

Rivo™ I System: Municipal & Industrial

WATER QUALITY ANALYSER



DESIGNED FOR MUNICIPAL & INDUSTRIAL APPLICATIONS

Evoqua's innovative Rivo™ system from the Wallace & Tiernan® family of products is a leading technology solution for reliable analysis and control of water quality. The management system delivers valuable insights and effective control of water quality for a range of municipal and industrial applications.

RESULTS YOU CAN TRUST

The Rivo system draws upon the latest advancements in smart water technology, connectivity, and usability, ensuring the highest quality water is used. By continuously monitoring multiple process parameters in real time*, the system ensures adherence to health, safety, and regulatory standards. Additionally, Rivo systems are equipped with remote management capabilities, enabling operators to monitor and control their water systems from a distance or efficiently manage multiple facilities.

OPERATIONAL FLEXIBILITY

The Rivo system simplifies water quality monitoring by consolidating all water treatment equipment controls into one intelligent platform. With a variety of plug-and-play module options, Rivo systems can easily be adapted to meet evolving monitoring requirements, ensuring continuous alignment with organisational needs. The system also seamlessly integrates with Evoqua flow cell measurement technology and sensors, providing a comprehensive solution.

COST AND ENVIRONMENTALLY EFFICIENT

Operators can improve operations, reduce costs and save time through the advanced monitoring and control capabilities of the Rivo system. The low maintenance requirements, proactive alerts and remote monitoring are key to reducing unplanned downtime.

Users also benefit from the self-cleaning measurement cell which keeps performance high and ensures the analyser remains free from residual particles. With no reagents required, operators can minimise the environmental impact of operations by significantly reducing chemical usage.

FEATURES

- Management and dosing control for up to two water parameters
- Configurable software components
- Up to four flexible ports for Rivo Flex IO Modules
- Remote monitoring and proactive alerts for multi-site management
- Intuitive, high-resolution touchscreen
- Integration of 3rd party sensors verified by Evoqua
- Proven security measures for safe and secure operations
- Verified measurement principles for global markets
- Certified to IP66

APPLICATIONS

Municipal applications:

- Drinking water
- Wastewater

Industrial applications:

- Process water

*Real time T90 < 20 sec.

RIVO™ I SYSTEM - MUNICIPAL & INDUSTRIAL

Electronic Name	Rivo I System	Rivo I PC System (with process control functions)
Part Number	W3T570783	W3T586961
Scope of application	Related to selected flow cell. Focus on potable, industrial and processing water.	Related to selected flow cell. Focus on potable, industrial and processing water.
Description	Two parameter analyzer	Two parameter analyzer with control functions
Functional Description	<ul style="list-style-type: none"> - Measuring of 2 parameters - Remote access via interfaces - Data log function - Alarm management - User password protection 	<ul style="list-style-type: none"> - Measuring and control of 2 parameters - Variety of operation modes (manual, auto, external stop) - Selectable external/internal setpoint/dosing factor - Remote access via interfaces - Data log function - Alarm management - User password protection
Touch panel	4.3" resistive colour touchscreen	4.3" resistive colour touchscreen
Module slots	Slots for up to 4 modules	Slots for up to 4 modules
Input on board	2 × digital input for volt free contacts 2 × 0/4-20 mA input ports 1 × temperature input port 1 × feedback positioner	2 × digital input for volt free contacts 2 × 0/4-20 mA input ports 1 × temperature input port 1 × feedback positioner
Outputs on board	2 × fused relays 250 VAC/30 VDC configurable	2 × fused relays 250 VAC/30 VDC configurable
Control Functions		<ul style="list-style-type: none"> - Single feed forward control - Compound loop control - Single feedback control
Interfaces	<ul style="list-style-type: none"> - Ethernet interface (HTTP/Modbus TCP protocol) - External USB 2.0 plug 	<ul style="list-style-type: none"> - Ethernet interface (HTTP/Modbus TCP protocol) - External USB 2.0 plug
Interfaces extensions	<ul style="list-style-type: none"> - Rivo Comm Module with RS485 interface (Wallace & Tiernan Protocol) - Further communication interfaces on request 	<ul style="list-style-type: none"> - Rivo Comm Module with RS485 interface (Wallace & Tiernan Protocol) - Further communication interfaces on request
Available modules	<ul style="list-style-type: none"> - Rivo Flex Mod Dis - Rivo Flex Mod mV - Rivo Flex Mod pH - Rivo Flex Mod Fluoride - Rivo Flex Mod 2AI - Rivo Flex Mod 2AO-mA - Rivo Flex Mod 2Rel-2DO 	<ul style="list-style-type: none"> - Rivo Flex Mod Dis - Rivo Flex Mod mV - Rivo Flex Mod pH - Rivo Flex Mod Fluoride - Rivo Flex Mod 2AI - Rivo Flex Mod 2AO-mA - Rivo Flex Mod 2Rel-2DO
Power supply	100-240VAC (50/60 Hz) +/-10% or 24VDC (-15...+20%)	100-240VAC (50/60 Hz) +/-10% or 24VDC (-15...+20%)
Operating temperature	0-50°C/32-122°F	0-50°C/32-122°F
Storage temperature	-20-70°C/-4-158°F	-20-70°C/-4-158°F
Protection	IP66	IP66
Certifications	CE/CSA/UKCA/RCM	CE/CSA/UKCA/RCM
Weight (incl. packaging)	2.5 Kg	2.5 Kg
Dimensions (W x H x D)	218 mm × 306 mm × 152 mm	218 mm × 306 mm × 152 mm

THE RIVO SOLUTION

Combine the Rivo system with your choice of Evoqua flow cell measurement modules and sensors to meet your specific requirements.



INPUT/OUTPUT DIAGRAM

Rivo™ Communication Extension
Extended communication capabilities RS485, USB, Ethernet
Additional interfaces on request



Power 24VDC, 100-230VAC

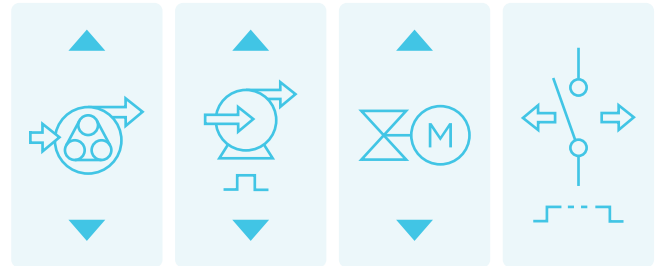
2 × Digital Input

Flow Input Signal 0/4-20 mA

External Dosing Factor 0/4-20 mA

Feedback (potentiometer, mA, V)

Temperature Input



Dosing Pump

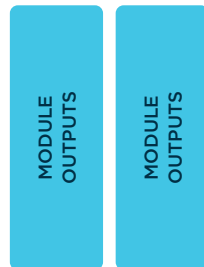
Solenoid Pump

Actuator with Feedback

Dosing Contact

MODULE OPTIONS

Rivo Flex Mod Dis
Rivo Flex Mod pH
Rivo Flex Mod mV
Rivo Flex Mod Fluoride
Rivo Flex Mod 2AI
Rivo Flex Mod Con



MODULE OPTIONS

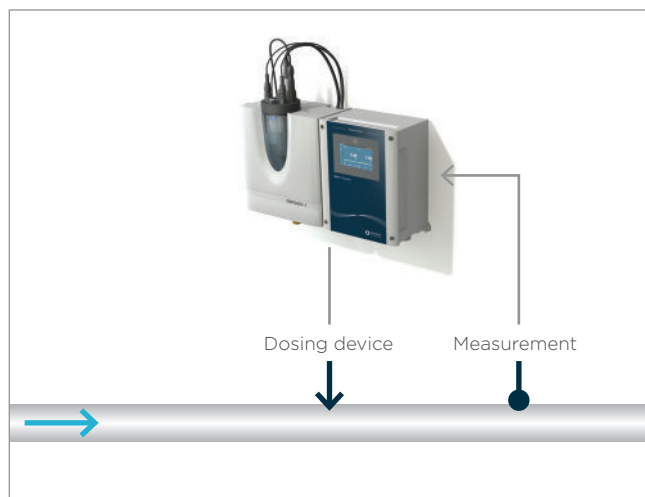
Rivo Flex Mod 2AO-mA
Configurable as
mA control output/
mA signal output

Rivo Flex Mod 2Rel-2DO
Configurable as
alarm outputs

CONTROL FUNCTIONS AVAILABLE WITH THE RIVO I PC VERSION (W3T586961)

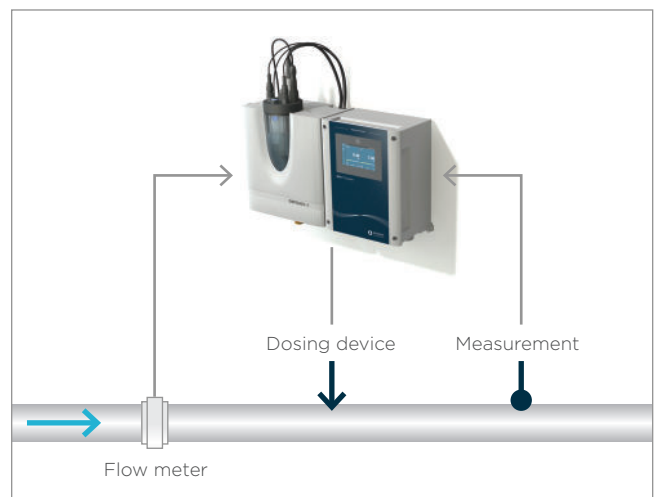
1

MEASUREMENT SINGLE FEEDBACK CLOSED-LOOP CONTROL



2

MEASUREMENT WITH COMPOUND LOOP CONTROL



CONTROL OPTIONS

The Rivo systems offer three control configurations: single feed-forward, single feedback closed-loop (1), and single feed compound loop control (2). Each measuring system comes with an optional integrated controller that can be used for external setpoint

selection, as well as with single feedback closed-loop control. Depending on the application, the control parameters can be used to manage devices such as the V10k™ gas feed system, dosing pumps, or frequency converters.

TRANSFORMING
WATER
— ENRICHING —
LIFE



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