get FIT®...
Digital load cells for dynamic weighing, sorting, and the control of filling and dosing processes
FIT® – The new generation of fast intelligent transducers by HBM

New digital load cells on the basis of the strain gage technology provide new impetus for the areas of dynamic weighing, sorting, filling, and dosing.

In addition to all relevant functions for standard weighing processes, the new intelligent load cells also provide control functions for sorting, filling, and dosing processes. Using a RS 232 or RS 485 4-wire interface, all relevant data can be accepted as a filtered, scaled, and digitized output signal directly into the control system used. And that at a fast measuring rate of up to 600 measurements per second.

FIT® load cells are available in different versions. In an encapsulated laser-welded stainless steel housing, FIT® load cells meet even the most stringent requirements with regard to hygiene and corrosion resistance. The RS 485 4-wire version provides for up to 90 subscribers within a bus system. The electronic vibration suppression does away with the need for mechanical or viscous damping elements.
FIT® in all dynamic weighing, sorting, filling, and dosing processes

Dynamic weighing

The new FIT® load cells allow you to adapt the functionality of your machine optimally to your system requirements:

FIT® functions for dynamic weighing processes:
- Generating the control signals for dosing processes
- Capability to adjust two limit switches by hysteresis
- Integrated trigger function

Dosing and filling processes

FIT® load cells can take over decentralized control functions within your automation systems. Thus, you can implement the complete dosing and filling control of coarse flow and fine flow valves, and the automatic optimization of parameters.

Use the FIT® potential and our know-how for your applications:

FIT® technology for:
Checkweighers, multi-head combinations weighers, bottling plant, sorting machines, postal scales, or other dynamic weighing devices.
FIT® – digital load cells

Digital designs and models

Using the load cell series FIT® and PW 18i, consisting of load cell and integrated electronics, two electronically-dampened types are available for your dynamic weighing applications – featuring a digital interface and a measuring rate of up to 600 measurements per second.

In contrast to the PW 18i type series, FIT® load cells are encapsulated in a stainless steel housing and are thus excellently suited for use in the food industry and other hygienically sensitive areas.

Depending on the actual application case we will be pleased to supply you with both load cell types, featuring two connection cables or connectors for communication and control.

Analog load cells plus digital transducer electronics

The digital transducer electronics AD 104 and AED can be used to convert a large number of analog HBM standards into digital allrounders. Depending on the model, the standard interfaces RS 232, RS 485 4-wire or Profibus will then be available for your area of application.

All digital load cells have in common that a digital, completely filtered and scaled measured value is available within the shortest possible time. In all cases, communication is effected via ASCII commands.
Soft operation – the HBM panel software

The AED Panel 32 software developed on the basis of Windows® with a graphical user interface provides for the comfortable setting of all technical weighing parameters such as ...

- calibration of the scales
- selection of the bus address and baud rate
- input of two limit values with hysteresis
- input of the required dosing and filling parameters

Panel software: typical parameters for filling and dosing processes

Integrated functions:

- integrated graphic functions for representing the course of the weighing process over time
- fast Fourier transformation (FFT) for frequency analysis. Statements on the vibration behaviour of mechanical interference sources, trigger parameters, and optical filter selection are possible without the need for costly analysers
- integrated multi-channel measurement function in bus mode

Technical weighing measurement data are complex; therefore, we have designed the AED Panel 32 software to be as easy to use as possible. Thus, e.g. auxiliary functions facilitate the variable input of all parameters.

The measured values and parameters can simply be stored on the PC or output to the PC printer.
The digital HBM program:

Make your processes FIT®...

... with our digital load cells. In addition, with our transducer electronics numerous analog load cell types can be modified into digital „allrounders”.

Contact us.

<table>
<thead>
<tr>
<th>Type</th>
<th>PW2/H1</th>
<th>PW10/H1</th>
<th>FIT®/H1S</th>
<th>FIT®/H1L</th>
<th>FIT®/H1D</th>
<th>PW18i/S</th>
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<tbody>
<tr>
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The digital HBM program:

Make your processes FIT®...

... with our digital load cells. In addition, with our transducer electronics numerous analog load cell types can be modified into digital „allrounders”.

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### Digital load cells

#### Nominal loads
- 5...20 kg
- 5...75 kg

#### Interface
- RS 232
- RS 485 4-wire
- Profibus DP V1

#### Max. output rate
- 100 Hz
- 600 Hz

#### External trigger
- ●
- ●

#### Limit switch
- ●
- ●

#### Dosing function
- ●
- ●

#### Degree of protection
- IP 66
- IP 67

#### Material
- stainless steel
- aluminium

#### Integrated electronics
- ●
- ●

#### External electronics
- ●
- ●

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**Digital platform load cell FIT®**

**Digital platform load cell PW 18i**
### Analog load cells become digital – with the HBM transducer electronics AD 104 or AED.

<table>
<thead>
<tr>
<th>Load Cell Specification</th>
<th>AD 104</th>
<th>AED 9101B</th>
<th>AED 9201*</th>
<th>AED 9301***</th>
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<tbody>
<tr>
<td>7,2...72 kg</td>
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**The stated degree of protection refers exclusively to the respective load cell/housing.

** Other load cells on request.

*** Functionalities by selection.

- On request.

### Technical Specifications

- **Load Cell:** PW18i/D, PW18i/L
- **Transducer Electronics:** AD104
- **Frequency Response:** 100 Hz
- **Protection Rating:** IP 67
- **Material:** Aluminium / Stainless Steel

**Note:** AD 104 for measurement chains.