Mμ Connect

RTU UNIT

6.06

General

Mμ Connect® is an advanced 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.

Mμ Connect® is configured and controlled using the PC application Connect Link™. A PC or the HMI touchscreen is easily connected via Mμ Connect's USB socket, WIFI module or via GSM/GPRS modem for pc, smaller adjustments and data overview can be accessed using a smartphone and WIFI.

Mμ Connect® can swiftly be provided with expansion of the input/output terminals by using I/O modules and DIN-bus.

Mμ Connect® provides a serial bus for attaching flow, level or other meters using Modbus communication.

Mμ Connect® communicates with a wide range of SCADA software.

Features

Mμ Connect is an advanced RTU, some selected features is mentioned here

- Intelligent pump monitoring
- Large number of input/out via I/O modules
- Energy optimized pump control
- Built-in pump capacity calulation
- State machine for individual programming
- Filter rinsing
- Works with analog and digital level/pressure transmitters
- Interlock w. stop pumps or start/stop level offset
- Storm flow calculation with time, number and volume
- Logic functions (control word) for individual control, combination of alarms and more

Applications

Control and supervisory of sewer and wastewater plants

- Pump stations
- Storm flow reservoir
- Wastewater treatment plants
- Control of aerators in sewage plants
- Master device for nConnect
- Controlling and supervising water supply plants and raw water sources
- Raw water borings
- Ground water pump stations
- Pressure booster stations
- Filtering plants

DATASHEET

EN 6.06 Mμ CONNECT DATASHEET 1507

mjk a xylem brand

Mμ Connect RTU Unit

I/O Expansion Modules

Mμ Connect® 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. More details in datasheet 6.07

Mμ Connect can be expanded easily using DIN-bus rail system.

Flexible input and output Modular construction

Operating

Android iPhone

Mμ Connect® 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 the App Store or Android Market
- Connect Link™ for setup, configuring and online data view through USB, GSM/GPRS modem or WIFI.
- HMI touchscreen display provides easy access to pump control, data readout and real-time operating overview.

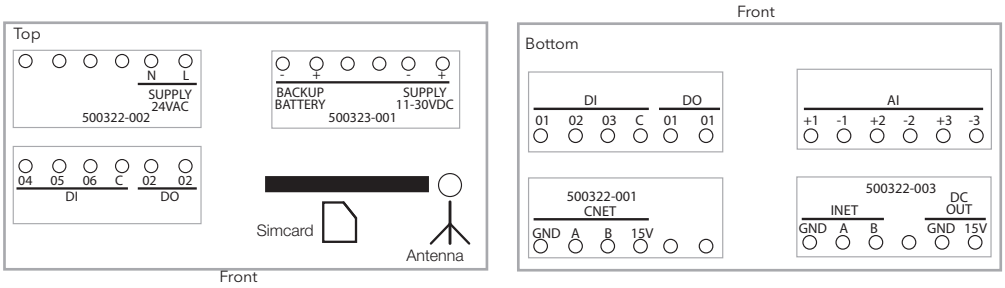
Specifications

Mμ Connect®	
Power supply ③	11-30 V DC / 24 V AC ± 20%
Power Consumption	8-40 VA, Depending on construction
Battery backup ③	Built-in battery charger includes surveillance of external led accumulator, (2 - 30 Ah)
Clock	Realtime clock incl. built-in lithium battery (exp. lifetime app. 10 years @ 20°)
Memory	32MB flash memory, 10x36000 logs depending on chosen protocol
Communications	1 stk. build-in GSM/GPRS Modem, (Quad-Band EGSM 850/900/1800/1900 MHz) 1 stk. build-in WIFI, 802.11b/g (2,4 GHz), Max 25Mbps (64/128 bit WEP, WPA, WPA2(AES)
Internal Communication	Modbus® RTU-mode
External Communication	Modbus® RTU-mode or COMLI®
Interface	1 pcs. RS485 DIN bus for I/O modules 1 pcs. RS485 Galvanic 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	IP 20
Cabinet Material	PC (Polycarbonate)
Operating Conditions	- 20 … 60 °C
Weight	0,55 kg
CE Approval	EN 61000-6-4 2007-02-19, EN 61000-6-2 2005-09-08 according to 89/336/EEC, 2004/108/EC, 1999/EC
Input and Output RTU Unit 3AI/6DI/2DO incl. expansionsmodules max. 32 DI, 32 DO, 16 AI og 16 AO	
Digital input ①	6 pcs. 10 - 30 V DC
Digital output ①	2 pcs. Electronic relays (max. 28 V AC / 28 V DC / 300 mA)
Analog input ①	3 pcs. Galvanically separated, 16 bit resolution, 4-20 mA, accuracy ± 0,25 % of FS②
Analog output ①	Only Mμ Connect® I/O module, 4-20 mA, Galvanically separated
Powersupply for I/O	1 pcs. 15 V DC, 150 mA

① When using Mμ Connect® 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 analogue inputs og 16 analogue outputs)
Expansion modules are mounted using DIN-rail bus system.
② At operating condition of 0-50°C
③ Minimum15-30 VDC to charge the backup battery; battery is charged by either AC or DC supply.

Mμ Connect RTU Unit

Electrical Connections



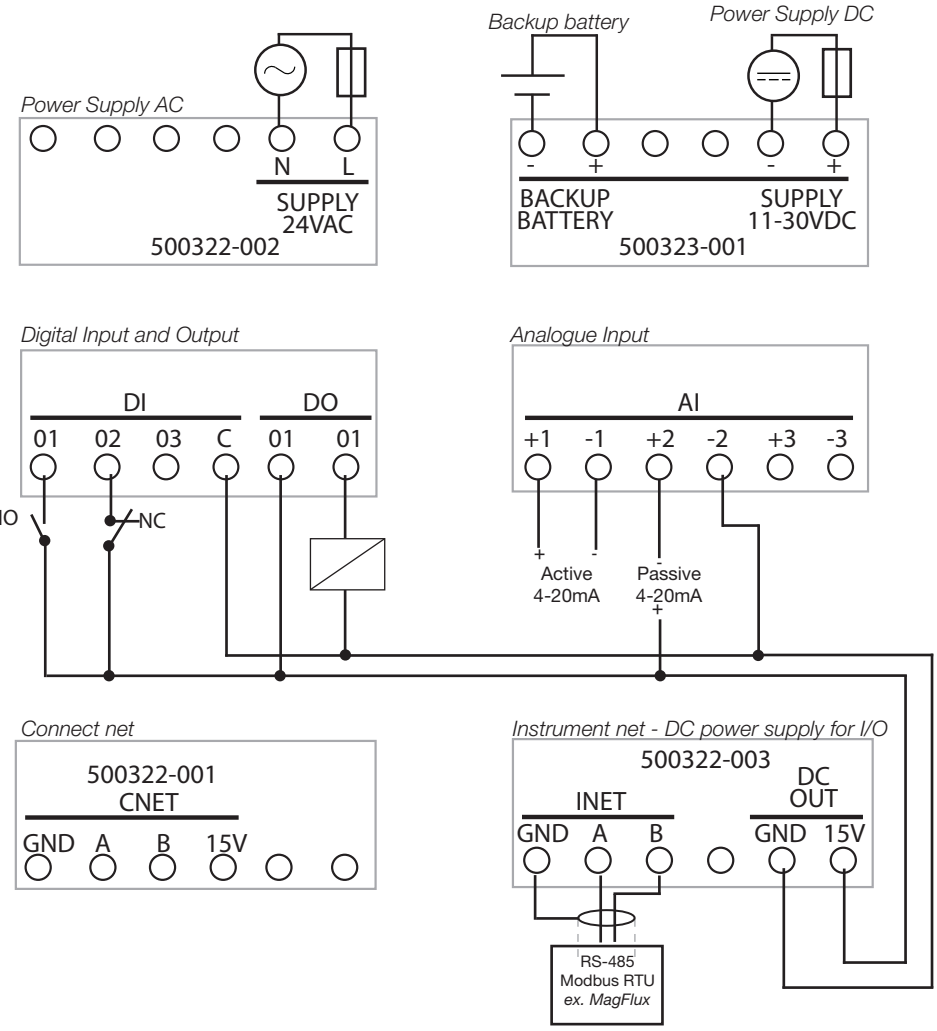
Connection examples

Supply can be either AC or DC

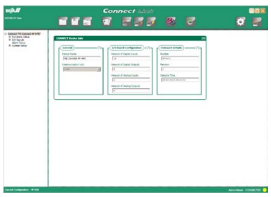
Min. 20VA.
Recommended 30VA-40VA

Backup battery can be charged by either AC or DC supply

Fuse:
12V, 3A
24V, 2A



Accessories



Connect Link

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

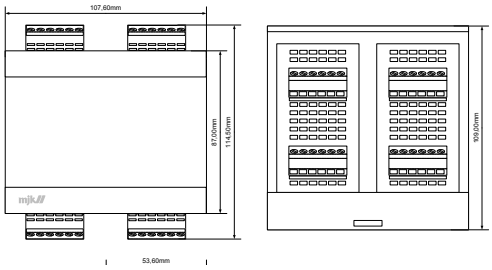
Back-up Battery

External batteries ensure continued power to the Mμ Connect® for several hours during power outages – depending on the battery capacity

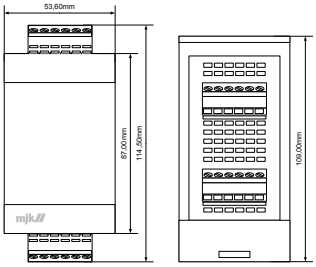
Mμ Connect RTU Unit

Dimensions

Mμ Connect®



Mμ Connect® I/O modul



Order numbers

Mμ Connect®	
205240	Mμ Connect® RS485/RS232 WIFI 6DI/2DO/3AI
205243	Mμ Connect® GSM/GPRS modem WIFI 6DI/2DO/3AI

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

Accesssories	
500311	DIN bus (3DIV.) for connection of each I/O module
500312	DIN bus (6DIV.) for connecting Mμ Connect CPU to I/O modules
691095	USB-cable for PC communication
840150	Connect Link™
205505	Connect ® Display unit
205205	Power supply 100-240VAC, 24VDC/1.75 A

GSM/GPRS antenna see datasheet 6.26
HMI Display see datasheet 6.31
nConnect see datasheet 6.08

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