

# Measurement System

## MCC + MCC LT

Measurement Communication Control

Automatic measurement system in the area of communication with flexible parameter programming



# MCC 4.0 + LT

## Measurement Communication Control System

The multi-talent among the measurement systems – incorporating your ideas -

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### WHAT YOU CAN EXPECT

If, in addition to procuring a reliable measurement system, you also have high demands as regards communication and direct data processing, you'll find that this system meets all your requirements. The MCC is a very universal, extendable measurement system from GLÖTZL that can work with all usual communication technologies.

Its special feature is the many different applications it can be used for through simple parameter programming. You'll really begin to appreciate its functional capabilities when you've realised all your own ideas and concepts through programming.

Sensors are connected to the measurement system only digitally via an RS485 bus. Consequently, digital sensors can be connected directly to the measurement system in a chain installation. All GLÖTZL protocols are supported.

Analogue sensors can also be connected flexibly via any multiplexers connected in series. This allows short cables on the analogue sensors, which increases the accuracy of the measurements and minimises fault vulnerability.

The connection and querying of the measurement system is uncomplicated and versatile. It communicates via the TCP/IP protocol. Older interfaces, such as communication via RS232 or traditional modem dial-up are also implemented.

### WHAT WILL SURPRISE YOU

With this measurement system the recorded measurements are not just stored, they can also be processed, calculated and evaluated within the system and the results can be communicated globally.

For this purpose, you can set up „virtual“ measurement points that link and average the „real“ sensor measurement points against each other and establish logical connections. All conceivable combinations and processing options are possible within the „calculated measurement points“. Within this averaging you can also program logical decision making criteria that really make linking the measurement points interesting.

Before a message, alarm or internal action is triggered the measurement system can check logical connections with the corresponding queries (if/then/greater than/lesser than/equals) based on your specifications. Alarm limits can be included in the evaluation and redundancy comparisons with parallel systems can be made. In this way a final decision is made as to which of the pre-set actions is used and to whom a message should be sent.

In each case eight digital input and output channels are available for the final action or message, which can be used as alarm outputs or for control functions. The MCC also has 4 analogue outputs (power output 4 - 20 mA or voltage output) with which you can output a result up to the fourth dimension or forward it to other evaluation and control systems for further processing.

If you now personally make a picture of the possibilities from the functions that have been described, you'll soon realise that there is almost nothing that our MCC can't do for you.

### WHAT WILL ULTIMATELY CONVINCING YOU

The measurement system can be extended considerably. This means that because of its reasonable entry price an MCC can even be used for small applications. It can also be used as the basis of a large recording system with up to 2,000 measurement points and master-slave applications.

If you already own one or more GLÖTZL recording systems, such as MFA V6, MDL41, MFM71, etc., you can use an MCC to activate them and use them as multiplexers. This converts it into a communication centre and master measurement system of a whole network of existing and new measurement systems.

The advantage of this is central querying of the measured data by the customer and central alarms when limit values are exceeded.

### USB READY

With a USB flash drive you can import parameter changes into the measurement system. These parameters can be sent from a remote location by e-mail and be overwritten in the system and the measured data can be read out at the same time. Users or service technicians don't need any heavy PC equipment on site to update the system.

## TECHNICAL SPECIFICATIONS

### MEASUREMENT

- 2,000 measurement channels, variable parametrizable with conversion formula
- Up to 20 measurement programmes
- Up to 60 Hz measurement frequency
- Up to 100,000 messages (fault, diagnostics and information messages) in the ring memory
- Up to 10,000,000 measurements in the ring memory
- Sliding average view
- Filter functions
- Median calculation
- Recording of changes in measurements (differentiation)
- Automatic compensations

### CALCULATION AND CONTROL

- Any desired formulas for calculated measurement points to link measurements
- Cascadable formulas for complex calculations
- 50 programmable actions with if-then conditions
- Logical links for redundancy comparisons
- Combination alarms for up to 50 groups
- Limit value monitoring in 3 levels
- Up to 4 analogue outputs for connecting PCS or similar systems
- Up to 8 digital inputs to record external statuses
- Up to 8 digital outputs as alarms or for control tasks

### REGULATION AND COMMUNICATION

These days, you should expect that a measurement system fulfils your requirements in terms of communication with various user groups:

- It must be possible to call measurements from several locations
- Different alarms must be sent to several different people
- Alarms must be sent via various means of communication (e-mail, fax, phone or SMS)
- Convenient data transfer and parameter programming via PC software

### COMMUNICATION OPTIONS

(many of them simultaneously):

- LAN (standard)
- WLAN (optional)
- VPN (optional)
- Internet connection via DSL, GSM/GPRS, UMTS
- RS232/RS 485
- Modem dial-up via GSM, ISDN, analogue connection
- Data transfer to USB flash drive
- internal web server (live view of current measurements)
- System networking via (W)LAN, RS485, RS232 or Internet
- Automatic data transfer via e-mail or FTP (zipped)
- Encryption AES-128-bit (optional)



Fig. An inexpensive, reduced variant of the MCC, only for digital measurement

## OPTIONAL ENHANCEMENTS

### MULTIPLEXER WITH STATIONARY SUPPLY

MU 10 (10-channel multiplexer)

MU 20 (20-channel multiplexer)

MU 40 (40-channel multiplexer)

### MULTIPLEXER WITH VARIABLE SUPPLY

MUX 10 (10-channel multiplexer)

MUX 20 (20-channel multiplexer)

MUX 40 (40-channel multiplexer)

ANALOGUE DIGITAL Controller DC2/4

### COMMUNICATION INTERFACES

Wireless modem bridge

ANALOGUE modem

ISDN modem

GPRS modem

GPRS router

DSL router

WLAN router

External antenna

Antenna masts

VAISALA weather station

### BATTERY AND POWER SUPPLY

Battery operation enhancement

Solar support enhancement

UPS enhancement

(Uninterruptible power supply)

### (PROTECTIVE) HOUSING

19" rack housing (3HE)

Indoor wall cabinet IP 55

Outdoor protective housing IP 67

Insulated weather protection casing

Ram protection for operation in  
traffic situations

Heating element (additional heating)

Lightning protection elements

Ex-proof housing for explosion protection

Earth anchor

Measuring office cabin

### MOUNTINGS

Mast mount

Pipe bracket mount

Wall mounting

and a lot more...



Fig. VAISALA weather station

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