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Let's Solve Water

Installation, Operation, and Maintenance manual

885463_2.0

MyConnect

FLYGT
a xylem brand

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1 Introduction and Safety

1.1 Introduction

Purpose of the manual

The purpose of this manual is to provide necessary information for installation, operation, and maintenance of the unit.

Read and keep the manual

Save this manual for future reference, and keep it readily available at the location of the unit.

CAUTION:

Read this manual carefully before installing and using the product. Improper use of the product can cause personal injury and damage to property, and may void the warranty.

The equipment, and its functioning, may be impaired if used in a manner not specified by the manufacturer.

Intended use

WARNING:

Operating, installing, or maintaining the unit in any way that is not covered in this manual could cause death, serious personal injury, or damage to the equipment and the surroundings. This includes any modification to the equipment or use of parts not provided by Xylem. If there is a question regarding the intended use of the equipment, please contact a Xylem representative before proceeding.

1.2 Safety terminology and symbols

About safety messages

It is extremely important that you read, understand, and follow the safety messages and regulations carefully before handling the product. They are published to help prevent these hazards:

- Personal accidents and health problems
- Damage to the product and its surroundings
- Product malfunction

Hazard levels

Hazard level	Indication
 **DANGER:**	A hazardous situation which, if not avoided, will result in death or serious injury
 **WARNING:**	A hazardous situation which, if not avoided, could result in death or serious injury
 **CAUTION:**	A hazardous situation which, if not avoided, could result in minor or moderate injury
NOTICE:	Notices are used when there is a risk of equipment damage or decreased performance, but not personal injury.

Special symbols

Some hazard categories have specific symbols, as shown in the following table.

Electrical hazard		Magnetic fields hazard	
	Electrical Hazard:		CAUTION:

1.3 User safety

Introduction

All government regulations, local health and safety directives must be observed.

Prevent danger due to electricity

All danger due to electricity must be avoided. Electrical connections must always be carried out in compliance with the following:

- The standard connections shown in the product documentation that is delivered together with the product
- All international, national, state, and local regulations. (For details, consult the regulations of your local electricity supplier.)

For more information about requirements, see sections dealing specifically with electrical connections.

1.3.1 Power lock-out

DANGER: Electrical Hazard

Before starting work on the unit, make sure that the unit and the control panel are isolated from the power supply and cannot be energized. This applies to the control circuit as well.

1.3.2 Qualification of personnel

WARNING: Electrical Hazard

Risk of electrical shock or burn. A certified electrician must supervise all electrical work. Comply with all local codes and regulations.

All work on the product must be carried out by certified electricians or Xylem authorized mechanics.

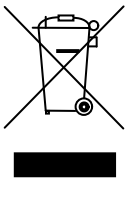
Xylem disclaims all responsibility for work done by untrained, unauthorized personnel.

1.4 End-of-life product disposal

Handle and dispose of all waste in compliance with local laws and regulations.

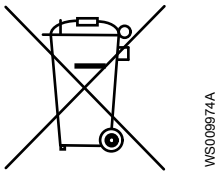
EU and UK only: Correct disposal of this product — waste electrical and electronic equipment

- EU: Directive 2012/19/EU on waste electrical and electronic equipment (WEEE)
- UK: SI 2013 No. 3113



This marking on the product, accessories, or literature shows that the product should not be disposed of with other waste at the end of its working life.

EU and UK only: Correct disposal of batteries in this product



This marking on the battery, manual, or packaging shows that the batteries in this product should not be disposed of with other waste at the end of its working life. Where marked, the chemical symbols Hg, Cd, or Pb indicate that the battery contains mercury, cadmium, or lead above the reference levels in 2006/66/EC or UK SI 2008 No. 2164. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

1.5 Spare parts

CAUTION:

Only use the manufacturer’s original spare parts to replace any worn or faulty components. The use of unsuitable spare parts may cause malfunctions, damage, and injuries as well as void the warranty.

1.6 Warranty

For information about warranty, see the sales contract.

1.7 Support

Xylem only supports products that have been tested and approved. Xylem does not support unapproved equipment.

2 Transportation and Storage

2.1 Inspect the delivery

Inspect the package

1. Inspect the package for damaged or missing items upon delivery.
2. Note any damaged or missing items on the receipt and freight bill.
3. File a claim with the shipping company if anything is out of order.
   If the product has been picked up at a distributor, make a claim directly to the distributor.

Inspect the product

1. Remove packing materials from the product.
   Dispose of all packing materials in accordance with local regulations.
2. Inspect the product to determine if any parts are damaged or missing.
3. If applicable, unfasten the product by removing any screws, bolts, or straps.
   For your personal safety, be careful when you handle nails and straps.
4. Contact your sales representative if anything is out of order.

3 Product Description

3.1 Product design

Design and usage

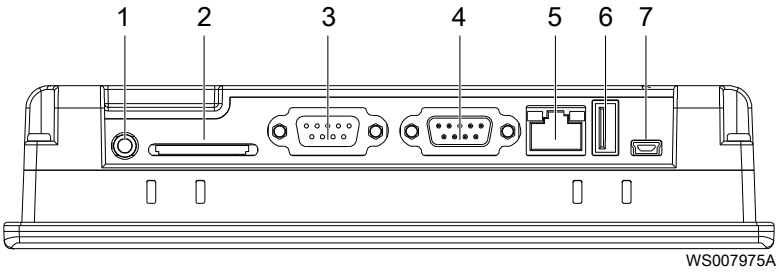
The MyConnect HMI is a touchscreen interface for its designated pump controller. The touchscreen provides indication, control, and supervision of sewage treatment and wastewater plants with one to pumps.

Installation

The HMI is installed close to the pumping station, on a wall or cabinet door.

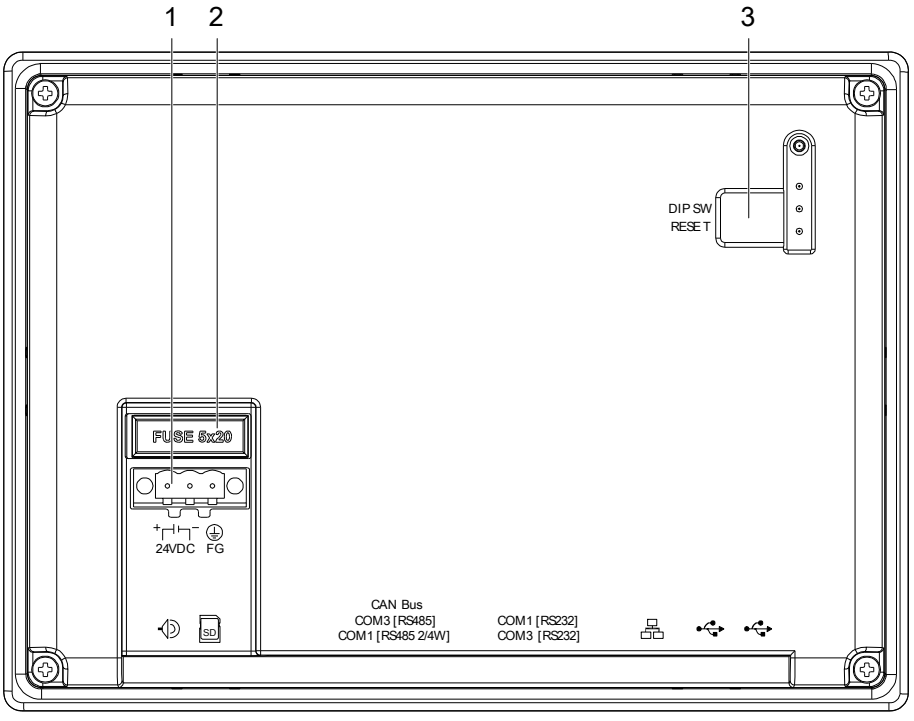
3.2 Ports and connectors

Ports on bottom



1. Audio Line Out - 3.5 mm jack (not used)
2. SD Card Slot SDHC (not used)
3. COM3 RS485 2 W. Supports MPI 187.5 K (for communication to the pump controller)
4. COM1 RS232 2 W (not used)
5. Ethernet Port 10/100 Base-T (for remote connections to the HMI using VNC)
6. USB Host USB 2.0 (not used)
7. USB Client USB 2.0 (used for backup)

Connectors on back



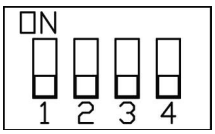
1. Power supply
2. Pre-installed fuse
3. DIP switch and reset button that is protected by rubber cover

Pre-installed fuse

Voltage	Ampere	Size
250 V	F 1.25 A	5 x 20 mm

DIP switch

The default setting for the DIP switch is OFF for all positions.



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- This setting should not be altered.
- The DIP SW switches should only be handled by qualified personnel or Xylem-authorized personnel.

Reset button

The reset button performs a soft restart of the unit. A reset does not influence a connected pump controller or the configuration in the HMI.

4 Mechanical Installation

4.1 Precautions

Before starting work, make sure that the safety instructions in the chapter *Introduction and Safety* on page 2 have been read and understood.

4.1.1 Do not install in an explosive zone

NOTICE:

Do not use this unit in environments that may contain flammable/explosive or chemically aggressive gases or powders.

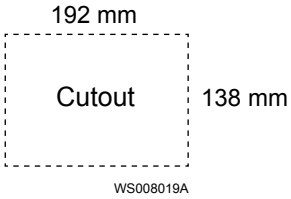
4.2 Mount the HMI

Recommended tools:

- Phillips screwdriver
- Saw (depending on wall surface)
- Drill and drilling machine (optional)

The HMI is attached to a wall or cabinet door.

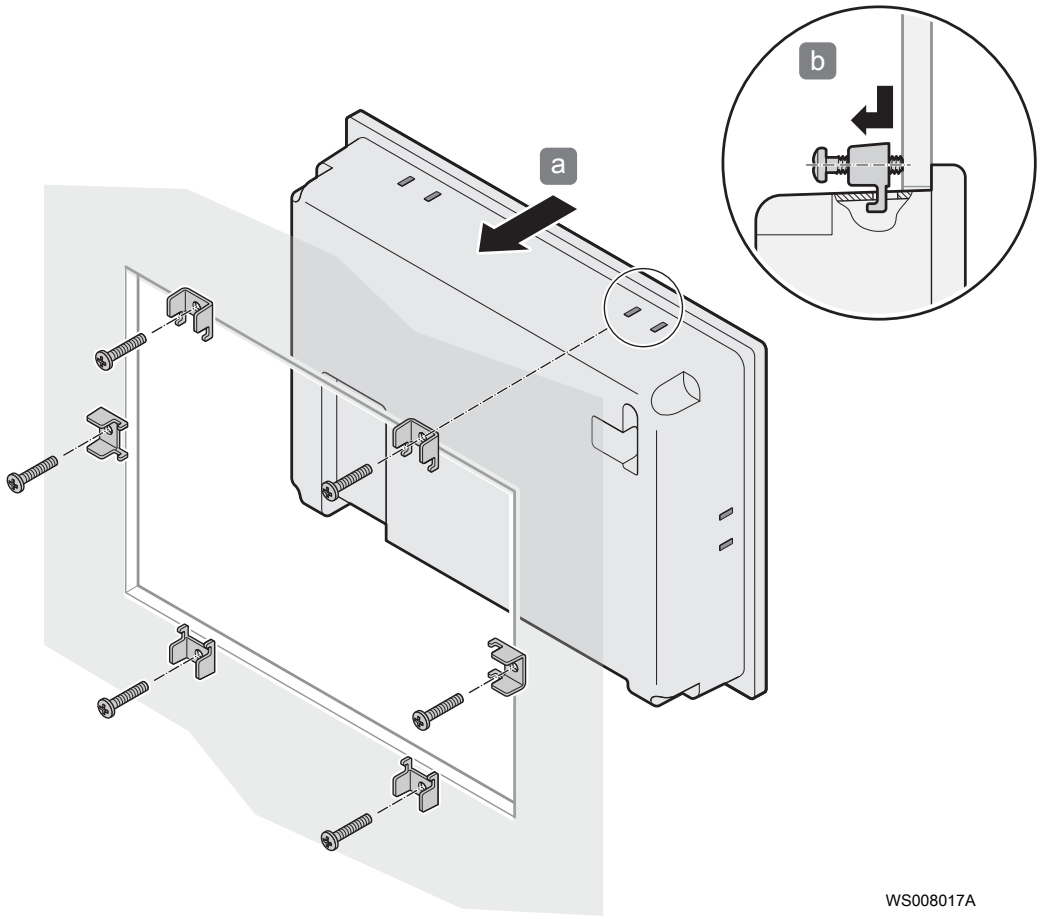
1. Make a rectangle hole in the wall or cabinet door.



2. Insert the metal brackets in the holes on the side of the unit according to the figure to fasten the display. Tighten the screws, 0.3-0.4 Nm.

NOTICE:

Allow approximately 5 cm of space behind the display to keep it ventilated.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5 Electrical Installation

5.1 Precautions

Before starting work, make sure that the safety instructions have been read and understood.

DANGER: Electrical Hazard

Before starting work on the unit, make sure that the unit and the control panel are isolated from the power supply and cannot be energized. This applies to the control circuit as well.

DANGER: Electrical Hazard

All electrical equipment must be grounded (earthed). Test the ground (earth) lead to verify that it is connected correctly and that the path to ground is continuous.

WARNING: Electrical Hazard

Risk of electrical shock or burn. A certified electrician must supervise all electrical work. Comply with all local codes and regulations.

WARNING: Electrical Hazard

There is a risk of electrical shock or explosion if the electrical connections are not correctly carried out, or if there is fault or damage on the product. Visually inspect equipment for damaged cables, cracked casings or other signs of damage. Make sure that electrical connections have been correctly made.

CAUTION: Electrical Hazard

Prevent cables from becoming sharply bent or damaged.

5.2 Requirements

These requirements apply for the electrical installation:

- The mains voltage and frequency must agree with the specifications for the product.
- Circuit breakers must be installed between the main voltage line and this unit.
- All fuses and circuit breakers must have the proper rating, and comply with local regulations.
- The cables must be in accordance with the local rules and regulations.
- If the power cable is jerked loose, then the ground (earth) conductor must be the last conductor to come loose from its terminal. Make sure that the ground (earth) conductor is longer than the phase conductors at both ends of the cable.

5.3 Pump controller settings

General requirements

The pump controller may be configured as usual, except for the requirements in this section that must be fulfilled before the HMI is ready for operation:

- The pump controller unit must have firmware version 844008-013 or later, to support the seven-day history function in the HMI.
- Control word in Pump control 1 must be activated, since this function is used by the HMI.

Analog inputs

The following analog inputs must be connected:

Analog input	Signal name	Scaling 4 mA	Scaling 20 mA	Type of sensor	Units	Averaging
AI 1	Level	0	Depends on the connected unit	Level	m, 2 decimals	0 s
AI 2	Current P1	0	Depends on the connected unit	Other units	A, 1 decimal	0 s
AI 3	Current P2	0	Depends on the connected unit	Other units	A, 1 decimal	0 s
AI4	Current P3	0	Depends on the connected unit	Other units	A, 1 decimal	0 s
AI5	Current P4	0	Depends on the connected unit	Other units	A, 1 decimal	0 s

Digital outputs

The following digital outputs must be connected. If three or four pumps are used, an extra I/O module providing additional digital outputs is required:

Digital output	Signal name	Relay function	Closing time, seconds on time	Delay
DO 1	Start/Stop P1	NO- constant	0 s	0 s
DO 2	Start/Stop P2	NO- constant	0 s	0 s
DO 3	Start/Stop P3	NO- constant	0 s	0 s
DO 4	Start/Stop P4	NO- constant	0 s	0 s

Automatically created settings

The following configuration is automatically created in the pump controller, depending on the number of pumps used. The HMI overwrites existing settings in the configuration in the pump controller:

Virtual Analog Input	Signal Name	High Alarm	Low Alarm	Explanation
VAI 3	Current P1 (Illustrated in HMI)	In use, Yes	In use, Yes	This VAI is used for setpoint for upper and lower limits in the main status screen ampere view.

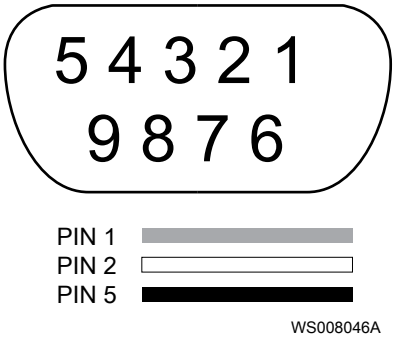
Virtual Analog Input	Signal Name	High Alarm	Low Alarm	Explanation
VAI 4	Current P2 (Illustrated in HMI)	In use, Yes	In use, Yes	This VAI is used for the setpoint for upper and lower limits in the main status screen ampere view.
VAI 5	Current P3 (Illustrated in HMI)	In use, Yes	In use, Yes	This VAI is used for the setpoint for upper and lower limits in the main status screen ampere view.
VAI 6	Current P4 (Illustrated in HMI)	In use, Yes	In use, Yes	This VAI is used for the setpoint for upper and lower limits in the main status screen ampere view.

Reference

For more information about settings, see the MyConnect Installation, Operations and Maintenance manual, pub no 884758.

5.4 Connect the HMI to the pump controller

The figure shows the wiring diagram for the COM cable.



PIN number	Signal	Wire color
1	B	Gray
2	A	White
5	GND	Black

1. Connect the cable to the RS485 port on the HMI.
2. Depending on the pump station configuration, select the applicable wiring diagram to connect the cable to the INET or the CNET port on the pump controller:

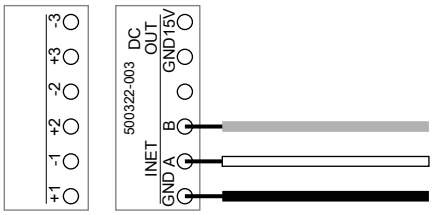
NOTICE:

When using the CNET port, Wi-Fi should be disabled in the pump controller.

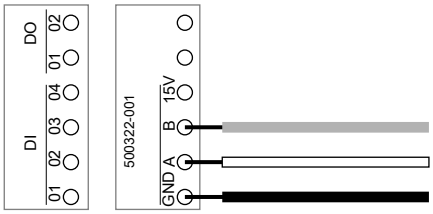
NOTICE:

When using the INET port, it cannot be used by additional units simultaneously.

INET



CNET



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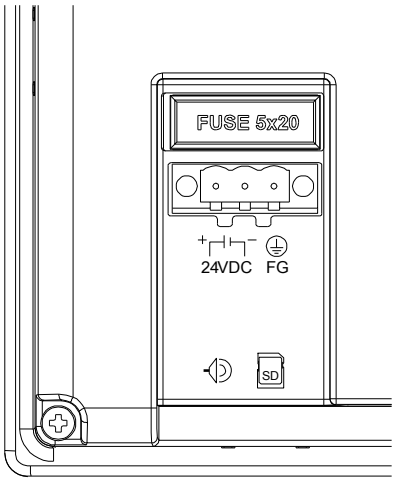
5.5 Connect the power supply

The HMI must be supplied with 24 VDC ± 20%, minimum 400 mA.

Connect the power supply according to the figure.

The power supply unit must fulfill isolation class II.



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Terminal	Function
–	24 VDC minus
+	24 VDC plus
FG	Functional ground

6 Troubleshooting

6.1 Precautions

Before starting work, make sure that the safety instructions have been read and understood.

DANGER: Electrical Hazard

Troubleshooting a live control panel exposes personnel to hazardous voltages. Electrical troubleshooting must be done by a qualified electrician.

DANGER: Electrical Hazard

Before starting work on the unit, make sure that the unit and the control panel are isolated from the power supply and cannot be energized. This applies to the control circuit as well.

6.2 The HMI does not turn on within 5 seconds

Cause	Remedy
The fuse is blown from incorrect polarity of the DC power.	Replace the fuse and reconnect the wiring correctly.
The fuse is blown from incorrect power supply voltage.	Check that the power supply provides the correct voltage range, 24 ± 20% VDC. A peak starting current up to 2 A is allowed.

6.3 The HMI freezes

Cause	Remedy
Runtime error in the HMI software.	Tap the reset button behind the rubber hatch on the back of the HMI unit.

6.4 Text does not appear correctly

Cause	Remedy
Use of characters that are not allowed.	Try alternate spellings of the I/O signal or station name. Change spellings using the MyConnect Link software. See the MyConnect Installation, Operation and Maintenance manual, publ no 884758.

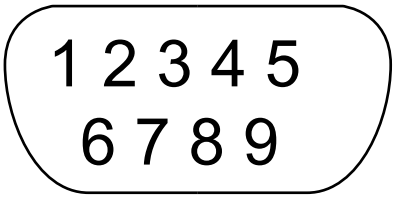
7 Technical Reference

7.1 Technical data

Power supply	24 VDC ±20%
Power consumption	400 mA @ 24 V
Processor	32 bit RISC CPU 600 MHz
Display	7” TFT LED, resolution 800 x 480 pixels
Brightness	500 cd/m2
Contrast ratio	500:1
Colors	16.7 M
Backlight life time	> 30 000 h
Touch-panel type	4-wire resistive
Memory	256 MB, RAM 256 MB
External communication	CAN bus, CANopen and Modbus RTU
Interface	• SD card slot SDHC • 1 audio line out - 3.5 mm jack • 1 USB host USB 2.0 • 1 USB client USB 2.0 • 1 Ethernet port 10/100 BASE-T • COM1 (RS232/RS485 2 W), • COM3(RS232/RS485 2 W), supports MPI 187.5 K
Enclosure	IP66 front panel (O-ring seal), NEMA 4
Cabinet material	Aluminum
Operating conditions	-20 - 50 °C (-4 - 122 °F)
Storage temperature	-20 - 70 °C (-4 - 158 °F)
Operation humidity	10 % - 90 % RH, non-condensing
Weight	Approximately 0.9 kg.
Dimensions of panel cutout	192 x 138 mm (W x H)
Approvals	• EN 55022:2006 + A1:2007 • EN 61000-3-2:2006 + A2:2009 • EN 61000-3-3:2008 • EN 55024:1998 + A1:2001 + A2:2003 • Complies with FCC class A • UL508 type 1, NEMA 4

7.2 Communication ports

The following figure shows the COM1/COM3 RS232 port.



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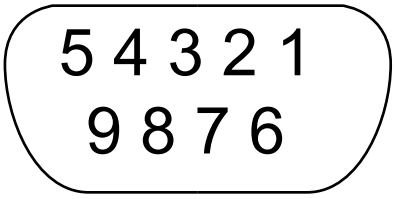
PIN number	Symbol	COM1 RS232	COM3 RS232
1	Not used	-	-
2	RxD	Received Data	-
3	TxD	Transmitted Data	-
4	Not used	-	-
5	GND	Signal ground	
6	Not used	-	-
7	RTS	Request to send	Transmitted Data
8	CTS	Clear to send	Received Data
9	Not used	-	-

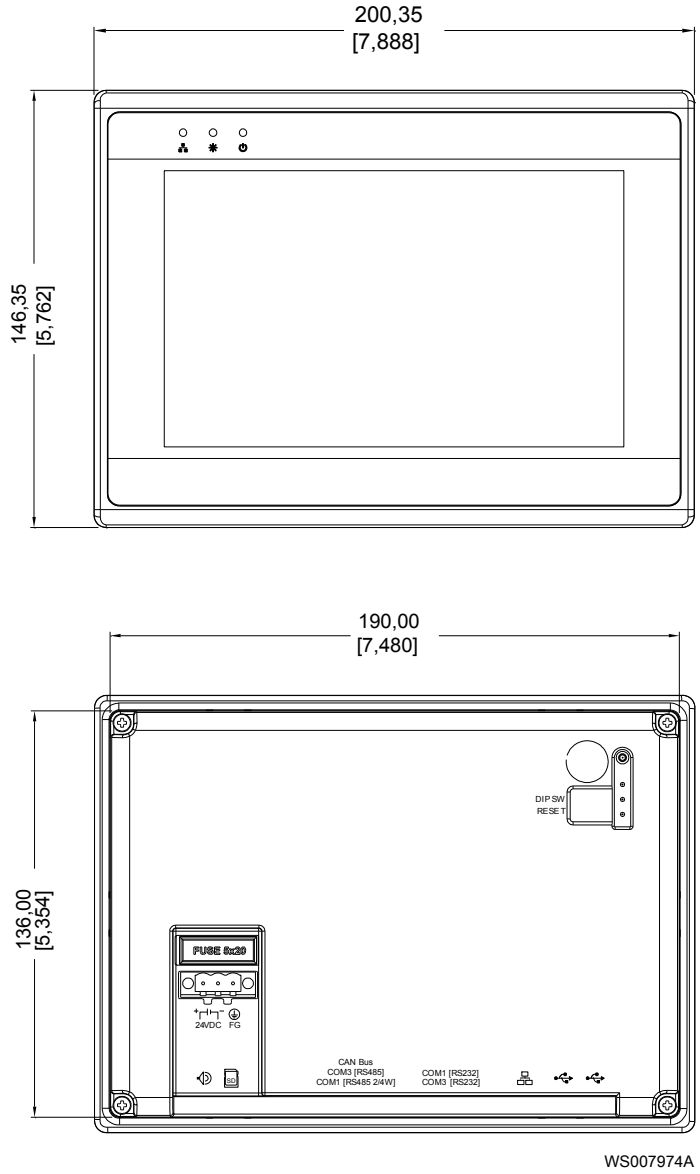
The following figure shows the COM1/COM3 RS485 CAN bus port.



WS008045A

PIN number	Symbol	COM1 RS485, 2 w	COM1 RS485, 4 w	COM3 RS485	CAN bus
1	RX-	Data-	RX-	-	-
2	RX+	Data+	RX+	-	-
3	TX-	-	TX-	-	-
4	TX+	-	TX+	-	-
5	GND	Signal ground			
6	Data-	-	-	Data-	-
7	CAN_L	-	-	-	CAN_L
8	CAN_H	-	-	-	CAN_H
9	Data+	-	-	Data+	-

7.3 Product dimensions



7.4 Order numbers

Order number	Part
829927	MyConnect, including cable.
829926	Cable kit for the pump controller to the HMI, RS485 cable, 2.5 m

Xylem |’zīləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

We’re a global team unified in a common purpose: creating advanced technology solutions to the world’s water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com

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Visit our Web site for the latest version of this document and more information

The original instruction is in English. All non-English instructions are translations of the original instruction.

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