

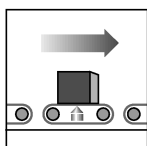
PW20i

Digital load cell for dynamic applications

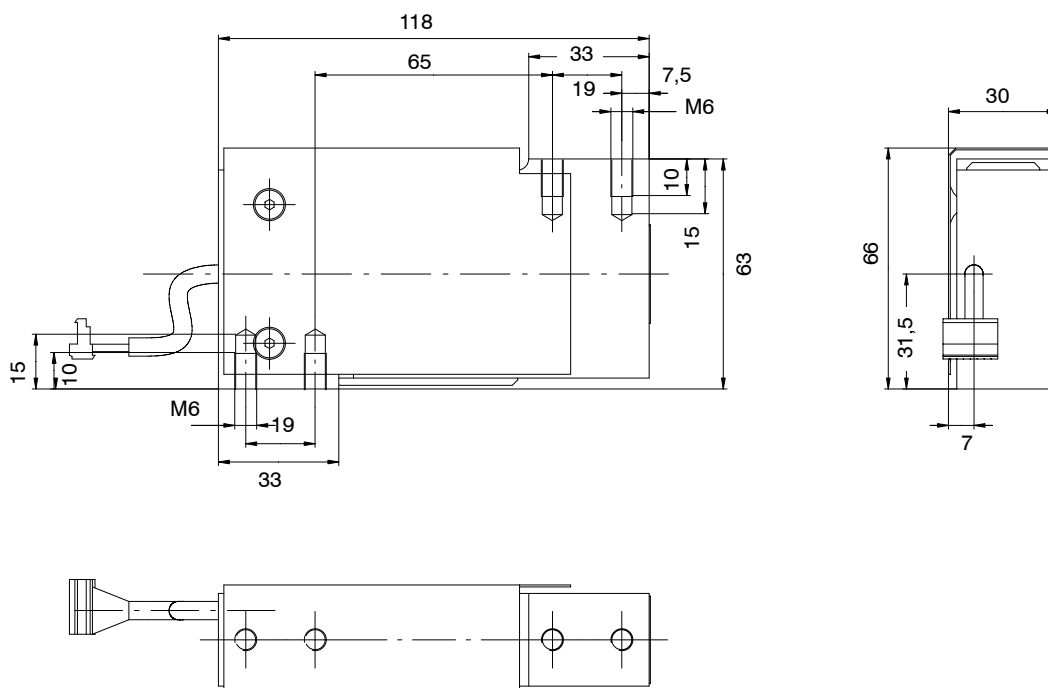


Special features

- High overload limits
- Integrated overload stop (Patent pending)
- Serial interface (UART)
RS-485-4-wire or RS-232
- Fast digital filtering and scaling of the measured signal
- Trigger function (external or level triggering)
- Legal for trade according to OIML R 60, R 76, 3000d (in preparation)
- PC software for parameter setting and dynamic analysis available from HBM



Dimensions (in mm; 1 mm = 0.03937 inches)



Specifications

Accuracy class according to OIML R60		C3 ¹⁾		
Max. capacity (E_{max})	kg	5	10	20
Min. load cell verification interval (v_{min})	g	0.5	1	2
Min. application range for 3000 d	kg	1.5	3	6
Max. platform size (Length x Width)	mm	L400 x W400		
Max. number of load cell verification intervals (n_{LC})		3000		
Fraction (p_{LC})		1		
Temperature coefficient of the sensitivity (TK_C) ²⁾³⁾ in the temperature range 0 °C ... +40 °C [+32 °F ... +104 °F]	%/10 K	+ 0.0250		
Temperature coefficient of the zero signal (TK_{SO}) ³⁾	%/10 K	± 0.0200		
Hysteresis error (d_{hy}) ²⁾³⁾	%	± 0.0166		
Non-linearity (d_{lin}) ²⁾³⁾	%	± 0.0166		
Creep (d_{CR}) over 30 min.	%	± 0.0166		
Eccentric loading error according to OIML R76	%	± 0.0233		
Safe load limit (E_L) with max. 20 mm eccentricity	%/ E_{max}	1000		
Permissible dynamic load (F_{srel}) with max. 50 mm eccentricity	%/ E_{max}	70		
Deflection at max. capacity (s_{nom})	mm	< 0.2		
Power supply				
Supply voltage UB1 (DC)	V	+ 12 ... + 30		
Power consumption	W	≤ 2		
Switch-on current	A	0.15		
Resolution of measuring signal (1 Hz Filter)	Bit	20		
Measuring rate	1/s	4 ... 600		
Adjustable cut-off frequency of the digital filters				
Filter mode 0	Hz	40 ... 0.25		
Filter mode 1 (settling time 62 ... 365 ms)	Hz	18 ... 2.5		
Baud rate	Baud	1200; 2400; 4800; 9600; 19200; 38400; 57600; 115200		
Max. number of bus members (with RS-485 interface)		32		
Asynchronous serial interface				
RS-485-4 wire, max. cable length	m	500		
RS-232, max. cable length	m	15		
Trigger input				
Max. input voltage	V	0 ... + 24		
Low level	V	0 ... 1		
High level	V	4 ... 24		
Input resistance	kΩ	10		
Nominal temperature range	°C [°F]	- 10 ... + 40 [+ 14 ... + 104]		
Operating temperature range	°C [°F]	- 10 ... + 50 [+ 14 ... + 122]		
Storage temperature range	°C [°F]	- 25 ... + 75 [- 13 ... + 167]		
EMC requirements		EN 45501, OIML R76 EN 61326-1/Tab. 4, equipment of class B EN 61326/A1, Tab. A1, equipment in industrial areas		
Degree of protection according to EN 60529		IP 65		
Connector		Pancon socket, 8 pole		
Material		Aluminum		
Weight, approx.	kg	0.7		

1) Approval in preparation

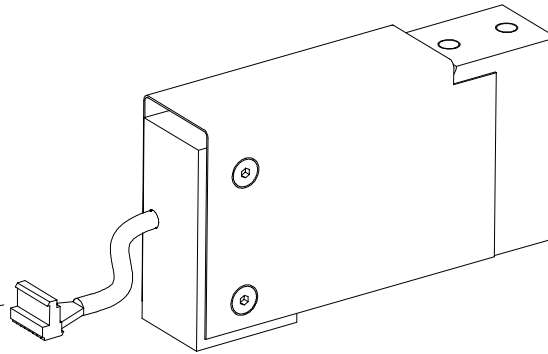
2) The values can be exceeded in individual cases. The resulting errors of T_{KC} , non-linearity and hysteresis don't exceed the maximum permissible errors of OIML R 60 with $p_{LC}=1$.

3) All relative errors are related to the output signal at max. capacity.

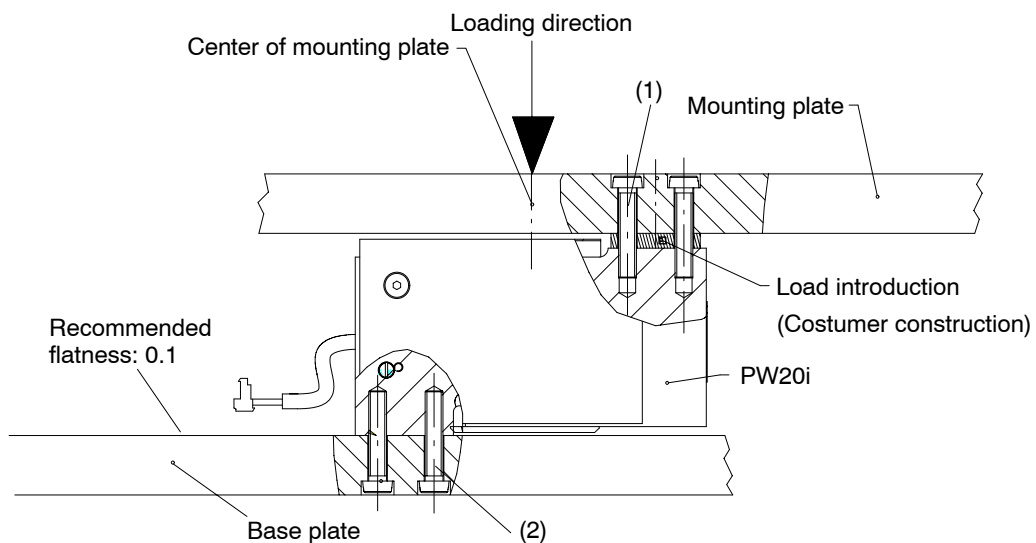
Electrical connections

Terminal	Color	RS-232	RS-485
1	red	12...30 V	12...30 V
2	white	GND	GND
3	blue	TXD	TA
4	green	—	RA
5	black	—	TB
6	gray	RXD	RB
9	yellow	Trigger	Trigger
8		free	

Pancon socket, 8 pole



Mounting hints



- 1: Attachment PW20i at load introduction: 2 x M6; property class 10.9; tightening torque 10 N·m; max. thread reach 10 mm. Recommended flatness 0.1 mm on connection surface
- 2: Attachment PW20i with base plate: 2 x M6; property class 10.9; tightening torque 10 N·m; max. thread reach 10 mm

Accessories, to be ordered separately

SC 232/422B Interface converter (see separate data sheet)

- Conversion from RS-232 to RS-422/-485 (4-wire)
- Galvanic separation
- High EMC security
- Including power supply unit and connection cable to the PC



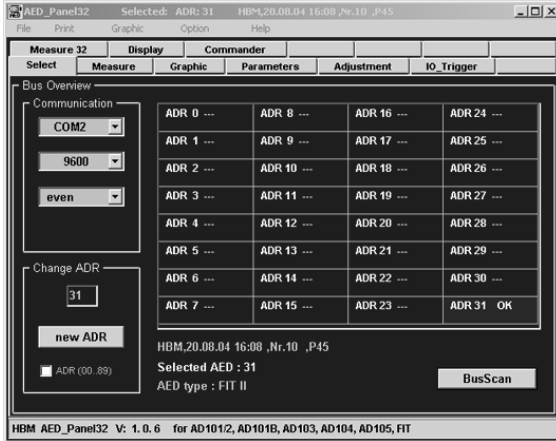
Accessories, to be ordered separately (Continuation)

1-AED/FIT-Doc = Documentation (CD-ROM with operating manual and AED_Panel32 panel program)

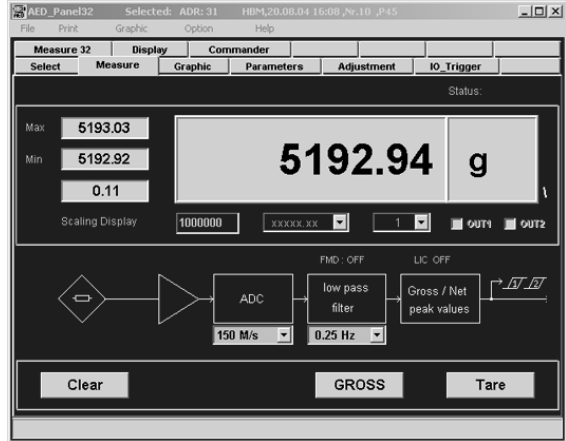
- Documentation of mechanics and electronics
- Documentation of the command codes for communication with the PW20i load cell
- Software package for parameter setting and dynamic analysis of the weighing system

Short description of the PC-Software AED_Panel32 (Example screen shots see below)

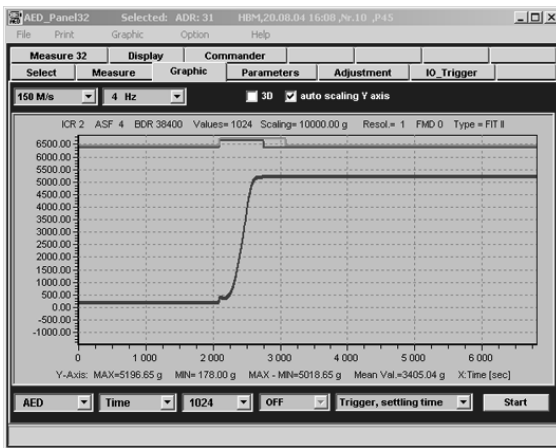
Address field for selection of the load cells and configuration of baud rate, address and interface



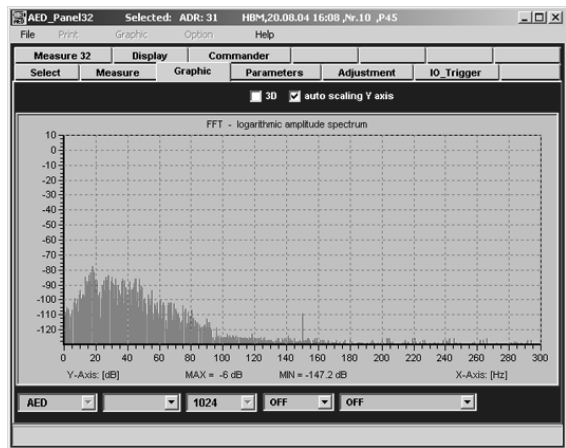
Display of measured values, measuring rates and filter configuration



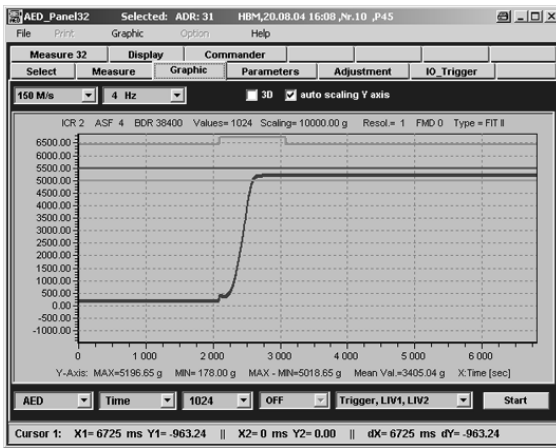
Graph for the settling process (here with level trigger)



Frequency analysis (Fourier analysis)



Graph for limit values



Bus measurement with up to 32 bus members

AED 00..07	AED 08..15	AED 16..23	AED 24..31
			31: 5192.62

Modifications reserved.
All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

Hottinger Baldwin Messtechnik GmbH

Im Tiefen See 45, D-64293 Darmstadt, Germany
Tel.: +49 6151 8030; Fax: +49 6151 803 9100
E-mail: support@hbm.com www.hbm.com



measurement with confidence