

## Pump controller for water technology

### The pump - system controller MAH:

is built in a sheet steel housing with a parameterizable pump controller with keyboard and colorful plain text display. Operation of PM motors (synchronous motors) up to 400Hz is possible.

**Operating modes: pressure controller, pressure switch, limit switch, level controller, level switch, temperature controller, temperature switch, quantity controller, flow controller, vacuum controller, differential pressure controller, fire extinguishing mode**

**Power range: 1-6(8) Pumpen 0,75kW - 2,2kW / 1PH 230V 50/60Hz +/- 15% (ab 2024)**

**Power range: 1-6(8) Pumpen 0,40kW - 355kW / 3PH 400V 50/60Hz +/- 15%**

**Power range: 1-6 Pumpen 5 - 200A Sanftstarter / 3PH 400V 50/60Hz +/- 15%**

#### Technical specifications:

Metal enclosure IP54, Main switch,  
Fuses for each pump,

**Frequency inverter with 50% / 1 min reserve,  
with line filter C1/2, soft starter with display,**

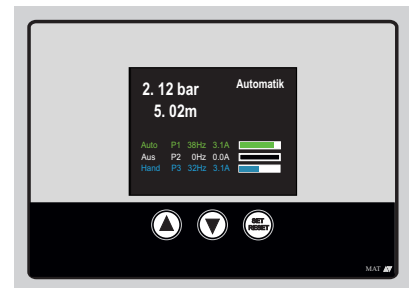
PTC connection each pump,  
Operating mode selector each pump,

4x Dig. Inputs,  
1x Relay Output collective fault,  
1x Relay Output Cooling / heating,  
1x Relay Output each inverter,  
3x transducer inputs 4-20mA (2xMAH+INV1),  
1x SD card,  
1x Passive ventilation standard < 5,4kW  
1x Active ventilation standard > 5,4kW  
1x interface RS485 Modbus RTU Master  
1x interface RS485 Modbus RTU / GSM Slave  
1x interface UART Adapter port

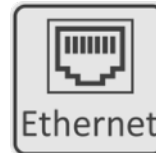
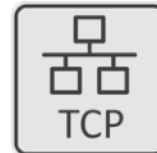
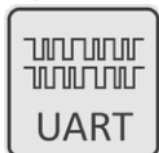
Option:

Plug-in board: 4x Relays Output,  
Plug-in board: RS485 Modbus RTU (GSM),  
Plug-in board: Modbus TCP/IP,  
GSM RS485 Modem,

**no transducer, no modem, no accessories**



#### Optionen:



**General water supply applications such as: Pressure increase, level maintenance and process water supply must be implemented.**

**System monitoring is optionally possible.**

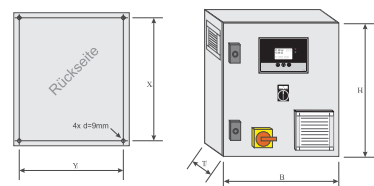
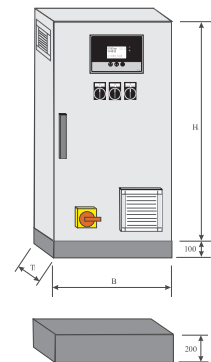
**The system is configured at the factory.**

Special types are available on request.

**MAH**

**All features of the MAH regulation:**

- Freely parameterizable pump controller with keyboard and colored plain text display
- Display for all operating messages, setpoints and commissioning values
- 4x digital inputs, 2x relay collective fault/heating/cooling, 1x relay output per frequency converter
- Speed control system for 1 to 6(8) pump systems all controlled
- Speed control system for 1 to 6 pump systems, all unregulated
- Triple password protection, connection for three sensors 4..20mA
- Adjustable PI controller for quick pressure control
- Adjustable zero quantity switch-off to switch off the pump to “standby”
- Safe start function for the safe filling of the pipes after a power failure
- Manual operation with adjustable fixed speed for emergency supply in the event of sensor failure
- Pump monitor for operation with underwater pumps
- Adjustable runtime monitoring, adjustable leakage monitoring
- Adjustable pressure reduction, adjustable dry running protection
- Adjustable electronic pressure monitoring
- Transducer monitoring with emergency switching to fixed speed
- Multi-operation with base load, peak load, jockey or boost function
- Automatic fault switching and pump change function
- Adjustable test run, adjustable flushing mode, adjustable motor characteristic, adjustable PM mode
- Real-time clock with error memory and time stamp
- Operating hours counter, daily hour counter
- Interface: RS485 ModBus RTU Slave
- Lockable front switch, fuses per frequency converter
- SD card for data logger, saving events
- GFCI + MCB 10A /230V on terminal
- Option: Connection for external 24VDC supply
- Option: Plug-in board RS485 Modbus RTU (GSM)
- Option: Aufsteckplatine Modbus TCP/IP
- Option: Modbus TCP/IP add-on board
- Option: stainless steel cabinet
- Option: control cabinet heating
- Option: external control cabinet
- Option: sine filter / all-pole sine filter



**Dimensions for the MAH regulation on request**



Presented by:

