

PW10A...

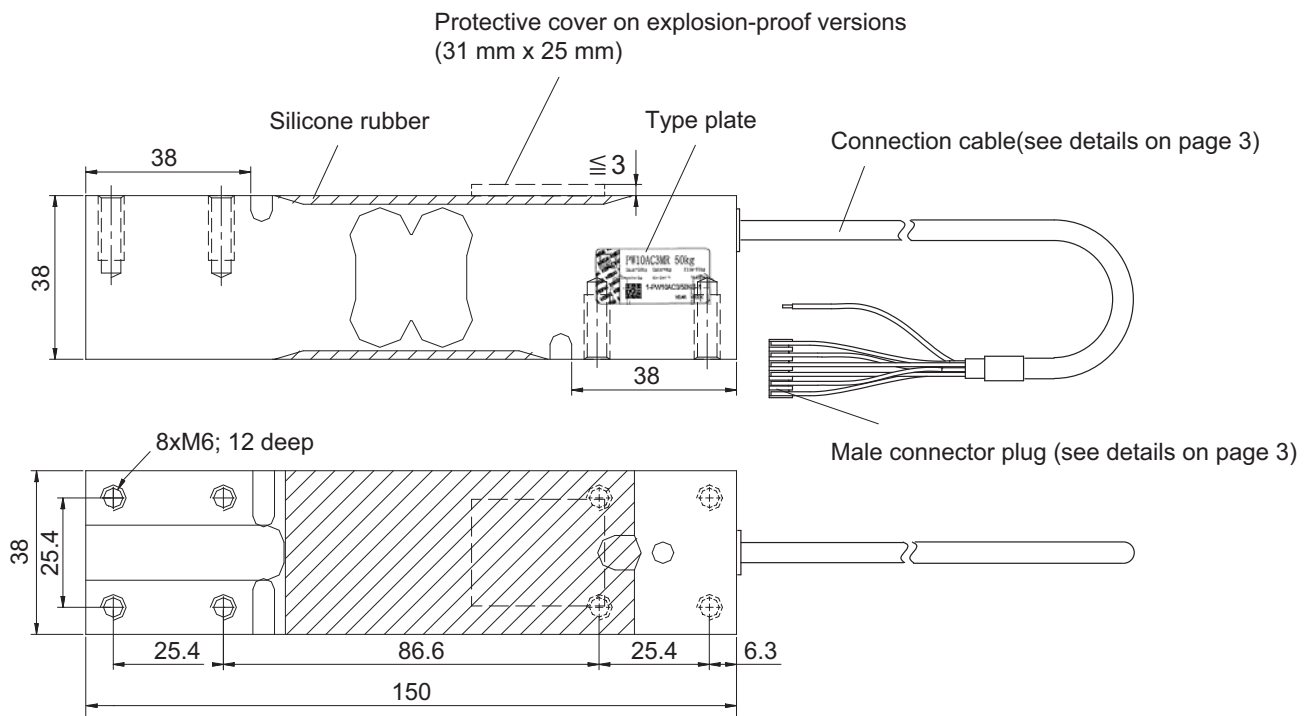
Single-point load cell



Special features

- Maximum capacities: 50 kg ... 300 kg
- Aluminum
- High ratio of minimum verification interval Y
- Compensated off-center load error
- Complies with EMC directives
- Shielded connection cable
- 6-wire configuration
- Explosion protection and other options also available

Dimensions (in mm; 1 mm = 0.03937 inches)



Specifications

| Type | | | PW10A... | | | | | |
|--|---------------------------------|-----------------|--|--------------|--------------|--------------|--------------|--------------|
| Accuracy class ¹⁾ | | | C3 Multi Range (MR) | | | | | |
| Number of load cell verification intervals | n_{LC} | | 3000 | | | | | |
| Maximum capacity ²⁾ | E_{max} | kg | 50 | 100 | 150 | 200 | 250 | 300 |
| Minimum load cell verification interval | v_{min} | g | 5 | 10 | 10 | 20 | 20 | 20 |
| Accuracy class C3MR | | | | | | | | |
| Temperature coefficient of zero signal | TC_0 | % of $C_n/10$ K | ± 0.0140 | ± 0.0140 | ± 0.0093 | ± 0.0140 | ± 0.0112 | ± 0.0093 |
| Accuracy class C3MR | | | | | | | | |
| Ratio of minimum verification interval Y | Y | | 10,000 | 15,000 | 10,000 | 12,500 | 15,000 | |
| Maximum platform size | | mm | 600 x 500 | | | | | |
| Rated output (nominal) | C_n | mV/V | 2.0 ± 0.2 (Option 6: A = 2 mV/V ± 0.1 %) | | | | | |
| Zero signal | | | 0 ± 0.1 | | | | | |
| Temperature coefficient of sensitivity ³⁾ | TC_S | % of $C_n/10$ K | ± 0.0175 ± 0.0117 | | | | | |
| Temperature range | | | | | | | | |
| +20 ... +40 °C | | | | | | | | |
| -10 ... +20 °C | | | | | | | | |
| Relative reversibility error ³⁾ | d_{hy} | % of C_n | ± 0.0166 | | | | | |
| Non-linearity ³⁾ | d_{lin} | | ± 0.0166 | | | | | |
| Minimum dead load output return | DR | | ± 0.0166 | | | | | |
| Off-center load error ⁴⁾ | | | ± 0.0233 | | | | | |
| Input resistance | R_{LC} | Ω | 300 ... 500 | | | | | |
| Output resistance | R_0 | | 300 ... 500 (Option 6: A = 359 $\Omega \pm 0.2 \Omega$) | | | | | |
| Reference excitation voltage | U_{ref} | V | 5 | | | | | |
| Nominal (rated) range of the excitation voltage | B_U | | 1 ... 12 | | | | | |
| Maximum excitation voltage | | | 15 | | | | | |
| Insulation resistance | R_{is} at 100 V _{DC} | G Ω | > 2 | | | | | |
| Nominal (rated) range of the ambient temperature | B_T | °C | -10 ... +40 | | | | | |
| Operating temperature range | B_{tu} | | -10 ... +50 | | | | | |
| Storage temperature range | B_{tl} | | -25 ... +70 | | | | | |
| Limit load | E_L | % of E_{max} | 150 | | | | | |
| at max. eccentricity | | mm | 150 | | | | | |
| Limit lateral loading, static | E_{lq} | % | 300 | | | | | |
| Breaking load | E_d | of E_{max} | 300 | | | | | |
| Rated displacement at E_{max} , approx. | s_{nom} | mm | < 0.5 | | | | | |
| Weight, approx. | m | kg | 0.6 | | | | | |
| Degree of protection ⁵⁾ | | | IP67 | | | | | |
| Material: Measuring body | | | Aluminum | | | | | |
| Application protection | | | Silicone rubber | | | | | |
| Cable sheath | | | PVC | | | | | |

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

²⁾ Maximum eccentric loading as per OIML R76

³⁾ If the values for non-linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of sensitivity (TC_S) are added together, they are within the cumulated error limit specified in OIML R60.

⁴⁾ Off-center load deviation per OIML R76.

⁵⁾ As per EN 60 529 (IEC 529)

Specifications (continued)

| Type | | | PW10A... |
|--|-----------|-------------------|------------------------------|
| Accuracy class ¹⁾ | | | C4 |
| Number of load cell verification intervals | n_{LC} | | 4000 |
| Maximum capacity ²⁾ | E_{max} | kg | 300 |
| Minimum load cell verification interval | v_{min} | g | 20 |
| Ratio of minimum verification interval | Y | | 15,000 |
| Temperature coefficient of zero signal | TC_0 | % of C_n / 10 K | ± 0.0093 |
| Temperature coefficient of sensitivity ³⁾ | TC_S | % of C_n / 10 K | ± 0.0131 ± 0.0087 |
| Temperature range | | | |
| +20 ... +40 °C | | | |
| -10 ... +20 °C | | | |
| Relative reversibility error ³⁾ | d_{hy} | % of C_n | ± 0.0125 |
| Non-linearity ³⁾ | d_{lin} | | ± 0.0125 |
| Minimum dead load output return | MDLOR | | ± 0.0125 |
| Off-center load error ⁴⁾ | | | ± 0.0175 |

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

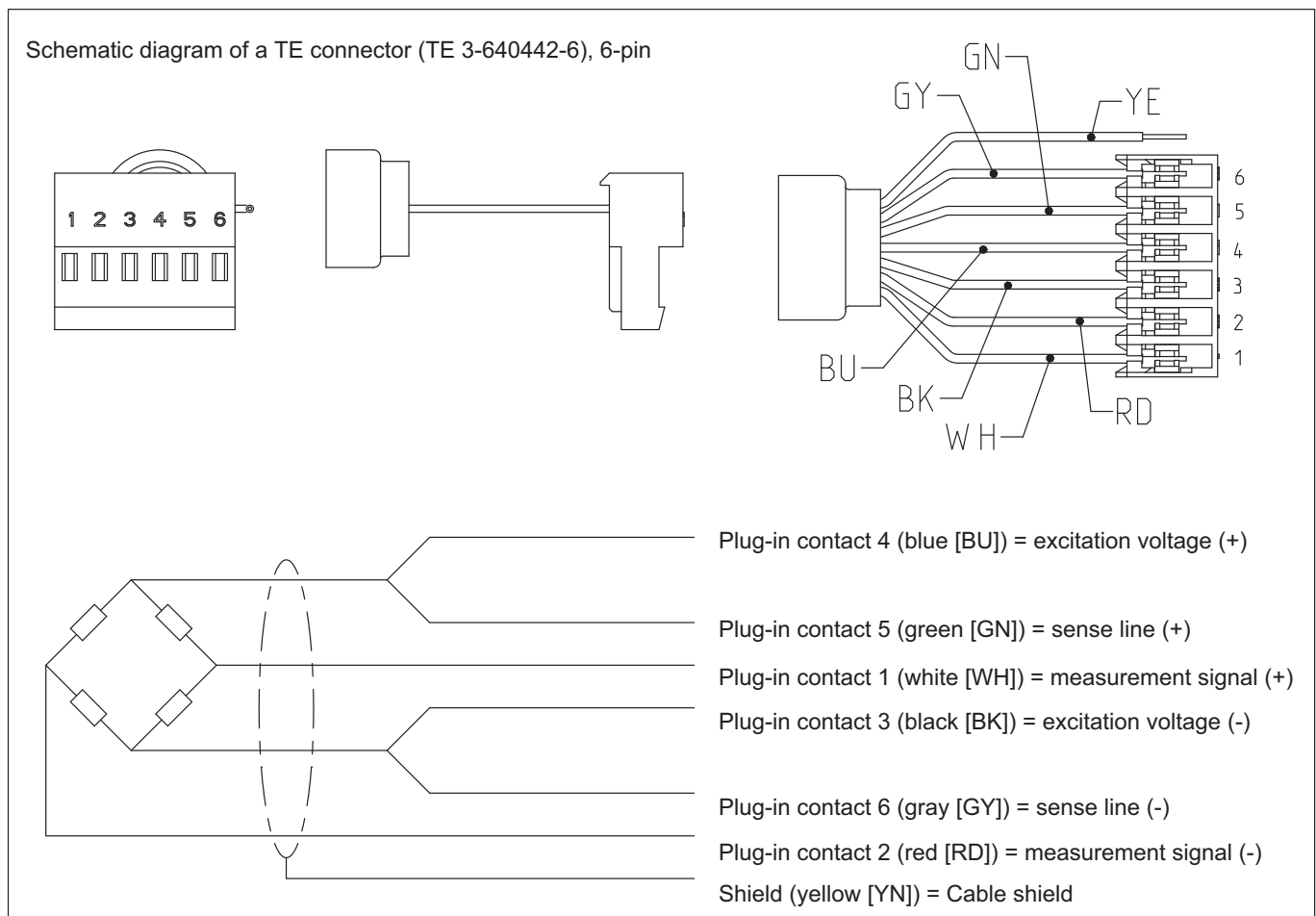
2) Maximum eccentric loading as per OIML R76

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

4) Off-center load error per OIML R76

Cable assignment

6-wire cable connection (available cable lengths: 1.5 m; 3 m; 6 m; 12 m)



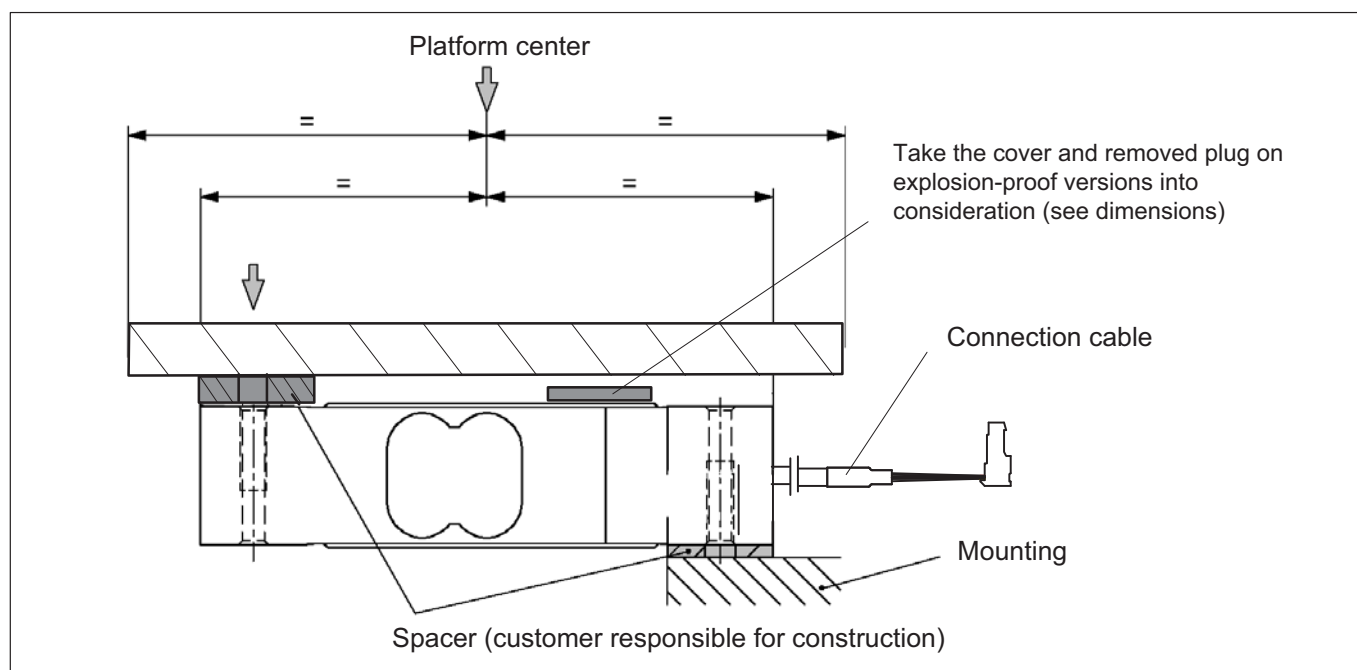
Mounting and load application

The load cells are firmly screwed in to 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⁾ |
|--------------------|--------|---------------------|---------------------------------|
| 50...300 kg | M6 | 10.9 | 14 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

PW10A... (aluminum)

| | | |
|------------------|----------------------------|---------------------------|
| Type | PW10A | |
| Accuracy class | C3-MR (OIML) (Multi Range) | C4 |
| Comment | Cable length 3 m (6-wire) | Cable length 3 m (6-wire) |
| Maximum capacity | Ordering number | Ordering number |
| 50 kg | 1-PW10AC3/50KG-1 | - |
| 100 kg | 1-PW10AC3/100KG-1 | - |
| 150 kg | 1-PW10AC3/150KG-1 | - |
| 200 kg | 1-PW10AC3/200KG-1 | - |
| 250 kg | 1-PW10AC3/250KG-1 | - |
| 300 kg | 1-PW10AC3/300KG-1 | 1-PW10AC4/300KG-1 |

K-PW10A... (aluminum), optional version

| | |
|---|---|
| Ordering number | |
| K-PW10A | |
| Code | Option 1: Mechanical design |
| N | - |
| Code | Option 2: Accuracy class |
| MR | C3-MR (OIML) (Multi Range) |
| Code | Option 3: Maximum capacity |
| 50 | 50 kg |
| 100 | 100 kg |
| 150 | 150 kg |
| 200 | 200 kg |
| 250 | 250 kg |
| 300 | 300 kg |
| Code | Option 4: Explosion protection |
| N | No explosion protection |
| AI1/21 | IECEX+ATEX Zone 1/21+FM, intrinsically safe II 2G Ex ia IIC T6/T4 Gb/II 2D Ex ia IIIC T125°C Db* |
| AI2/22 | IECEX+ATEX Zone 2/22, not intrinsically safe II 3G Ex ec IIC T6/T4 Gc/II 3D Ex tc IIIC T125°C Dc* |
| Code | Option 5: Cable length |
| 1.5 | 1.5 m |
| 3 | 3 m (standard) |
| 6 | 6 m |
| 12 | 12 m |
| Code | Option 6: Other |
| N | Without |
| A | 2mV/V $\pm 0.1\%$ / 359 $\Omega \pm 0.3 \Omega$ [only with option 4 = N] (adjusted output, suitable for parallel connection) |
| K-PW10A - N - - - - - - - - - - - - - - - - | |

* Including EC-Type Examination Certificate/Certificate of Conformity BVS 13 ATEX X 108 X/IECEX BVS 13.0109 X

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.

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