DATA SHEET

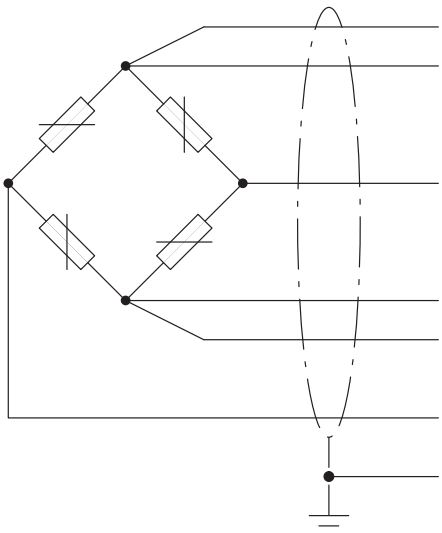
C16A...
100/200/400 t
Self-centering pendulum load cells

SPECIAL FEATURES

- Self-restoring function
- Nominal (rated) loads: 100 t, 200 t and 400 t
- Simple installation
- Rust-resistant materials, laser-welded, IP68/IP69K
- Legal for trade
  100 t with up to 3000 d (OIML R60 D1 + C3)
  200 t, 400 t with up to 1000 d (OIML R60 D1)
- Optimized for parallel connection
- Explosion-protection design as per ATEX, IECEx and FM (US/CA)



CABLE ASSIGNMENT (6-WIRE CONFIGURATION)



(gray)	Sensing element (-)
(black)	Excitation (-)
(white)	Signal (+)
(blue)	Excitation (+)
(green)	Sensing element (+)
(red)	Signal (-)
(-)	Cable shield/drain wire, connected to enclosure ground

SPECIFICATIONS

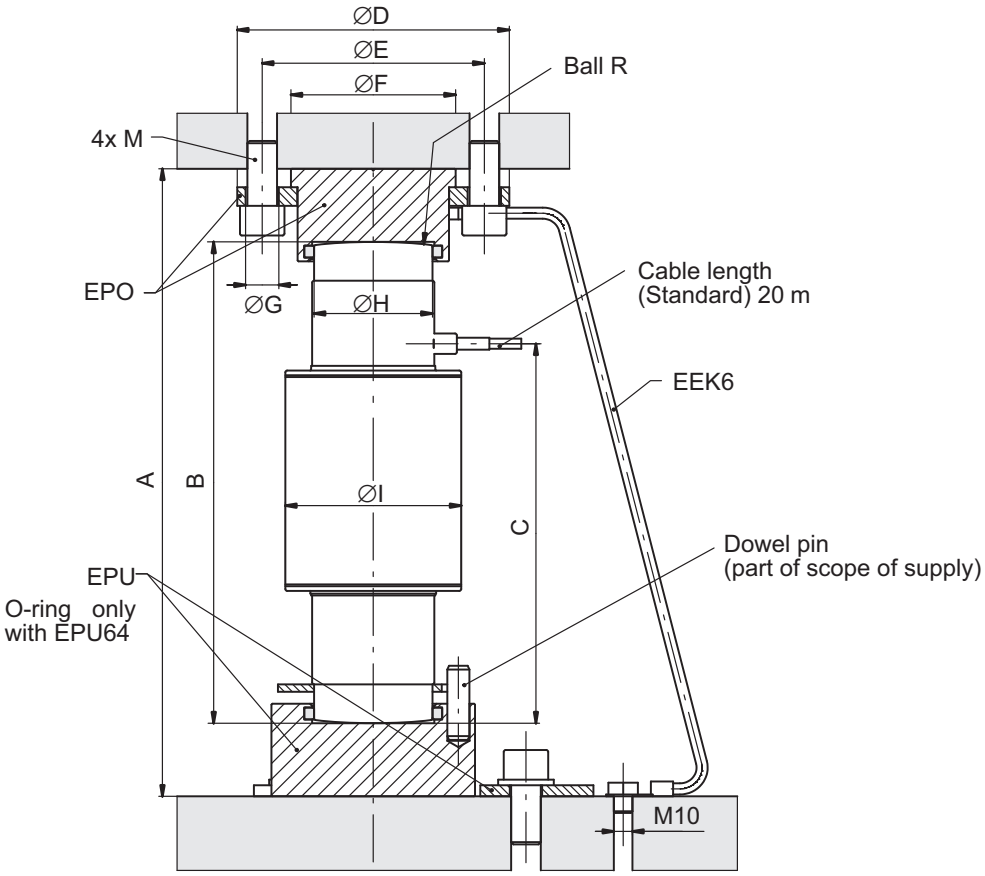
Type			C16A			
Accuracy class per OIML R60			D1			C3
Number of scale intervals	n_{LC}		1000			3000
Nominal (rated) load	E_{max}	t	100	200	400	100
Minimum load cell verification interval	v_{min}	% of E_{max}	0.0200			0.0100
Ratio of minimum verification interval	Y		5000			10000
General specifications						
Nominal (rated) sensitivity	C_n	mV/V	2			
Sensitivity tolerance [1]		%	±0.5			
Temperature coefficient of sensitivity [2]	TK_C	% of C_n/10 K	±0.0250			±0.0080
Temperature coefficient of zero signal	TK_0		±0.0285			±0.0140
Relative reversibility error [2]	d_{hy}	% of C_n	±0.0330			±0.0170
Non-linearity [2]	d_{lin}		±0.0300			±0.0180
Load creep in 30 min.	d_{cr}		±0.0330			±0.0167
Minimum dead load output return, 30 min.	DR		± 0.0330			±0.0167
Input resistance (black-blue)	R_{LC}	Ω	700 ±20			
Output resistance[1] (red-white)	R_0		706 ±3.5			
Reference excitation voltage	U_{ref}	V	5			
Nominal (rated) range of the supply voltage	B_U		0.5 … 12			
Insulation resistance	R_{is}	GΩ	> 5			
Nominal (rated) ambient temperature range	B_T	°C	-10 … +40			
Operating temperature range	B_{tu}		-50 … +70			
Storage temperature range	B_{tl}		-50 … +85			
Limit load	E_L	% of E_{max}	150			
Breaking load	E_d		> 350	> 200	> 300	> 350
Relative permissible oscillatory stress (oscillation width as per DIN 50100)	F_{srel}		70			
Nominal (rated) displacement at E_{max}, approx.	s_{nom}	mm	1.57	2.15	2.64	1.57
Weight without cable, approx.	G	kg	8	10.8	22.0	8
Degree of protection per EN60529 (IEC529)			IP68 (test conditions 1 m water column / 100 h) IP69 K (water at high pressure, steam cleaner)			
Material: **Measuring body+ housing** **Cable entry** **Seal** **Cable sheath**			Stainless steel [3] Stainless steel [3] Viton® Thermoplastic elastomer			

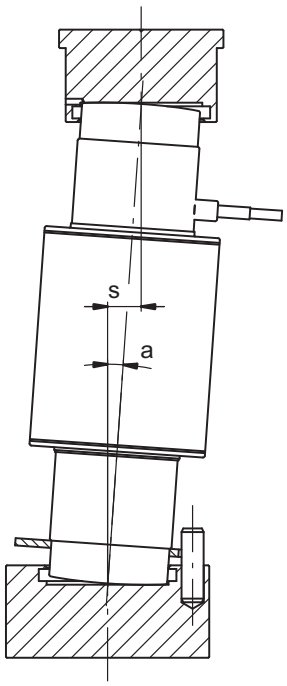
[1] Because of the off-center load compensation, the sensitivity and output resistance are matched in such a way that when there is eccentric loading, the scale display is within the permissible error limits.

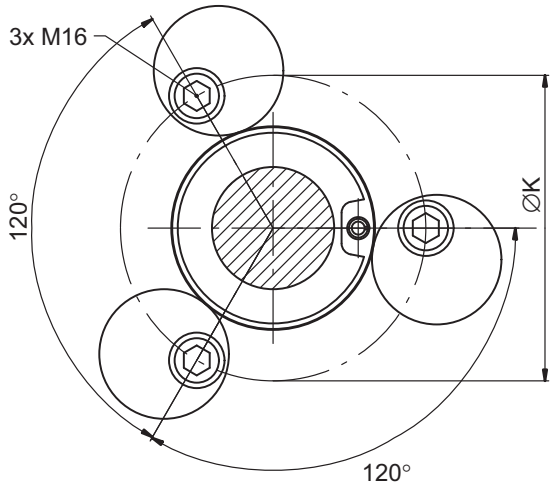
[2] The values for non-linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of sensitivity (TC_S) are recommended values. The sum of these values is within the cumulative error limit for p_{LC} = 0.7 according to OIML R60.

[3] As per EN 10088-1

DIMENSIONS AND LOADING FITTINGS FOR MAXIMUM CAPACITIES 100 T ... 400 T







	Dowel pin	M
100 t/200 t	Ø12 x 40	M16
400 t	Ø14 x 50	M24

Cable: Ø 5,4 mm

Nominal (rated) load	Thrust pieces top + bottom (1 set = 2 pieces)	A	B	C	ØD	ØE	ØF	ØG	ØH	ØI	ØK	R	a_{max} [1]	s_{max} [2]	F_R [3] at s_{max}	F_R [3] at s = 1 mm
100 t	**EPO3/100 t, C16/EPU64**	339 ±1.5	260	205	147	120	89	18	64	95	165	290	4°	18	8.6	0.48
200 t												400	2°	9	7.3	0.81
400 t	**EPO3/400 t, C16/EPU109**	386 ±1.5	260	205	240	196	160	26	109	154	230	570	2°	9	11.8	1.31

1) Max. permissible misalignment
2) Max. permissible lateral displacement of load application
3) Restoring force in % of applied load

OPTIONS FOR C16A

- Explosion protection versions as per ATEX, IECEx and FM (US/CA)

  AI1/21 ATEX+IECEx+FM Zone 1/21, intrinsically safe;
  - ATEX/IECEx: II 2G Ex ia IIC T6/T4 Gb + II 2D Ex ia IIIC T125°C Db;
  - FM(US/CA): Class I Zone 1 AEx/Ex ia IIC T4 Gb + Zone 21 AEx/Ex ia IIIC T125°C Db;
  - FM(US): Class I, II, III Division 1, Groups A, B, C, D, E, F, G T4

  AI2/21 ATEX+IECEx Zone 2/21, not intrinsically safe;
  - ATEX/IECEx: II 3G Ex ec IIC T6/T4 Gc + II 2D Ex tb IIIC T125°C Db

- Overvoltage protection
- Cable length 40 m

ACCESSORIES (TO BE ORDERED SEPARATELY)

- **EPO3/100t** Thrust piece for top, incl. clamping ring (100 t and 200 t)
- **C16/EPU64** Thrust piece for bottom, incl. 3 eccentric discs (100 t and 200 t)
- **EEK6** Ground cable, 600 mm long

C16A LOAD CELLS, OPTIONAL VERSIONS

Ordering number
K-C16A2

Code	Option 1: Mechanical design
S	Standard

Code	Option 2: Accuracy class	
D1	D1 (OIML)	
C3	C3 (OIML)	[only with option 3 = 20 / 30 / 40 / 60 / 100]
C4	C4	(OIML) [only with option 3 = 30 / 40 / 60]
C5	C5 (OIML)	[only with option 3 = 30 / 40 / 60] (on request)

Code	Option 3: Maximum capacity	
20	20 t	[only with option 2 = D1 / C3]
30	30 t	[only with option 2 = D1 / C3 / C4 / (C5 on request)]
40	40 t	[only with option 2 = D1 / C3 / C4 / (C5 on request)]
60	60 t	[only with option 2 = D1 / C3 / C4 / (C5 on request)]
100	100 t	[only with option 2 = D1 / C3]
200	200 t	[only with option 2 = D1 and option 6 = N]
400	400 t	[only with option 2 = D1]

Code	Option 4: Explosion protection	
N	No Ex protection	
AI1/21	ATEX+IECEx+FM zone 1/21	[only with option 6 = N]
AI2/21	ATEX+IECEx zone 2/21	

Code	Option 5: Cable length	
S12	12 m (standard)	[only with option 3 = 20 / 30]
S20	20 m (standard)	[only with option 3 = 40 / 60 / 100 / 200]
20	20 m	[only with option 3 = 20 / 30]
40	40 m	
20R	20 m (standard)	[only with option 3 = 20 / 30 / 40 / 60]

Code	Option 6: Overvoltage protection
N	None
L	With overvoltage protection

Code	Option 7: Other
N	None
Y	Y=20000 [only with option 2 = C3 + Option 3 = 30/40/60]

K-C16A2 - S - □□ - □□□ - □□□□□□ - □□□ - □ - □

Not all codes can be combined with one another. Take note of the conditions in square brackets!

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