

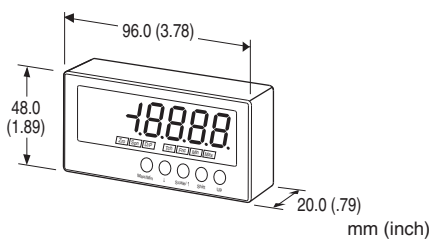
## Digital Panel Meters 47NL Series

### LOOP POWERED DIGITAL PANEL METER

(4 1/2 digit, LED display type)

#### Functions & Features

- 4 1/2 digit loop powered digital panel meter
- No external power source needed
- Moving average function to suppress the display flickering
- Scaling, forced zero, low-end cutout
- Max. and Min. value display



### MODEL: 47NLN-[1][2]

#### ORDERING INFORMATION

- Code number: 47NLN-[1][2]
- Specify a code from below for each of [1] and [2].  
(e.g. 47NLN-R/Q)
- Specify the specification for option code /Q  
(e.g. /SET)

#### INPUT

##### Current

4 - 20 mA DC

#### [1] DISPLAY COLOR

R: Red

G: Green

#### [2] OPTIONS

blank: none

/Q: With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

##### EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet  
(No. ESU-9563)

#### GENERAL SPECIFICATIONS

**Construction:** Panel mount type

**Degree of protection:** IP66; Applicable to the front of the panel meter mounted according to the specified panel cutout. Only screw mounting conforms.

**Connection:** Screwless spring terminal

**Applicable wire size:** 0.2 to 0.5 mm<sup>2</sup>, stripped length 6 mm

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

**Setting:** (Front button)

- Scaled range
- Moving average
- Others

(Refer to the instruction manual for details)

**Averaging:** None or moving average

**Lockout setting:** Prohibiting certain operations; protecting settings

#### DISPLAY

**Display:** 16 mm (.63) high, 4 1/2 digits, 7-segment LED

**Display range:** -19999 to 19999

**Decimal point position:** 10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup>, 10<sup>-4</sup> or none

**Zero indication:** Higher-digit zeros are suppressed.

**Over-range indication:** '-19999' or '19999' blinking for display values out of the display range.

'S.ERR' and 'Min' or 'Max' blinking when the input signal is out of the usable range.

**Function indicators:**

Zro, Spn, D/P, Tch, Fnc, Min, Max

Display mode status and operation status, ON or blink  
(Display color is the same as display color code.)

**Engineering unit indication:** Sticker label attached

DC, AC, mV, V, kV, μA, mA, A, kA, mW, W, kW, var, kvar, Mvar, VA, Hz, Ω, kΩ, MΩ, cm, mm, m, m/sec, mm/min, cm/min, m/min, m/h, m/s<sup>2</sup>, inch, l, l/s, l/min, l/h, m<sup>3</sup>, m<sup>3</sup>/sec, m<sup>3</sup>/min, m<sup>3</sup>/h, Nm<sup>3</sup>/h, N·m, N/m<sup>2</sup>, g, kg, kg/h, N, kN, Pa, kPa, MPa, t, t/h, °C, °F, %RH, J, kJ, MJ, rpm, sec, min, pH, %, ppm, etc.

#### INPUT SPECIFICATIONS

##### ■ DC Current

**Current range:** Approx. 3.7 to 23 mA DC

**Voltage drop:** Approx. 6.3 V with 4 mA; approx. 6.5 V with 20 mA (Equivalent input impedance: Approx. 325 Ω)

(There is voltage drop generated by using the unit. For the two-wire transmitter power supply, make sure that the operable voltage for the two-wire transmitter is ensured including the voltage drop by other devices and wiring resistance.)

## INSTALLATION

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Operating humidity:** 10 to 90 %RH (non-condensing)

**Mounting:** Magnet or screw mounting

**Weight:** 75 g (2.6 oz)

## PERFORMANCE

**Accuracy**

**Display:**  $\pm 0.1\% \pm 1$  digit

**Temp. coefficient:**  $\pm 0.015\% / ^\circ\text{C}$  ( $\pm 0.008\% / ^\circ\text{F}$ )

## STANDARDS & APPROVALS

**EU conformity:**

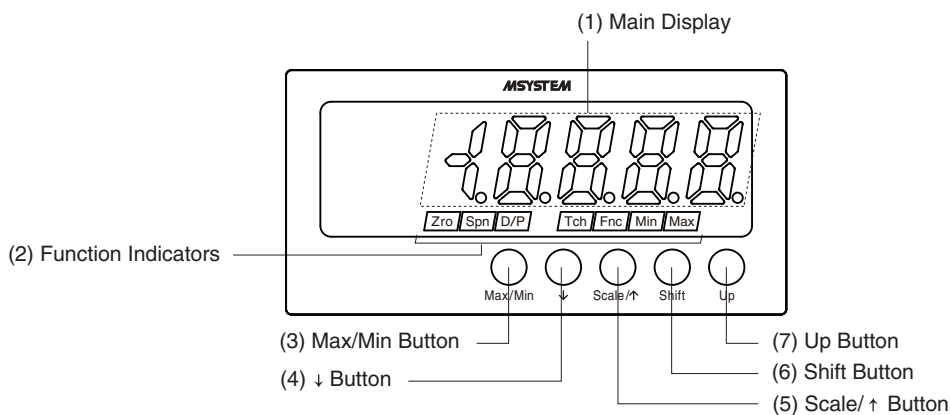
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

## EXTERNAL VIEW



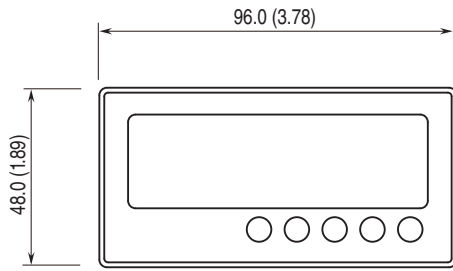
### ■ COMPONENT IDENTIFICATION

No.	COMPONENT	FUNCTION
(1)	Main display	Indicates present values, setting values and status of the unit.
(2)	Function indicators	Indicates the status in each setting mode.
(3)	Max/Min button	Used to switch the main display to show the present values, maximum values or minimum values.
(4)	↓ Button	Used to shift through setting items in each setting mode etc.
(5)	Scale/↑ button	Used to move on to the scaling setting and other setting modes; or to shift through setting items in each setting mode.
(6)	Shift button	Used to move on to the setting standby status of each setting mode or to shift through display digits in each setting item.
(7)	Up button	Used to change setting values, to execute/cancel Forced Zero or to select setting values.

Note: Refer to the operating manual for details on each function.

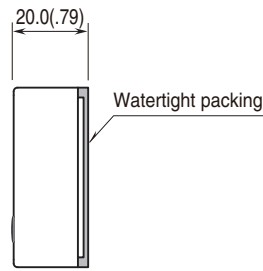
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

### FRONT VIEW

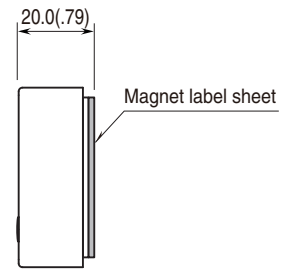


### SIDE VIEW

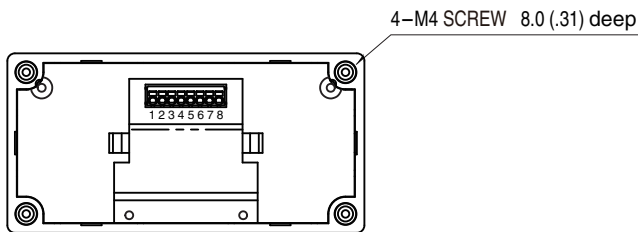
#### • SCREW MOUNTING



#### • MAGNET MOUNTING



### REAR VIEW



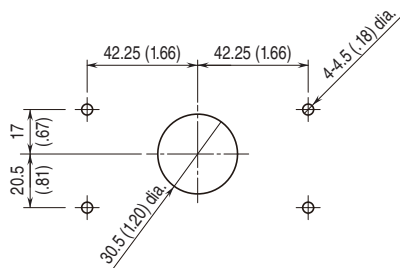
## MOUNTING REQUIREMENTS unit: mm (inch)

### PANEL MOUNTING

(Conform to degree of protection IP66)

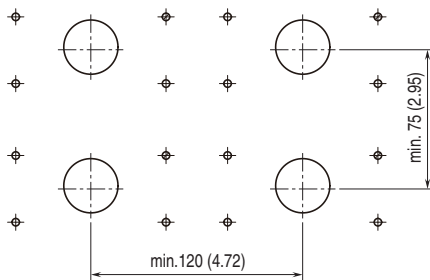
Panel cutout must be such as M-System specified. Use watertight packing and unit fixing screws included in the product package.

#### • Single Mounting unit: mm (inch)



Panel thickness: 1.0 to 3.2 mm

#### • Clustered Mounting unit: mm (inch)



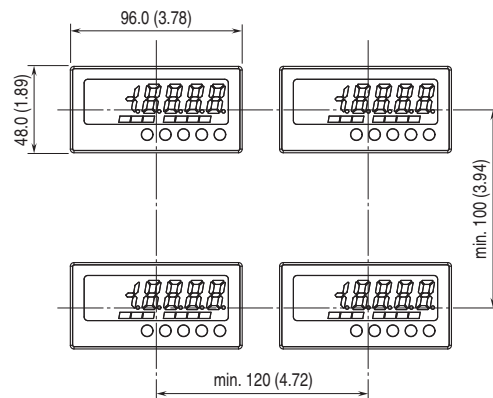
Panel thickness: 1.0 to 3.2 mm

### MAGNET MOUNTING

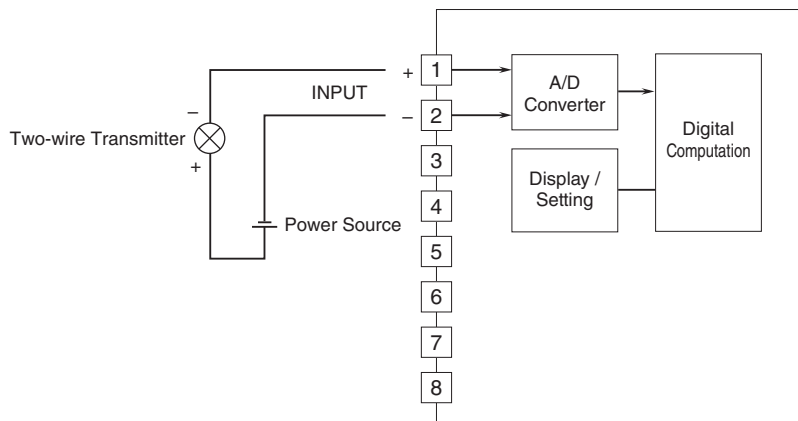
(Not conform to degree of protection IP66)

Panel cutout is not required. Use magnet sheet and stopper included in the product package.

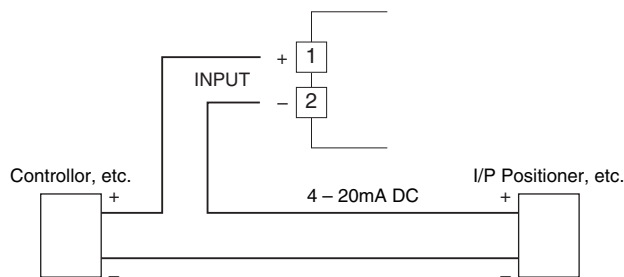
#### • Clustered Mounting unit: mm (inch)



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



### ■ 4-WIRE CONNECTION EXAMPLE



Specifications are subject to change without notice.