

Z16A...

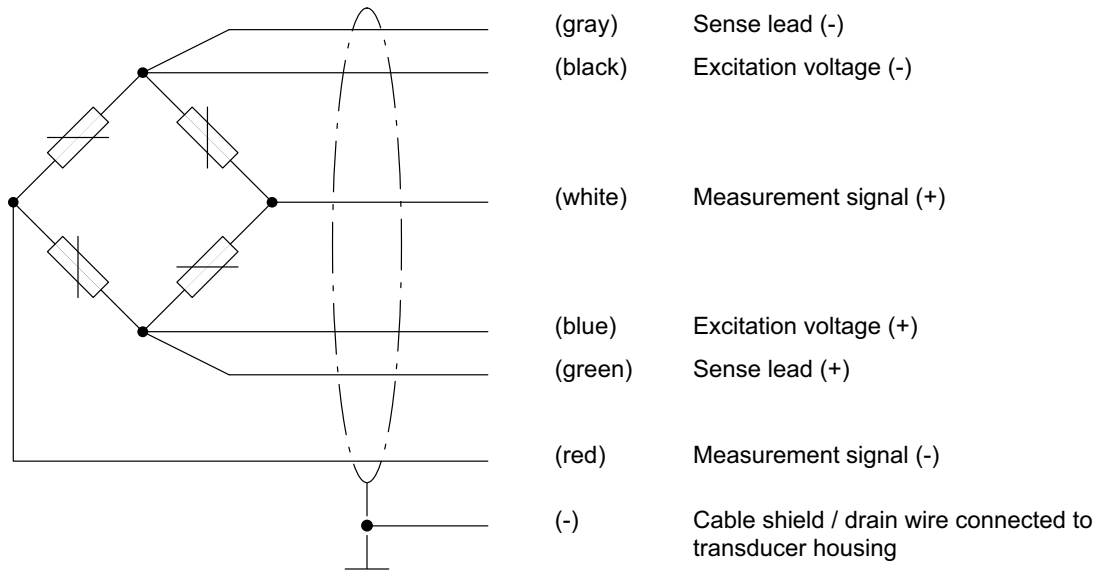
Rugged tension load cell

Special features

- Nominal (rated) loads: 7.5 t, 15 t
- Simple installation
- Rust-resistant materials, laser-welded, IP68, IP69K
- Accuracy class up to C3 (OIML R60 test report)
- Optimized for parallel connection by off-center load compensation
- Meets EMC requirements as per EN 45501
- Adapter for M36x3 internal thread available
- Six-wire configuration
- Explosion protection versions per ATEX and IECEx



Cable assignment (6-wire configuration)



With this cable assignment, the output voltage at the measuring amplifier is positive in the tensile direction when the transducer is loaded.

Specifications

Type			Z16A		
Accuracy class per OIML R60 ¹⁾			D1		C3
Number of load cell verification intervals	n_{LC}		1000		3000
Nominal (rated) load	E_{max}	t	7.5	15	15
Minimum load cell verification interval	v_{min}	% of E_{max}	0.0200		0.0100
Ratio of minimum verification interval	Y		5,000		10,000
General specifications					
Nominal (rated) sensitivity ²⁾	C_n	mV/V	2		
Sensitivity tolerance		%	±0.5		
Temperature coefficient of sensitivity ³⁾	TC_S	% of $C_n/10$ K	±0.0250		±0.0080
Temperature coefficient of zero signal	TC_0		±0.0285		±0.0140
Relative reversibility error ³⁾	d_{hy}		±0.0330		±0.0170
Linearity error ³⁾	d_{lin}		±0.0300		±0.0180
Load creep in 30 min.	d_{cr}		±0.0330		±0.0167
Input resistance (black-blue)	R_{LC}		Ω	700 ±20	
Output resistance ²⁾ (red-white)	R_0	706 ±3.5 (Option 40 m: 711 ±3.5)			
Reference excitation voltage	U_{ref}	V	5		
Nominal (rated) range of the excitation voltage	B_U		0.5 ... 12		
Insulation resistance at 100V _{DC}	R_{is}	G Ω	> 5		
Nominal (rated) ambient temperature range	B_T	°C	-10 ... +40		
Operating temperature range	B_{tu}		-30 ... +70		
Storage temperature range	B_{tl}		-50 ... +85		
Limit load	E_L	% of E_{max}	150		
Breaking load	E_d		> 350		
Relative permissible oscillatory stress (oscillation width as per DIN 50100)	F_{srel}		70		
Nominal (rated) displacement at E_{max} , approx.	s_{nom}	mm	0.20	0.27	
Weight without cable, approx.	G	kg	2.3		
Degree of protection per DIN EN 60529 (IEC 529)			IP68 (test conditions: 100 hours under 1m water column); IP69 K (water at high pressure, steam cleaner) ⁴⁾		
Cable length, six-wire configuration			12 m		
Material					
Measuring body and housing			Stainless steel ⁵⁾		
Cable entry			Stainless steel ⁵⁾		
Seal			Viton [®]		
Cable sheath			Thermoplastic elastomer		

1) $P_{LC} = 0.7$

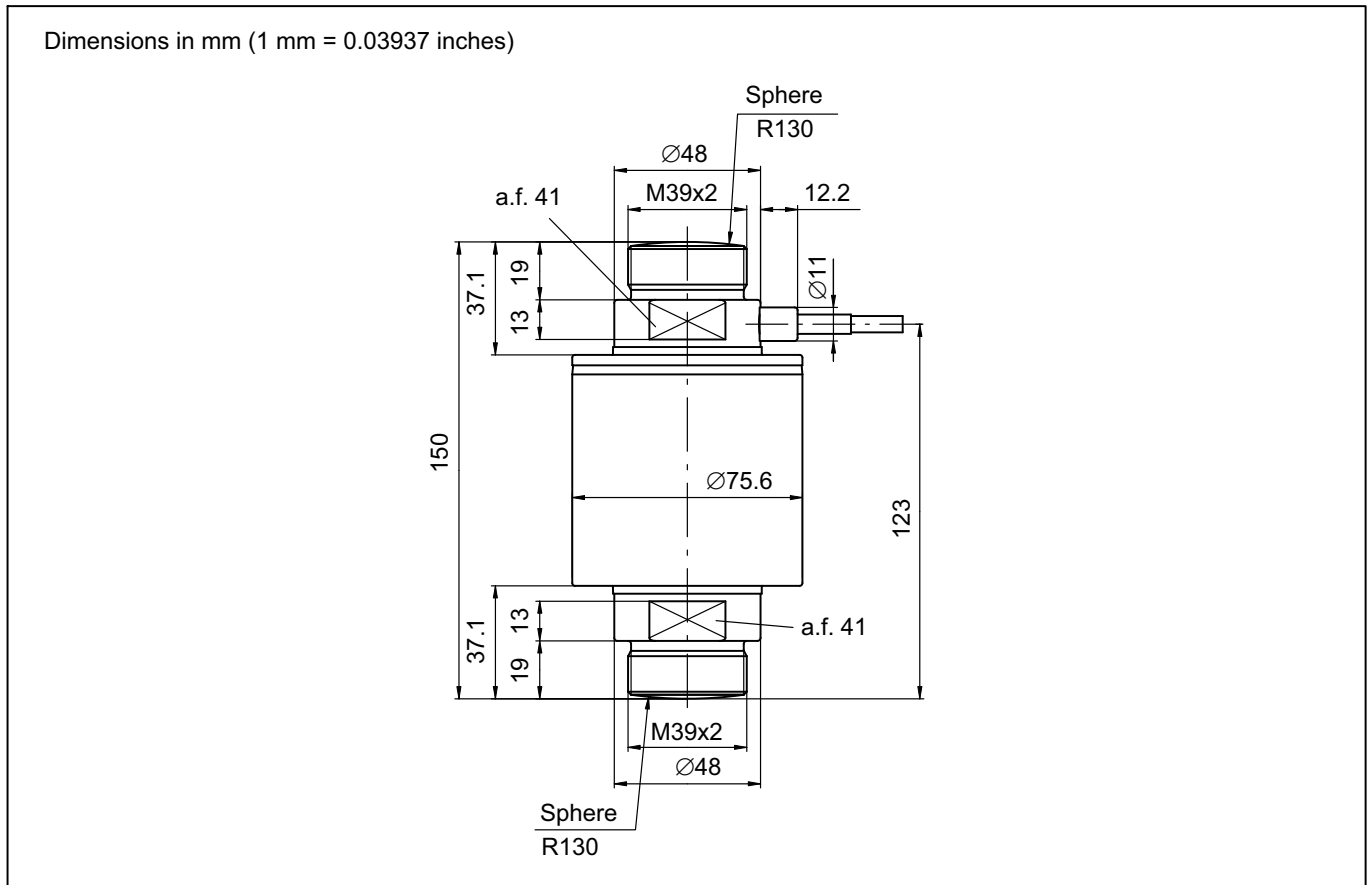
2) Sensitivity and output resistance are matched in such a way on each transducer that the measured value lies within the permissible error limits when they are connected in parallel.

3) 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 limits according to OIML R60.

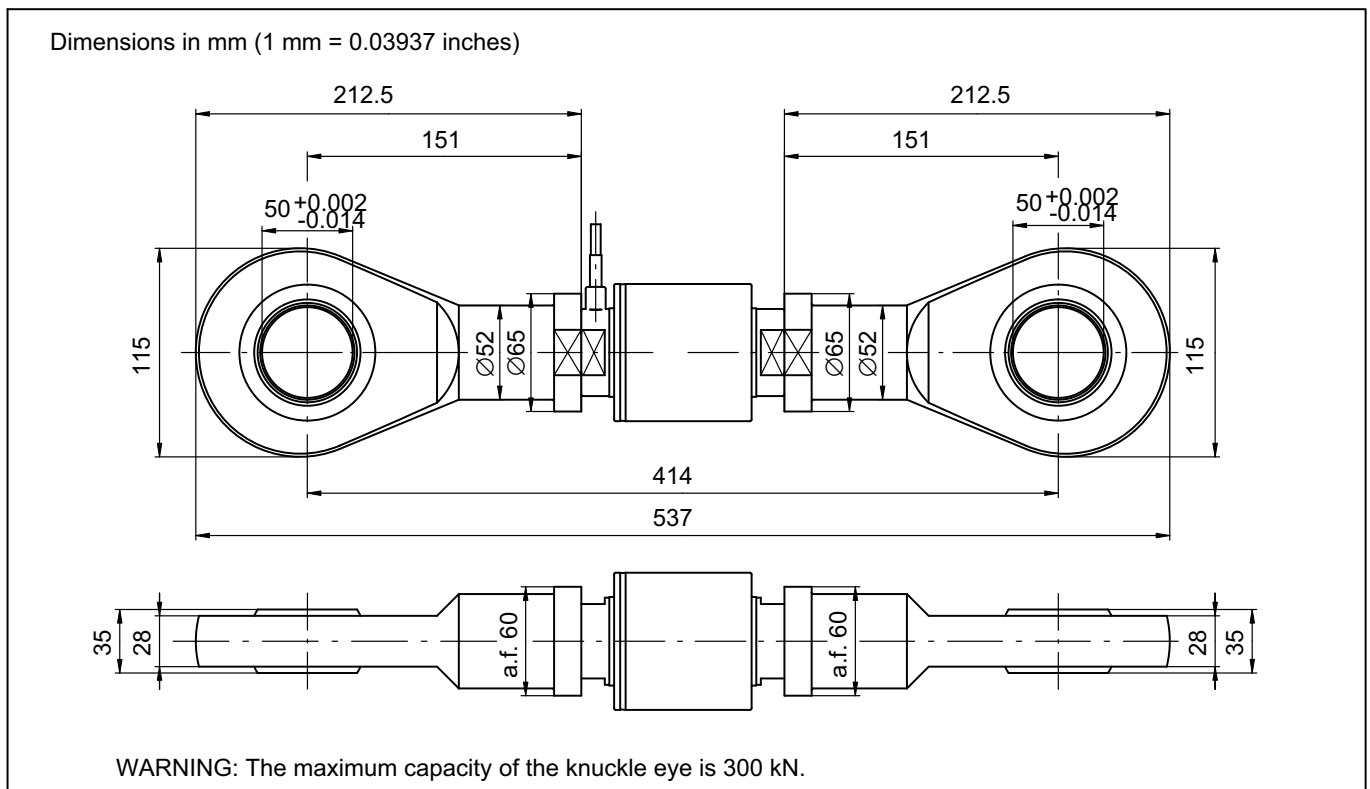
4) Based on DIN 40050, Part 9 specifications, for road vehicles

5) As per EN 10088-1

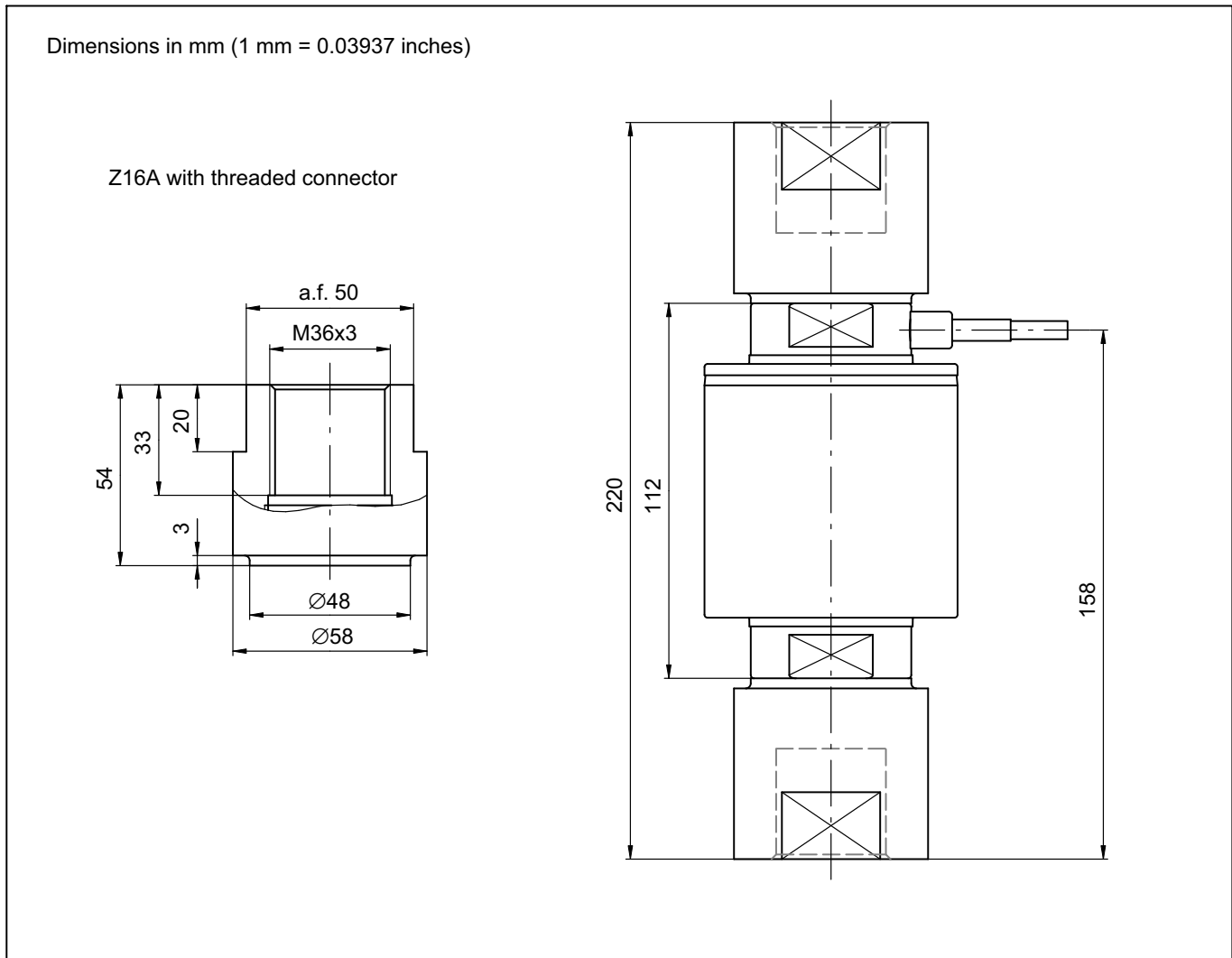
Dimensions and mounting parts for maximum capacities 7.5 t ... 20 t



Accessories, knuckle eyes (to be ordered separately): 1-U2A/10T/ZGOW, comprising 1 knuckle eye



**Accessories, thread adapter (to be ordered separately):
1-Z16/ADAPTERM36x3, comprising 2 thread adapters**



Options for Z16A

- Explosion protection per IECEx and ATEX

AI1/21 IECEx+ATEX zone 1/21 intrinsically safe, II 2G Ex ia IIC T6/T4 Gb, II 2D Ex ia IIIC T125°C Db*

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

* with EU type examination certificate (BVS13ATEX E 10 X) and IECEx Certificate of Conformity (IECEx BVS 13.0109 X)

** Option AI2/21 IEC + ATEX zone 2/21 includes zone 2/22

- Overvoltage protection
- Cable length 20 m ($E_{max} = 7.5 \text{ t} \dots 15 \text{ t}$) / - Cable length 40 m ($E_{max} = 7.5 \text{ t} \dots 15 \text{ t}$)
- 20 m cable with braided wire ($E_{max} = 7.5 \text{ t} \dots 15 \text{ t}$)

Product numbers

Type	Z16AD1	Z16AC3
Accuracy class	D1 (OIML)	C3 (OIML)
Nominal (rated) load	Order No.	Order No.
7.5 t	1-Z16A3D1/7.5t	
15 t	1-Z16A3D1/15t	1-Z16A3C3/15t

Z16A load cells, optional versions

Order No.	
K-Z16A3	
Code	Option 1: Mechanical design
S	Standard
Code	Option 2: Accuracy class
D1	D1 (OIML)
C3	C3 (OIML) [only with option 3 = 15 t]
Code	Option 3: Nominal (rated) load
7.5	7.5 t
15	15 t
Code	Option 4: Explosion protection
N	No explosion protection
AI1/21	IECEX + ATEX zone 1/21
AI2/21	IECEX + ATEX zone 2/21
Code	Option 5: Cable length
S12	12 m (Standard)
20	20 m
40	40 m
20R	20 m (metal braiding)
Code	Option 6: Overvoltage protection
N	None
L	With overvoltage protection
Code	Option 7: Other
N	None

K-Z16A3 - [S] - [] - [] - [] - [] - [] - [] - [] - [] - [N]

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

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 · www.hbm.com

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