

C6A

Force Transducer

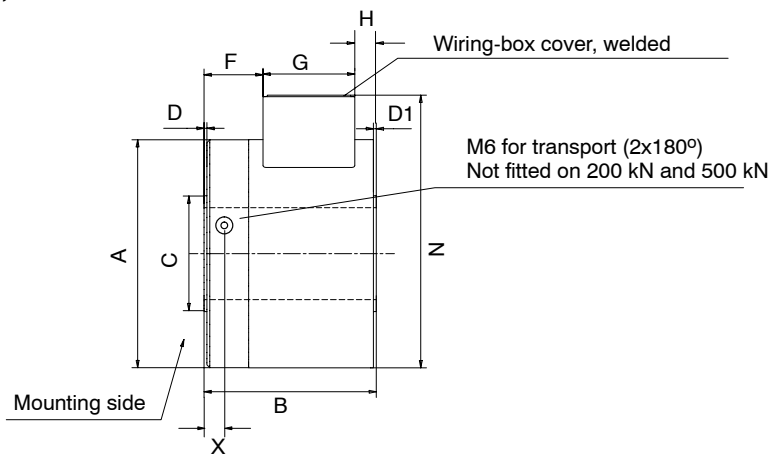


Special features

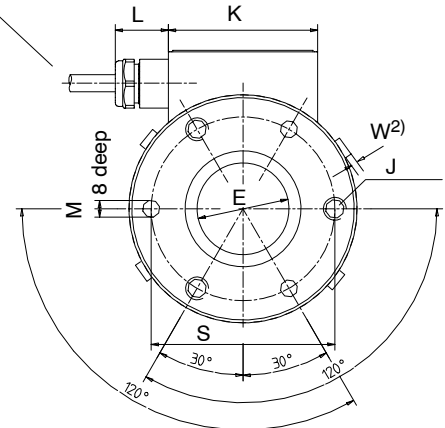
- Compressive force transducer
- Nominal forces 200 kN ... 5 MN
- Continuous inner bore for nominal forces from 200 kN to 2 MN
- Rust-resistant version for 200 kN and 500 kN nominal forces
- Extensive mounting accessories

Dimensions (in mm; 1 mm= 0.03937 inches)

C6A¹⁾, nominal forces 200 kN...2 MN



Cable: \varnothing 6,5 mm; 6 m long, shielded, unterminated



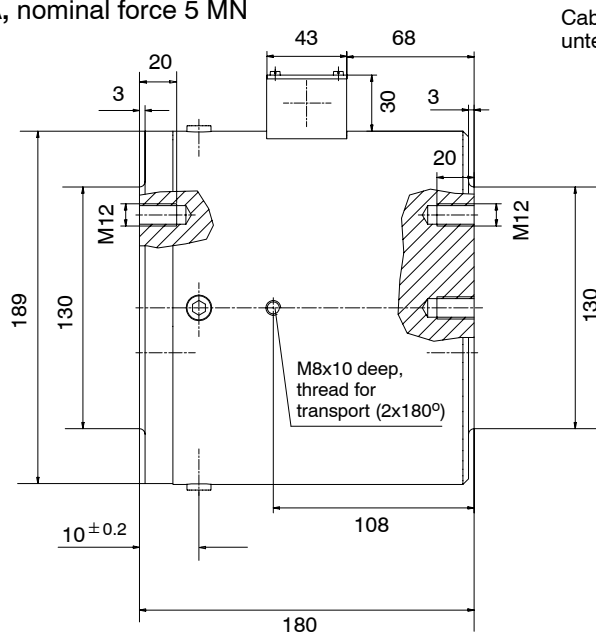
1) Force transducers for nominal loads ≤ 500 kN, manufactured from rust-resistant material

2) For 1 MN and 2 MN only

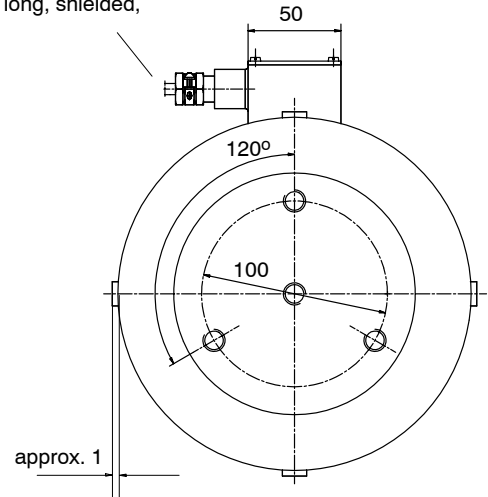
Nominal forces	A	B	C ± 0.1	D	D1	E ^{+0.1}	F	G	H	J	K	L	M ^{H11}	N	S ± 0.1	W	X
200 kN	80	60	40.4	1	1	32	19.5	32.5	8	M8-8deep	53	18.5	6	97.5	64	-	-
500 kN	80	60	52	1	1	32	19.5	32.5	8	M8-8deep	53	18.5	6	97.5	64	-	-
1 MN	168	100	88	2	3	68	29	43	28	M12-15deep	50	35	8	200	130	1	10
2 MN	168	100	106	2	3	68	29	43	28	M12-15deep	50	35	8	200	130	1	10

Dimensions continued (in mm)

C6A, nominal force 5 MN



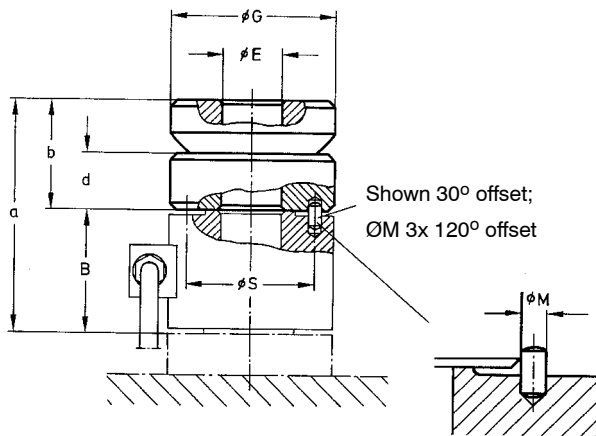
Cable: $\varnothing 6.5$ mm; 6 m long, shielded, unterminated



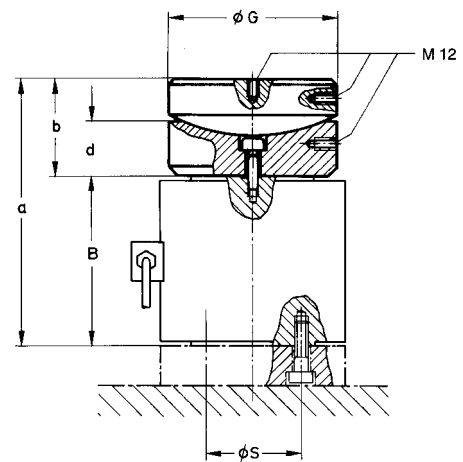
Mounting accessories

Spherical cap ZK (Compensation by oblique load introduction)

for nominal forces in range 200 kN...2 MN



for 5 MN nominal forces

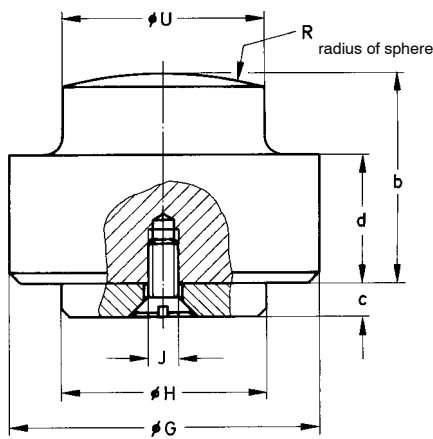


Nominal forces	ZK order no.	Weight in kg	B	E ^{+0.1}	G	M _{h11}	s	a	b	d
200...500 kN	1-C6/50T/ZK	1.7	60	32	82 _{-0.2}	6	64 ± 0.1	112	52	28
1 MN	1-C6/100T/ZK	3.8	100	68	121.5 _{-0.2}	8	130 ± 0.1	175	74.5	40
2 MN	1-C6/200T/ZK	11.6	100	68	159 _{-0.2}	8	130 ± 0.1	195	95	50
5 MN	1-C6/500T/ZK	20.6	180	-	178 _{-0.3}	-	100	284	103	61

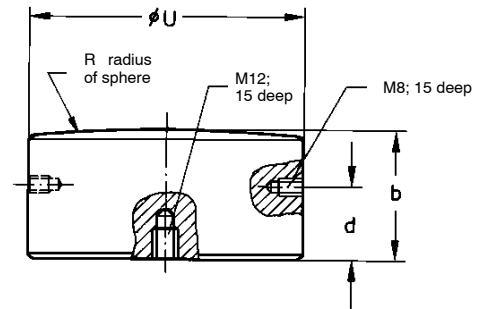
Mounting accessories continued

Load button ZL (for high-precision measurement)

for nominal forces in range 200 kN... 2 MN

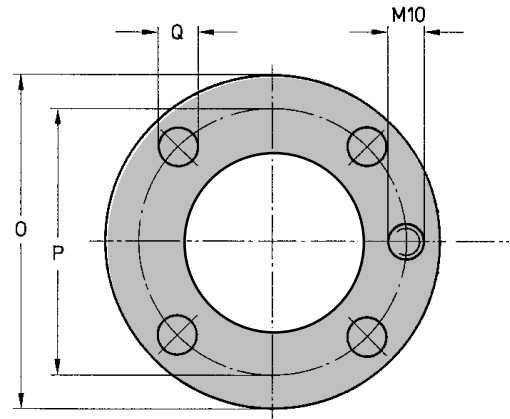
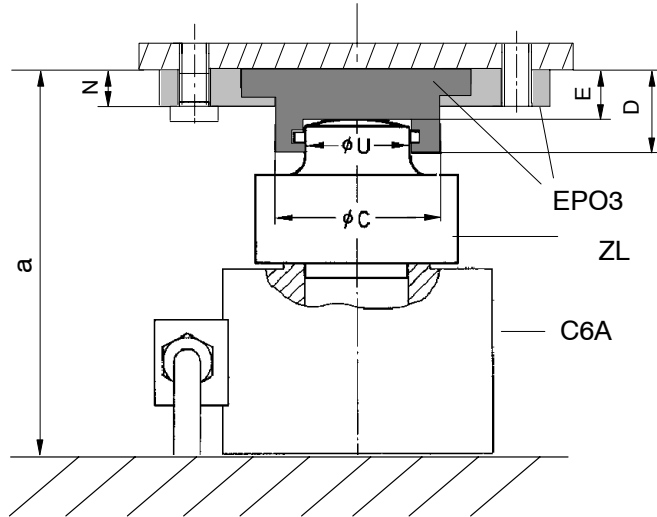


for 5 MN nominal forces



Nominal forces	ZL order no.	Weight in kg	G	H _{-0.1}	J	R	U _{-0.2}	b	c	d
200 kN	1-C6/20T/ZL	0.8	60	31.9	M5	300	32	45	5	30
500 kN	1-C6/50T/ZL	0.8	60	31.9	M5	300	44	45	5	30
1 MN	1-C6/100T/ZL	6.4	120	67.9	M6	600	64	80	8	60
2 MN	1-C6/200T/ZL	6.8	120	67.9	M6	600	85	80	8	60
5 MN	1-C6/500T/ZL	6.5	-	-	-	-	129.8 _{-0.05}	60	-	35

Thrust piece EPO3



* Shown with load buttons ZL 0.2 MN...2 MN

Nominal forces	EPO3 order no.	Weight in kg	C	D	E	N	O	P	Q	U _{-0.2}	a
200 kN	1-EPO3R/20T	1.2	47.9	27.5	20	14	114	90	13	32	125
500 kN	1-EPO3/50T	3.4	81.9	50	39.5	20	148	120	17	44	144.5
1 MN	1-EPO3/100T	3.2	81.9	50	39.5	20	148	120	17	64	219.5
2 MN	1-EPO3/250T	13.0	139.5	80	67.5	25	225	190	22	85	247.5
5 MN	1-EPO3/500T	27.0	169.8	103	90	33	270	220	26	130	250

Specifications (data according to VDI standards 2638)

Type	C6A						
Accuracy class	0.5						
Nominal force	F _{nom}	MN	200 kN	500 kN	1 MN	2 MN	5 MN
Nominal sensitivity	C _{nom}	mV/V	2				
Relative sensitivity deviation²⁾	d _c	%					< ± 1
when used with hardened pressure plates		%	< ± 2.5				< ± 1
when used with load button ZL and pendle bearing EPO3		%	< ± 0.5				< ± 0.5
when used with spherical cap ZK		%	< ± 2.5	< ± 4		< ± 0.5	
Relative zero signal deviation	d _{s,o}	%	< 1				
Relative range of inversion (0.5F_{nom})	u	%	< ± 0.8				
Linearity deviation²⁾	d _{lin}	%					
when used with hardened pressure plates		%	< ± 1				< ± 0.5
when used with load button ZL and pendle bearing EPO3		%	< ± 0.5				< ± 0.5
when used with spherical cap ZK		%	< ± 1				< ± 0.5
Effect of temperature on sensitivity/10 K by reference to nominal sensitivity	TK _c	%	< ± 0.1				
Effect of temperature on zero signal/10 K by reference to nominal sensitivity	TK ₀	%	< ± 0.05				
Creep over 30 min, in nominal temperature range¹⁾	d _{crF+E}	%	< ± 0.06				
Input resistance at reference temperature	R _e	Ω	> 345				
Output resistance at reference temperature	R _a	Ω	356 ± 1.5				
Isolation resistance at test voltage 100 V	R _{is}	GΩ	> 5 × 10 ⁹				
Reference excitation voltage	U _{ref}	V	5				
Operating range of the excitation voltage	B _{U,GT}	V	0.5 ... 12				
Reference temperature	t _{ref}	°C	+23				
Nominal temperature range	B _{t,nom}	°C	-10...+70				
Operating temperature range	B _{t,G}	°C	-30...+85				
Storage temperature range	B _{t,S}	°C	-50...+100				
Maximum operating force¹⁾	F _G	%	150				
Limit force¹⁾	F _L	%	150				
Breaking force¹⁾	F _B	%					
when used with hardened pressure plates		%	> 300				
when used with load button ZL and pendle bearing EPO3		%	> 300				> 200
when used with spherical cap ZK		%	> 200				> 200
Static lateral limit force¹⁾	F _Q	%					
when used with hardened pressure plates		%	20				
when used with load button ZL and pendle bearing EPO3		%	20				10
when used with spherical cap ZK		%	10				
Permissible vibration amplitude¹⁾ to DIN 50 100	F _{rb}	%	70				
Nominal displacement without mounting accessories (± 15 %)	S _{nom}	mm	0.07	0.08	0.09	0.11	0.26
Natural frequency without coupled ground and without mounting accessories	f _G	kHz	4.5	8	6	7.5	4.3
Weight, without cable		kg	1.4	1.7	10.8	12.2	33
Degree of protection to DIN EN 60 529			IP 67				
Cable length, 6-wire connection		m	6				

¹⁾ related to the nominal force

²⁾ the differing tolerances when using different mounting accessoires are due to the transducer's low profile

Modifications reserved.

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