ULTRATWIN

Twin-channel ultrasonic level / volume monitoring, pump control, open channel flow measurement, or all three!

Flexible pump control & open channel flow monitoring with the UltraTWIN

Flexibility is the keyword for the UltraTWIN 2 channel ultrasonic system. Each channel is user-configurable to operate independently either as a full-function open channel flow monitor calculating flow rate to BS ISO 1438 and 4359, a pump control system, or as a level and volume monitoring unit for liquids or solids, calculating volumes and providing alarms.

UltraTWIN is compatible with the full range of dB or dBR transducers, from the ultra-high resolution dBMACH3 to the powerful 40 m (131.2 ft) range dB40. Six relays configurable to either channel provide full alarm and control options.

Level / Volume Measurement

Use the level / volume measurement setting and UltraTWIN provides everything you would get from the Pulsar Ultra 3 or Ultra 5 in level measurement mode. UltraTWIN in level/volume mode will calculate volumes based on a wide variety of standard tank shapes and is equally at home measuring liquids and solids.

Open Channel Flow Measurement

When you select the open channel flow option, you are getting the full power of Pulsar Measurement's flow expertise, the choice of wastewater companies, and process industries worldwide to measure open channel

THE RIGHT METER FOR

- Effluent Discharge Monitoring
- Shaft Tank Dual Chamber Measurement
- Dual-Channel Monitoring
- Screen House Monitoring
- Sophisticated Pump Control

flow within effluent treatment processes. Features include onboard totalization and pulsed output. UltraTWIN provides outstanding accuracy when teamed with the high-resolution dBMACH3 transducer.

Pump Control

In the pump control configuration, UltraTWIN provides all the power of the Pulsar Ultra 5. Extremely reliable level monitoring even in the most difficult applications, it also provides a wide

range of sophisticated pump control routines to keep the application running perfectly. UltraTWIN also includes four digital inputs making it possible to monitor the performance of other equipment, for example, a no-flow signal from a pump can trigger an alarm without the need for costly PLCs.

Data Logging / Digital Communications

A powerful data logging solution can be added to the UltraTWIN system. As a factory fit option, level and flow information is recorded and date stamped at user-defined intervals to build up a complete picture of the changing situation on site. Information may be stored for up to 12 months, and easily downloaded to a computer through a standard RJ11 port. The data logging solution offers Pulsar's PC Ultra Log Software package which records and charts data and trends in an easily accessible form.

UltraTWIN may also be upgraded to include RS485 communications, operating the Modbus RTU or Profibus DP V0 or V1 protocols.

UltraTWIN Fascia Mount

UltraLog Software

The UltraLog Software Package is a powerful tool that can be used in conjunction with the data logging board available with the Pulsar Ultra range. This will provide you with all the tools required to get the most from the powerful data logging capability of the Pulsar Measurement Ultra range of products.

Data Logging

Pulsar's Ultra Data Logger provides wall mounted Ultra controllers with data logging functionality.
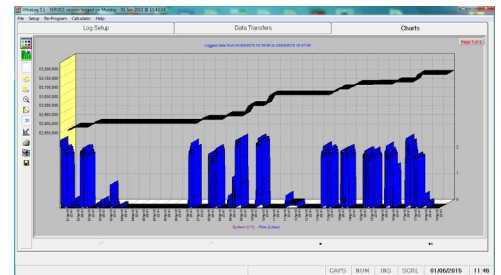
Ultra Data Logger records information onto the supplied 8GB Micro SD card enabling you to log a wealth of data for the lifetime of the unit - for example, when set to log at 30-second intervals, the logging period is 19,884 days (54.5 years). Log interval is user selectable and logged files are stored in .csv format which can be used with the most widely used spreadsheet software.

Ultra Wizard

Ultra Wizard is an onboard, menu-driven software tool that allows the user to quickly and simply set up an UltraTWIN unit for a specific application.

The user is led into a 'Quick Setup' menu specific to the application type that allows parameters such as empty and full distances and alarm / control relay settings to be entered. The majority of applications will then be 'ready to go,' while it is easy to finish off the more demanding installations via further menus, refining the programming to add extra sophistication to pump control routines.

UltraLog Graph Example

The unique 'Quick Setup' allows a user to avoid time-consuming programming and reference to parameter numbers.

Technical Specifications

PHYSICAL: MOUNTING OPTION SPECIFIC

Mounting Option:	Standard Wall Mount:	Fascia Mount:
Controller Body Dimensions:	235 mm x 184 mm x 120 mm (9.3 in x 7.2 in x 4.7 in)	200 mm x 112 mm x 108 mm (7.9 in x 4.4 in x 4.3 in) Cutout: 165 mm x 105 mm (6.5 in x 4.1 in)
Weight:	Nominal 1 kg (2.2 lb)	Nominal 1 kg (2.2 lb)
Enclosure Material / Description:	Polycarbonate, flame resistant to UL 94-5V (wall), UL94-V0 (fascia)	Polycarbonate, flame resistant to UL 94-5V (wall), UL94-V0 (fascia)
Cable Entry Detail:	3 x M20 glands	
Transducer Cable:	Twin Screened	
Maximum Separation:	1,000 m (3,280 ft)	

ENVIRONMENTAL

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IP Rating:	IP65 (Standard), IP64 (Fascia)
Max. & Min. Temperature (Electronics):	-20 °C to +50 °C (-4 °F to +122 °F)
Flammable Atmosphere Approval:	Safe area: compatible with approved dB transducers
CE Approval:	See the CE Declaration of Conformity in the product manual
UL Approval:	UL Listed. UL Listed to Canadian safety standards. Certificate Number: E257330 (wall and fasica mounts only)

PERFORMANCE

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Accuracy:	+0.25% of the measured range or 6 mm (0.2 in), whichever is greater
Resolution:	+0.1% of the measured range or 2 mm (0.08 in), whichever is greater
Range:	• 125 mm to 40 m (4.9 in to 131.2 ft), depending on transducer • 0 mm to 2.4 m (0 in to 7.9 ft), with dBMACH3 for open channel flow
Echo Processing:	Patented DATEM (Digital Adaptive Tracking of Echo Movement)

OUTPUTS / INPUTS

Analog Output:	2 x Isolated output 4-20mA or 0-20mA into 500 (user programmable and adjustable), 0.1% resolution
Digital Output:	Full duplex RS232 via RJ11 port
Display:	6 digits plus 12 character text, plus bar graph with direction indicators, remote communicator identifier, and program / run / test mode indicators
Digital Inputs:	Wall = 4, Fascia = 7, normally open or normally closed, 24 V DC supply

PROGRAMMING

Onboard Programming:	Standard wall and fascia mount units with integral keypad
PC Programming:	Via RS232 (RJ11 port)
Programming Security:	Via password (user selectable and adjustable)
Programmed Data Integrity:	Via non-volatile RAM, plus backup
Power Supply:	115 V AC +5%/-10% 50/60 Hz, 230 V AC +5%/-10%, 18-30 V DC
Volt-free Contacts:	6 form C (SPDT) 5 A, 240 V AC
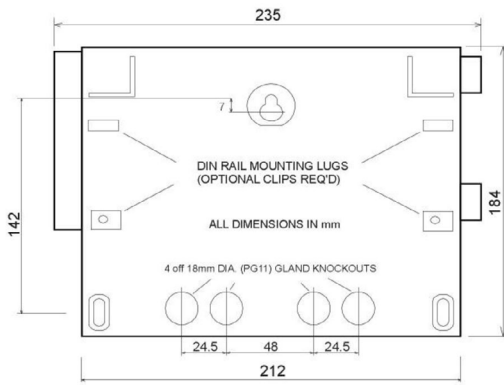
UltraTWIN Drawing Back
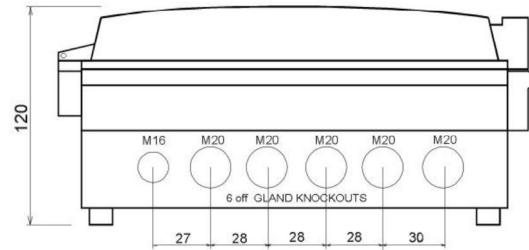
UltraTWIN Drawing Cable Entry

Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia, allows us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

By taking a step forward in echo processing technology, Pulsar Measurement addresses applications previously thought to be beyond the scope of ultrasonic measurement. This technology improves signal processing at the transducer head which has made it possible to increase resistance to electrical noise, enabling the transducer to 'zone in' on the true echo.

For more information, please visit our website:

www.pulsarmeasurement.com

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