

LOOP POWERED DIGITAL PANEL METER
(explosion-proof; outdoor enclosure)

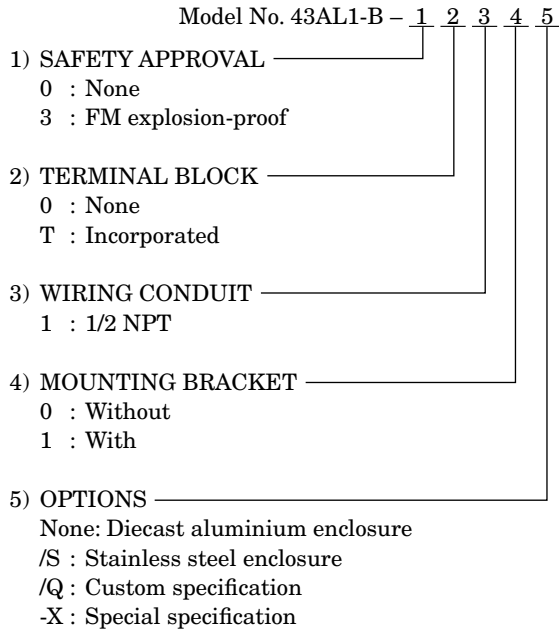
MODEL **43AL1-B**

BEFORE USE

■ SAFETY PRECAUTIONS

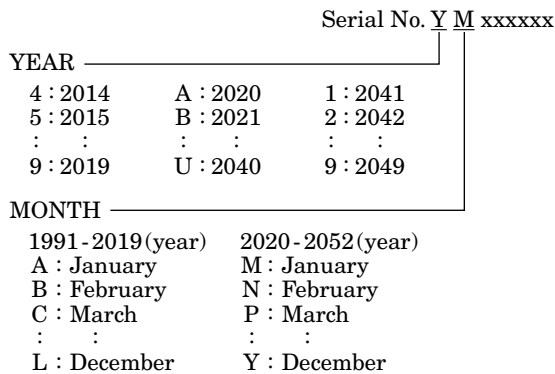
This manual describes important points of caution for safe use of this product in potentially explosive atmosphere. Please read this manual carefully before installing and operating the product.

■ MODEL NUMBER IDENTIFICATION



■ MANUFACTURED DATE CODE IDENTIFICATION

The manufactured year and month can be identified by the serial number described on the specification label.



⚠ WARNING

Explosions could result in death or serious injury:

- The enclosure cover must be fully engaged to meet explosion-proof/flameproof requirements.
- Do not remove the enclosure cover in explosive atmospheres when the circuit is alive.
- Before you remove the unit or mount it, or before you connect or disconnect the wiring, turn off the power supply and the input signal for safety. Do not disconnect unless the area is known to be non-explosive.
- Take care not to generate mechanical spark when accessing to the instrument and peripheral devices in hazardous locations. Do not apply physical impact or friction on the 43AL1-B enclosure.
- Whenever you need to measure voltage across the terminals or apply a simulated input signal to the terminals, make sure that there is no danger of explosion in the atmosphere.
- Verify the certification of the product described on the specification label on the product.
- Verify that the operating atmosphere of the meter is consistent with the appropriate hazardous locations certifications.
- Verify that the environmental temperature is within the temperature class required for the area.

Failure to follow these installation guidelines could result in death or serious injury:

- Make sure only qualified personnel perform the installation.
- The instrument modification or parts replacement by other than authorized representative of us is prohibited and will void the approval of Factory Mutual Research Corporation.
- The FM approval of model 43AL1-B is applied to the combination of the outdoor enclosure and the meter. The meter must not be separated or replaced.

⚠ SAFETY FEATURES & CAUTIONS

■ EXPLOSION-PROOF and DUST-IGNITION PROOF APPROVAL

- Explosion-Proof
 - Class I, Division 1, Groups B, C and D
- Dust-Ignition Proof
 - Class II, Division 1, Groups E, F and G
 - Class III, Division 1
- Enclosure Rating: NEMA 4X
- Temperature Code: T5, T6
- Ambient Temperature:
 - 40 to +70°C (T5)
 - 40 to +60°C (T6)
- All wiring shall comply with National Electrical Code ANSI/NFPA 70 and Local Electrical Codes.
- SEAL ALL CONDUITS WITHIN 18 INCHES.
- Prior to installation, check that the safety class of this unit satisfies the system requirements.
- Before wiring, make sure there is no danger of explosion in the atmosphere.

- Before opening the enclosure, wait at least for 60 seconds after the power is removed.
- The cable entry device and stopping plugs for unused apertures shall be of a certified explosion-proof type, suitable for the conditions of use and correctly installed.
- The cable entry conduit is 1/2 NPT threaded.
- Five or more cable entry threads must be engaged.
- Squeeze the cable entry and stopping plug into the conduit with the proper tool.
- Before turning the power supply on, be sure to close the enclosure cover tightly.
- DO NOT RUB the surface of the plastic enclosure with a dry cloth. Electrostatic charge generated by the friction may cause an explosion.
- Be sure to earth the unit.
- For external earthing or bonding connection a cable lug shall be used so that the conductor is secured against loosening and twisting and that contact pressure is maintained.

INSTALLATION DIAGRAM for FM EXPLOSION-PROOF MODEL

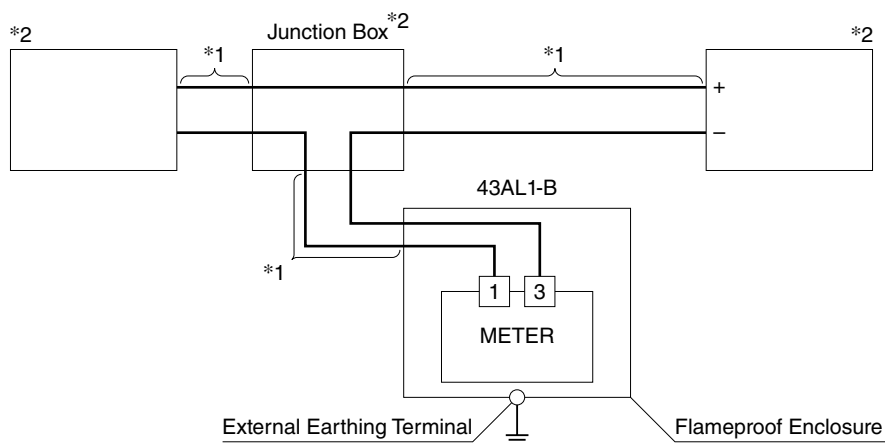


Figure 1. Without Relaying Terminal

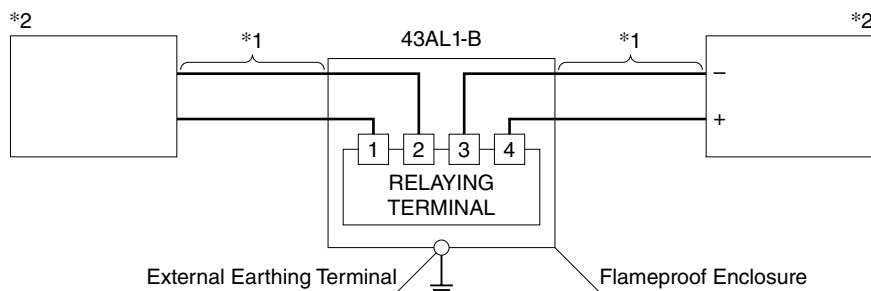


Figure 2. With Relaying Terminal

ELECTRICAL DATA
INPUT SIGNAL: 4 to 20 mA DC

*1 : All wiring shall comply with National Electrical Code ANSI/NFPA 70 and Local Electrical Codes.
SEAL ALL CONDUITS WITHIN 18 INCHES.

*2 : Other equipment including the junction box must be approved for appropriate hazardous location by a certification organization recognized as NRTL.