INSTRUCTION MANUAL

POTENTIOMETER TRANSMITTER (PC programmable)	MODEL	**27PM**

BEFORE USE ....

Thank you for choosing us. Before use, please check contents of the package you received as outlined below.
If you have any problems or questions with the product, please contact our sales office or representatives.

■ PACKAGE INCLUDES:

Signal conditioner ....(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES

• The actual installation environments such as connected devices and connected wires may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures to ensure the CE conformity.

■ GENERAL PRECAUTIONS

• Before you remove the module, turn off the power supply and input signal for safety.

■ ENVIRONMENT

• When heavy dust or metal particles are present in the air, install the module inside proper housing with sufficient ventilation.
• Do not install the module where it is subjected to continuous vibration. Do not subject the module to physical impact.
• Environmental temperature must be within -40 to +85°C (-40 to +185°F) with relative humidity within 0 to 95% RH in order to ensure adequate life span and operation.

■ WIRING

• Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
• Do not bind these cables together with those in which noises are present. Do not install them in the same duct.
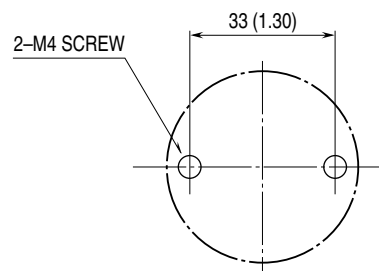
■ AND ....

• The module is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

COMPONENT IDENTIFICATION

Specifications
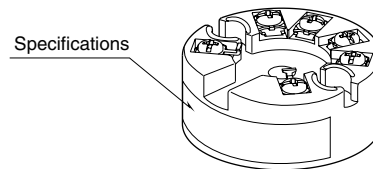
INSTALLATION unit : mm (inch)

This module is suitable for mounting inside a DIN type B head.
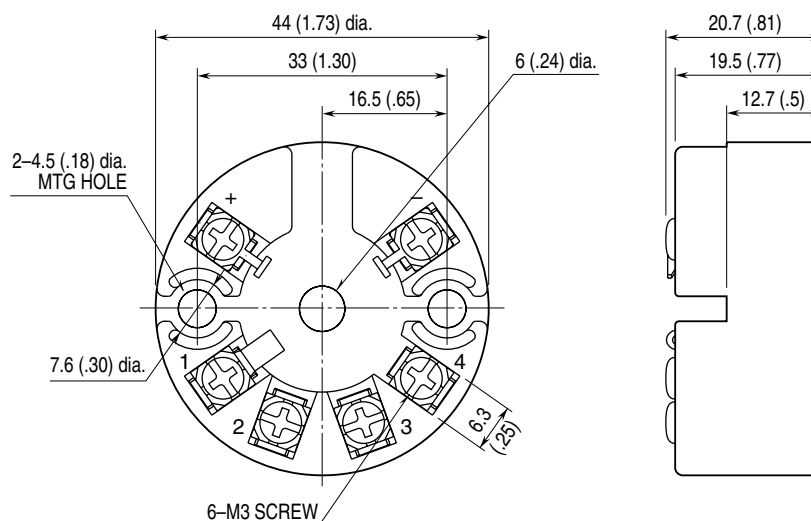

2–M4 SCREW   33 (1.30)

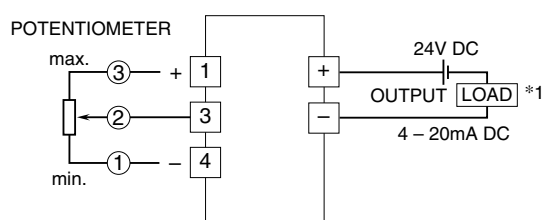The screws are to be provided by the customer.

TERMINAL CONNECTIONS

Connect the module as in the diagram below.

■ **EXTERNAL DIMENSIONS unit : mm (inch)**

■ **CONNECTION DIAGRAM**

*1. Limited to 250 – 500Ω when using the communication to configure the module.

WIRING INSTRUCTIONS

■ **SCREW TERMINAL**

Torque: 0.5 N·m

CHECKING

1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.

2) Input: Check that the voltage between terminal 3 – 4 is within 0 – 100% of full-scale.

   If the potentiometer wires are broken, the output goes over 100% (below 0% with downscale) due to burnout function. Check leadwires in such a case.

3) Output: Check that the load is within the permissible limit including wiring resistance.

$$\text{Load Resistance } (\Omega) = \frac{\text{Supply Voltage (V)} - 9 \text{ (V)}}{0.023 \text{ (A)}}$$

(including leadwire resistance)

ADJUSTMENT PROCEDURE

To calibrate the signal to match with a receiving instrument or to change the factory-set configurations, use the PC Configurator software installed on a Windows PC via the Bell202 Modem (model COP-HU).
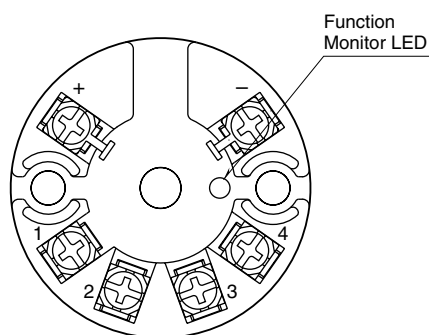
The PC Configurator software is downloadable at our web site.
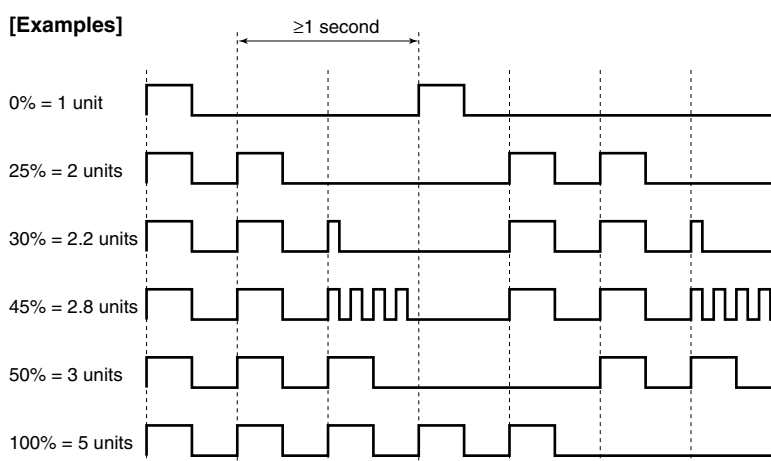
LIGHTNING SURGE PROTECTION

We offer a series of lightning surge protector for protection against induced lightning surges. Please contact us to choose appropriate models.

FUNCTION MONITOR LED (option /M)

■ **FUNCTION MONITOR LED**

Function
Monitor LED

+ –

1 4

2 3

■ **INPUT MONITOR:** The input 0 – 100% is converted into a combination of 1-second (1 unit) and 0.25-second (0.2 unit) cycled pulses. 1 unit corresponds to 25%, while 0.2 unit corresponds to 5%. 0% equals to 1 unit, while 100% corresponds to 5 units. The input % is represented in the total number of 1-unit pulses and 0.2-unit pulses, repeated in the sequence of '1-unit pulses —> 0.2-unit pulses —> OFF for 1 second or more.'

1 UNIT 25% — ON | OFF — 1 sec.
0.2 UNIT 5% — 0.25 sec.

[Examples] ≥1 second

0% = 1 unit

25% = 2 units

30% = 2.2 units

45% = 2.8 units

50% = 3 units

100% = 5 units

■ **ERROR MONITOR:** Indicates the transmitter's error status.

Lower overrange: The input signal is lower than the output's lower range limit.

2 sec. cycle
0.125 sec. OFF
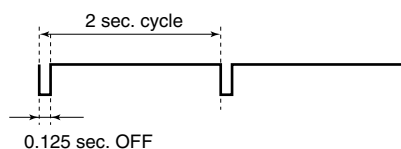
Upper overrange: The input signal is higher than the output's upper range limit.

2 sec. cycle
0.125 sec. OFF - ON - OFF
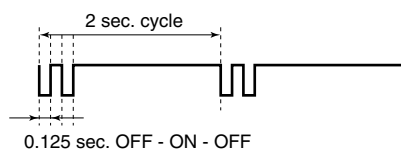
Burnout: Sensor wire breakdown is detected.

0.125 sec. ON - OFF

Internal error: The CPU detects an internal error.

1 sec. cycle
0.125 sec. ON - OFF - ON