

GLÖTZL Baumeßtechnik

Modular Measuring Station for maximal 1,000 sensors

Type: MFM71
Art.-No.: 50.01

- Variable mode of operation
- As measuring station in the measuring line
- Self-sufficient as datalogger
- Data transfer via dedicated line, fixed network, GSM or ISDN modem, LWL, USB
- Universally programmable
- Easy assembly and handling
- Modularly upgradable
- Alarm output, 6 potential-free contacts, controlled by parameter setting in the single measuring point for alarm limit values



Application

For construction control, e. g. of barrages, tunnels and bridges

Description

The modular measuring station MFM71 is able to supply up to 1,000 sensors in its greatest extension dimension and automatically measure them. All inputs are galvanically separated to one another, The measuring station is universally programmable for the application of most of the electric sensor types.

Pneumatic and hydraulic sensors are measured by a separate pneumatic controller type ACH, which can be mounted locally separated, the gained measuring values of which are serially input. Further serial sensors with GMS7-bus (e.g. plumb- and leakage water measuring devices) can be connected and measured.

Modular construction

The complete measuring station is modularly executed and consists of a station centre and the offset multiplexers for 20, 40, 60 or max. 80 sensors each. By this, the quantity of measuring points of the MFM71 can be adjusted to the required sensor numbers in the construction. The multiplexers are installed in the proximity of the sensors, and are connected to the station centre by a 10-core bus cable. The programs GLA7 or GKSPPro for Windows are used as programs for parametering, input and management of the measured values.

For example, the following items can be adjusted at the station:

- Different measuring times for the sensors (30 time programs), subdividable in groups (max. 60 measuring points for each time program) , freely selectable time cycles
- Supply type for each sensor
- Quantity of measurements for each cycle
- Quantity of measurements for averaging
- Freely programmable recognition of limit values and signalization by alarm relay

The measuring results are fail-safely stored. For an increased security, each measured value is filed with date and time.

Information memory

Additionally, important events and failures are filed in an information memory in the MFM71, which can be downloaded by the operating routine. These can be, e.g., the switch-on and switch-off of the station, the programming of sensors and time programs or errors at initialization of a modem.

Data downloading of measured values

The measured values can be downloaded at any time. This can be done on site by means of a laptop resp. via a RS485 line from a central station. Modems can also be connected, and then allow an access from any place you like.

A remote adjustment of the measuring program can be done by authorized users from any place at all.

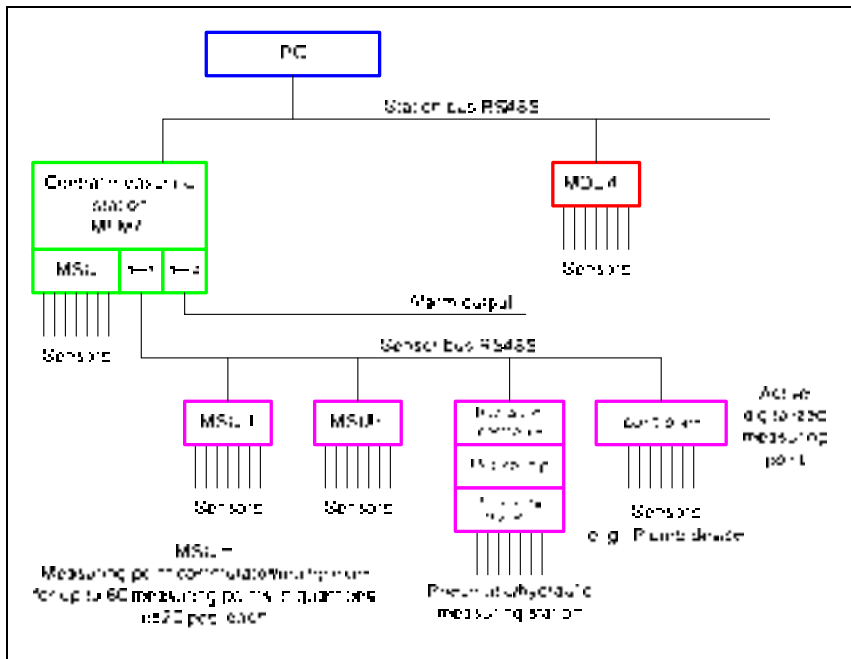
Energy supply

In the self-sufficient operation, the energy supply can be secured over long periods by means of Li- or SLA-battery. Generally, lead or NiMH-accus are used which are charged by network or solar cells.

Technical data

Nos. of measuring points:	up to 1,000 (four-wire circuit) in several variant modular in steps of 20 sensors	
Connectable sensors:	4 – 20 mA	e. g. displacement transducers, pressure sensors, leakage water measuring devices
	1mA	e. g. Pt100 temperature transducers
	5V/ 0.2mA/ 1mA-bridges	e. g. pressure transducers, temperature sensors
	Vibrating wire	e. g. pressure-, strain-, inclination-, temperature transducers
	Serial sensors (RS485-bus)	e.g. active cells, plumb measuring devices, leakage water levels Pneumatic- and hydraulic sensors, e. g. pressure-, load cells by pneumatic controller
Resolution:	Analog: 16 bit (corresponds to approx. 0.015 % f.s.) Vibrating wire: 0.005 %	
Memory:	40,000 measured values with date and time 2,000 status- and alarm messages	
Interfaces:	GMS7-bus compatible: RS485, galvanically separated, fixed line, GSM-, ISDN-modem, LWL-converter, USB	
Switching outputs:	Failure, modem: One potential-free contact max. 42 V, 1 A 6 project-specific ones for limit value control: Potential-free switching contact max. 42 V, 1A, optional 230 V, 6A, programmable by GLA, GKSPro	
Supply:	Internal Li-battery, optional: external lead accu, eventual with charger	
Supporting time:	Dependent on equipment 1 day to several months	
Protection type:	IP40, higher protection grades by switching cabinet	
Dimensions:	Station centre: 19"-plug-in module 26, optional 48 TE Multiplexer: 255 x 115 x 70 mm on cap rail	

System outline



Multiplexer unit with 20 measuring points and control

Subject to technical alterations