



Product Description

Test stands, calibration lab or other measurement tasks with high accuracy demands - Type FMV-8 is the ideal and extremely cost-efficient multi-channel measurement system for weighing applications, force and torque measurements.

The signals of the connected load cells or strain gage sensors are internally digitized and processed by 8 high-precision Type LDU 69.1 Load Cell Digitizing Units.

The connection to peripheral electronics is done by a serial interface which is prepared as RS485 and RS232C.

Key Features

- High precision digital measuring amplifier with ± 20 -bit A/D converters
- Up to 8 measuring channels for load cells or strain gage sensors in one 19"-housing
- Synchronised data capturing for up to 32 channels (requires several instruments)
- Sensor curve linearisation
- Sensor plug connectors
- Serial interface RS485/RS232C

Options

- Version with 4 measurement channels Type FMV-4
- Version with other equipment on enquiry

Available Accessoires

- Setup software (for MS Windows)
- Software for data recording on a PC

Specifications

Max. number of measurement channels	8 channels in one housing (up to 32 channels with several instruments in one common bus system)
Accuracy class	III
Test certificate according OIML R76	10 000 counts
Linearity	< 0.001 %
Excitation: load cells / sensors	5 V AC (at 250...2000 Ω , 4- or 6-wire technique)
Analogue input range	± 2.2 mV/V, optional ± 4.4 mV/V (bi-polar, for weighing applications, force and torque measurements)
Min. input per verification scale interval	0.02 μ V (non-approved) / 0.1 μ V (approved)
Resolution	Internal (± 20 bit A/D converter): $\pm 1\,050\,000$ counts; External: $\pm 999\,999$ counts
Max. conversion rate per channel	172 measurement values per second
Digital lowpass filter	0.2...3 Hz in 6 steps (Bessel, Gauss oder Butterworth)
Linearisation	Sensor curve linearisation with up to 7 sampling points
Calibration	Software calibration and set up
Weighing / measurement functions	Zero, gross, tare, net, filter, etc.
Temperature effects	On zero: typ. 1 ppm/ $^{\circ}$ C, max. < 2 ppm/ $^{\circ}$ C; on span: typ. 1 ppm/ $^{\circ}$ C, max. < 2 ppm/ $^{\circ}$ C
Ambient temperature	-10 $^{\circ}$ C to +45 $^{\circ}$ C (operation); -20 $^{\circ}$ C to +60 $^{\circ}$ C (storage)
Housing	19"-design, painted steel enclosure, aluminium front plate, protection IP20
Dimensions and weight	19" wide, 2 U high, 350 mm deep, appr. 5 kg (appr. 315 mm mounting depth without front handles)
Power supply	12...24 V DC (max. 15 W power consumption); ships with suitable 230 V AC wall power supply
EMC	CE 73/23/EEC; 93/98/EEC and 89/336/EEC
Communication interface	Serial interface RS485 / RS232C, 115 200 Baud
Other	Synchronised data capturing for all channels within the bus system by use of a software trigger