

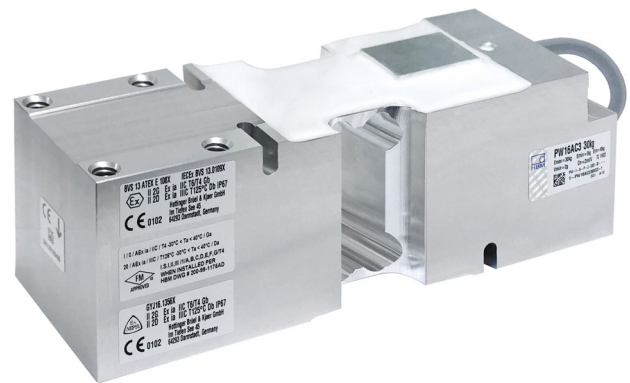
DATA SHEET

PW16A...EX

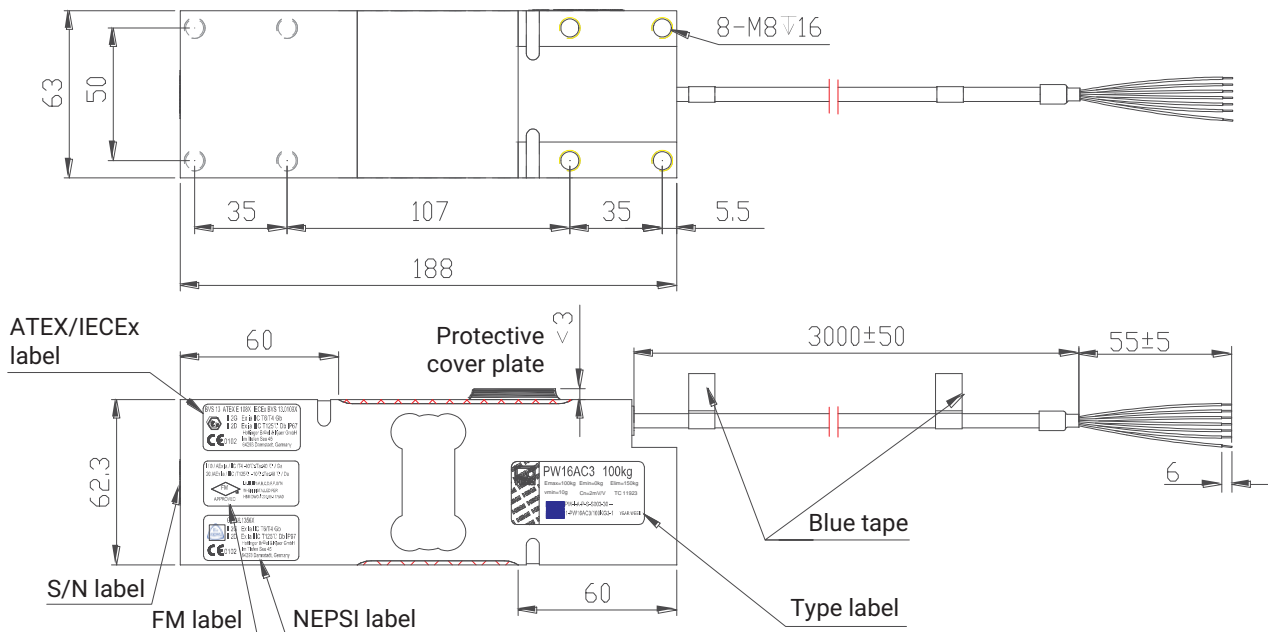
Single point load cells

SPECIAL FEATURES

- Explosion protection intrinsically safe execution for zone 1/21 ATEX/IECEX/FM-US/NEPSI
- Maximum capacities: 30 kg ... 660 kg
- Aluminum
- High ratio of minimum verification interval Y
- Off-center load compensation
- Complies with EMC directives



DIMENSIONS



Dimensions in mm (1 mm = 0.03937 inches)

SPECIFICATIONS

Type			PW16A...EX									
Accuracy class ¹⁾			C3 Multi Range (MR)									
Number of load cell verification intervals	n_{LC}		3000									
Maximum capacity	E_{max}	kg	30	50	75	100	150	200	250	300	500	660
Minimum load cell verification interval	v_{min}	g	2	5	5	10	10	20	20	20	50	50
Temperature coefficient of zero signal	TC_0	% of $C_n / 10\text{ K}$	± 0.0093	± 0.0140	± 0.0093	± 0.0140	± 0.0093	± 0.0140	± 0.0112	± 0.0093	± 0.0140	± 0.0106
Ratio of minimum verification interval Y	Y		15,000	10,000	15,000	10,000	15,000	10,000	12,500	15,000	10,000	13,200
Maximum platform size		mm	600 x 600									
Nominal sensitivity	C_n	mV/V	2.0 \pm 0.2									
Zero signal			0 \pm 0.1									
Temperature coefficient of sensitivity ²⁾	TC_S	% of $C_n / 10\text{ K}$										
Temperature range +20 ... +40 °C			± 0.0175									
-10 ... +20 °C	± 0.0117											
Relative reversibility error ²⁾	d_{hy}	% of C_n	± 0.0166									
Non-linearity ²⁾	d_{lin}		± 0.0166									
Minimum dead load output return	DR		± 0.0166									
Off-center load error ³⁾			± 0.0233									
Input resistance	R_{LC}	Ω	300 ... 500									
Output resistance	R_0		300 ... 500									
Reference excitation voltage	U_{ref}	V	5									
Nominal (rated) range of the excitation voltage	B_U		1 ... 15									
Insulation resistance at 100 V _{DC}	R_{is}		G Ω	> 2								
Nominal (rated) range of the ambient temperature	B_T	°C	-10 ... +40									
Service temperature range	B_{tu}		-10 ... +50									
Storage temperature range	B_{tl}		-25 ... +70									
Limit load	E_L	% of E_{max}	150									
Limit lateral loading, static	E_{lq}		300									
Service load at max. 100 mm eccentricity	E_u		150									
Breaking load at max. 20 mm eccentricity	E_d		300									
Relative permissible oscillation stress at max. 20 mm eccentricity	F_{srel}		70									
Rated displacement at E_{max} , approx.	s_{nom}		mm	< 0.5								
Weight, approx.	m	kg	1.8									
Degree of protection ⁴⁾			IP67									
Material:												
Measuring body			Aluminum									
Covering agent			Silicone rubber									
Cable sheath			PVC									

1) As per OIMLR60, with $P_{LC} = 0.7$

2) If the values for non-linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of sensitivity (TC_C) are added together, they are within the cumulated error limit specified in OIML R60.

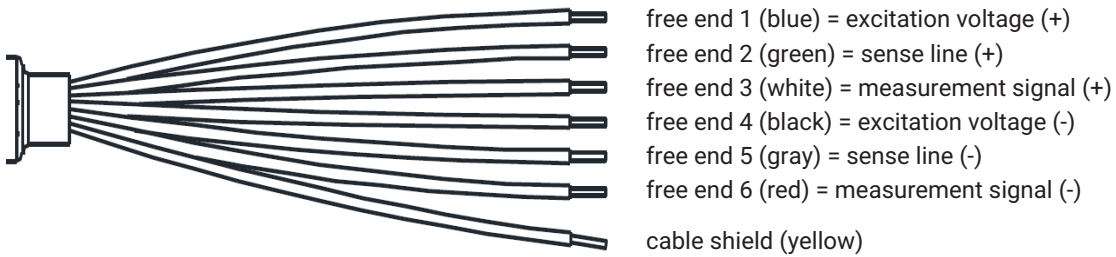
3) Off-center load deviation per OIML R76.

4) EN 60 529 (IEC 529)

CABLE ASSIGNMENT

6-wire cable connection with free ends, 6 x 0.14 mm²/AWG 26, cable length 3 m

Schematic diagram with free ends



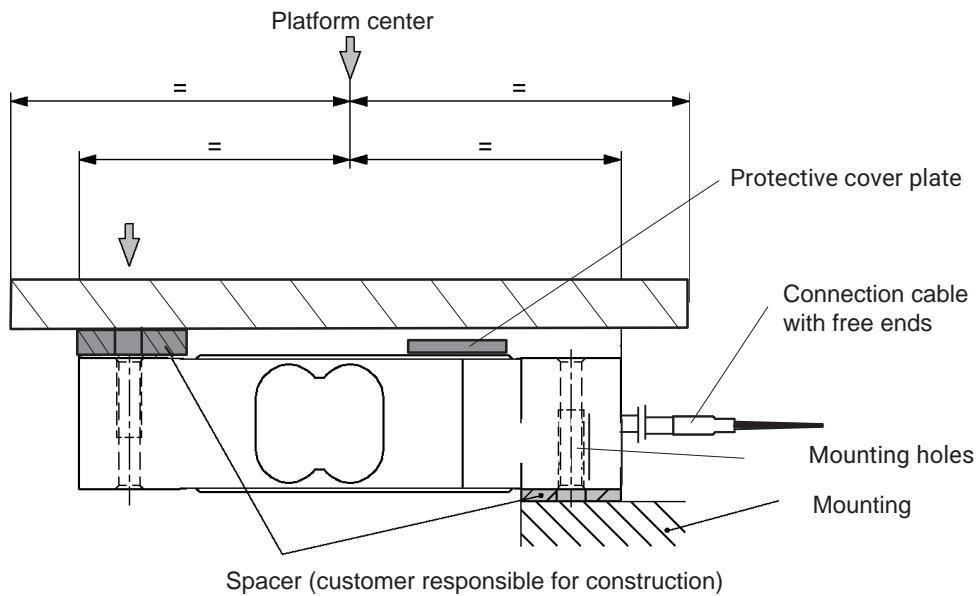
MOUNTING AND LOAD APPLICATION

The load cells are attached at the mounting holes, the load is applied at the other end. The recommended screws and tightening torques can be found in the table below:

Maximum capacities	Thread	Min. property class	Tightening torque ¹⁾
30...500 kg	M8	10.9	32 N·m
660 kg	M8	12.9	39 N·m

¹⁾ Recommended value for the specified property class. Please comply with the screw manufacturer's instructions with regard to screw dimensions

Load must not be applied to the side where the cable connection is located, as this would cause a force shunt.



PRODUCT NUMBERS

PW16A... (aluminum, explosion protection)

Type	PW16A			
Accuracy class	C3-MR (OIML) (Multi Range)			
Comments	Cable length 3 m (6-wire)			
Maximum capacity	Ordering number		Maximum capacity	Ordering number
30 kg	1-PW16AC3/30KG3-1		200 kg	1-PW16AC3/200KG3-1
50 kg	1-PW16AC3/50KG3-1		250 kg	1-PW16AC3/250KG3-1
75 kg	1-PW16AC3/75KG3-1		300 kg	1-PW16AC3/300KG3-1
100 kg	1-PW16AC3/100KG3-1		500 kg	1-PW16AC3/500KG3-1
150 kg	1-PW16AC3/150KG3-1		660 kg	1-PW16AC3/660KG3-1

EXPLOSION PROTECTION EXECUTIONS

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