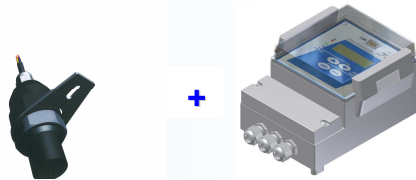


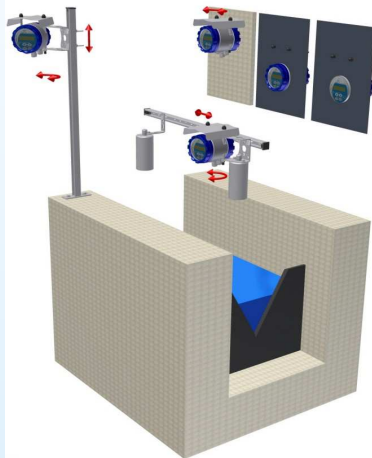


Adaptive system of ELA meters

**Ultrasonic flowmeter**  
type **MQU 99**  
for open profile  
compact and remote  
version with display

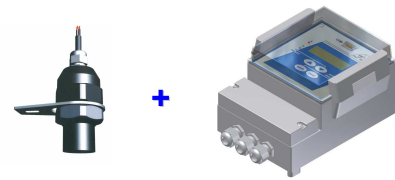


**MQU 99 – SMART**

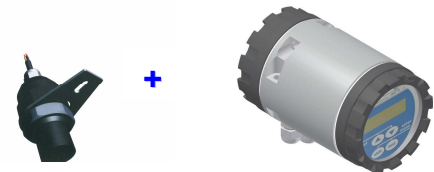


**MQU 99 – C**  
**MQU 99 – S**

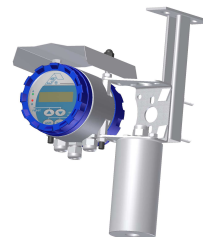
**Ultrasonic level meter**  
type **MHU 99**  
for measuring of level  
compact and remote  
version with display



**MHU 99 – SMART**



**MHU 99 – S**



**MHU 99 – C**

- Flexible and clever assembling system
- Robust and resistant cover of sensor and transmitter
- Innovative and high-power transmitter for every application
- Easy and fast-moving change from compact to remote version

**Applications**

- Agriculture
- Water treatment
- Power, civil engineering
- Chemical, food, pharmaceutical industry

## Function description

continuous measurement of current flow, level up to 10 meters  
possibility of special single channel flowmeter with 2nd sensor for flume flood checking  
data logger: 2 months capacity (current month + previous month); average 5-minute current flowrates, total volume and operating time by hour/day/month time slices; accessible via communication output or by local keyboard and display  
universal power supply, low power consumption  
additional modules according to customers requirements  
**diagnostics:** echo loss, flume flood checking + next functions

## Advantages

**Compact and remote**, multi-universal, efficient ultrasonic flowmeter or level meter, **easy and economic** assembly **for every application via special bracket ELA®**.

## Technical data – details:

The customer assume personal responsibility for reasonable using of sensor and control unit.

### Ultrasonic sensor:

#### Measuring of flow and level to 2 m

Level range	0 ÷ 1,8 m
Emission angle	10°
Accuracy	0,24 % of range (for reference conditions)
Temperature compensation	yes, internal
Ambient temperature	-30 až 70°C
Electric protection	IP 68
Power supply	18 - 36 VDC 10 % or from control unit / drain < 30 mA
Weight	0,2 kg

#### Measuring of level to 6 m or 10 m

Level range	0 ÷ 5,7 m / 0 ÷ 9,7 m
Emission angle	14° / 12°
Accuracy	0,24 % of range (for reference conditions)
Temperature compensation	yes, internal
Ambient temperature	-30 až 70°C / -30 až 60°C
Electric protection	IP 68
Power supply	18 - 36 VDC 10 % or from control unit / drain < 30 mA
Weight	0,9 kg
Sensor performance	PVDF / PE, connecting G 1", G 1 1/2", flange - non-dismountable compact body, non-rewirable, self-supporting, 4 m length

#### Control unit MQU, MHU 99 – SMART / MQU, MHU 99 - C,S:

Display	LCD, 2x 16 characters, with backlight
Flow measurement accuracy	1,8 % of reading while flow is within 10÷100% of range, for (reference conditions)
Data logger	measurement data archiving (set up 5 min to 2 months), PC data output
Outputs	analog (4(0) – 20 mA), impulse, frequency (0 - 1 kHz), 4x relays (30VAC/DC/3A)
Keyboard	4x keys
Communication output	RS 232, RS 485, Modbus RTU, ELA protocol
Cable outlets	3x PG 11
Power supply	85 ~ 260 VAC / 50 ~ 60 Hz / 10 VA, ^ 9 ~ 36 VDC / 10 W ^ 24 VDC / 10 W (± 1V)
Electric protection	MQU, MHU 99 – C,S: IP 67 (NEMA 5) / MQU, MHU 99 – SMART: IP 65 (NEMA 4)
Ambient temperature	-20° C ÷ +50°C
Dimensions	MQU, MHU 99 – C,S: 180 x Ø 115 mm MQU, MHU 99 – SMART: 210 x 160 x 115 mm
Weight	MQU, MHU 99 – C,S: 2,6 kg / MQU, MHU 99 – SMART: 1,5 kg
Housing material	MQU, MHU 99 – C,S: aluminium housing // MQU, MHU 99 – SMART: plastic housing
Surface finish	powered coated (komaxit, anodizing) / -