

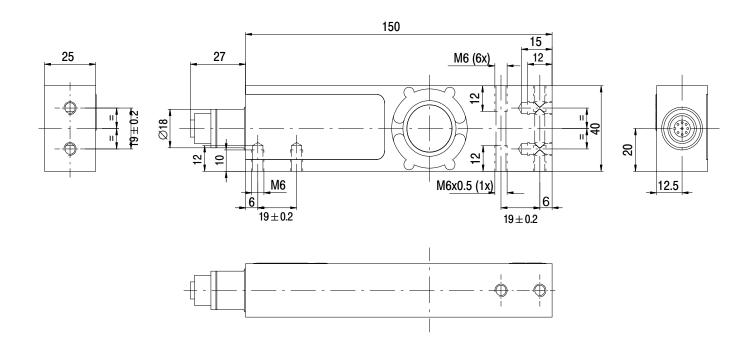
PW15iA

Digital load cell optimized for dynam. applications

Special features

- Accuracy class C3
- Off-center load compensation (OIML R 76)
- Interfaces: 4-wire RS-485, CANopen, DeviceNet
- Rapid digital filtering and scaling of the measurement signal
- 2 inputs and outputs, optionally switchable
- PC software for parameter setup and dynamic analysis
- Stainless steel
- Degree of protection IP68/IP69K

Dimensions in mm (1 mm = 0.03937 inches)





Specifications

| Туре | | | | PW15iA | |
|---|-------------------|------------------------|---|-------------------|---------|
| Accuracy class 1) | | | C3 | | |
| Number of load cell verification intervals | n, o | | | 3000 | |
| Maximum capacity ²⁾ | n _{LC} | ka | 10 | 20 | 50 |
| | E _{max} | kg | | | |
| Minimum load cell verification interval | V _{min} | g | 1 | 2 | 5 |
| Minimum utilization range for 3000 d | | kg | 3 | 6 | 15 |
| Temperature coefficient of the zero signal per 10 K ¹⁾⁴⁾ | TC ₀ | % of C _n | ±0.0160 | ±0.0160 | ±0.0160 |
| Max. platform size (L x W) | | mm | 500x400 | | |
| Temperature coefficient of sensitivity per 10 | TCS | | | | |
| K in the temperature range ³⁾ | | | | | |
| +20 +40°C | | | ±0.0218 | | |
| -10 +20°C | | % of | ±0.0150 | | |
| Relative reversibility error ³⁾⁴⁾ | d _{hy} | C _n | | ±0.0160 | |
| Non-linearity ³⁾⁴⁾ | d _{lin} | | ±0.0160 | | |
| Load creep in 30 minutes | d_{CR} | | ±0.0160 | | |
| Off-center load error ⁵⁾ | | | | ±0.0233 | |
| Service load at max. 120 mm eccentricity | Ευ | | | 150 | |
| Limit load at max. 20 mm eccentricity | Eı | % of | | 300 | |
| Relative permissible oscillation stress at | F _{srel} | E _{max} | | | |
| max. 50 mm eccentricity | 3101 | | | 70 | |
| Nominal (rated) displacement | s _{nom} | mm | | <0.2 | |
| Voltage supply: | | | | | |
| Supply voltage UB1 | | V_{DC} | +12 +30 | | |
| Power consumption | | W | ≤1.5 | | |
| Inrush current | | Α | 0.15 | | |
| Measurement signal resolution (1 Hz filter) | | bit | 24 | | |
| Data rate | | 1/s | 4 1200 | | |
| Adjustable digital filter cut-off frequency | | Hz | 80 0.0625 | | |
| Baud rate (RS-485 interface) | | baud | 1200; 2400; 4800; 9600; 19,200; 38,400; 57,600; 115,200 | | |
| Max. number of bus nodes | | | | 32 | |
| CANopen interface | | | ; | Standard CiA DS30 | 1 |
| Baud rate | | baud | 10,000 1,000,000 | | |
| DeviceNet interface | | | Release 2.0 ODVA | | |
| Baud rate | | baud | 125,000 500 000 | | |
| Max. cable length (CANopen, DeviceNet) | | m | ≤5000 (10 kBaud) ≤100 (500 kBaud), ≤25 (1 MBaud) | | |
| Asynchronous serial interface | | | | | |
| RS-485, 4-wire, max. cable length | | m | | 500 | |
| Digital HCMOS input ⁶⁾ | | | | | |
| Permissible input voltage | | V | 0 +12 | | |
| Low level | | V | <1 | | |
| High level | | V | > 4 | | |
| Input resistance | | kΩ | | 70 | |
| Digital PLC input ⁶⁾ | | ., | | 0 .00 | |
| Permissible input voltage | | V | 0 +30 | | |
| Low level High level | | V | < 6 > 10 | | |
| Input resistance | | V kΩ | > 10 | | |
| Control outputs ⁶⁾ | - | 1/22 | | <u> </u> | |
| External supply voltage | | V | | 11 +30 | |
| Max. current per output | | A | < 0.5 | | |
| Max. current of all outputs together | | A | <1 | | |
| Nominal (rated) range of the ambient | B _T | | | - 1 | |
| temperature | ^D T | °C | | -10 +40 | |
| Operating temperature range | B _{tu} | °C | | -10 +50 | |
| Storage temperature range | | °C | | -25 +75 | |
| Storage temperature range | B _{tl} | 10 | | -20 +/5 | |

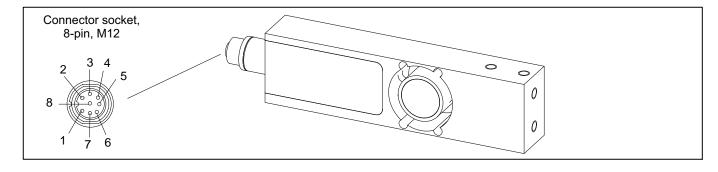
| Туре | | | PW15iA | | |
|---|------------------|--|---|----|----|
| Maximum capacity ²⁾ | E _{max} | kg | 10 | 20 | 50 |
| EMC requirements | | | EN 45501, OIML R76 | | |
| | | | EN 61326-1/Tab. 4, Class B equipment | | |
| | | | EN 61326/A1, Tab. A1, equipment in industrial sectors | | |
| Electrical connection | | | Device socket, 8-pin | | 1 |
| Weight, approx. | G | kg | 1 | | |
| Degree of protection per EN 60529 (IEC 529) | | IP68 (test conditions 1 m water column/100 h); | | | |
| Material | | stainless steel 1.4545 7) | | | |

 $^{^{1)}}$ As per OIML R60, with P_{LC} = 0.8.

Ordering number

| | Interfaces | | | |
|------------------|-----------------|-----------------|-----------------|--|
| Maximum capacity | RS-485 | CANopen | DeviceNet | |
| 10 kg | 1-PW15IAB3/10kg | 1-PW15IAC3/10kg | 1-PW15IAD3/10kg | |
| 20 kg | 1-PW15IAB3/20kg | 1-PW15IAC3/20kg | 1-PW15IAD3/20kg | |
| 50 kg | 1-PW15IAB3/50kg | 1-PW15IAC3/50kg | 1-PW15IAD3/50kg | |

Electrical connection



| Terminal | RS-485 | CANopen | DeviceNet | Color code for connection cable 8) |
|----------|---------|--------------|--------------|------------------------------------|
| 1 | GND | GND | GND | white |
| 2 | I/O | I/O | I/O | brown |
| 3 | RA | CAN High IN | CAN High IN | green |
| 4 | I/O | I/O | I/O | yellow |
| 5 | RB | CAN Low IN | CAN Low IN | gray |
| 6 | ТВ | CAN Low OUT | CAN Low OUT | pink/black |
| 7 | TA | CAN High OUT | CAN High OUT | blue |
| 8 | 12 30 V | 12 30 V | 12 30 V | red |

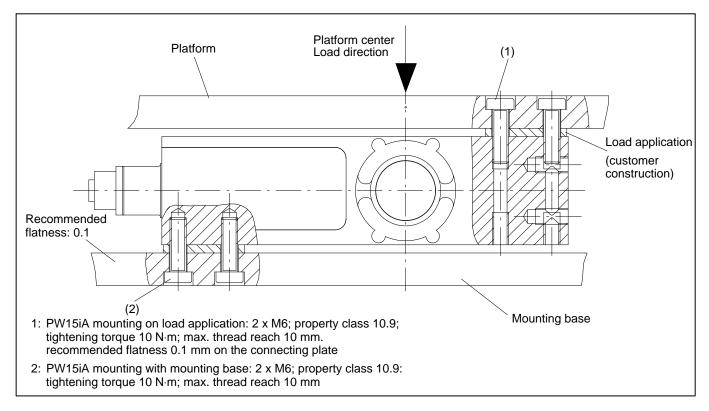
⁸⁾ See accessories for connection cables.

As per OIML R60, with P_{LC} = 0.5.
 Max. eccentric loading as per OIML R76.
 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 cumulated error limit laid down by OIML R60.
 All relative error data refer to the output signal at max. capacity.

⁵⁾ As per OIML R76.

 ⁶⁾ The electronics have 2 digital I/Os, that can be optionally connected as input (HCMOS/SPS) or as output. For more information, see the mounting instructions and the command documentation.
 7) As per EN 10088-1.

Mounting instructions



Accessories, to be ordered separately

The following cables are available for the connector:

| Туре | Ordering number |
|---|-----------------|
| Connection cable with M12 M plug, 8-pin, TPU IP67, PUR cable sheath, 3 m long | 1-KAB165-3 |
| Connection cable with M12 M plug, 8-pin, TPU IP67, PUR cable sheath, 6 m long | 1-KAB165-6 |
| Connection cable with M12 M plug, 8-pin, TPU IP67, PUR cable sheath, 12 m long | 1-KAB165-12 |
| Connection cable with M12 M plug, 8-pin, stainless steel IP68/IP69K, TPE cable sheath, 3 m long | 1-KAB173-3-1 |
| Connection cable with M12 M plug, 8-pin, stainless steel IP68/IP69K, TPE cable sheath, 6 m long | 1-KAB173-6-1 |

You can also download the free PanelX program for parameterization and simple analysis from the HBM website.

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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