Digital weighing technology solutions
Fast, precise and cost-efficient
Clever solutions for dynamic and static applications

Digital technology with strain gauge-based load cells

Digital weighing technology from HBM provides you with the right tool for your sorting, checkweighing, filling and packaging applications. A range of certified products offers excellent quality for dynamic weighing processes.

Digital load cells, for example, can be used to perform distributed control functions in your automation environments. This helps you to implement complete dosing and filling control of coarse and fine flow as well as autonomous optimization of parameters.

Application examples

Checkweighers  |  Multthead combination weighers  |  Bottling plants
---|---|---
Very simple integration of a portioning weigher as the most important component in the packaging process  |  In multthead combination weighers, digital or analog load cells control the mixing ratio exactly with PAD  |  Conditioning of measurement signals for optimum control of bottling plants using digital load cells from HBM

Batching weighers  |  Sorting machines  |  Postal scales
---|---|---
Even granular materials can be batched precisely and easily with coarse and fine settings  |  Digital, precise and fast – for efficient and optimum sorting of goods  |  Accurate to the gram: digital load cells are a powerful component of your postal scale, even with fast franking
The strengths of SG-based weighing technology

The digital success principle

The basis for your complete solution

Components for dynamic weighing. Individually or as a complete solution. Weighing technology from HBM offers both.

- SG-based digital load cells PW15iA and FIT (Fast Intelligent Transducers)
- PAD digital transducer electronics
- Intuitive PanelX operating software

Good reasons for HBM

A reliable partner

HBM is a leading partner in weighing technology. So you will also be benefitting from a strong supplier for your machines:

- We are a component supplier only for weighing technology, so you will not be buying your components from a potential competitor
- A reliable partner around the world for dependable delivery
- Local and close to you – with a strong sales and service team

Safety and reliability with load cells from HBM

- Highly precise load cells with valid national and international test certificates
- Fast and easy to use thanks to international approvals including NTEP, GOST and OIML
Always one crucial step ahead


An intelligent load cell is the heart and soul of your packaging and sorting machines and checkweighers. With digital load cells from HBM, you benefit from a solution that ensures that your dynamic weighing systems are operating at their full potential:

SG-based digital load cells are more than just sensors for your machine: You can use them as an "engine of innovation" for all of your development. The unique combination of an attractive price and impressive technical properties will allow you to lower prices for your checkweighing and packaging systems considerably, thereby opening up entirely new market segments. We make you fit – in hard global competition.

FIT7A by HBM:

fit for speed and precision in your checkweigher

**Fit for speed**
Top speeds in measurement signal conditioning with up to 180 weighings per minute. So your machines can guarantee speed and efficiency.

**Fit for precision**
Top values in precision – never achieved previously with SG-based load cells – with standard deviations of only 0.1 g for 10 kg and the new accuracy class C4.

**Fit for competition**
Top price: About 50% more cost-efficient than load cells based on electromagnetic force compensation. So your machines can stay competitive and reach new market segments.
The measured value digitizer

The decisive tool in harsh environments

Fast and exact –
for bottling and checkweighing applications

Digital transducer electronics are sturdy components, which makes them a reliable control element in bottling plants and similar systems. For example, the PAD 4000A is optionally available with a connection cable and rugged M12 plug connections as well as a cable in hygienic design. Different HBM load cells can be connected easily with plug connection. Two freely programmable digital I/Os are available for bottling or checkweighing applications. That makes the PAD 4000A optimally suited for connecting rugged strain gauge-based load cells such as the PW15P or hygienically designed sensors like the PW27 with EHEDG certificate.

Maximum precision – even with vibration

With a measured value resolution of up to 1,000,000 digits for 2 mV/V and complete measurement signal conditioning with selectable or automatic filters, precision is guaranteed even with strong vibration.

PanelX analysis software is available for adjusting functions and analyzing measurement signals. The transducer electronics can be conveniently integrated using RS485, CANopen and DeviceNet interfaces.

The new digital technology of the FIT7A offers greater precision and allows for fast and accurate measurements, even with temperature fluctuations and in dynamic applications.
Simply well adjusted

Intuitive and based on actual requirements

Intuitive PanelX operating software allows you to adjust all the parameters for your measurement with Touch Control. The design is application-oriented so it responds to your needs. The integrated Web Help provides continuous support to make your measurement tasks easier.

Other strengths of PanelX
- Adjusting the weighing system
- Selecting the bus address and baud rate
- Entering four limit values with hysteresis
- Graphical analysis and visualization of measurement results

Supported connections
- RS485
- CANopen
- DeviceNet
Digital load cells

Digital load cells based on SG technology bring new momentum to dynamic weighing, sorting, bottling and batching.

<table>
<thead>
<tr>
<th>Type family</th>
<th>FIT7A</th>
<th>FIT5A</th>
<th>PW15iA</th>
<th>PAD4001</th>
<th>PAD4002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy class in legal-for-trade operation</td>
<td>C3; C4</td>
<td>C3</td>
<td>C3</td>
<td></td>
<td></td>
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<tr>
<td>Maximum scale division (Y value) up to</td>
<td>25000 **</td>
<td>25000</td>
<td>10000</td>
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<tr>
<td>Platform size up to</td>
<td>600 x 500 mm</td>
<td>400 x 400 mm</td>
<td>500 x 400 mm</td>
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<td>Interfaces</td>
<td>RS-485, 4-wire CANopen Device Net</td>
<td>RS-485, 4-wire CANopen Device Net</td>
<td>RS-485, 4-wire CANopen Device Net</td>
<td>RS-485, 4-wire CANopen Device Net</td>
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<tr>
<td>Diagnostic channel***</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>Digital inputs</td>
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<td>Stainless steel</td>
<td>Stainless steel</td>
<td>Stainless steel</td>
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<tr>
<td>External supply voltage</td>
<td>11 ... 30 V</td>
<td>11 ... 30 V</td>
<td>11 ... 30 V</td>
<td>11 ... 30 V</td>
<td>11 ... 30 V</td>
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<tr>
<td>Nominal loads from ... to kg</td>
<td>3 kg 75 kg</td>
<td>5 kg 50 kg</td>
<td>10 kg 50 kg</td>
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</tr>
</tbody>
</table>

* Depending on which load cell is connected
** Y up to 40,000 available soon
*** Additional diagnostic channel depending on option