



## MY CONNECT

### Технические характеристики

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сайт: [www.mjk.nt-rt.ru](http://www.mjk.nt-rt.ru) || эл. почта: [mkj@nt-rt.ru](mailto:mkj@nt-rt.ru)



# M $\mu$ Connect<sup>®</sup>

## General



M $\mu$  Connect<sup>®</sup> is a combination control and supervisory unit. It controls smaller water works, wastewater treatment plants, pump stations, potable water and raw water pumps, measures and registers storm flow, and data logs multiple measured values.

M $\mu$  Connect<sup>®</sup> is configured and controlled using the PC application Instrument Link™ or a Connect<sup>®</sup> display. A PC is easily connected and configured via M $\mu$  Connect's USB socket, WIFI module or by a smart phone via GSM/GPRS modem, all standard equipment!

M $\mu$  Connect<sup>®</sup> is ready for expansion with extra I/O modules.

M $\mu$  Connect<sup>®</sup> is perfect for:

- Energy optimization
- Simple monitoring controls
- Intelligent pump supervision
- Data and event logging
- Interlock controls including stopping pumps

M $\mu$  Connect<sup>®</sup> provides a serial bus for attaching flow, level or other meters using Modbus communication.

M $\mu$  Connect<sup>®</sup> communicates with a wide selection of monitoring software.

## Application

Control and supervision of sewer and wastewater plants

- Pump stations
- Storm flow monitoring
- Storm flow reservoirs
- Wastewater treatment plants
- Control of aerators in sewage plants
- Energy optimization

Controlling and supervising water supply plants and raw water sources

- Raw water wells
- Ground water pump stations
- Filter rinsing
- Pressure booster stations
- Pressure control
- Filtering plants

## Features

The M $\mu$  Connect<sup>®</sup> development is based on MJK's well-known Connect<sup>®</sup> and is the result of an intensive development process made possible with many years' experience in manufacturing equipment for SCADA systems and pump controls.

M $\mu$  Connect<sup>®</sup> has multiple connectivity options and can function as a controller or as an RTU in an SCADA system.

M $\mu$  Connect<sup>®</sup> consists of a CPU unit and can be expanded when needed with digital or analog I/O modules.

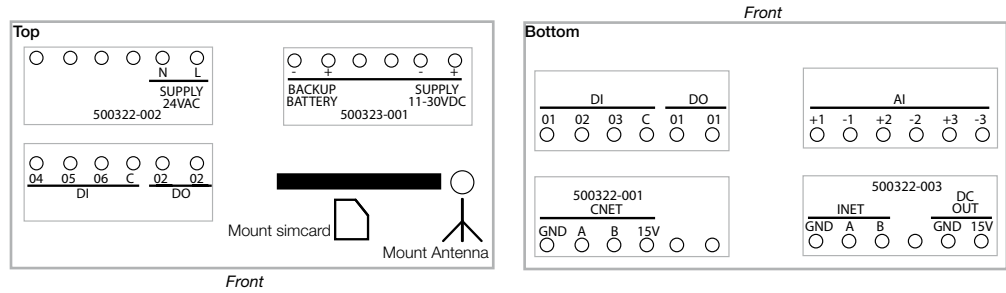
M $\mu$  Connect<sup>®</sup> provides a built-in GSM/GPRS communication modem as standard for transmitting data or messages using the cell phone network.

M $\mu$  Connect<sup>®</sup> has built-in WIFI for easy smart phone access with the MJK App installed. This makes it possible to monitor or change start/stop levels, force start/stop and block pumps – and read alarms and I/O status on your smart phone through the built-in WIFI.

- Built-in intelligent pump monitoring with Control-word for optimal monitoring
- Flexible number of input and output channels using I/O expansion modules.
- Modbus or Comli communication protocol for SCADA systems
- Instrument Net for connecting flow and level meters for example
- Function for energy optimization
- Can be connected to both analog and digital level or pressure transmitters.
- Time stamped data and event logging.
- Data logging and event logging
- Interlock with either stop of pumps or start/stop level offset
- Storm flow calculation with time, numbers and volume.
- Logic functions for individual controls, combination of alerts, and more
- Built-in pump capacity calculations.

# Data Sheet

## Electrical Connections



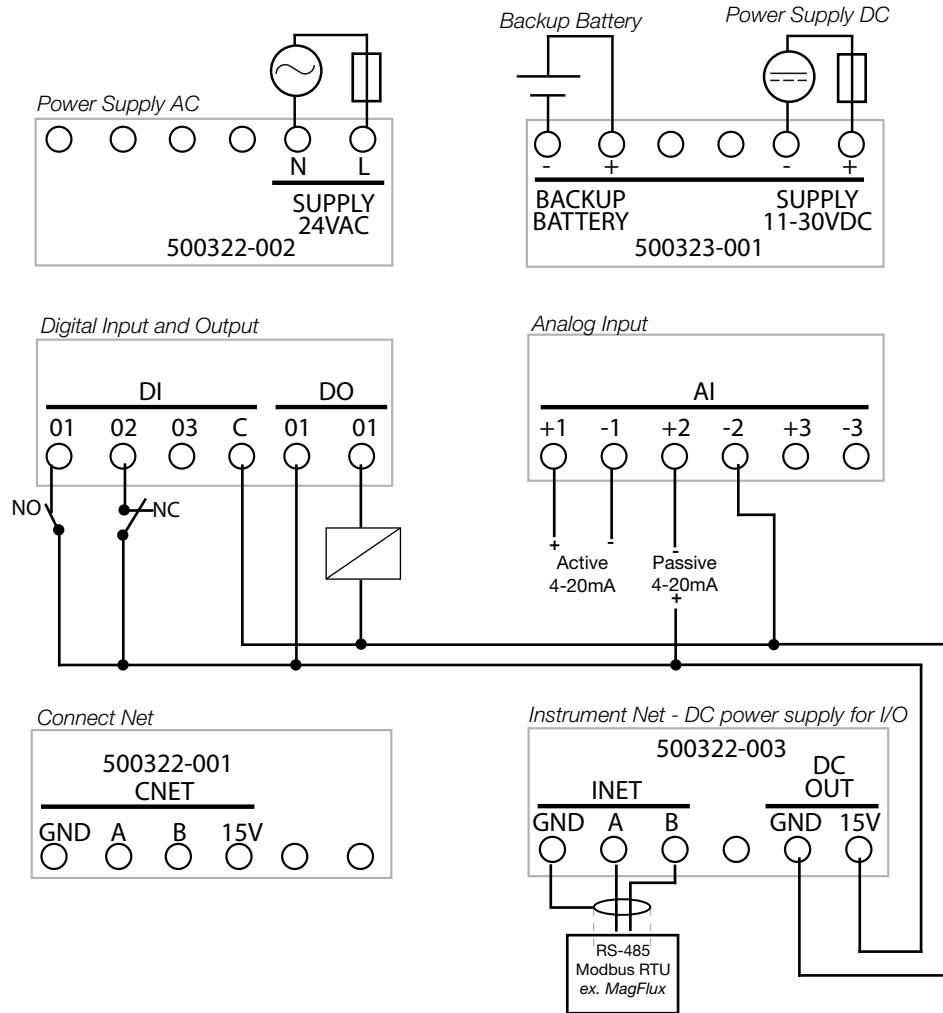
## Connection Examples

Supply can be either AC or DC

Min. 20VA.  
Recommended 30VA-40VA

Backup battery can be charged by either AC or DC supply

Fuse:  
Must be UL-Listed  
12V, 3A  
24V, 2A



## I/O Expansion Modules

M $\mu$  Connect<sup>®</sup> can be expanded through I/O expansion modules. The DIN rail units communicate with each other through the DIN bus system mounted on the rail.

M $\mu$  Connect<sup>®</sup> can be configured with a wide selection of I/O modules - from a single controller/alerter to a fully expanded multi-variable process controller system. The maximum number of I/O modules is 8 units which combined with the CPU unit give a total maximum of 32 DI, 32 DO, 16 AI and 16 AO.

M $\mu$  Connect can be expanded easily using DIN-bus rail system.



Flexible input and output      Modular construction



DIN Bus rail

# Data Sheet

## Features Continued...

M $\mu$  Connect<sup>®</sup> works together with other M $\mu$  Connect<sup>®</sup> and Connect<sup>®</sup> units and can be connected to flow and pressure meters together with pH, dissolved oxygen, total suspended solids and turbidity instruments through its built-in RS-485 port.

M $\mu$  Connect<sup>®</sup> is configured with MJK's Instrument Link<sup>™</sup> software where you have both an overview of the current configuration, and the option for editing and uploading new configurations, while also viewing current readings and status.

## Operating



iPhone



Android



M $\mu$  Connect<sup>®</sup> can be operated from several different devices:

- A smart phone connected through the built-in WIFI. The Apps for both iPhone and Android are free and can be downloaded on the App Store (iPhone) and Android Market.  
*Scan the QR code and download from App Store or Android Market*
- Instrument Link<sup>™</sup> on your PC for setup, configuring and online data view through USB, GSM/GPRS modem or WIFI.
- Connect<sup>®</sup> display through Instrument Net.

## Specifications

M $\mu$ Connect <sup>®</sup>	
Power supply ③	11-30 V DC / 24 V AC $\pm$ 20%
Power Consumption	8-40 VA, Depends on construction
Battery backup ③	Built-in battery charger includes supervising an external battery, (2 - 30 Ah)
Clock	Realtime clock incl. built-in lithium battery (exp. lifetime app. 10 years @ 68°F)
Memory	32MB flash memory, 10x36,000 logs depending on chosen protocol
Communications	1 built-in GSM/GPRS Modem, (Quad-Band EGSM 850/900/1800/1900 MHz) 1 built-in WIFI, 802.11b/g (2,4 GHz), Max 25Mbps (64/128 bit WEP, WPA, WPA2(AES))
Internal Communication	Modbus <sup>®</sup> RTU-mode
External Communication	Modbus <sup>®</sup> RTU-mode or COMLI <sup>®</sup>
Interface	1 pcs. RS485 DIN bus for I/O modules 1 pcs. RS485 Galvanically separated for Instrument Net 1 pcs. RS485 Galvanically separated for Connect net 1 pcs. USB 1,1 type mini B, female 1 pcs. MMCX, female, for antenna
Enclosure	NEMA 1
Cabinet Material	PC (Polycarbonate)
Operating Conditions	-4...140°F / -20...60°C
Weight	19.4 oz
CE Approval	EN 61000-6-4:2007, EN 61000-6-2:2005
Input and Output RTU Unit 3AI/6DI/2DO incl. expansionmodules max. 32 DI, 32 DO, 16 AI og 16 AO	
Digital input ④	6 pcs. 10 - 30 V DC
Digital output ④	2 pcs. Electronic relays (max. 28 V AC / 28 V DC / 300 mA)
Analog input ④	3 pcs. Galvanically separated, 16 bit resolution, 4-20 mA, accuracy $\pm$ 0,25 % af FS <sup>②</sup>
Analog output ④	Via optional M $\mu$ Connect <sup>®</sup> I/O module, 4-20 mA, Galvanically separated
Powersupply for I/O	1 pcs. 15 V DC, 150 mA
① When using M $\mu$ Connect <sup>®</sup> expansion modules, the maximum number of input and outputs will be: 32 DI, 32 DO, 16 AI and 16 AO (32 digital inputs, 32 digital outputs, 16 analog inputs and 16 analog outputs) Expansion modules are mounted using DIN-rail bus system.	
② At operating condition of 32-122°F	
③ Minimum 15-30 VDC to charge the backup battery; battery is charged by either AC or DC supply.	

Accessories



**Instrument Link™**

MJK Instrument Link 5.0 or newer is used for configuring M $\mu$  Connect® by communicating between Connect® or M $\mu$  Connect® and a PC with a standard USB cable, WIFI or a PSTN/ GSM/GPRS modem. See data sheet no. 6.28

**Smartphone App**

MJK smart phone App is used on a smart phone instead of a display to operate and view the most important data.

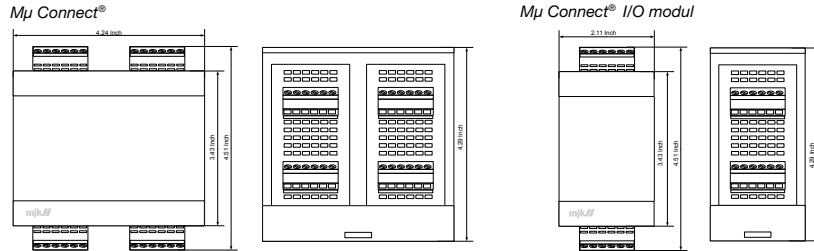
**MJK Connect Display**

M $\mu$  Connect® can be operated and configured using the same display as used for Connect®.

**Back-up Battery**

External batteries ensure continued power to the M $\mu$  Connect® for several hours during power outages – depending on the battery capacity

Dimensions



Order numbers

M $\mu$ Connect®	
205240	M $\mu$ Connect® RS485/RS232 WIFI 6DI/2DO/3AI
205243	M $\mu$ Connect® GSM/GPRS modem WIFI 6DI/2DO/3AI

I/O Expansion Modules (max 16AI/16AO/32DI/32DO)	
205260	M $\mu$ Connect® I/O module 12DI
205261	M $\mu$ Connect® I/O module 12DO
205262	M $\mu$ Connect® I/O module 6DI/6DO
205270	M $\mu$ Connect® I/O module 6AI
205271	M $\mu$ Connect® I/O module 6AO
205272	M $\mu$ Connect® I/O module 3AI/3AO
205280	M $\mu$ Connect® I/O module 6DI/3AI
205281	M $\mu$ Connect® I/O module 6DI/3AO
205282	M $\mu$ Connect® I/O module 6DO/3AI
205283	M $\mu$ Connect® I/O module 6DO/3AO

Accessories	
500311	DIN bus (3DIV.) for mounting one I/O module
500312	DIN bus (6DIV.) for mounting M $\mu$ Connect CPU to the I/O modules
691095	USB-cable for PC communication
840150	Instrument Link™
205505	Connect® Display unit
205205	Power supply 100-240VAC, 24VDC/1.75 A



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