

INSTRUCTION MANUAL

**2-WIRE UNIVERSAL TEMPERATURE TRANSMITTER
(PC programmable)**

MODEL

27U

BEFORE USE

Thank you for choosing M-System. 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 M-System's 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.

When using this product in potentially explosive atmosphere or hazardous (classified) location, you have to follow the safety procedure to install it. Please refer to "SAFE INSTALLATION MANUAL" for each type of certification.

POINTS OF CAUTION

■ **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 apply physical impact to the module.
- 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.

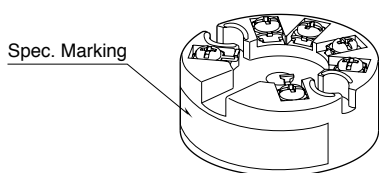
■ **WIRING**

- Do not install cables (power supply, input and output) 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**

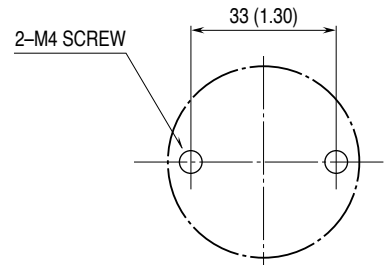
- The module is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

COMPONENT IDENTIFICATION



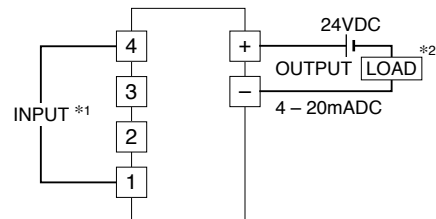
INSTALLATION mm (inch)

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



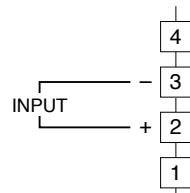
TERMINAL CONNECTIONS

Connect the module as in the diagram below.



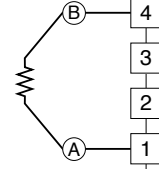
*1. Input Connection Examples

■ **DC MILLIVOLT**



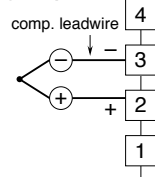
■ **RTD & RESISTANCE**

• **Two-wire**

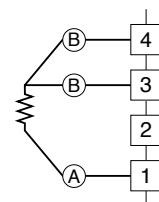


■ **THERMOCOUPLE**

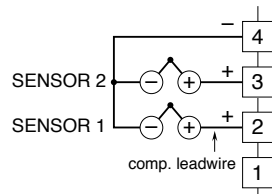
• **Single input**



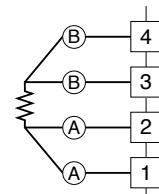
• **Three-wire**



• **Dual input**



• **Four-wire**



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

Fuji Electric France S.A.S.

46, Rue Georges Besse - Z I du Brézet - 63 039 Clermont-Ferrand cedex 2 FRANCE

France : Tél. 04 73 98 26 98 - Fax 04 73 98 26 99 - International : Tél. (33) 4 7398 2698 - Fax. (33) 4 7398 2699

E-mail : sales.dpt@fujielectric.fr – WEB : www.fujielectric.fr

CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Input: Check the input signal.
If the temperature sensor or its extension wires are broken, the output goes over 100% (below 0% with down-scale protection) due to burnout protection 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)

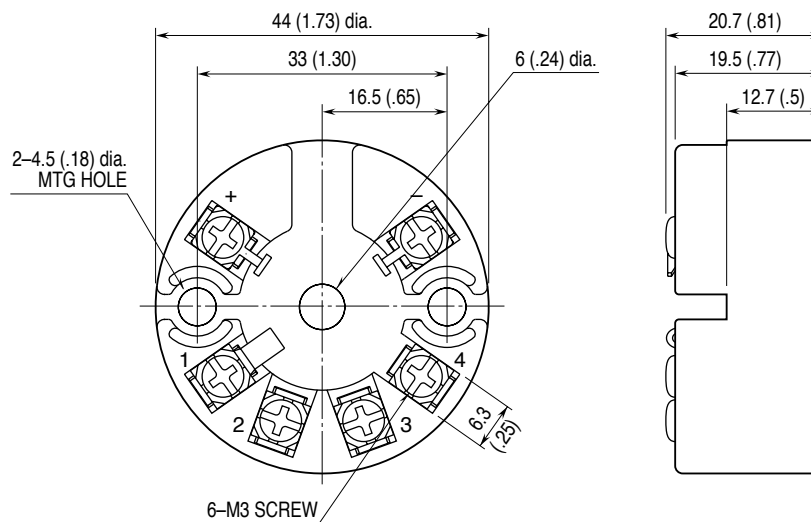
ADJUSTMENT PROCEDURE

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 M-System's web site:

<http://www.m-system.co.jp>

EXTERNAL DIMENSIONS mm (inch)



Specifications are subject to change without notice.