

C2...

Load cells

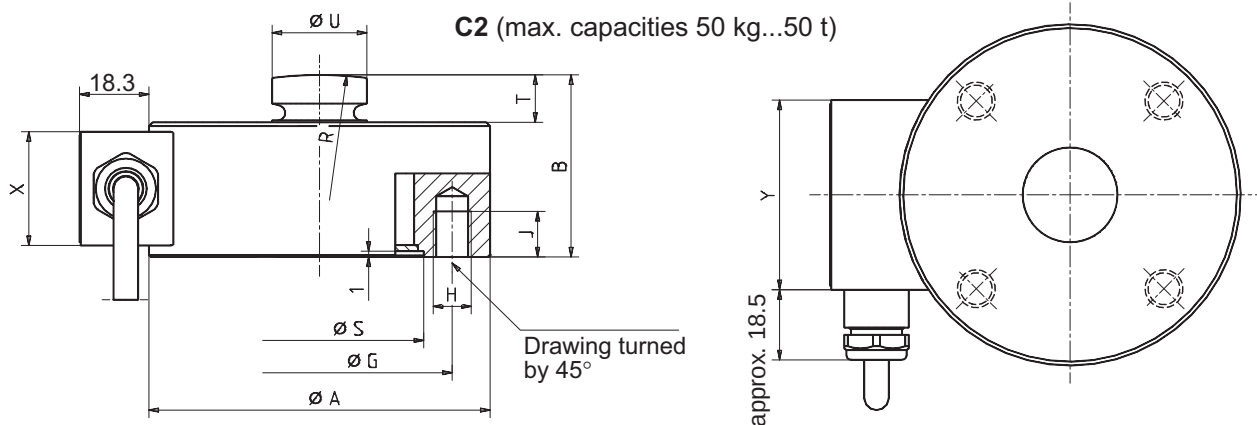
Special features

- Load cells made of stainless materials
- Max. capacities: 50 kg ... 50 t
- Small deflection
- High permissible dynamic load
- Six-wire circuit
- Low profile
- Meets EMC requirements according to EN 45 501
- Explosion proof version (optional)

Data sheet



Dimensions (in mm; 1 mm= 0.03937 inches)



Max. cap. [t]	ØA _{0.2}	B	ØG	H	J	R	ØSH ⁸	T	ØU	X	Y
0.05...1	50	30	42	4xM5	7	60	34	7	13	20	35
2 and 5	90	48	70	4xM10	12	100	55	12.5	25	30	50
10 and 20	115	60	90	4xM12	16	160	68	12.5	32	30	50
50	155	90	125	4xM16	20	300	97	15.5	44	30	50

Specifications

Type			C2	
Accuracy class			0.2	0.1
Max. capacity		kg t	50 -	100, 200, 500 1, 2, 5, 10, 20, 50
Sensitivity	C _n	mV/V	2	
Tolerance on sensitivity		%	<±0.20	
Temperature effect on sensitivity	TK _C			
In the nominal temperature range		%/10 K	<±0.05	
In the service temperature range		%/10 K	<±0.10	
Temperature effect on zero balance	TK ₀			
In the nominal temperature range		%/10 K	<±0.05	
In the service temperature range		%/10 K	<±0.10	
Hysteresis error	d _{hy}	%	<±0.15	
Non-linearity	d _{lin}	%	<±0.20	<±0.10
Creep over 30 min.	d _{DR}	%	<±0.06	
Input resistance	R _{LC}	Ω	340 ... 550	
Output resistance	R ₀	Ω	356 ±0.2 (for cable lengths less than 20 m) 359 ±0.2 (for cable length 20 m)	
Reference excitation voltage	U _{ref}	V	5	
Nominal range of excitation voltage	B _U	V	0.5...10	0.5...12
Max. permissible excitation voltage		V	12	18
Insulation resistance	R _{is}	GΩ	>5	
Nominal temoerature range	B _T	°C [°F]	-10...+40 [14...104]	
Operating temperature range	B _{tu}	°C [°F]	-30...+85 [-22...185] (-30...+120) [-22...248] ¹⁾	
Storage temperature range	B _{tl}	°C [°F]	-50...+85 [-58...185]	
Safe load limit	E _L	% of rated capacity	130	150
Breaking load	E _d		300	
Rel. static lateral load limit	E _{lq}		50	
Permissible dynamic load (peak to peak acc. to DIN 50100)	F _{srel}		100	
Degree of protection class (IP) to EN 60 529 (IEC 529)			IP 67	
Material				
Measuring body			Stainless steel ²⁾	
Cable gland			Nickel plated brass, Silicone	
Cable sheath			Thermoplastic elastomer	

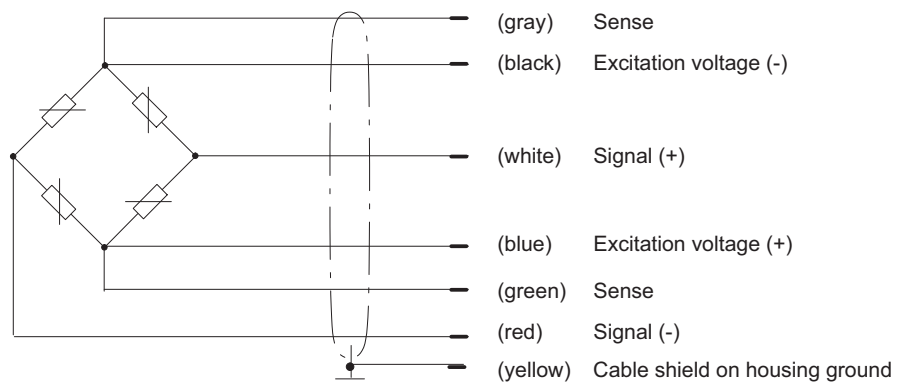
¹⁾ Optionally available with extended operating temperature range, not for Explosion-proof versions

²⁾ According to EN 10088-1

Mechanical values

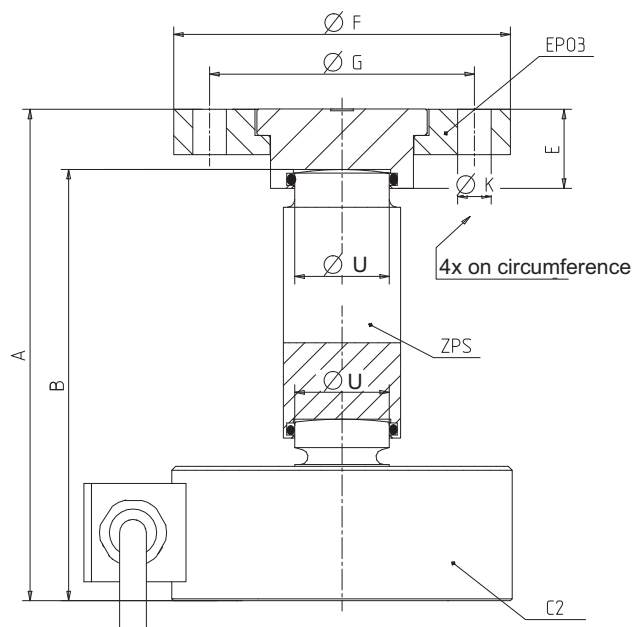
Max. capacity [t]	Deflection at max. capacity (s _{nom}) [mm], approx.	Weight (G), approx. [kg]	Cable length [m]
0.05	< 0.1	0.4	3
0.1	< 0.1	0.4	3
0.2	< 0.1	0.4	3
0.5	< 0.1	0.4	3
1	< 0.1	0.4	3
2	< 0.06	1.8	6
5	< 0.06	1.8	6
10	< 0.06	3	12
20	< 0.06	3	12
50	< 0.1	8.6	12

Wiring code



Mounting accessories

**ZPS¹⁾ Pendle bearing support and
EPO3/EPO3R¹⁾ Pendle bearing above**



S_{perm.}: Max. permissible lateral displacement
[mm] with rated load

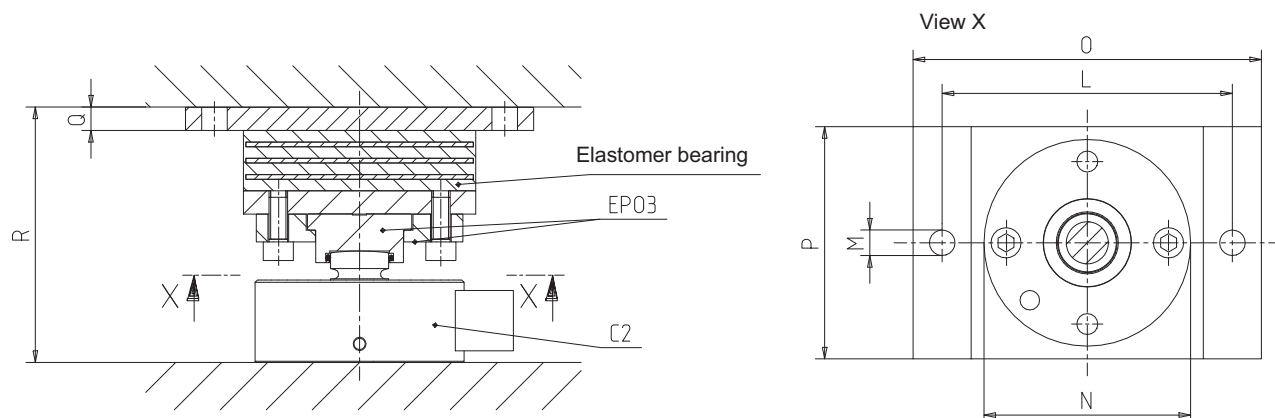
F_R : Restoring force [% of load applied] with a lateral displacement of 1mm

Max. capac.	Pendle bearing support ¹⁾	Pendle bearing above ¹⁾	A	B	E	ØF	ØG	ØU	ØK	S _{perm.}	F _R
50 kg...1 t	1-ZPS13/44	1-EPO3/200 kg	90	74	21	89	70	13	9	±3	2.4
2 and 5 t	1-ZPS25/66	1-EPO3R/5 t	130	114	21	89	70	25	9	±5	2.6
10 and 20 t	1-ZPS32/115	1-EPO3R/20 t	195	175	27.5	110	90	32	13	±9	1.2
50 t	1-ZPS44/150	1-EPO3/50 t	280	239.5	50	147	120	44	17	±10	1.5

¹⁾ ZPS Pendle bearing support, EPO3R and EPO3/200 kg Pendle bearings above are made from stainless steel.

Mounting accessories (continued)

ZELA/ZELB Elastomer bearing and EPO3/EPO3R¹⁾ pendle bearing



$S_{perm.}$: Max. permissible lateral displacement [mm] with rated load

F_R : Restoring force [N] with a lateral displacement of 1mm

Max. capac. [t]	Elastomer bearing ¹⁾	Pendle bearing ¹⁾	L	M	N	O	P	Q	R	$S_{perm.}$	F_R
0.5 and 1	1-ZELB/2 t	1-EPO3/200 kg	100	9	89	120	60	10	85.5	±4.5	400
2	1-ZELB/2 t	1-EPO3R/5 t	100	9	89	120	60	10	103	±4.5	400
5	1-ZELB/5 t	1-EPO3R/5 t	125	11	89	150	100	10	110	±8	620
10	1-ZELB/10 t	1-EPO3R/20 t	175	13	110	200	100	12	135	±9.5	810
20	1-ZELA/20 t	1-EPO3R/20 t	230	13	110	260	150	12	142	±15	1400
50	1-ZELA/50 t	1-EPO3/50 t	335	17	148	370	200	15	200	±10.5	2300

¹⁾ ZELB Elastomer bearing, EPO3R/... and EPO3/200 kg Pendle bearings are made from stainless steel.

Options

Explosion-proof versions

AI1/21 IECEx+ATEX zone 1/21 + FM intrinsically safe, II2G Ex ia IIC T6/T4 Gb / II 2D Ex ia IIIC T125°C Db* [only with Option 6=N]

AI2/21 IECEx+ATEX zone 2/21 non-intrinsically safe, II3G Ex ec IIC T6/T4 Gc / II 2D Ex tb IIIC T125°C Db* [only with Option 6=N]

AIM1 IECEx+ATEX M1, intrinsically safe I M 1 Ex ia I Ma* [only with Option 6 = N]

* Including EC-Type Examination Certificate/Certificate of Conformity BVS 13 ATEX X 108 X/IECEx BVS 13.0109 X

Operating temperature range extended to 120 °C [248 °F] (not possible in connection with explosion proof version)

Accessories, to be ordered separately

- ZPS Pendle bearing support and EPO3/EPO3R Pendle bearing
- ZELA/ZELB Elastomer bearing and EPO3/EPO3R Pendle bearing
- EEK Grounding cable

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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