN

For M30 threaded rods



Specifications

Performance	
Load range	0100.0 kN
Sensitivity at full scale	Δ + 1.5 mV/V
Zero Point	- 0.5 mV/V
Zero Point unmounted	± 2 % FS
Deviation output signal	± 5 % FS
Nonlinearity	≤ 2.0 % FS

Electrical data	
Power supply	515 VDC
Output signal at full scale	Δ + 1.5 mV/V
Bridge resistance	700 ohms

Mechanical data	
Overload	26 kN
Electrical connection	M12 plug IP67 4pol
Cable length	1 m

Environmental data	
Storage temperature	-40+70 °C
Ambient temperature	-10+65 °C
Protection rate	IP 54

Dimensions





Pin Assignment



Order information

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