

C9C

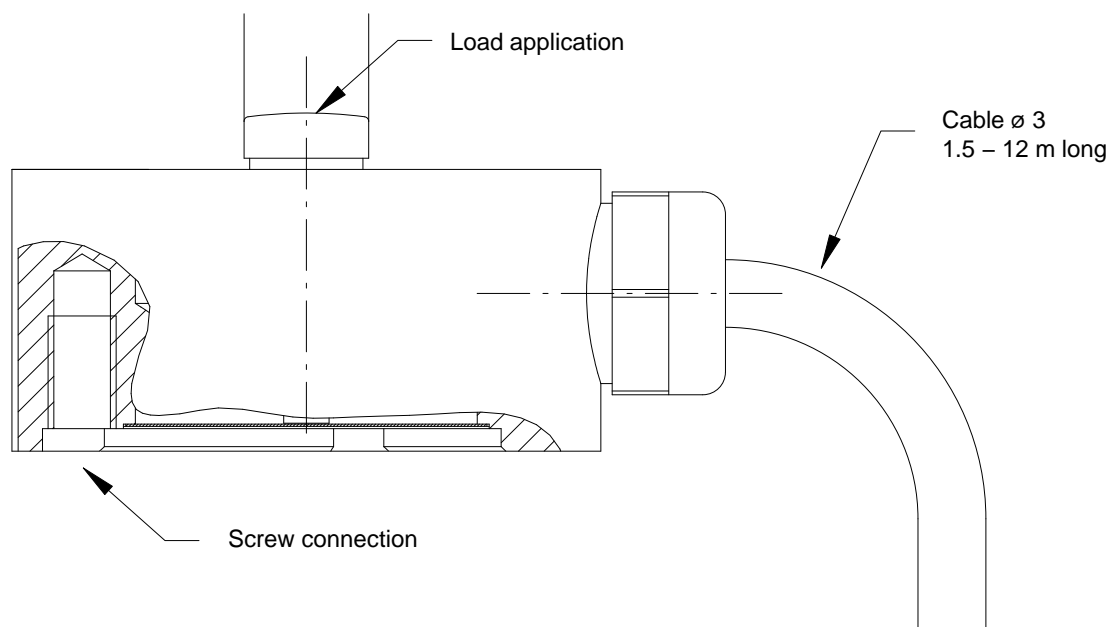
Force Transducer



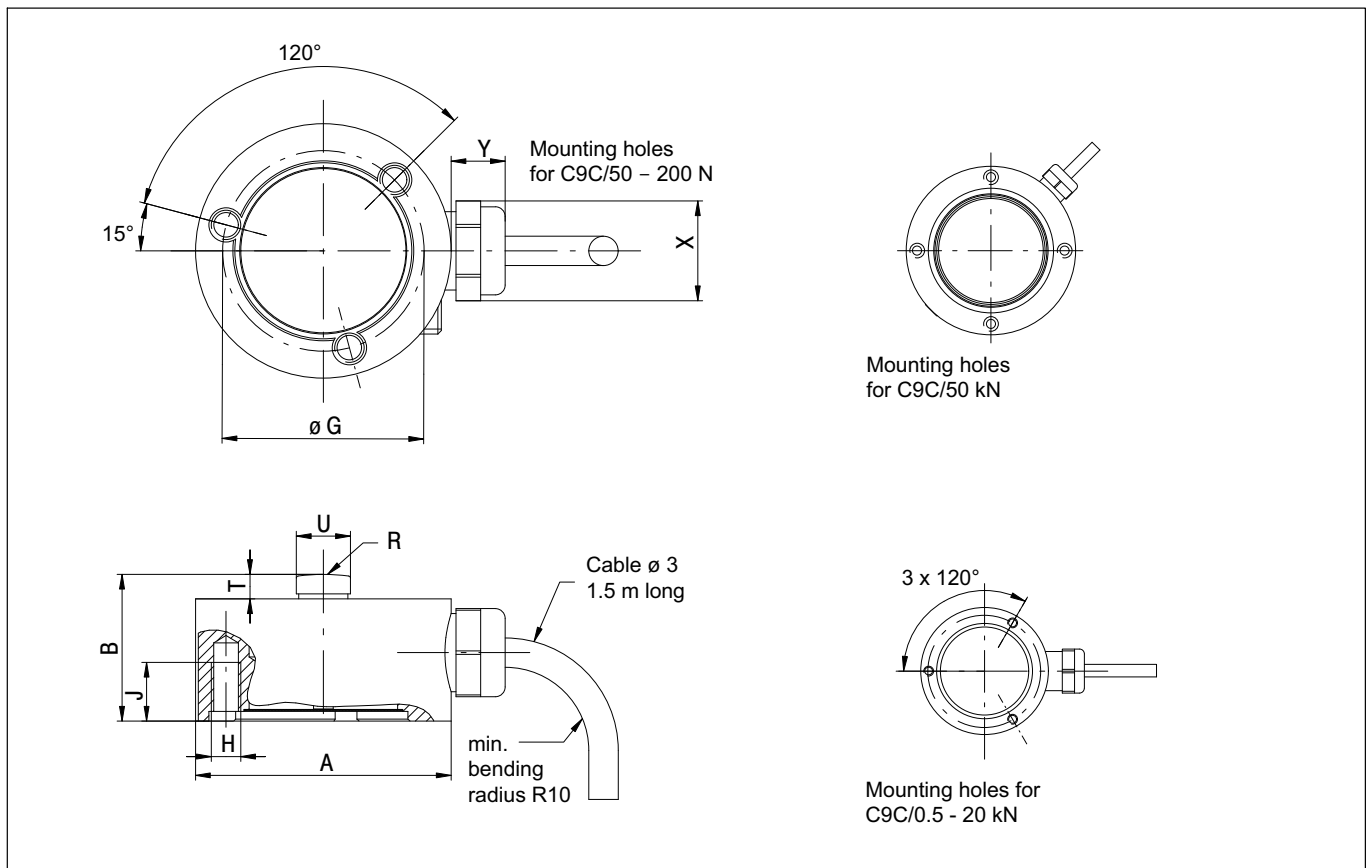
Special features

- Compact design compressive force transducer
- Accuracy class 0.2
- Nominal (rated) forces 50 N to 50 kN
- Configurable with different cable lengths, plug assembly and TEDS on request
- Made of rustless materials
- High rigidity, particularly suited for dynamic measurement tasks

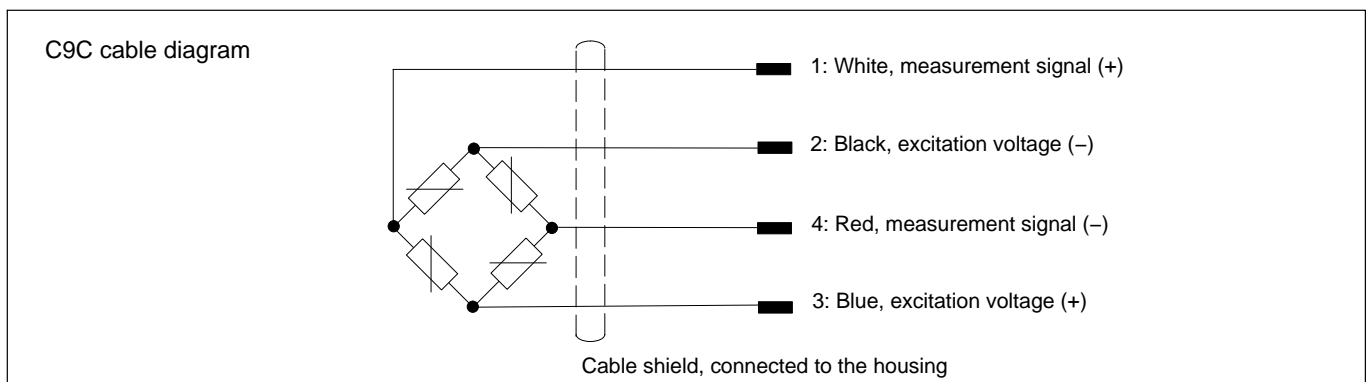
Principle of the C9C force transducer



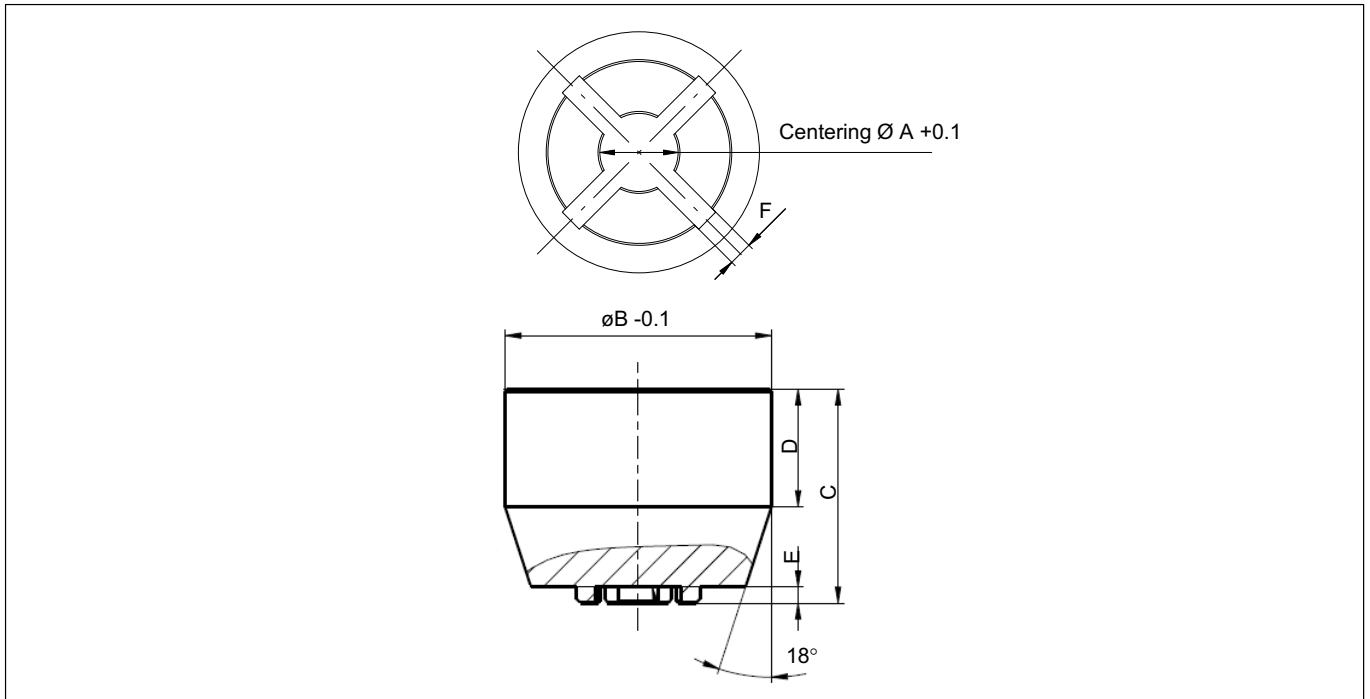
Dimensions of the C9C (in mm)



Nominal (rated) force of C9C	A _{-0.1}	B	G _{+/-0.1}	H	J	R	T	U _{-0.1}	X	Y
	[mm]									
50 N - 200 N	26	15	20.5	3 x M3	6	20	2.5	5.5	10.5	5.5
0.5 kN - 20 kN	26	13	22.75	3 x M2	3.5	40	1	8	10.5	5.5
50 kN	46	28	40	4 x M4	6	80	8	16	10.5	5.5



Dimensions of the ED09 (in mm)



EDO9 ordering number	Force range	$\varnothing A$	$\varnothing B$	C	D	E	F
		[mm]					
1-EDO9/20kN	0.5 - 20 kN	8.1	25	20	11	1.5	2.5
1-EDO9/50kN	from 50 kN	16.1	30	22	8	4	8

Specifications

Nominal (rated) force	F _{nom}	N	50	100	200								
			kN				0.5	1	2	5	10	20	50
Accuracy													
Accuracy class			0.2										
Relative reproducibility and repeatability errors without rotation	b _{rg}	%	< 0.2										
Relative reversibility error	v	%	< 0.2										
Non-linearity	d _{lin}	%	< 0.2										
Relative creep	d _{crF+E}	%	< 0.2				< 0.1						
Effect of temperature on sensitivity													
in the nominal (rated) temperature range	TK _C	% / 10 K	< 0.2										
in the operating temperature range	TK _C	% / 10 K	< 0.50										
Effect of temperature on the zero signal													
in the nominal (rated) temperature range	TK ₀	% / 10 K	< 0.2										
in the operating temperature range	TK ₀	% / 10 K	< 0.50										
Electrical characteristics													
Nominal (rated) sensitivity	C _{nom}	mV/V	1										
Relative zero signal error	d _{s,0}	mV/V	+/- 0.2										
Sensitivity error	d _C	%	< 1										
Input resistance	R _i	Ω	250 - 400				300 - 450						
Output resistance	R _o	Ω	200 - 400				120 - 450						
Insulation resistance	R _{is}	Ω	> 1*10 ⁹										
Operating range of the excitation voltage	B _{u,gt}	V	0.5 - 12										
Reference excitation voltage	U _{ref}	V	5										
Connection			4-wire circuit										
Temperature													
Reference temperature	t _{ref}	°C	23										
Nominal (rated) temperature range	B _{t,nom}	°C	-10 to +70										
Operating temperature range	B _{t,g}	°C	-30 to +85										
Storage temperature range	B _{t,S}	°C	-30 to +85										
Characteristic mechanical quantities													
Max. operating force	F _G	% of F _{nom}	200				120						
Limit force	F _L	% of F _{nom}	> 200				> 150						
Breaking force	F _B	% of F _{nom}	> 400										
Permissible eccentricity when loading with nominal (rated) force	e _g	mm	2.6	2.5	2.5	3.5	2.6	3.2	1.8	2.0	1.0	2.5	
Nominal (rated) displacement +/- 15%	S _{nom}	mm	0.009			0.015	0.019	0.020	0.025	0.040	0.055	0.075	
Fundamental resonance frequency	f _G	kHz	7.3	10	15.7	3.5	5	7	13	15.1	20	12	
Relative permissible oscillatory stress	F _{rb}	% of F _{nom}	80										70
General information													
Degree of protection per EN 60529			IP67										
Spring element material			Steel										
Measuring point protection			Hermetically welded										
Cables			Four-wire circuit, PUR insulation										
Cable length	m		1.5 m; 3 m; 5 m; 6 m; 7 m; 12 m										
Weight	g		55				65					260	

Versions and ordering numbers

Code	Measuring range	Ordering number
0050	50 N	1-C9C/50N
0100	100 N	1-C9C/100N
0200	200 N	1-C9C/200N
00K5	0.5 kN	1-C9C/0.5KN
01k0	1 kN	1-C9C/1kN
02k0	2 kN	1-C9C/2kN
05k0	5 kN	1-C9C/5kN
10k0	10 kN	1-C9C/10kN
20k0	20 kN	1-C9C/20KN
50k0	50 kN	1-C9C/50KN

The ordering numbers shown in gray are preferred types, they can be delivered rapidly. All force transducers with 1.5 m cable, open ends and without TEDS.

The order no. for the preferred types is 1-C9C...

The order no. for customer-specific designs is K-C9C-...

The ordering number example **K-C9C-05k0-12m0-F-T** shown further below refers to a: C9C, 5 kN nominal (rated) force with 12 m cable, 15-pin Sub-D connector and TEDS

Cable length	Plug version	Transducer identification
1.5 m 01m5	Free ends Y	With TEDS T
3 m 03m0	15-pin Sub-D connector F	Without TEDS S
5 m 05m0	MS3106PEMV connector N	
6 m 06m0	15-pin Sub-HD connector Q	
7 m 07m0		
12 m 12m0		

K-C9C-	05k0-	12m0-	F-	T
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All cable lengths can be combined with all plugs.

TEDS can only be ordered in conjunction with a plug option. It is not possible to combine TEDS and free cable ends.

Subject to modifications.
All product descriptions are for general information only.
They are not to be understood as a guarantee of quality or
durability.

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