# ZENITH

## Technical Specifications:

Pulsar's Zenith is a high specification, pumping station management system. Pulsar's proven, non-contacting, ultrasonic technology provides almost all known pumping routines in an easy-to-use package. By combining advanced ultrasonic level measurement with the control and monitoring of pumps, and providing many other control functions, it is possible to eliminate a PLC by using Zenith in a smaller station.

### PHYSICAL: MOUNTING OPTION SPECIFIC

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|---|---|
| **Mounting Option:** | **Fascia Mount:** |
| **Controller Body Dimensions:** | 200 mm x 112 mm (7.87 in x 4.41 in) front, 165 mm x 105 mm (6.49 in x 4.13 in) cut-out |
| **Weight:** | Nominal 1 kg (2.2 lb) |
| **Enclosure Material/ Description:** | Stainless steel and polycarbonate, flame resistant to UL94 V0 |
| **Transducer Cable Extensions:** | Twin Screened |
| **Maximum Separation:** | 1,000 m (3,280 ft) |

### ENVIRONMENTAL

| | |
|---|---|
| **IP Rating:** | IP64 |
| **Max. & Min. Temperature (Electronics):** | -20 °C to +55 °C (-4 °F to +131 °F) |
| **Flammable Atmosphere Approval:** | Safe area: compatible with approved dB transducers allowing installation to zone 0 |
| **CE Approval:** | EMC approval to BS EN 50081-1:1992 for emissions and BS EN50082:1995 for immunity, and to BS EN61010-1:1993 for low voltage directive |
| **UL Approval:** | UL Listed. UL Listed to Canadian safety standards. Certificate Number: E257330 |
| **Power Supply:** | 115 V AC +5%/ -10% 50/60 Hz, 220 V AC +5%/ -10%, 18-36 V DC |

### PERFORMANCE

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|---|---|
| **Accuracy:** | +0.25% of the measured range or 6 mm whichever is greater |
| **Resolution:** | dBMACH3 0.25 mm (0.01 in), dB3 0.5 mm (0.02 in), dB6 and dB10 1 mm (0.04 in), dB15 1.5 mm (0.06 in), db25 2.5 mm (0.1 in), dB40 5 mm (0.2 in) |
| **Range:** | Depending upon transducer, from 125 mm to 40 m (0.41 ft to 130 ft) |
| **Echo Processing:** | Patented DATEM (Digital Adaptive Tracking of Echo Movement) |
| **Digital Communications:** | RS485 Modbus or Profibus DP V0 or V1 |

### PROGRAMMING

| | |
|---|---|
| **On-board Programming:** | Standard 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 |

## OUTPUTS/INPUTS

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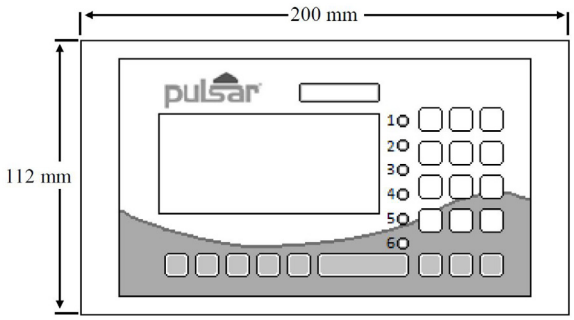
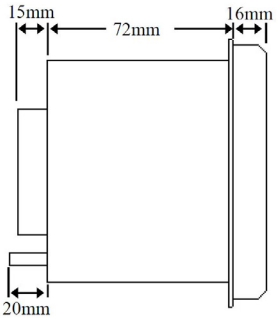
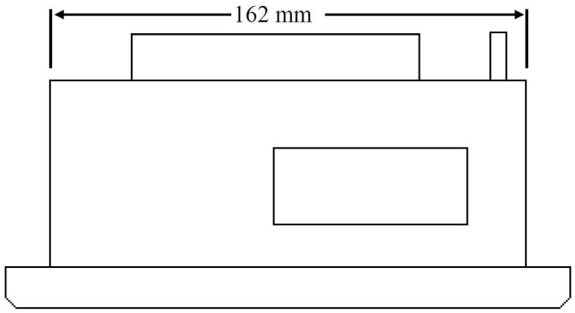
|---|---|
| **Volt-free Contacts::** | 6 form "C" (SPDT) 5A, 220 V AC |
| **Digital Inputs:** | 7 NO or NC with 24 V DC internal supply, available max. 20mA |
| **Analog Output (Adjustable):** | Isolated output of 4-20mA or 0-20mA into 500 Ω (user programmable and adjustable) 0.1% resolution |
| **Analog Input:** | Isolated input for loop powered device. 4-20mA source |
| **Serial Output:** | RS232 via RJ11 port |
| **Display:** | 6 digits plus 12 character text, plus bargraph with direction indicators, remote communicator idintifier and program/run/test mode indicators |



Zenith Drawing Front



Zenith Drawing Side



Zenith Drawing Top

pulsar MEASUREMENT

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