MILLTRONICS

The MiniRanger Plus level monitor uses non-contacting ultrasonic technology to provide effective monitoring for a range up to 15 m (50 ft.) on liquids and 7.5 m (25 ft.) on solids.

It offers optional volume calculation for 8 standard vessel configurations or open channel flow with 11-point characterization. It comes with 2 relays and a true isolated 4-20 mA output.

MiniRanger Plus has built-in Sonic Intelligence® advanced echo-processing software for superior reliability.

It is economical and easy to use. The unit can be programmed using the keypad or through a laptop using Milltronics' Dolphin Plus software.

It is compatible with chemical-resistant Echomax[®] transducers and can be used in hostile environments at temperatures as high as 145°C (293°F).

MiniRanger Plus is also available in rack or panel mount versions.



Product Features

- Universal power supply
- · Multi-field backlit LCD
- Two alarm/pump control relays
- High level switch operation
- Lead/lag pump operation
- Isolated mA output
- Sonic Intelligence[®]
- Dolphin Plus compatible
- Integral keypad
- Optional level to volume conversion
- Optional open channel monitoring (OCM)

Technical Specifications

Power

• 9-250 Vac, 40-70 Hz, 38 VA, 12W or 9-250 Vdc, 11W

Environmental

- location: indoor/outdoor
- altitude: 2000 m max.
- ambient temperature: -20 to 50°C (-5 to 122°F)
- relative humidity: suitable for outdoor (Type 4X/NEMA 4X/IP65 enclosure)
- · installation category: II
- pollution degree: 4

Range

- solids applications: 7.5 m (25 ft.) (transducer dependent)
- liquid applications: 15 m (50 ft.) (transducer dependent)

Accuracy

• 0.25% of range or 6 mm (0.24"), whichever is greater

Resolution

• 0.1% of program range* or 2 mm (0.08"), whichever is greater

Memory

- program stored in non-volatile FLASH memory, for software upgrades via optional Dolphin interface
- parameters stored in non-volatile EEPROM

Display

38 x 100 mm (1.5 x 4") multi-field backlit LCD

Enclosure

Type 4X/NEMA 4X/IP65

Outputs

Transducer Drive

 43.5 kHz, 250 V peak pulses of 1 ms max. duration at max. repetition rate of 300 ms

Relays

- 2 alarm/pump control relays
- 1 form 'C' SPDT contact per relay, rated 5 A at 250 Vac noninductive

mΑ

- optically isolated 0/4 to 20 mA
- max. loading: 750 Ω
- resolution: 0.1% of 20 mA

Transducer

 compatible models: ST-H and Echomax[®] models XPS-10/10F, XPS-15/15F, XCT-8, XCT-12, XRS-5, XKS-6

Cable

- co-axial to be RG62-A/U low capacitance
- signal to be 2-3 copper conductors, twisted, with foil shield, drain wire, 300V 0.5 to 0.75 mm² (22 to 18 AWG)
- relay/power to be copper conductors per local requirements to meet 250V 5A contact rating

Weight

1 kg (2.2 lbs.)

Options

Open Channel Monitoring

• for weirs and flumes, using a total of 11 point characterization

Volume Conversion

automatic level to volume conversion for eight standard vessel configurations

Communications

• Dolphin Plus compatible via optional Milltronics ComVerter

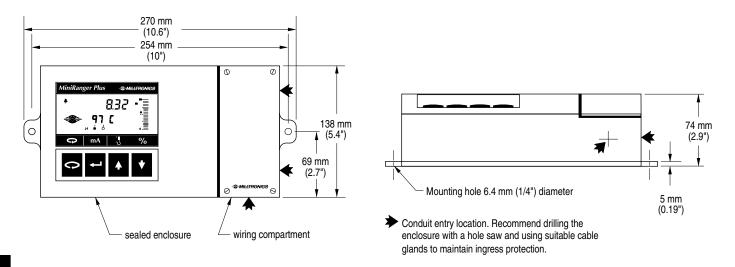
Approvals

- CE**, FM, CSA NRTIJC
- * Program range is defined as the empty distance to the face of the transducer plus any range extension.
- **EMC performance available upon request.

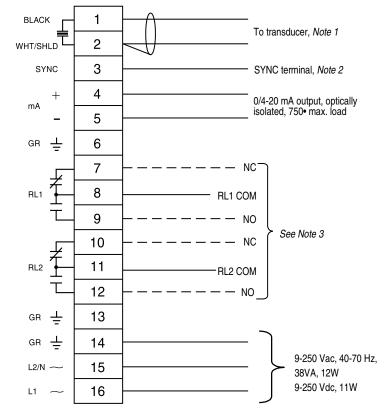
Specifications are subject to change without notice.

MiniRanger Plus – Wall Mount

Dimensions



Wiring



Relays shown in de-energized position.

Notes:

- Use RG-62 A/U coaxial (or equivalent) for extensions up to 365 m (1200 ft.). Run in grounded metal conduit, separate from other wiring.
- Required only if mounted adjacent to other Milltronics equipment (with the exception of the MultiRanger Plus and HydroRanger). Interconnect all 'SYNC' terminals with a single 18 gauge (0.5 mm²) wire.
- Each relay has 1 set of form 'C' (SPDT) contacts, relay rated at 5A 250 Vac, non-inductive, when equal or lower rated limiting fuses are installed. Relay de-energized when in alarm conditions and energized for pump control.

MILLTRONICS

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