Green Premium™

Life Is On Schneider Electric

RealStream Lift Station

Fully-configurable pump station controller and display

Product at a glance

The RealStream™ Lift Station solution is a fully-configurable lift station controller and display that enables monitoring and control of lift stations leveraging the Schneider Electric SCADAPack™ E Smart RTU technology.

Supporting the control of up to four pumps, this easy-to-deploy solution allows standardization of collection network assets and can help improve visibility and useful life of equipment. The RealStream Lift Station Solution is comprised of a RealStream Lift Station Controller and a Graphic Display Terminal.

Green Premium™ ecolabel product – Sustainable performance, by design

Features

- Fully-configurable lift station controller that quantifies station efficiency to cost of operating each station, allowing comparisons among all lift stations in the network
- Supports DNP3 Level 4 with SAv2 offering security and built-in communication tuning capabilities
- Helps to ensure that data is available for regulation purposes and remote monitoring through local logging of station performance
- Increases asset life through advanced wet well level control and pump control
- Increases visibility to lift station operation through automatic alerts and alarms

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Reduce Cost of Ownership

The RealStream Lift Station Solution monitors and controls lift station operations to help reduce the cost of ownership for stand-alone lift stations at recreational facilities or complex, geographically dispersed municipal systems.

Leveraging Schneider Electric SCADAPack E Smart RTU technology, RealStream Lift Station is fully configurable and can be easily operated without any programming. Flexible, user-friendly installation options allow for a short time to operation and solutions for both new and existing installations. One-click updating and deployment is available when paired with EcoStruxure™ SCADA Expert Geo SCADA software. An available Geo SCADA template enables remote monitoring and basic control over one or multiple RealStream Lift Stations.

When part of a fully integrated network using Schneider Electric Altivar™ variable speed drives, RealStream Lift Station can help operators achieve CapEx and OpEx reductions through maximizing pump life, reduced infrastructure stress, increased energy efficiency, and pro-active predictive maintenance.

Benefits

The strength of the RealStream Lift Station Solution lies in its ability to monitor AND control the entire waste water operation. By giving operators local and remote access to operating parameters such as total volume, energy consumption, and pump performance indicators, plus the controls to adjust operations accordingly, operators can:

- Improve overall system performance
- Reduce the time to manage the system
- Optimize capital and maintenance expenditures

Maximizes Asset Life

When paired with smart variable frequency drives that automatically moderate pump speeds, RealStream Lift Station helps to reduce wear on assets including pumps, piping, and check valves.

Improves Energy Efficiency

Controlling variable speed drives or starters with automatic de-ragging built in to the same pump station controller, operators can reduce the required energy and increase station efficiency.

Increases Uptime

Alerts on pumps and system assets help operators to repair problems before possible faults occur. Self-diagnostics with intelligent, multiple operation modes help to reduce unexpected service calls and environmental discharges.

Enables Predictive Maintenance

Understanding the efficiency of each station and the cost of pumping enables performance-based maintenance and optimized capital expenditures at the right time and place.

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Specifications – General characteristics

Pump Station Controller

Pumps Supported	Up to 4
Pump Modes	Lead, Lag, Standby
Pump Alternation	Automatic or fixed
Control Modes	Level Transmitter, Float
Pump Performance Monitoring	Start statistics, run times, historical logs, power logging
Event Logging Capacity	500 DNP3 events; 40,000 events on local file system
Assignable Sensors	# limited to max IO count plus up to 27 Modbus RTU or Modbus TCP Sensors
Station Maintenance	Fat Ring Spreading, Ventilation, Dry Pit Water Detection
Pump Maintenance	Pump deragging
Alarms	Configurable and logged locally
Alarm Notifications	Geo SCADA Host
Security	Local User Logon, DNP3 Secure Authentication
Variable Frequency Drive Support	Up to 4 with Modbus, up to 2 with 4...20 mA
Support Modbus VFD	Altivar 600 series
SCADA Host Integration	Preconfigured EcoStruxure SCADA Expert Geo SCADA templates for rapid deployment

IO

Digital Inputs	16, 12...24 Vdc digital inputs
Digital Outputs	10 relay outputs: dry contact, rating: 3 A, 30 Vdc or 240 Vac (resistive)
Analog Inputs	8, 4...20 mA (15-bit)
Analog Outputs	2, 4...20 mA or 0...20 mA (12-bit)
Counter Inputs	2, 0...10 kHz (turbine or dry contact)

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Specifications – General characteristics (continued)

Communication

Serial Ports	2, RS485: One reserved for VFD control and Modbus Sensors. One reserved for the GDT, 1, RS232: 8-pin modular RJ45 jack, full duplex.
Serial Protocols	DNP3 Server, Modbus RTU Client, Modbus RTU Server
Ethernet Port	1, 10/100Base-T
Ethernet Protocols	DNP3 TCP, DNP3 UDP, Modbus/TCP Server
Communication Protocols	DNP3 Level 4, Modbus RTU, Modbus/TCP
USB Peripheral Port	USB 2.0-compliant “B”-type receptacle

Operation and Storage

I/O Terminations	5, 6, and 9-pole removable terminal blocks, 12...22 AWG, 15 A contacts
Operating Temperature	-40…70 °C (-40…158 °F)
Storage Temperature	-40…70 °C (-40…158 °F)
Corrosion Immunity	Conformal Coated
Rated Voltage	11.5…32 Vdc
Max Power	7 W at 24 Vdc (internal 5 Vdc supply fully loaded and Vloop on and boosted, fully loaded)
Typical Power Requirements	2.8 W at 24 Vdc with DO Relays Off, 4.5 W at 24 Vdc with DO Relays On
Dimensions	W: 142 mm (5.59 in.) H: 181 mm (7.13 in.) D: 66 mm (2.60 in.)

Certifications

Hazardous Area Classification	• Class I, Division II Groups A,B,C, and D, T4 • For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/

Graphic Display Terminal

Display Type	Backlit LCD screen white and red
Pixel Resolution	240 x 160
Protection Degree	Front face: IP65 (When installed according to the manufacturer’s instructions) Back face: IP20
Corrosion Immunity	Atmosphere free from corrosive gases
Operating Temperature	-15…50 °C (5…122 °F)
Storage Temperature	-40…70 °C (-40…158 °F)
Power Requirements	5 V power is supplied from pump station controller serial port
Dimensions	W: 80 mm (3.15 in.) H: 126 mm (4.96 in.) D: 20 mm (0.79 in.)
Mounting Requirement	22.5 mm (0.89 in.) hole, max panel thickness of 6 mm (0.23 in.)

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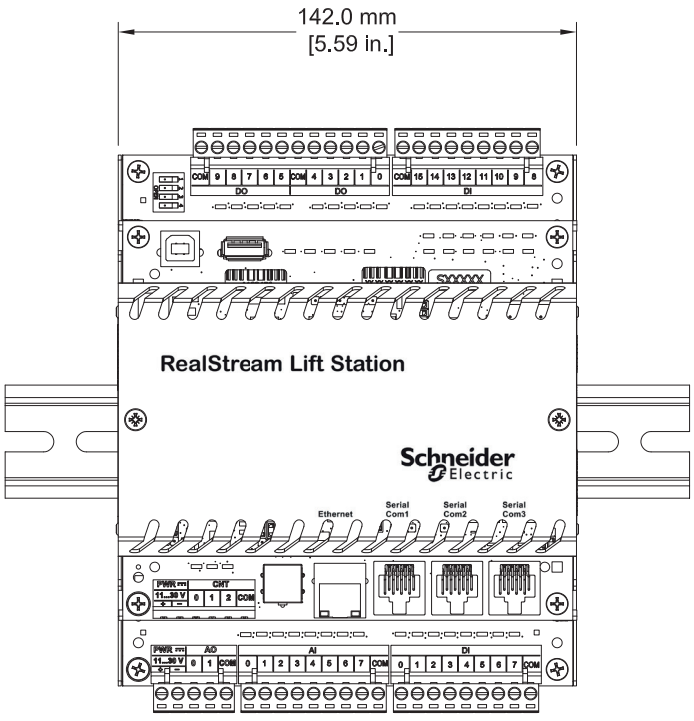
Model Code

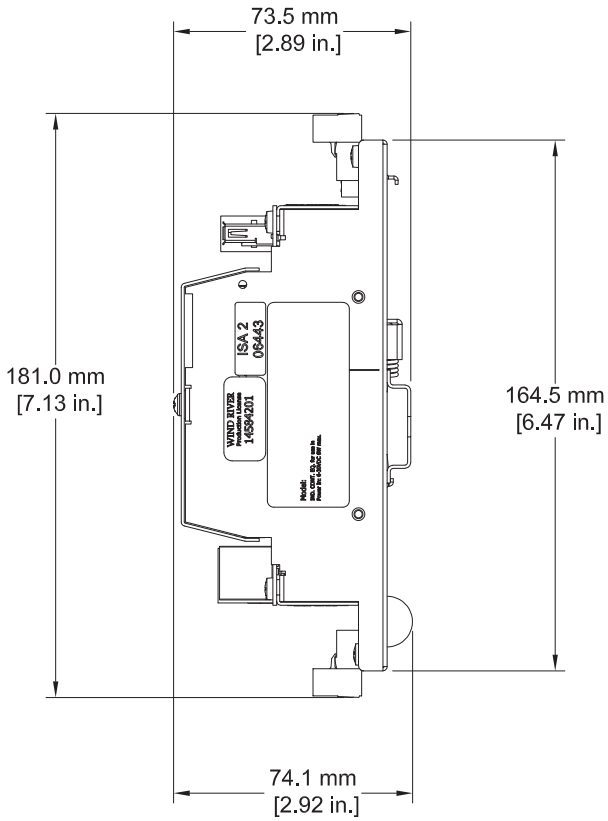
TBUW334-101N-100AU	RealStream Lift Station Controller: 5 Communication Ports: 2 RS485 (RJ45), 1 RS232 (RJ45), 1 Ethernet (RJ45), 1 USB (programming/diags), DNP3 protocol, Graphic Display Terminal, Class I, Div 2

Controller Dimensions

FRONT VIEW



SIDE VIEW



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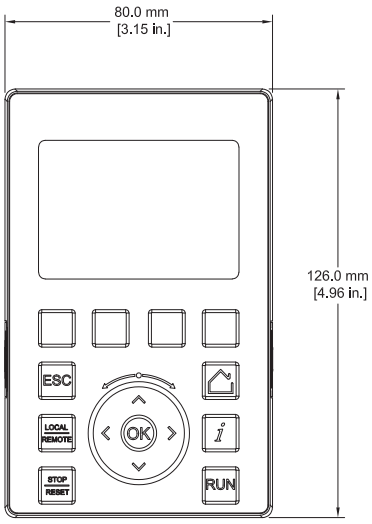
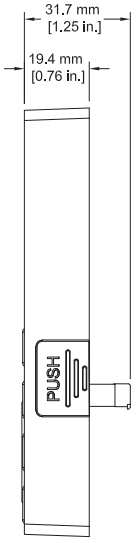
Display and Mounting Kit Dimensions

Graphic Display Terminal

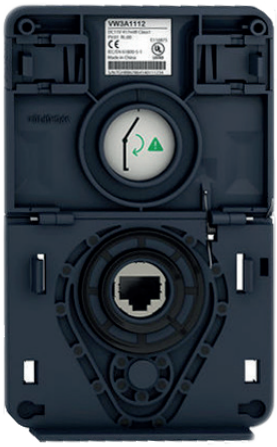
FRONT VIEW



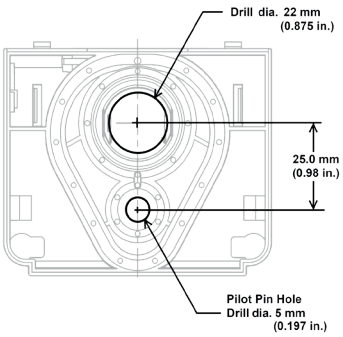
SIDE VIEW



Mounting Kit



Mounting Kit Panel
Cutout Dimensions



Note: Not all product features are available in every mode of operation.

Disclaimer:
The information provided in this document contains general descriptions and/or technical characteristics of the performance of the described products or services. For detailed specification, performance and instruction of use, refer to corresponding Catalogs and user guides if available.

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Green Premium™

Schneider Electric's commitment to deliver products with best-in-class environmental performance.

Green Premium™

More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACH substance information
- Industry leading # of PEP's*
- Circularity instructions

Learn more about Green Premium

Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO_2 products.

CO2 and P&L impact through… Resource Performance

Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO_2 emissions.

Cost of ownership optimization through… Circular Performance

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

Peace of mind through… Well-being Performance

Green Premium products are RoHS and REACH-compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

Improved sales through… Differentiation

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)