



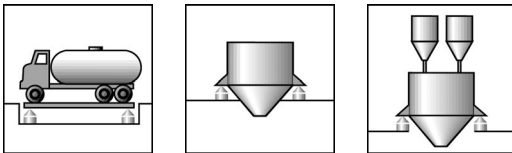
# C16A... 100/200/400 t

Self-centering  
pendulum load cells



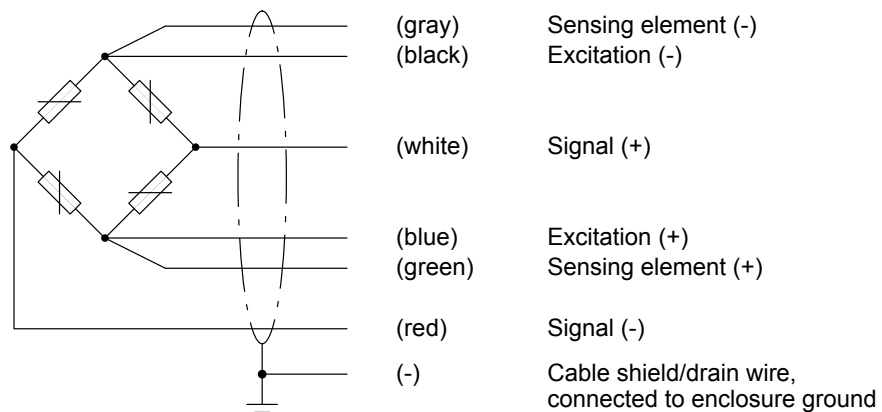
## Special features

- Self-restoring function
- Nominal (rated) loads: 100 t, 200 t and 400 t
- Simple installation
- Rust-resistant materials, laser-welded, IP68
- Optimized for parallel connection by off-center load compensation
- Meets EMC requirements as per EN 45501
- Ex-protection design as per ATEX (optional)

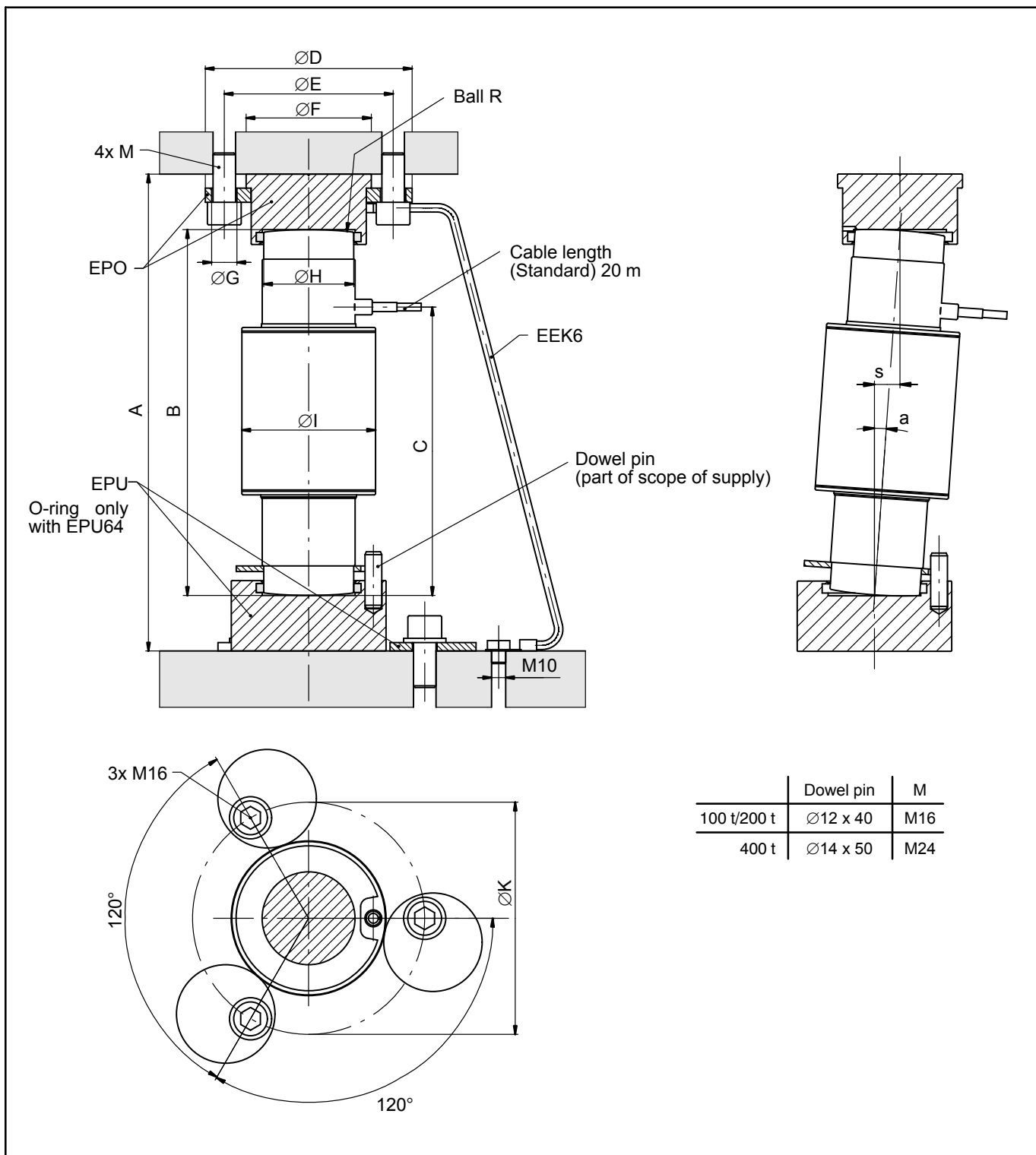


## Cable assignment

Cable assignment (six-wire configuration):



# Dimensions and mounting depth



	Dowel pin	M
100 t/200 t	$\varnothing 12 \times 40$	M16
400 t	$\varnothing 14 \times 50$	M24

Nominal (rated) load	Thrust pieces top + bottom (1 set = 2 pieces)	A	B	C	$\varnothing D$	$\varnothing E$	$\varnothing F$	$\varnothing G$	$\varnothing H$	$\varnothing I$	$\varnothing K$	R	$\alpha_{max}^{1)}$	$s_{max}^{2)}$	$F_R^{3)}$	
															at $s_{max}$	at $s = 1 \text{ mm}$
100 t 200 t	EPO3/100 t, C16/EPU64	339	260	205	147	120	89	18	64	95	165	290	4°	18	8.6	0.48
		$\pm 1.5$											2°	9	7.3	0.81
400 t	EPO3/400 t, C16/EPU109	412	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

## Specifications

Type				C16A D1			C16A C3
Nominal (rated) load	$E_{max}$		100 t	200 t	400 t	100 t	
Accuracy class per OIML R60			D1 (0.0330 %)			C3 (0.0170 %)	
Number of scale intervals	$n_{LC}$		1000 (10000 NTEP III LM)	1000		3000	
Minimum load cell verification interval	$v_{min}$	% of $E_{max}$	0.0200 (0.0068 NTEP III LM)	0.0200		0.0100	
Nominal (rated) sensitivity	$C_n$	mV/V	2				
Sensitivity tolerance <sup>1)</sup>		%	±0.5				
Temperature coefficient of sensitivity <sup>2)</sup>	$TK_C$	% of	±0.0250			±0.0080	
Temperature coefficient of zero signal	$TK_0$	$C_n/10$ K	±0.0285			±0.0140	
Relative reversibility error <sup>2)</sup>	$d_{hy}$		±0.0330			±0.0170	
Non-linearity <sup>2)</sup>	$d_{lin}$	% of $C_n$	±0.0300			±0.0180	
Load creep in 30 min.	$d_{cr}$		±0.0330			±0.0167	
Input resistance	$R_{LC}$		700 ±20				
Output resistance <sup>1)</sup>	$R_0$	Ω	706 ±3.5				
Reference excitation voltage	$U_{ref}$		5				
Nominal (rated) range of the supply voltage	$B_U$	V	0.5 ... 12				
Insulation resistance	$R_{is}$	GΩ	> 5				
Nominal (rated) ambient temperature range	$B_T$		-10 ... +40				
Operating temperature range	$B_{tu}$	°C	-30 ... +70				
Storage temperature range	$B_{tl}$		-50 ... +85				
Limit load	$E_L$		150				
Breaking load	$E_d$	% of $E_{max}$	> 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 <sup>3)</sup> Stainless steel <sup>3)</sup> Viton® Thermoplastic elastomer				

<sup>1)</sup> 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.

<sup>2)</sup> 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.

<sup>3)</sup> as per EN 10088-1

## Options:

- **Overvoltage protection** (not possible with Ex protection)
- **Ex protection versions as per ATEX:**
  - II 2 G Ex ia IIC T4 and T6 (Zone 1) <sup>\*</sup>)
  - II 3 G Ex nA II T6 (Zone 2)
  - II 2 D Ex tD A21 IP68 T80 °C (Zone 21) <sup>\*</sup>)
  - II 3 D Ex tD A22 IP68 T80 °C (Zone 22 for non-conductive dust)
  - II 2 G EExd IIC T6 (Zone 1) <sup>\*</sup>) see separate data sheet

<sup>\*</sup>) with EC Type Approval Test Certificate

- **40 m cable**

## Accessories (to be ordered separately):

- **EPO3/100t** Thrust piece for top, incl. clamping ring (100t and 200t)
- **C16/EPU64** Thrust piece for bottom, incl. 3 eccentric discs (100t and 200t)
- **EPO3/400t** Thrust piece for top, incl. clamping ring (400t)
- **C16/EPU109** Thrust piece for bottom, incl. 3 eccentric discs (400t)
- **EEK6** Ground cable, 600mm long

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

**Hottinger Baldwin Messtechnik GmbH**

Im Tiefen See 45 · 64293 Darmstadt · Germany  
Tel. +49 6151 803-0 · Fax: +49 6151 803-9100  
Email: [info@hbm.com](mailto:info@hbm.com) · [www.hbm.com](http://www.hbm.com)

measure and predict with confidence

