

Product Update



Ultra Lite

Features

- Level measurement
- Volume measurement including linearisation for tank shapes
- Advanced pump control
- Open Channel Flow
- 5 control/alarm relays plus 4-20mA output
- Solids or liquids level measurement
- Data logging option
- Wall or fascia mount
- easy installation, simple menu-driven setup
- RS232 standard with optional RS485 Modbus and Profibus
- DATEM echo processing
- AC or DC supply as standard
- No special interconnection cable
- Up to 1000m (3280ft) separation from transducer
- Use dB transducer family, 125mm to 50m range (4.9in to 165ft)
- Comprehensive LCD display
- Ultra Wizard easy set up

Ultra sophisticated and versatile non-contacting ultrasonic measurement and control

Pulsar's Ultra range has set the standard in non-contacting level and volume gauging, pump control and open channel flow measurement for many years, with thousands of installations world-wide. Ultra Lite includes Pulsar's unique DATEM echo processing algorithm for rock-solid performance, and incorporates a full suite of high-performance control, monitoring and measurement features.

Ultra Lite offers complete flexibility in ultrasonic control and measurement, being user-configurable via the intuitive and straightforward prompt-led ULTRA WIZARD menu system to measure level, volume or open channel flow, or provide advanced pump control.

There are five assignable relays for alarm, control or totalisation functions, with built-in alarm functions including: high and low level, in and out of band, rate of change and pump efficiency. Pump control functions include fixed and alternate duty, FOFO etc, plus advanced options such as pump run-on, storm control and pump exercising. Open Channel Flow is measured in simple exponential, flumes and thin-plate weirs, selected primary elements to BS3680, ISO 1438 and 4359. For volume measurement, Ultra Lite includes 12 pre-loaded tank shapes and the option of 32-point linearisation.

Ultra Lite introduces a new multi-function LCD display so, at a glance, level or flow measurement, a bar indication of percentage of maximum and relay states are easily visible.

Ultra Lite - the perfect choice for robust, reliable, in-depth control and monitoring, backed up by Pulsar's superb world-wide service.



UK CERTIFICATIONS



pulsar[®]
PROCESS MEASUREMENT

Ultra Lite:

Technical Information

- **Relay Alarm Functions**
 - High/Low Level
 - In band/out of band
 - Rate of fill and empty
 - High/Low temperature
 - System fail (Loss of Echo)
 - Pump efficiency
 - Fill/empty control (initiate/stop)
- **Pump Control Functions**
 - Fixed duty assist/backup
 - Alternate duty assist/backup
 - Duty backup and assist
 - Service ratio duty/assist & duty/backup
 - FOFO (first on, first off)
 - Standby
 - Pump by time
- 2 pump sets (4 pumps total)
- **Advanced Pump control functions**
 - Pump run-on
 - Power on/off delay
 - Pump start/stop delay
 - Pump exercising
 - Pump start variation
 - Storm control feature
 - Aeration control
 - Flush valve control
- **Open Channel Flow**
 - Simple exponential
 - Selected primary elements to BS3680, ISO1438 & 4359
 - Flumes: rectangular, u-throated
 - Thin plate weirs: v-notch (standard, 60° and 90°, plus other types)
- Universal flow calculation (32 setpoints)
- Penstock control using step time
- **Data logs**
 - Pump running, run-on hours
 - Number of pump starts
 - Maximum and minimum recorded temperatures
 - Optional datalogging board for expanded logging capacity and Modbus or Profibus DP connectivity.

Pulsar Process Measurement Limited operates a policy of constant development and improvement and reserves the right to amend technical details as necessary

ULTRA LITE CONTROLLER

Volt free contacts:	5 form C (SPDT) 5A, 240V ac
Outside dimensions:	240 x 184 x 118mm (9.45" x 7.24" x 4.65")
Cable entry:	10 cable entries - 5 x M20, 1 x M16 underside, 4 x 18mm at rear
Weight:	Nominal 1kg (2.2lbs)
Case material:	Polycarbonate, flame resistant to UL94-5V
IP rating:	IP65
Max and min temp. (electronics):	-20°C to +50°C (-4°F to 122°F)
Flammable atmosphere approval:	Safe area: compatible with approved dB transducers (see transducer specification sheet)
CE Approval:	EMC approval to BS EN 50081-1:1992 for emissions and BS EN 50082-2:1995 for immunity, and to BS EN 61010-1:1993 for low voltage directive.
Echo processing:	Patented DATEM (Digital Adaptive Tracking of Echo Movement)
Analogue output:	Isolated output 4-20mA or 0-20mA into 500Ω (user programmable), 0.1% resolution
Serial output:	Full duplex RS232 via RJ11 port
Digital output (optional):	RS485 conn for Modbus with Profibus DP V0 or V1 options
Display:	Dedicated two-row LCD display showing level or flow at programmed scale, plus indication of percentage of maximum level and relay status
Data logging (optional):	Via RJ11 port has 256kb giving 1 year at 15 min intervals (uses PC Suite software)
Programming:	Integral keypad. Also PC Programming via RS232 (RJ11 port) or RS485
Programming security:	Via password (user selectable and adjustable)
Programmed data integrity:	Via non-volatile RAM, plus backup
Power supply:	105 - 120V ac, 50/60Hz, 210 - 240V ac, 22-28V dc
Transducer cable:	Three core screened, can be extended with 2 or 3 core screened
Maximum separation:	1000m (3280 feet) from transducer to control unit

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