Data Sheet

C2

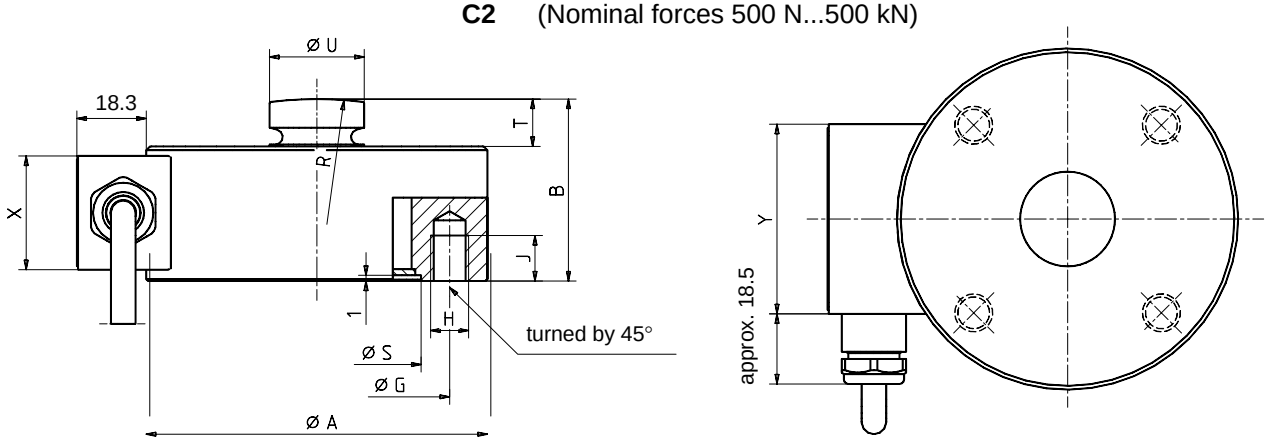
Force Transducers

Special features

- **Compressive Force transducer made of rust-resistant materials**
- **Low overall height**
- **Nominal forces 500 kN ... 200 kN**
- **Accuracy class 0.1**

Dimensions (in mm; 1 mm= 0.03937 inches)

C2 (Nominal forces 500 N...500 kN)



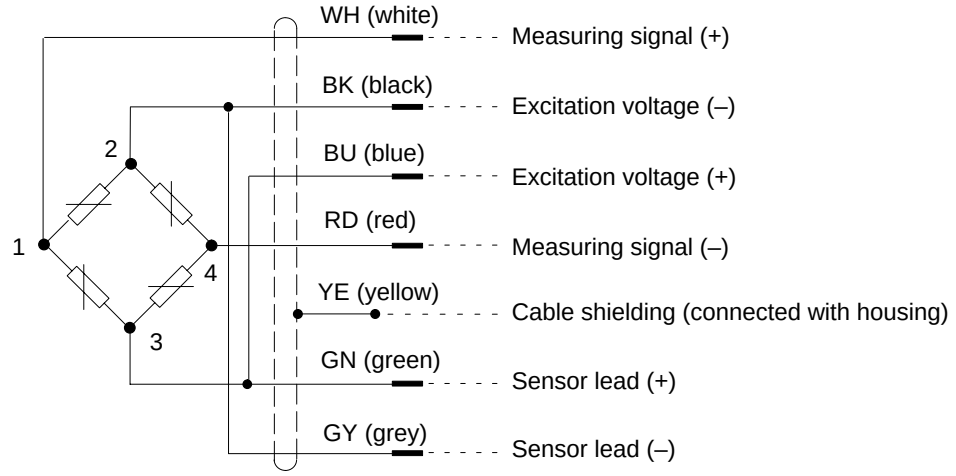
Nominal forces	∅$A_{-0,2}$	B	∅G	H	J	R	∅S^{H8}	T	∅U	X	Y
500 N...10 kN	50	30	42	4xM5	7	60	34	7	13	20	35
20 kN, 50 kN	90	48	70	4xM10	12	100	55	12,5	25	30	50
100 kN, 200 kN	115	60	90	4xM12	16	160	68	12,5	32	30	50

Specifications (acc. to DIN/VDE 2638)

Type			**C2**								
Nominal forces	F_{nom}	kN	0.5	1	2	5	10	20	50	100	200
Accuracy class			0.2	0.1							
Nominal sensitivity	C_{nom}	mV/V	2								
Rel. tensile/compressive force sensitivity variance	d_c	%	$< \pm 0.2$								
Rel. deviation from zero	d_{ao}	%	< 1								
Hysteresis ($0.2F_{nom}$ to F_{nom})	u	%	< 0.2	< 0.15							
Linearity deviation	d_{lin}	%	< 0.2	< 0.1							
Temperature influence on the sensitivity per 10 K, rel. to nominal sensitivity	TK_C	%	0.1								
Temperature influence on the zero signal per 10 K, rel. to nominal sensitivity	TK_0	%	0.05								
Effect of eccentricity per mm	d_e	%	± 0.3	± 0.3	± 0.2		± 0.1				
Rel. creep over 30 min	d_{crF+E}	%	$< \pm 0.06$								
Input resistance	R_e	Ω	> 340								
Output resistance	R_a	Ω	300 ... 400								
Isolation resistance	R_{Is}	GΩ	$> 2 \times 10^9$								
Reference excitation voltage	U_{ref}	V	5								
Operating range of the excitation voltage	$B_{U,G}$	V	0.5 ... 12								
Nominal temperature range	$B_{t,nom}$	°C [°F]	–10 to +70 [14...158]								
Operating temperature range	$B_{t,G}$	°C [°F]	–30 to +85 (120)[2] [–22...185(248)[2]]								
Storage temperature range	$B_{t,S}$	°C [°F]	–50 to +85 [–58...185]								
Reference temperature	t_{ref}	°C [°F]	+23 [73.4]								
Max. operational force	(F_G)	%	130		150						
Limit force	(F_L)	%	130		150						
Breaking force	(F_B)	%	> 300								
Static lateral limit force[1]	(F_Q)	%	50								
Nominal displacement	S_{nom}	mm	< 0.1					< 0.06			
Fundamental resonance frequency	f_G	kHz	4.4	8.7	9.7	18.5	19.3	13	14	13	14
Weight		kg	0.4					1.8	1.8	3	3
Rel. permissible vibration stress	F_{rb}	%	100								
Protection to DIN EN 60529			IP67 (IP68)[3]								
Cable length, six-wire technique		m	3					6		12	

[1] rel. to a point of force introduction on the load introduction cap
[2] optional 120° version

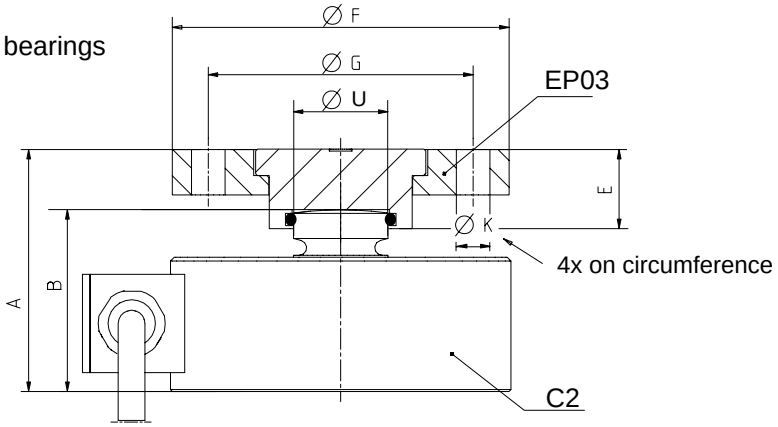
Cable wiring assignment (Six wire-circuit)



Accessories, to be ordered separately**:**

EPO3/EPO3R Pendle bearings

Mounting accessories
EPO3/EPO3R[1)] Pendle bearings



Nominal force	Pendle bearing[1)]	A	B	E	∅F	∅G	∅U	∅K
500 N...10 kN	1-EPO3/200KG	46	30	21	89	70	13	9
20 kN , 50 kN	1-EPO3R/5T	64	48	21	89	70	25	9
100 kN, 200 kN	1-EPO3R/20T	80	60	27,5	110	90	32	13

1) EPO3R and EPO3/200KG Pendle bearings are made of stainless steel.

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