

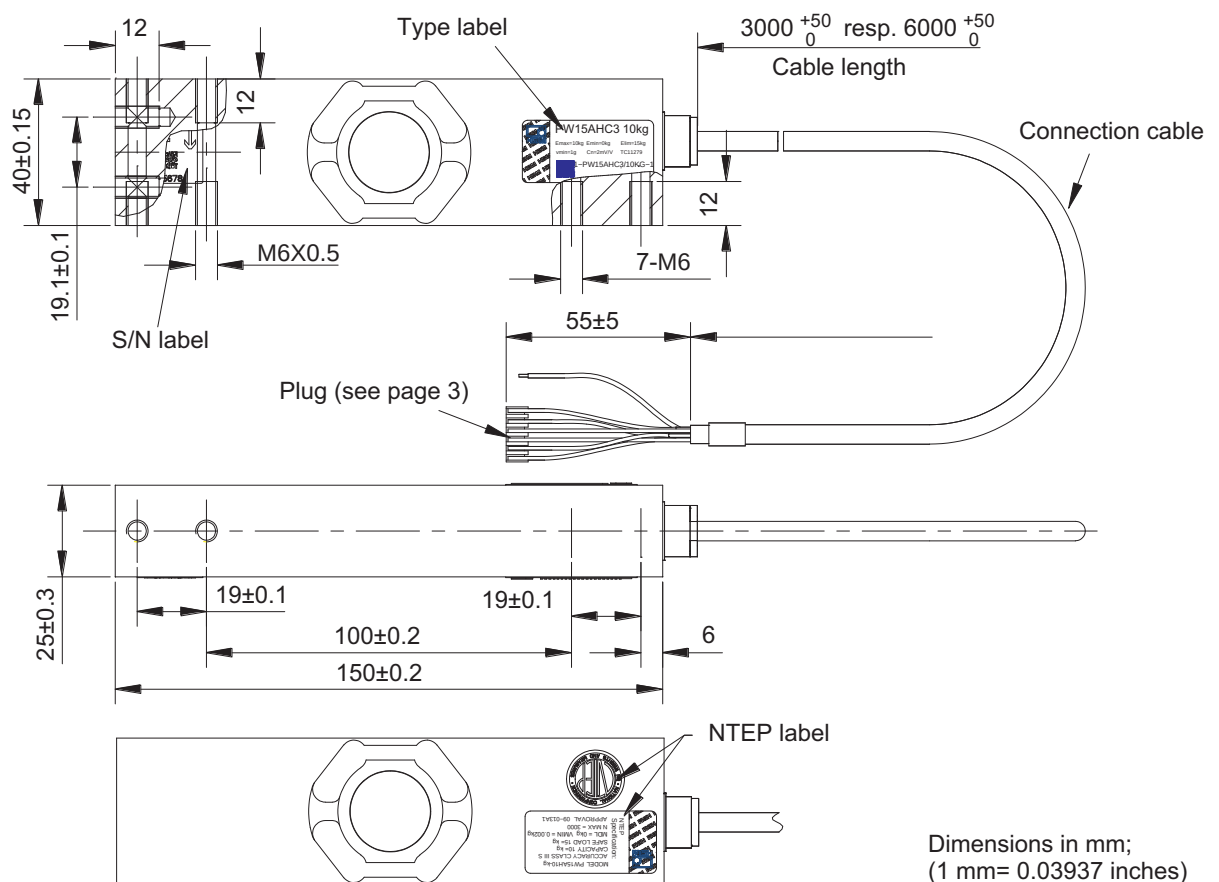
PW15AH...

Single point load cell

Special features

- Nominal load 10 kg ... 100 kg
- Stainless steel
- High ratio of minimum verification interval Y
- Industrial Footprint (SP4M)
- Degree of Protection IP68; IP69K
- Different cable lengths and other options available

Data sheet



Specifications

Type			PW15AH/PW15AHY (C3 MR)			
Accuracy class ¹⁾			C3 Multi Range (MR)			
Max. number of load cell interval	n_{LC}		3000			
Maximum capacity	E_{max}	kg	10	20	50	100
Min. LC verification interval (PW15AH)	v_{min}	g	1	2	5	10
Ratio of minimum verification interval (PW15AH)	Y		10000			
Temperature effect on zero balance (PW15AH)	TK_0	% of C_n / 10 K	± 0.0140			
Min. LC verification interval (PW15AHY)	v_{min}	g	0.5	1	2	5
Ratio of minimum verification interval (PW15AHY)	Y		20000		25000	20000
Temperature effect on zero balance (PW15AHY)	TK_0	% of C_n / 10 K	± 0.0070		± 0.0056	± 0.0070
Maximum platform size		mm	500 x 400			
Sensitivity	C_n	mV/V	2.0 ± 0.2			
Zero balance			0 ± 0.1			
Temperature effect on sensitivity ²⁾ Temperature range: +20 ... +40°C [+68 ... +104°F] -10 ... +20°C [+14 ... +68°F]	TK_C	% of C_n / 10 K	± 0.0175 ± 0.0117			
Hysteresis error ²⁾	d_{hy}	% of C_n	± 0.0166			
Non-linearity ²⁾	d_{lin}		± 0.0166			
Minimum dead load output return	MDLOR		± 0.0166			
Off center load error ³⁾			± 0.0233 ³⁾			
Input resistance	R_{LC}	Ω	300 ... 500			
Output resistance	R_0		300 ... 500			
Reference excitation voltage	U_{ref}	V	5			
Nom. range of excitation voltage	B_U		1 ... 12			
Max. excitation voltage ⁴⁾			15			
Insulation resistance with 100 V _{DC}	R_{is}	G Ω	> 1			
Nominal temperature range	B_T	°C [°F]	-10 ... +40 [+14 ... +104°F]			
Service temperature range	B_{tu}		-10 ... +50 [+14 ... +122°F]			
Storage temperature range	B_{tl}		-25 ... +70 [-13 ... +158°F]			
Limit load at max. 160 mm eccentricity	E_L	% of E_{max}	150			
	E_L	mm	160			
Lateral load limit, static	E_{lq}	% of E_{max}	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			
Deflect. at E_{max} , approx.	s_{nom}	mm	< 0.5			
Weight, approx.	m	kg	1.0			

Protection class ⁵⁾			IP 68 (test conditions 100 h at 1 m water column); IP69K (water at high pressure, steam jet cleaning) ⁶⁾
Material	Measuring element Cable sheath		1.4545 ⁷⁾ PVC (3 m) or PUR (6 m)

¹⁾ According to OIML R60 with $P_{LC} = 0.7$

²⁾ The data for Non-linearity (d_{lin}), Hysteresis error (d_{hy}) and Temperature effect on sensitivity (TK_C) are typical values. The sum of these data meets the requirements according to OIML R60.

³⁾ According to OIML R76

⁴⁾ For explosion protection variants, see "Explosion protection: Safety instructions," available at <https://www.hbm.com/en/3010/pw15b-robust-stainless-steel-single-point-load-cell/>

⁵⁾ According to EN60529 (IEC529)

⁶⁾ Following the definitions of the DIN 40050, part of 9, for road vehicles

⁷⁾ According to EN 10088-1

Type			PW15AH (C6 MR)			
Accuracy class ⁸⁾			C6 MR (Multi Range)			
Max. number of load cell interval	n_{LC}		6,000			
Maximum capacity	E_{max}	kg	10	20	50	100
Minimum load cell verification interval	v_{min}	g	0.5	1	2	5
Ratio of minimum verification interval	Y		20,000		25,000	20,000
Temperature coefficient of zero signal	TC_0	% of C_n / 10 K	±0.0070	±0.0070	±0.0056	±0.0070
Temperature coefficient of sensitivity ⁹⁾ Temperature range: +20 ... +40°C [+68 ... +104°F] -10 ... +20°C [+14 ... +68°F]	TC_s		±0.0087 ±0.0058			
Hysteresis error ⁹⁾	d_{hy}	% of C_n	±0.0083			
Non-linearity ⁹⁾	d_{lin}		±0.0083			
Minimum dead load output return	MDLOR		±0.0083			
Off center load error ¹⁰⁾			±0.0116			
Material cable sheath			PVC (3 m)			

Type			PW15AH (C3MI8)			
Accuracy class ⁸⁾			C3MI8			
Max. number of load cell interval	n_{LC}		3,000			
Maximum capacity	E_{max}	kg	10	20	50	100
Minimum load cell verification interval	v_{min}	g	1	2	5	10
Ratio of minimum verification interval	Y		10,000			
Temperature coefficient of zero signal	TC_0	% of C_n / 10 K	±0.0140			
Temperature coefficient of sensitivity ⁹⁾ Temperature range: +20 ... +40°C [+68 ... +104°F] -10 ... +20°C [+14 ... +68°F]	TC_s		±0.0175 ±0.0117			
Hysteresis error ⁹⁾	d_{hy}	% of C_n	±0.0062			
Non-linearity ⁹⁾	d_{lin}		±0.0062			
Minimum dead load output return	MDLOR		±0.0062			
Off center load error ¹⁰⁾			±0.0116			
Material cable sheath			PVC (3 m)			

⁸⁾ As per OIML R60, with $P_{LC} = 0.7$

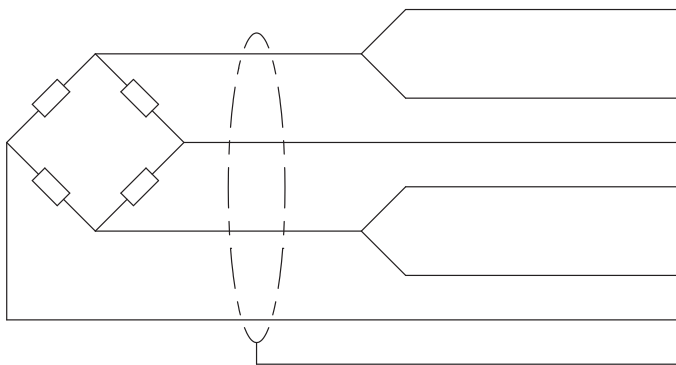
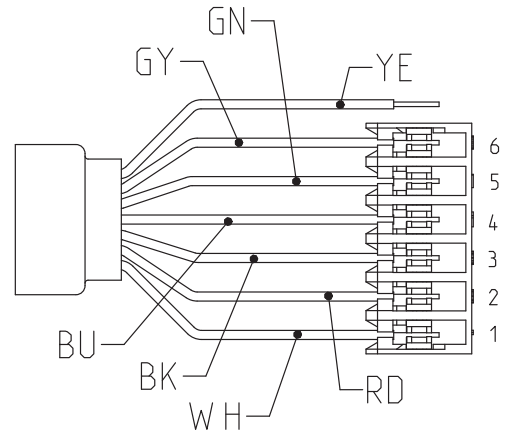
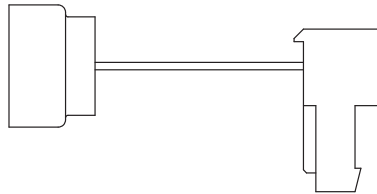
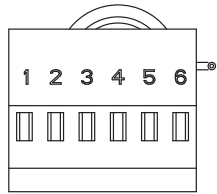
⁹⁾ The sum of data for Non-linearity, Hysteresis and TC Span meets the requirements of OIML R60

¹⁰⁾ As per OIML R76

Wiring code

Connection with 6 wire cable, 6 x 0.14 mm²/AWG 264 (selectable cable length: 3 m; 6 m)

Schematic diagram of a TE connector* (TE 3-640442-6), 6-pin

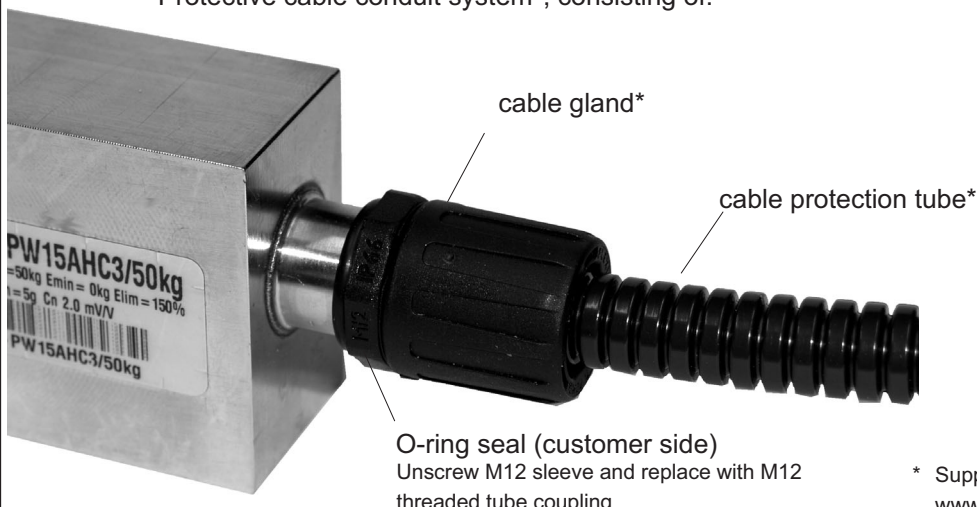


- Plug-in contact 4 (blue [BU]) = excitation voltage (+)
- Plug-in contact 5 (green [GN]) = sense line (+)
- Plug-in contact 1 (white [WH]) = measurement signal (+)
- Plug-in contact 3 (black [BK]) = excitation voltage (-)
- Plug-in contact 6 (gray [GY]) = sense line (-)
- Plug-in contact 2 (red [RD]) = measurement signal (-)
- Shield (yellow [YN]) = Cable shield

* not for explosion protection variants

Cable protection (to be implemented by the customer)

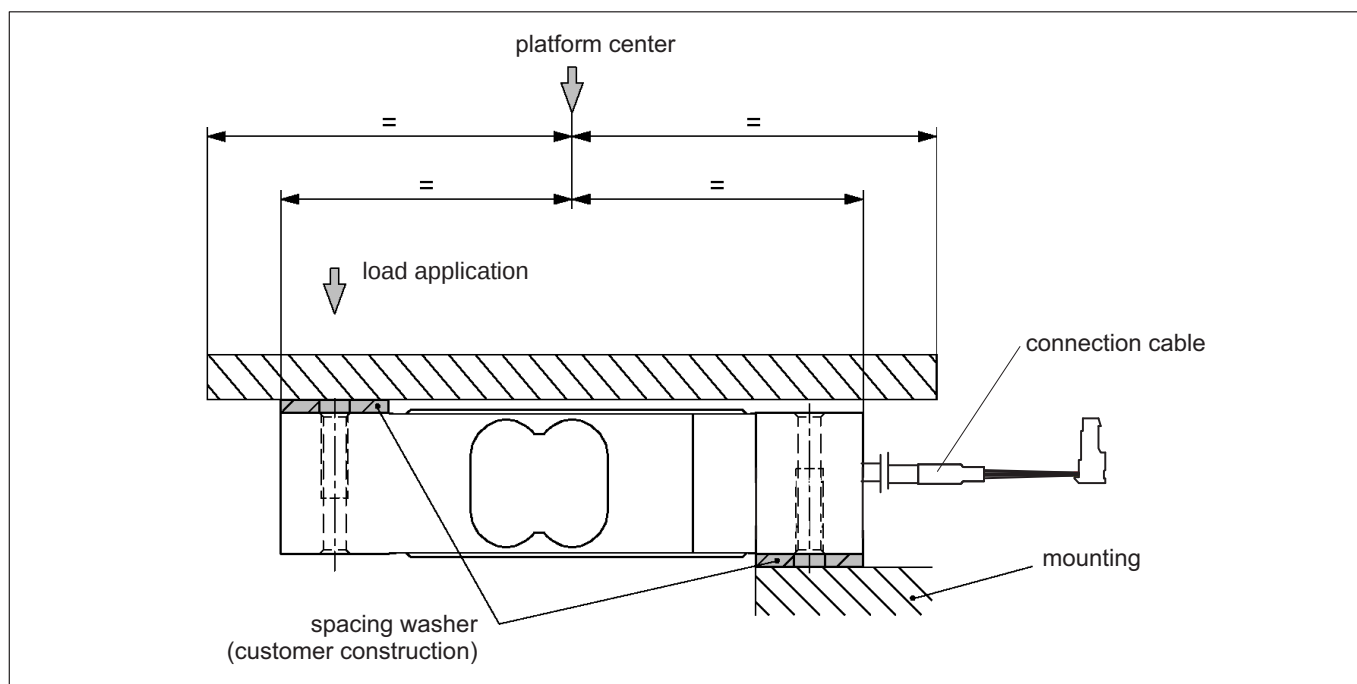
Protective cable conduit system*, consisting of:



* Supplier, e.g. Comp. Flexicon,
www.flexicon.uk.com

Load application

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



Ordering codes

PW15AH... (Stainless steel, hermetically sealed)

Type	PW15AH	PW15AHY	PW15AH C3 MI8	PW15AH C6-MR
Accuracy class	C3-MR (OIML) (Multi Range)	C3-MR (OIML) (Multi Range, high Y value)	C3 MI8 (OIML)	C6-MR (OIML) (Multi Range)
Capacity	Order number			
Cable length 3 m (6-wire, PVC)				
10 kg	1-PW15AHC3/10KG-1	1-PW15AHY/10KG-1		
20 kg	1-PW15AHC3/20KG-1	1-PW15AHY/20KG-1		
50 kg	1-PW15AHC3/50KG-1	1-PW15AHY/50KG-1		
100 kg	1-PW15AHC3/100KG-1	1-PW15AHY/100KG-1		
10 kg	1-PW15AHC6/10KG-1	1-PW15AHMI/10KG-1		
20 kg	1-PW15AHC6/20KG-1	1-PW15AHMI/20KG-1		
50 kg	1-PW15AHC6/50KG-1	1-PW15AHMI/50KG-1		
100 kg	1-PW15AHC6/100KG-1	1-PW15AHMI/100KG-1		
Cable length 6 m (6-wire, PUR)				
10 kg	1-PW15AHC3/10KU-1			
20 kg	1-PW15AHC3/20KU-1			
50 kg	1-PW15AHC3/50KU-1			
100 kg	1-PW15AHC3/100KU-1			

PW15AH... (Stainless steel, hermetically sealed), optional versions

Order no.	
K-PW15AH	

Code	Option 1: Mechanical version
N	Standard

Code	Option 2: Accuracy
MR	C3-MR (OIML)

Code	Option 3: Capacity
10	10 kg
20	20 kg
50	50 kg
100	100 kg

Code	Option 4: Explosion protection
N	No explosion protection
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

Code	Option 5: Cable length
3	3 m
6	6 m

Code	Option 6: Miscellaneous
N	without
A	2mV/V $\pm 0.1\%$ / 359 Ohm ± 0.3 Ohm [only with option 4 = N] (aligned output, suitable for connection in parallel)

Code	Option 7
N	Standard

K-PW15AH - **N** - **M** **R** - - - - -

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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