



DIS2116 with C16i

...the digital weighing system
for vehicle and railroad track scales



- Complete
- Simple
- Safe



DIS2116 – Weighing made easy

DIS2116 is an extraordinarily innovative scale electronics that supports you in weighing rapidly and accurately using vehicle scales for incoming or outgoing goods and railroad track scales.

DIS2116 offers far more than just a digital display. Adapt the different parameters to your requirements with just a few keystrokes. All settings relevant to weighing, e.g.:

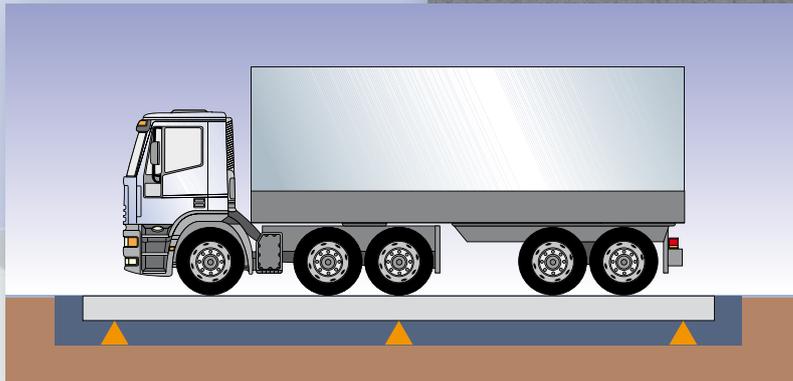
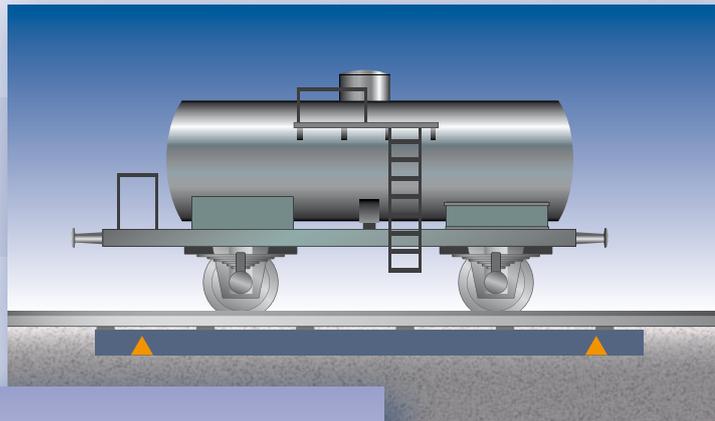
- Scale configuration
- Scale parameters
- Off-center load compensation
- Legal-for-trade modes
- Measurement signal filter

are easy to make and data is stored internally – the extra plus of safety for you.



Vehicle scales with up to three segments and max. 8 load cells each can be configured with a DIS2116.

Up to 8 load cells per segment.
Max. 3 segments per DIS2116.



Vehicle and railroad track scales can easily and quickly be upgraded with the weighing system.

Closer to the future with HBM technology

In the legal-for-trade mode, **data transmission is encrypted.** This meets the latest requirements of the EC directive on manipulation-free data transmission.

The **electronic off-center load compensation** can be implemented very easily and extremely accurately with high reproducibility and high speed.

The interfaces enable almost all types of connection options for **integrating the scale electronics** into other systems. In addition, the Anybus Port option is available for connecting to Ethernet or other bus systems.

DIS2116 works together with C16i digital load cells as a purely digital measurement chain. You can therefore benefit from all the advantages of digital measurement signal processing such as signal quality, EMC safety and dynamics without data loss.



DIS2116 – Ease of use and fu

The display and control panel is integrated in a robust aluminum front panel with IP20 protection. If it is installed in a control panel, the IP 65 degree of protection is achieved.



In the display field, two information lines,

a status line,

the measured value display

and a function line

offer a clear and immediate overview of the current measuring mode.



You can easily navigate through the operating dialogs and select the required setting parameters using function keys F1 - F4.

The sealing label protects the adjusted legal-for-trade parameters from unauthorized changes.



Max1: _____ Min1: _____ d1=e1: _____ S.N. _____
 Max2: _____ Min2: _____ d2=e2: _____
 Max3: _____ Min3: _____ d3=e3: _____ DIS2116 CE HBM

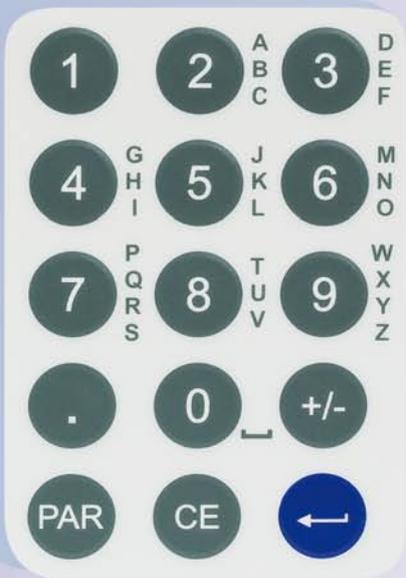
The inspection window is used to insert a labeling strip (for the scale type plate with legal-for-trade data, device name, etc.). This provides a rapid overview of the scale data.

Settings for legal-for-trade applications can be implemented using the hidden pushbutton. This pushbutton is sealed after calibration with the provided adhesive or legal-for-trade label.



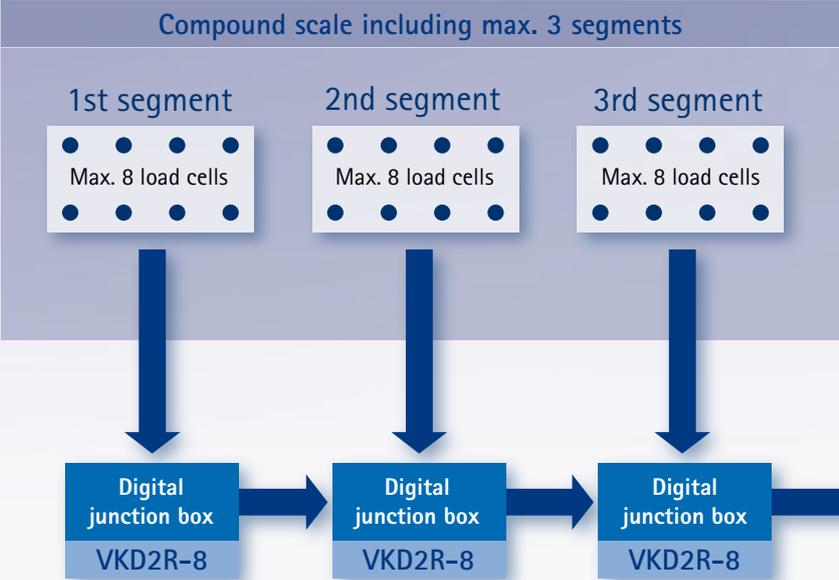
Legal-for-trade label for marking a legal-for-trade automatic weighing instrument.

Functionality



The control panel enables individual digits and characters to be input and edited in a dialog. This allows e.g. a "yard list" to be precisely specified by entering the vehicle registration plate and the material loaded.

An external keyboard can be connected via the PS2 interface for greater comfort.



A compound scale can be created with max. 3 segments and max. 8 load cells each.

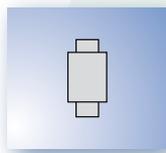
The VKD2R-8 digital junction box from HBM's range of products is available for easy parallel connection of the load cells.

DIS2116 – Data transmission

The DIS2116 scale electronics provides the voltage supply for the connected C16i load cells and displays the conditioned digital output signal of the load cells. Up to 24 digital load cells can be connected via an RS-485 4-wire interface.

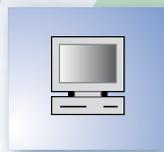


The COM 5 connection is set up as an optional interface for a fieldbus module.



Max. 24 C16i digital load cells can be connected.

The COM 2 RS-232 interface is used for connecting e.g. a PC or primary systems.



A serial printer can be connected with the 9-pin SUB-D socket via the COM 3 RS-232 interface for printing out data and scale parameters. The SUB-D socket is assigned so that a standard printer cable can be used.

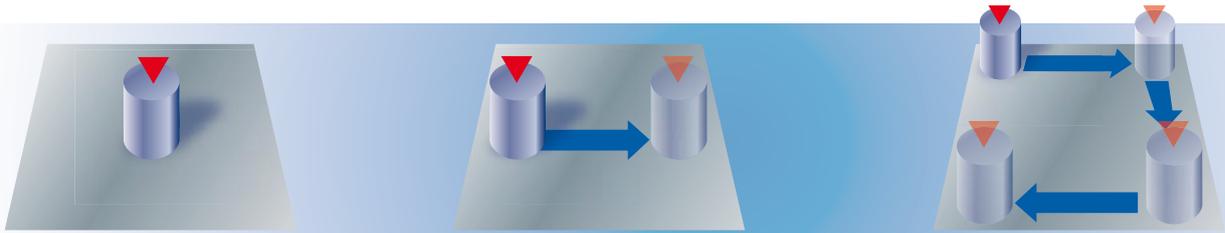


If a second display is required, for example in a plant or another control room, this is possible using the COM 4 RS-232 interface.



and functions

An extremely easy off-center load compensation can be implemented in electronic form using the DIS2116. Depending on the accuracy requirements, three modes can be selected: Simple – Average – Precise



Simple: The scale is loaded in the center. The measured values of all connected load cells are acquired for the unloaded scale and the scale loaded with the balancing weight. The off-center load error is compensated using the measured values of the connected load cells.

Average: The scale is loaded with the calibration weight in the center between two neighboring load cells. Three measured values (incl. unloaded scale) are recorded for a platform scale with four load cells.

Precise: In the "Precise" mode, each load cell is loaded with the calibration weight. Five measured values (incl. unloaded scale) are recorded for a platform scale with four load cells.



In addition, the DIS2116 has a USB interface for connecting a printer. The internal SD memory card, with a storage volume of 1 GByte, acts as the alibi memory for the weighing data and parameters.



The PS2 interface can be used to connect an external standard keyboard.

Characteristic features of the digital components

C16i

- Self-restoring load cell
- Max. capacities: 20 t to 60 t
- Easy installation
- Rust-resistant materials, laser-welded, IP68
- Legal-for-trade certification up to 6000 d (OIML R60) up to 10000 d (NTEP class III LM)
- Meets EMC requirements as per EN 45 501, OIML R76/EN45501

VKD2R-8

- Connection of RS-485 / RS-422 serial interfaces as 2-wire or 4-wire bus
- Connection of up to eight digital HBM transducers and electronics
- Active bus termination
- EMC-tested
- IP65 degree of protection

The characteristics and functions of all HBM components in the digital measurement chain are optimally matched to each other and can be easily adapted - if required - to existing needs without complicated adjustments.

DIS2116 with C16i

...the digital weighing system



For more detailed information about the components of the weighing system

- ▶ Complete technical documentation for download
- ▶ Virtual truck scales including DIS2116
- ▶ Latest newsletter

please visit:

www.hbm.com/weighing



DIS2116



VKD2R-8



C16i

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measure and predict with confidence

