

Metiron Computer



Computer for the DIGI SENS digital sensor technology; especially for sensors based on the vibrating wire measuring technique.

Application

The Metiron serves for the analysis and processing of measuring data of DIGISENS transducers. It was developed for real time applications for complex measurement-problems and control of processes. With its various digital and serial input- and output-ports it can be weaved in a manifold of different situations.

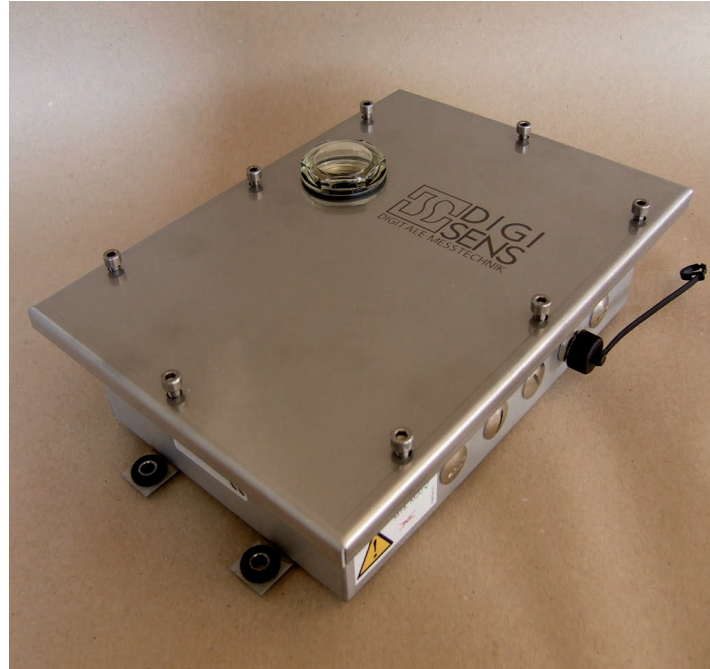
Together with the MeTerm – its separated terminal and storage unit – it forms the perfect interface between the transducers and the user.

Thanks to the separation of the main computer and the terminal the Metiron can be used as a simple data grabber in a customer system or – together with the MeTerm – form a stand alone solution.

The rugged construction and the leakprove housing offer a free choice for outdoor installations, on vehicles or in an industrial environment.

Advantages

- Up to 100 real time measurements per second for each measuring cell
- Resolution up to 1 ppm
- (Optional) separated terminal (display, keyboard, CF-card) for the installation in a vehicle cabin or the office (up to 1000 m distance)
- Communication: up to 4 serial interfaces (RS-



232/422/485) and CAN-bus

- up to 8 digital inputs (4 galv. isolated)
- up to 8 digital outputs (4 galv. isolated)
- Certifiable according to OIML
- EMV tested following EN61326-1, EN61000-3-2&3, Grange CCG001/B
- CE-conformity
- E-type-approval
- Leakprove, stainless steel housing with integrated vibration absorbers

Description

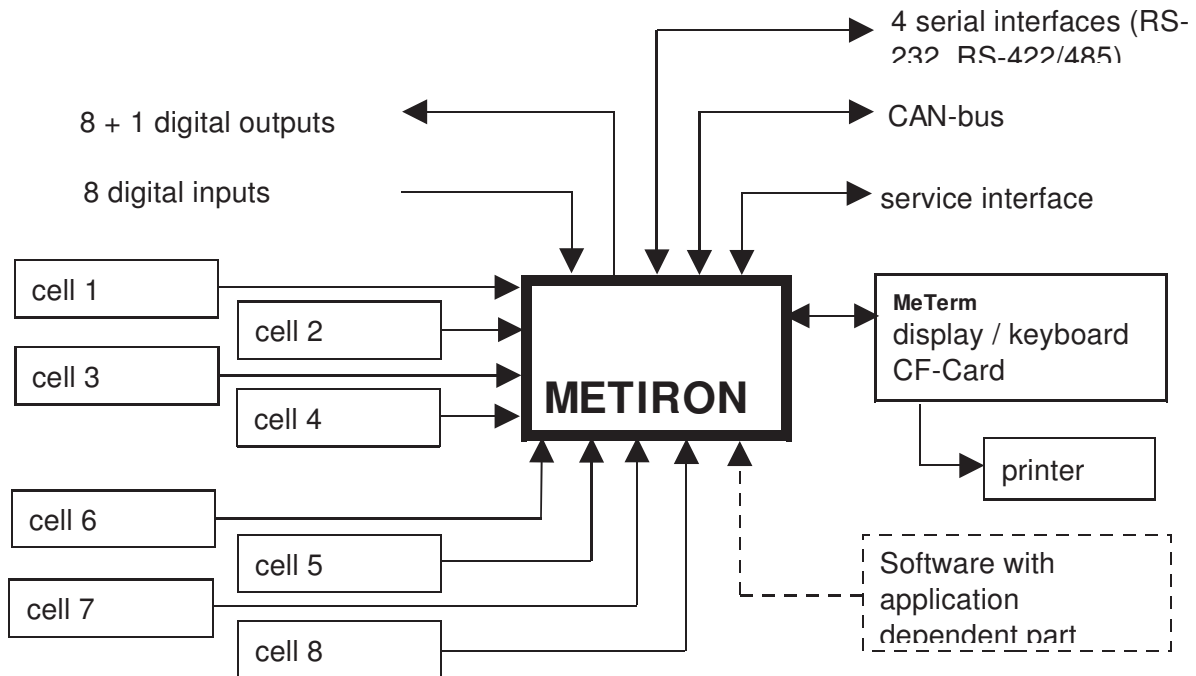
The Metiron forms our new central computer unit of the digital measuring system. It has 8 inputs for vibrating wire measuring cells with ED 21 interface. Via the built-in EEPROM the cells communicate to the computer the way in which the measuring results have to be conditioned. This means that cells and com-

puter are fully interchangeable. The Metiron is able to carry out up to 100 measurements per second in real-time for every cell, and to condition the measuring data of every individual cell – e.g. load or acceleration cells – into acceleration-compensated measuring data. The measuring data can be transferred via one of the different interfaces to a host computer system. As well several RFID-units for identifying the objects to be measured can be connected to the Metiron directly.

By the separation of the computer (with all cables) and the terminal the Metiron can be placed at the ideal position to minimize the cabling complexity.

The terminal MeTerm which is connected only by one thin cable needs only a little place and can be placed in an ergonomic way.

Metiron Computer



Technical specifications

Mechanical design :

- Stainless steel housing with vibration absorbers, stuffing glands type PG for all connecting cables required
- Enclose dimensions : 200 x 280 x 95 mm
- Protection class IP 69K

Resolution :

- Up to 100 Samples/Second $\geq 1/40'000$ of full range
- Variable, SW-driven sampling frequency
- Depending on sampling rate, resolutions of down to 1 ppm and better are possible

Inputs for vibrating-wire load cells :

- 8 independent and protected inputs for load cells; simultaneous conditioning and combination of signals

Basic data of the electronics:

- Processor : MOTOROLA MC 68367
- Memory : Flash-ROM: 1 MB
RAM : 1 MB, battery buffered
- Real-time clock, buffered power supply: 10-48 VDC, 6 W @ 24 VDC
- Extensive self-test functions
- SW-Updates directly off a PC
- Switch for locking parameterisation on board
- Temperature range: -25°C bis +70 °C

Digital inputs and outputs:

- up to 8 inputs, 4 galvanically decoupled
- up to 8 outputs, 4 galvanically decoupled

Interfaces :

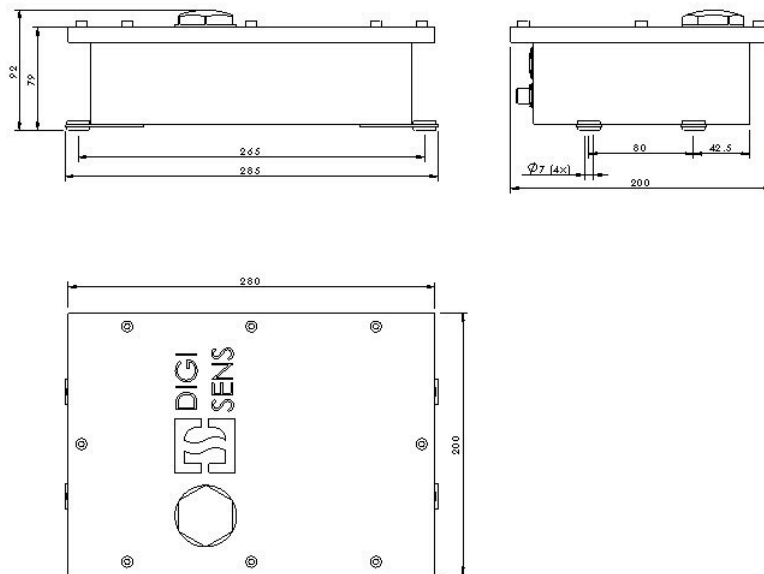
- up to 4 asynchronous, serial interfaces, configurable as RS-232, oder RS-422/485
- 1 serial interface (RS-232) for firmware updates and parameterisation
- 1 CAN-interface (CleANopen)

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Dimensional Drawing



Options

- METERM (separated terminal with keyboard, display and CF-card)
- MESTORE (internal display and CF-card)
- MEOUT (separated terminal with keyboard and display, waterprotected, no CF-card)

Applications

- Refuse containers
- Lorry payload
- Fork lifts and palettes
- Skips
- Lorry and rail loads
- Forces in robots and automation
- Weighbridges for road vehicles
- etc.

(separated terminal with keyboard, display and CF-card)

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