Connect®

SUPERIOR FLEXIBILITY

mjk
a **xylem** brand

CONNECT® - TREMENDOUS POSSIBILITIES

Connect® gives you the advantage of:

- Control and monitoring of waste water pumping installations
- Control and monitoring of drinking water treatment installations
- Control of variable speed drives for optimizing energy consumption
- Collecting data and data logging from flow and level instruments
- Communication using public telephones, private lines, GSM, GPRS, UHF transcievers, Ethernet, Bluetooth ect.

Connect® is the result of intensive R&D work from one of the market leaders in municipal SCADA and remote process communication systems. We developed our first product for remote process monitoring in 1983. Now, with more than 25 years of experience in this field, we have applied our experience to the design of the Connect® system. MJK's history and reputation for developing and producing products with long life times ensure exceptional utility, many years of trouble-free operation and a great investment in MJK's new Connect® systems.

Connect® is a compact unit easy to set up and use, and so flexible that it can be applied in a vast number of applications.

WASTEWATER

Use MJK Connect® for controlling pumps and monitor lift station operations

Connect® is designed using the same ideas behind our new series of instruments where measuring, control and communication systems communicate with a display module using a Modbus protocol. A system with an independent display and operator panel saves not only space and money, it also opens up for connecting more measurement input units mounted in series for expanding the in- and outputs, so Connect® can monitor all the parameters at small and big plants.

The flexible interface and communication modules give you the opportunity to select the communication system which is available and the most economical for the installation.

Connect® provides up to six individually mA outputs for control of VFD drives for pumps and blowers for optimizing the energy consumption.

DRINKING WATER

The flexibility of Connect® makes it very powerful for control and optimization of energy consumption of pumps for water intake, control of pumps for water delivery throughout the city network, control of the filtrating process, control of booster pumps in the network, monitoring water towers, burglar and plant security alarms, recording of flow, monitoring of nightime flow to trace water losses, etc. With the logical operation the high functionality and the possibility to operate more MJK Connect® units in a network, Connect® is the ideal multi-functional solution for the modern water supply facility.

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The growing awareness of energy consumption and the fast growing costs of energy are of great importance. These are effectively addressed and managed by MJK's Connect® using numerous functions which can control and optimize energy consumption. A few examples:

Wastewater lift stations

The set points for starting and stopping the pumps can be adjusted via remote communication. The central computer in the SCADA system can lower the intervals between start and stop set points during night hours and increase the distance in peak hours or during a heavy rain. Connect® can control pumps with VFD to minimize the energy consumption per pumped cubic meter of (waste) water.

Storm flow basins

In these applications MJK Connect® controls the whole sequence according to time and flow rate. Connect® controls return pumping, so it is done during night hours, when the sewage plant has the lowest load.

Booster pumps on the water supply network

When variable frequency drives control the pump speeds, MJK Connect® will optimize the numbers of pumps in operation and the pumps' speeds, so that the pumps always operate within the optimal RPM ranges.

Filling of water towers

MJK Connect® can control the priority of filling, so that it can take place during night hours, when the electricity costs are low, and if the consumption allows for it.

Use MJK Connect® to display measurements from several flow meters. When using MJK Connect®, MJK MagFlux® flow meters may be blind without display and keyboard reducing installation costs. The flow meters can be connected to a MJK Connect® on a 2-wire loop with Modbus communication. Via Modbus all flow meters can be configured, and Connect® can display an overview picture, where all measurements are presented simultaneously.

This function is not only more economical, it also gives a much better overview than normally. In addition MJK Connect® automatically stores all measurements in its data logger for easy access through a single device instead of via multiple devices.

Connect® networks can be built and / or extended on demand to almost any level of sophistication.

This innovation means that MJK Connect® units can be configured individually, or several can be connected in networks. In some applications it means controlling pumps using heavy-duty relays at the motor control centre, while at the same time tightly controlling a number of mA outputs for optimizing the energy consumption with variable frequency drives. Perhaps there is a concurrent demand to control or log other measurements such as pH, turbidity or flow. Install the MJK Connect® units where it is most practical, and the entire operation can be managed from one of the MJK Control units or from inside the control room. MJK Connect® gives you the power, the flexibility and a clear and logical access to efficiently manage all your measurements.

Display

Display	Graphic LCD-display (64 x 128 pixels) with soft-keys
Indication	Menu system with analogue in-and output indications of measuring values for connected instruments, data logger graphics, pump volume, etc.
Communication	MODBUS® RTU-mode for communication to 1 - 4 Connect® units or MJK instruments
Memory	16 Mb Flash memory, 165.000 logs with day and time stamps
Bluetooth®	IEEE 802.15.1. Class 2, 2.5 mW (Optional)

Connect®

Power supply	24 / 115 / 230 V AC, 50 / 60 Hz ± 10 % or 10 - 30 V DC
UPS power	Built-in charger 13,6 VDC / 250 mA with voltage monitoring for external battery
Real-time clock	With built-in lithium cell for 10 years of operation
Memory	16 MB Flash-memory, 200.000 logs depending on chosen protocol
Interface 1	Slot for communication module
Interface 2	One USB 1,1 type, mini B, Female
Data protocol	MODBUS® RTU-mode / COMLI® RS 232

In- and output interface

In- and output interface	Numbers indicate maximum for one unit (numbers in brackets for maximum 4 units in network)
Analogue input	6 (24) AI (galvanic insulated, 4 - 20 mA, 16 bit ± 0,25 %)
Analogue output	3 (12) AO (active 4 - 20 mA, galvanic insulated)
Digital input	16 (64) DI (galvanic insulated)
Digital output	8 (32) DO (electronic or mechanical relays)
Power supply for external units	3 (12) x 15 V DC, 200 mA (galvanic insulated)

Communication modules

PSTN	Hayes compatible, auto-call, auto-answer
GSM	900 / 1800 MHz
GPRS	900 / 1800 MHz
RS 232 Opto	Galvanic insulated RS 232 for data radio or external equipment
RS 485 Opto	Galvanic isolated RS 485 with repeater for private lines
RS 485	MODBUS® RTU-mode
RS 485	Profibus® PA
Ethernet	RJ 45

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