

Conductivity meas. transducer



GLMU 200 MP incl. 2-pol standard meas. cell

Properties

- Output signal freely scaleable
- Adjustable cell constant
- Selectable temperature compensation mode
- On site display for the temperature
- Exchangeable unit stickers

Specification

Measuring ranges: (free selectable by user)

Conductivity: 0,0 ... 200,0 $\mu\text{S/cm}$, 0 ... 2000 $\mu\text{S/cm}$,
0,00 ... 20,00 mS/cm or 0,0 ... 200,0 mS/cm

Temperature meas.: -5,0 ... +140,0 °C (device) and 0,0 ... +80,0 °C (meas. cell)

Accuracy: (at nominal temperature = 25°C)

Conductivity: $\pm 0.5\%$ of m.v. $\pm 0.3\%$ FS

Temperature meas.: $\pm 0.2^\circ\text{C} \pm 1\text{digit}$

Measuring cell: plugable via 7-pin socket, screwable

Standard meas. cell: 4-pole graphite meas. cell in sturdy plastic shaft, temperature range up to 80°C, cell constant approx. 0,55 cm^{-1} , $\varnothing 12\text{mm}$, length of shaft 120mm, approx. 1m cable.

For pressureless applications use the slip-on thread adapter PG13.5. For pressures up to 6 bar order cell with fixed PG13.5 thread (optionally).

Cell constant: K = 0,30 ... 1,20, freely adjustable

Compensation coefficient: (selectable by user)

off: no compensation

Lin: linear compensation (from 0.3 ... 3.0 %/K)

nLF: non-linear function of natural water according to EN27888 (DIN 38404)

Display: approx. 13 mm high, 4-digit LC-display

Output signal: 4 - 20 mA (2-wire), standard
0 - 1V or 0 - 10 V (3-wire), with upcharge

Electric isolation: input electrically isolated

Auxiliary energy: 12 ... 30 VDC (for option 0-10V: 18 ... 30 V DC)

Reverse voltage protection: 50V permanent

Perm. impedance (at 4-20mA): $RA [\Omega] = (U_v [V] - 12V) / 0.02 A$

Permissible load (at 0-10V): $RL > 3000 \Omega$

Working temperature: -25 ... +50 °C (transducer)
0 ... +80 °C (standard meas. cell)

Storage temperature: -25 ... +70 °C

Electric connection: elbow-type plug acc. to DIN 43650 (IP65)

Housing: ABS (IP65) with the exception of electrode socket

Dimensions: 82 x 80 x 55 mm, without elbow-type plug and socket

Mounting: with fixing holes for wall mounting,
Mounting distance: 148 x 50 mm (W x H)

Options / upcharge

AV010: output signal 0-10V

AV01: output signal 0-1V

PG: electrode with thread PG13.5 (for use up to 6 bar)

KL=... longer meas. cell cable (recommended max. 5m) **each m**

Accessories / spare parts

LFE 202 spare 2-pol measuring cell

GKL 100 100ml control solution, 1413 $\mu\text{S/cm}$ (pursuant DIN 27888)

PG 13.5 plug on thread adapter for pressureless use

Flow measuring transducer



GSMU 0102 B5

GSMU 0102 C5

GSMU 1020 B5

GSMU 1020 C5

Properties

- 3 measuring ranges integrated in each device
- selection between 2 different response times
- high accuracy
- almost independent of flow direction
- shock resistant
- resistant to pollution

Typical application:

GSMU 0102: e.g. monitoring of clean rooms and laminar flow

GSMU 1020: e.g. air conditioning and ventilation technology, process and environmental technology

Measuring principle: no moving parts. Hot-film anemometer principle.

Specification

Measuring range flow:

GSMU 0102: 0 ... 1 m/s, 0 ... 1.5 m/s and 0 ... 2 m/s

GSMU 1020: 0 ... 10 m/s, 0 ... 15 m/s and 0 ... 20 m/s

Measuring range can be set by means of jumper.

Output signal: 0 - 10 Volt (out < 1.0 mA) or
4 - 20 mA ($R_i < 450 \Omega$)

Measuring range can be set by means of jumper.

Measuring accuracy: (at 20°C, 45% r.h., 1013hPa)

GSMU 0102: 0 ... 1.0 m/s: $\pm 0,04 \text{ m/s} \pm 2\%$ of measured value

0 ... 1.5 m/s: $\pm 0,05 \text{ m/s} \pm 3\%$ of measured value

0 ... 2.0 m/s: $\pm 0,06 \text{ m/s} \pm 3\%$ of measured value

GSMU 1020: 0 ... 10 m/s: $\pm 0,2 \text{ m/s} \pm 3\%$ of measured value

0 ... 15 m/s: $\pm 0,2 \text{ m/s} \pm 3\%$ of measured value

0 ... 20 m/s: $\pm 0,2 \text{ m/s} \pm 4\%$ of measured value

Response time: t_{90} (at 10 m/s): typ. 4s or 0.2s

Response time can be set by means of jumper.

Dependency on flow direction: < 3 % of measured value at $\Delta\alpha < 10^\circ$

Voltage supply: AC / DC $\pm 20\%$, max. 150mA

max. load: 500 Ohm

Connection: screw-type terminals up to 1.5 mm^2

Operating temperature: -10 ... +50 °C

Storage temperature: -20 ... +60 °C

Housing: 80 x 80 x 35 mm (H x W x D)

Material: ABS

Protection rating: IP65

Sensor tube: length = 200 mm (+18 mm for sensor head), $\varnothing 12 \text{ mm}$

GSMU...B5: sensor tube permanently connected to housing

GSMU...C5: sensor tube connected to housing via cable (approx. 1 m long)

Other tube or cable lengths upon request.

EMC: Conforming to CE acc. to DIN EN 50081-1 and DIN EN 50082-2

Accessories

GNG 24/150 power supply: 24VDC, 150mA

GNT 0520 mains transformer: 230V~ auf 24V~,
with mounting clamp and screw-type terminals.
Dimensions approx. 62 x 56 x 32.5 mm