

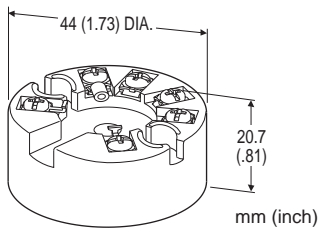
## Head-mounted Two-wire Signal Conditioners 27-UNIT

### POTENTIOMETER TRANSMITTER

(PC programmable)

#### Functions & Features

- I/O range programming via PC Configurator
- Self diagnostics
- Low temperature drift
- CE marking



### MODEL: 27PM-0[1]

#### ORDERING INFORMATION

- Code number: 27PM-0[1]

Specify a code from below for [1].

(e.g. 27PM-0/M)

#### SAFETY APPROVAL

0: None

#### [1] OPTIONS

##### Function Monitor LED

Blank: Without

/M: With

#### RELATED PRODUCTS

- USB interface Bell202 modem (model: COP-HU)  
Usable in 'non-hazardous' area only.
- PC configurator software (model: 27MCFG)  
Downloadable at M-System's web site.

#### GENERAL SPECIFICATIONS

**Construction:** Sensor head-mounting

**Connection:** M3 screw terminals (torque 0.5 N·m)

**Screw terminal:** Nickel-plated brass

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output

**User-configurable items:** PC and the transmitter are

connected with the COP-HU.

- Input range
- Burnout
- Output limits (Upper / Lower)
- Damping time
- Linearization
- Output calibration
- Loop test output

#### INPUT SPECIFICATIONS

**Potentiometer:** 100 Ω - 10 kΩ

**Minimum span:** 10 % of total resistance

**Excitation:** 2.5 V DC (43.2 kΩ connected in serial)

#### OUTPUT SPECIFICATIONS

**Output range:** 4 - 20 mA DC

**Operational range:** 3.75 - 23 mA

**Load resistance vs. supply voltage:**

Load Resistance (Ω) = (Supply Voltage (V) - 9 (V)) / 0.023 (A) (including leadwire resistance)

**Burnout:** 3.75 - 3.8 mA or 21.5 - 23 mA

(factory set to 23 mA)

**Upper output limit proportional to the input:**

20 - 21.5 mA (factory set to 21.5 mA)

**Lower output limit proportional to the input:**

3.8 - 4 mA (factory set to 3.8 mA)

**Update time:** 440 msec.

#### INSTALLATION

**Supply voltage:**

• DC Power input: 9 - 35 V DC

**Operating temperature:** -40 to +85°C (-40 to +185°F)

**Operating humidity:** 0 to 95 %RH (non-condensing)

**Mounting:** Head-mounting (DIN type B head)

**Weight:** 50 g (1.76 oz)

#### PERFORMANCE in percentage of span

**Accuracy:** 0.05 % × 100 % of full scale / Input range (%)

**Temp. coefficient:** 0.0075 %/°C (0.0004 %/°F)

**Response time:** ≤ 2 sec. (0 - 90 %)

with damping time set to 0

**Burnout response time:** ≤ 2 sec.

**Supply voltage effect:** ±0.01 % of span/V

**Insulation resistance:** ≥ 100 MΩ with 500 V DC

**Dielectric strength:** 1500 V AC @1 minute (input to output)

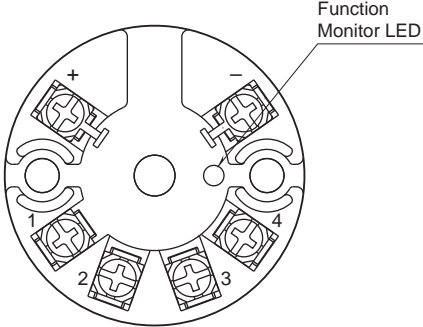
#### STANDARDS & APPROVALS

**CE conformity:**

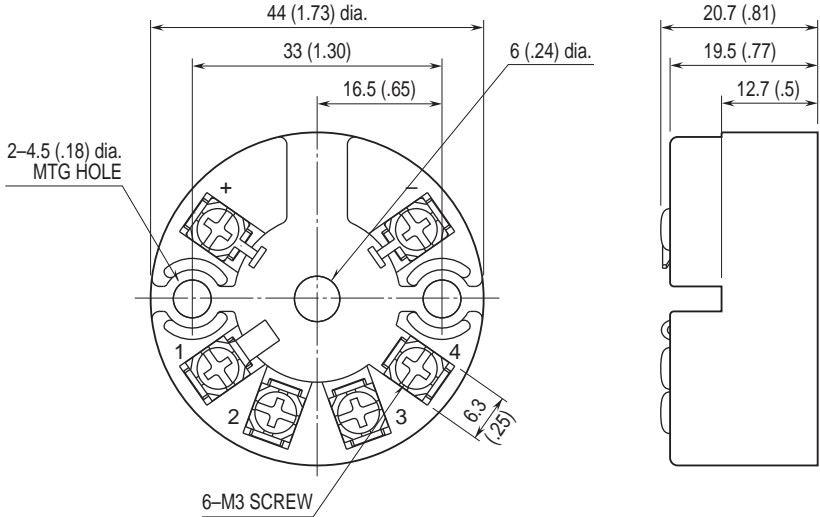
EMC Directive (2004/108/EC)

EMI EN 61000-6-4

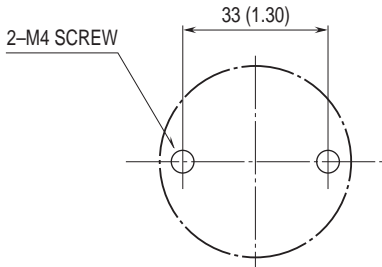
**FUNCTION MONITOR LED (option /M)**



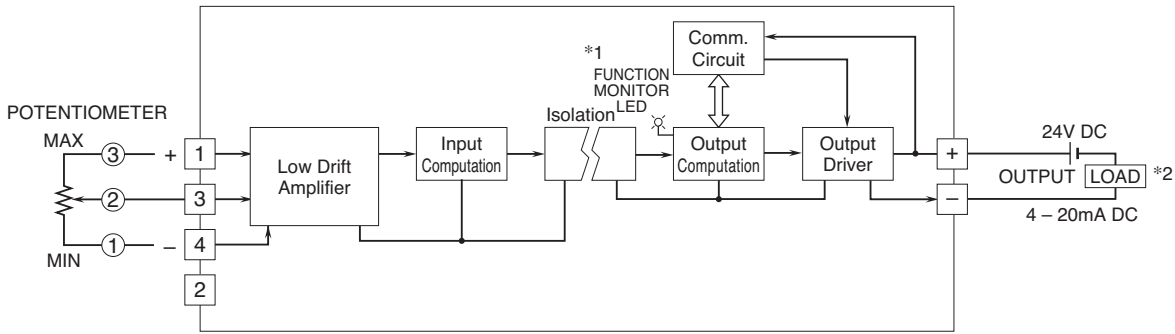
**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



**MOUNTING REQUIREMENTS unit: mm (inch)**



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\*1. Option /M  
\*2. Limited to 250 – 500Ω when using the communication to configure the module.



Specifications are subject to change without notice.