

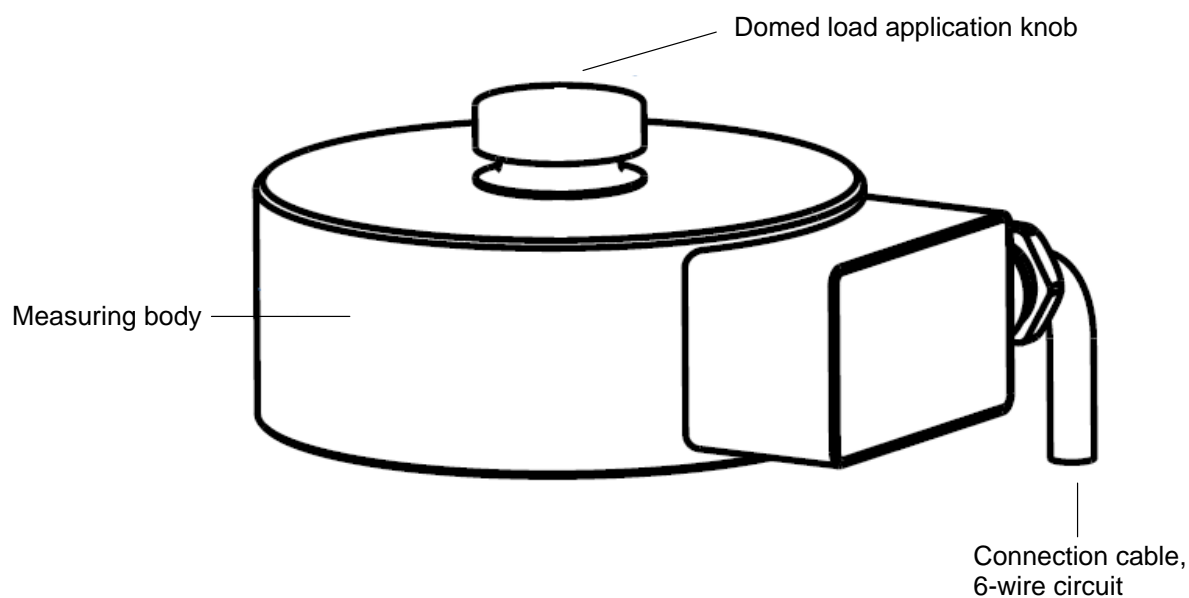
C2

Force Transducer

Special features



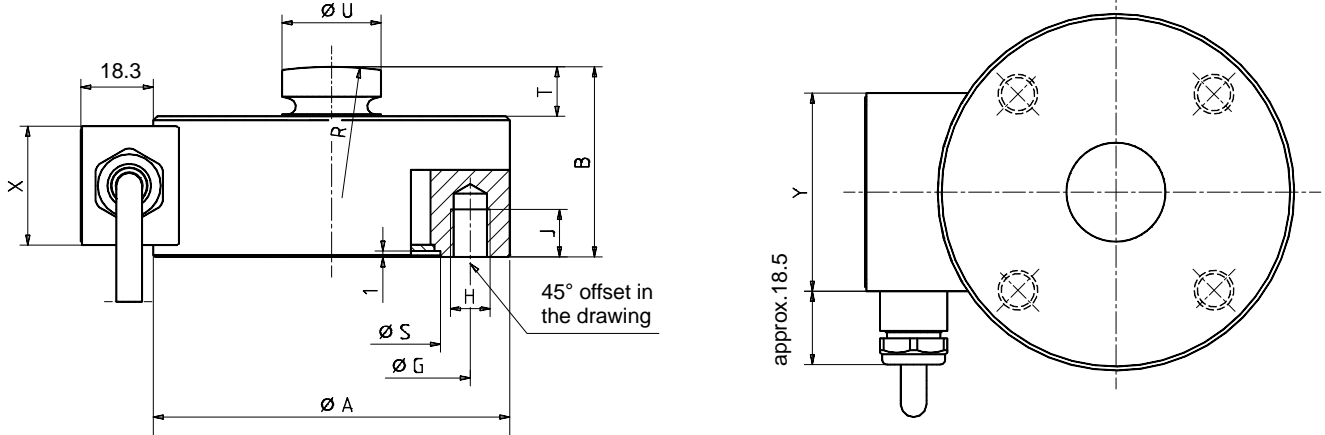
- Tensile/compressive force transducer
- Non-rusting, degree of protection IP67
- Can be configured with different cable lengths, plug fitting and TEDS on request
- Lateral force compensation
- Low overall height
- Nominal (rated) forces 500 N ... 200 kN
- Accuracy class 0.1



Dimensions

Dimensions in mm (1 mm = 0.03937 inches)

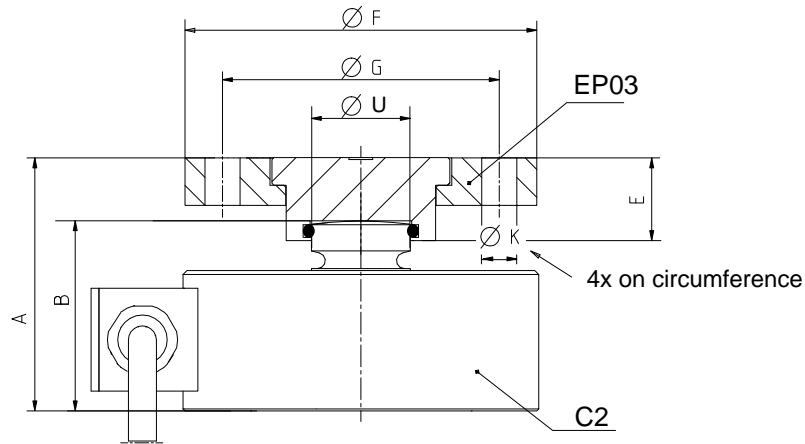
C2 (nominal (rated) forces 500 N...200 kN)



Nominal (rated) force	ØA-0.2	B	ØG	H	J	R	ØS ^{H8}	T	ØU	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

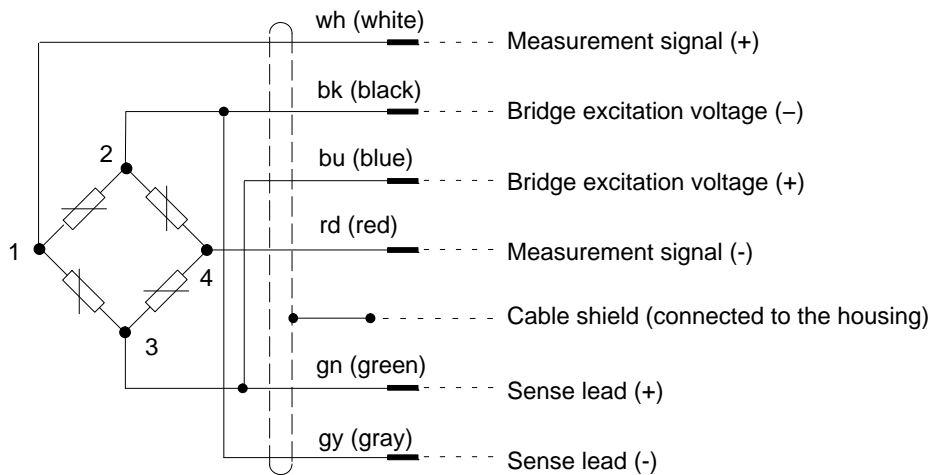
Accessories, to be ordered separately: Thrust piece EPO3/EPO3R

Thrust piece EPO3/EPO3R mounting aid



Nominal (rated) force	Thrust piece ¹⁾	A	B	E	ØF	ØG	ØU	ØK
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

Cable wiring assignment (6-wire circuit)



C2 versions and ordering numbers

Code	Measuring range	Ordering number	<p>The ordering numbers shown in gray are preferred types and can be delivered rapidly. All preferred types come with free ends and without TEDS transducer identification.</p> <p>The example below describes a C2 with a capacity of 50 kN, 12 m connection cable, fitted SUB-HD plug for connection to the QuantumX amplifier and TEDS transducer identification chip</p>
500N	500 N	1-C2/500N	
001K	1 kN	1-C2/1KN	
002K	2 kN	1-C2/2KN	
005K	5 kN	1-C2/5KN	
010K	10 kN	1-C2/10KN	
020K	20 kN	1-C2/20KN	
050K	50 kN	1-C2/50KN	
100K	100 kN	1-C2/100KN	
200K	200 kN	1-C2/200KN	

Cable length	Plug version	Transducer identification
3 m 03M0	Free ends Y	With TEDS T
6 m 06M0	15-pin Sub-D plug F	Without TEDS S
12 m 12M0	MS3106PEMV plug N	
20 m 20M0	15-pin Sub-HD plug Q	
30 m 30M0		

K-C2-	050K-	12M0	F	T
-------	-------	------	---	---

Scope of supply

C2 force transducer

Mounting instructions

Manufacturing certificate

Accessories (not included in the scope of supply)

Description	Ordering number
Ground cable, 400 m	1-EEK4
Ground cable, 600 m	1-EEK6
Ground cable, 800 m	1-EEK8
Thrust piece for nominal (rated) forces 500 N \approx 10 kN	1-EPO3/200kg
Thrust piece for nominal (rated) forces 20 kN \approx 50 kN	1-EPO3R/5t
Thrust piece for nominal (rated) forces 100 kN \approx 200 kN	1-EPO3R/20t

Specifications as per DIN/VDE2638

Type		C2										
Nominal (rated) force	F _{nom}	N	500									
		kN		1	2	5	10	20	50	100	200	
Accuracy												
Accuracy class			0.2	0.1								
Relative reproducibility and repeatability errors without rotation	b _{rg}	%	0.1									
Rel. reversibility error (0.5 * F _{nom})	V _{0.5}		0.2	0.15								
Non-linearity	d _{lin}		0.2	0.1								
Creep upon loading (30 min)	d _{crF}		0.06									
Effect of eccentricity ¹⁾ (10% F _{nom} * 10 mm)	d _E		0.3	0.2	0.1							
Temperature effect on sensitivity	TC _S	% / 10 K	0.1									
Temperature effect on zero signal	TC ₀		0.05									
Characteristic electrical values												
Nominal (rated) sensitivity	C _{nom}	mV/V	2									
Rel. zero signal error	D _{s,0}		1									
Sensitivity error	d _c	%	0.2									
Input resistance	R _i	Ω	> 340									
Output resistance	R _o		200 ... 400									
Insulation resistance	R _{is}		> 2									
Operating range of the excitation voltage	B _{U,G}	V	0.5 ... 12									
Reference excitation voltage	U _{ref}		5									
Connection		6-wire circuit										
Temperature												
Reference temperature	t _{ref}	°C	+23									
Nominal (rated) temperature range	B _{T,nom}		-10 to +70									
Operating temperature range	B _{T,G}		-30 to +85									
Storage temperature range	B _{T,S}		-50 to +85									
Mechanical quantities												
Maximum operating force	F _G	% of F _{nom}	130	150								
Limit force	F _L		130	150								
Breaking force	F _B		300									
Static lateral limit force ²⁾ When loading with nominal (rated) force	F _Q		100	70	40	55	12	15	9			
Permissible eccentricity	e _G	mm	5.4	5.3	5.2	4.8	4.2	8.0	2.0	1.5	1.5	
Nominal (rated) displacement ±15%	S _{nom}		0.049	0.053	0.047	0.048	0.04	0.069	0.074	0.08	0.10	
Fundamental frequency	f _G	kHz	4.4	8.7	9.7	18.5	19.3	13	14	13	14	
Relative permissible oscillatory stress	F _{rb}	% of F _{nom}	100									
General information												
Degree of protection per DIN EN 60529 ³⁾		IP67										
Spring element material		Non-rusting stainless steel										
SG protection		Hermetically-welded measuring body										
Cable		6-wire, polyethylene insulated										
Cable length		As requested by the customer										
Weight	kg	0.4					1.8			3		

¹⁾ Lateral force effect application point

²⁾ Permissible FQ application point

³⁾ 1 m water column, 0.5 h

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

B0656-2.0 en

Hottinger Baldwin Messtechnik GmbH

PO Box 10 01 51, D-64201 Darmstadt, Germany
Im Tiefen See 45, D-64293 Darmstadt, Germany
Tel.: +49 06151 803-0 Fax: +49 06151 8039100
Email: support@hbm.com Internet: www.hbm.com



measurement with confidence