

# 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.

## 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

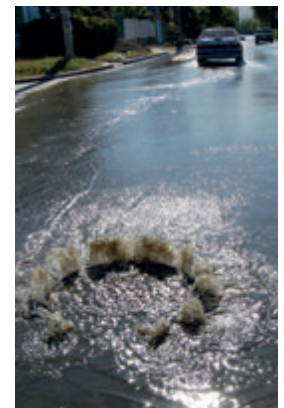
Controlling variable speed drives or starters with automatic de-ragging built in to the same pump station controller, operators can reduce the required energy and increase station efficiency.

## 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
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### 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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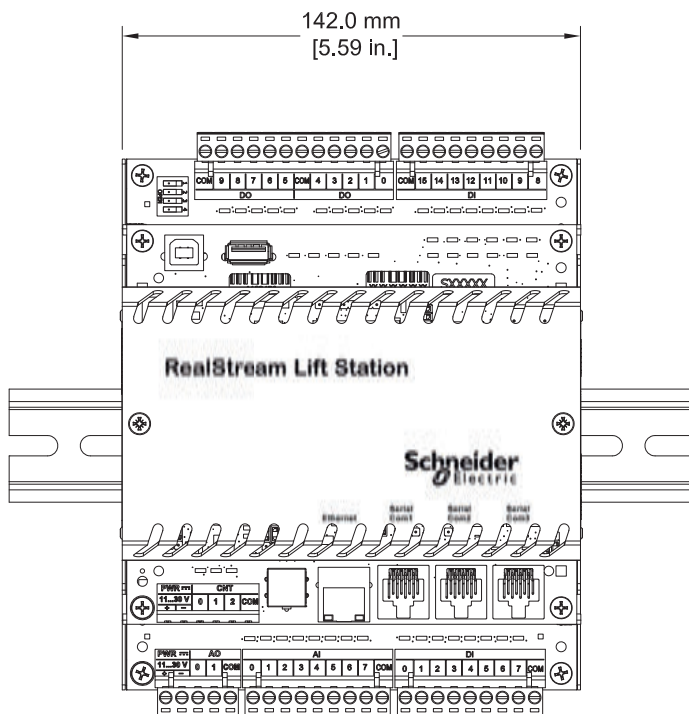
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## Model Code

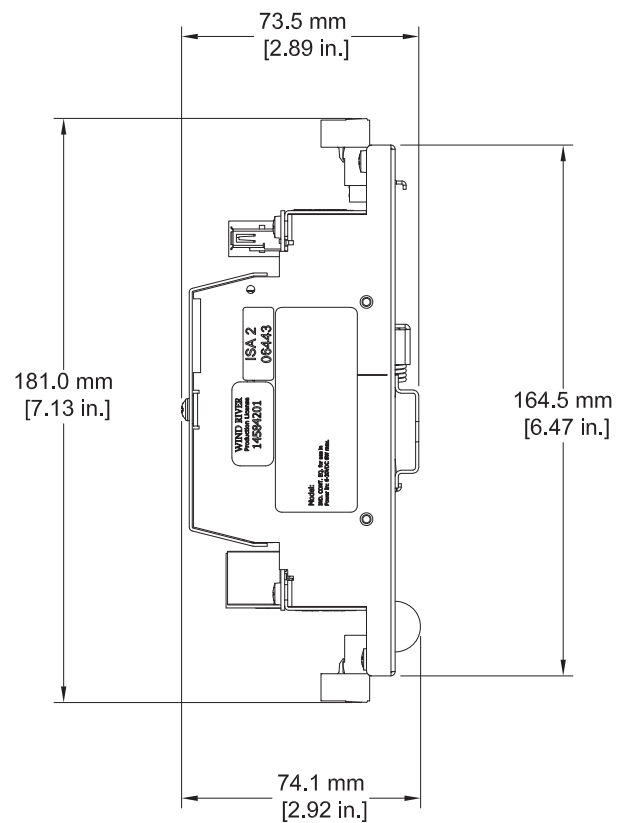
TBUW334-101N-100AU	RealStream Lift Station Controller: 5 Communication Ports: 2 RS485 (RJ45), 1 RS232 (RJ45), 1 Ethernet (RJ45), 1 USB (programming/diags), DNP3 protocol, Graphic Display Terminal, Class I, Div 2
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## Controller Dimensions

FRONT VIEW



SIDE VIEW

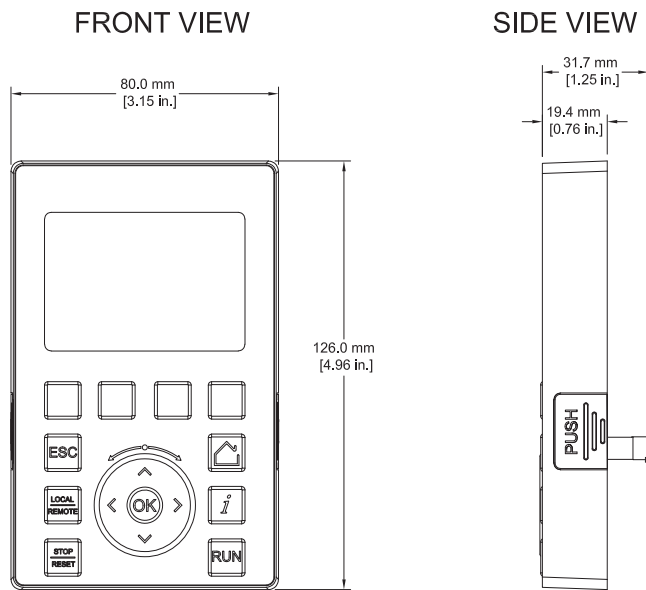


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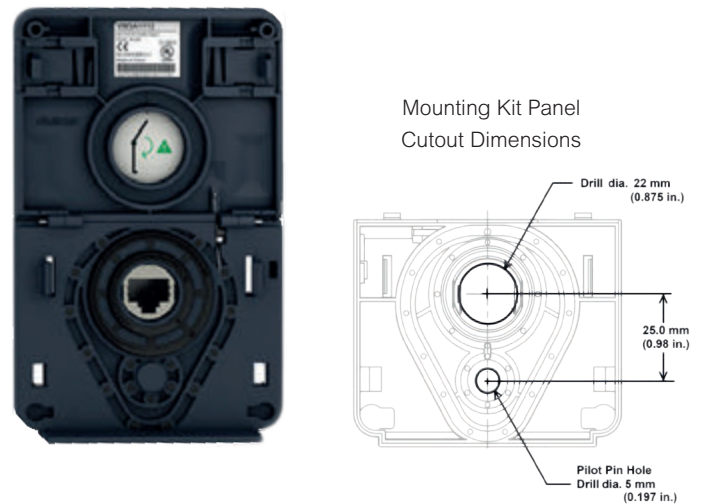
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## Display and Mounting Kit Dimensions

### Graphic Display Terminal



### Mounting Kit



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

Schneider Electric reserves the right to change product specifications. For more information visit [www.schneider-electric.com](http://www.schneider-electric.com).

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Part Number TBULM08003-70 v15

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February 2021