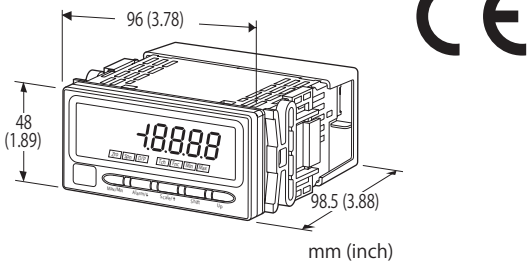
Digital Panel Meters 47 Series

DC INPUT DIGITAL PANEL METER

(4 1/2 digit, process meter, LED display type)

Functions & Features

- 4 ½ digit DC input digital panel meter
- 1/8 DIN size
- Moving average function to suppress the display flickering
- Scaling, forced zero, low-end cutout
- Max. and Min. value display
- Safety terminal cover tethered to the device with a strap
- IP66 front panel
- Separable terminal block



MODEL: 47LYV-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: 47LYV-[1][2]-[3][4]

Specify a code from below for each of [1] through [4].
(e.g. 47LYV-AR-M2/Q)

- Specify the specification for option code /Q
(e.g. /C01/S01/SET)

[1] INPUT

Current

A: 4 – 20 mA DC (Input resistance approx. 10 Ω)
D: 0 – 20 mA DC (Input resistance approx. 10 Ω)

Voltage

5: 0 – 5 V DC (Input resistance 1 MΩ min.)
6: 1 – 5 V DC (Input resistance 1 MΩ min.)
4W: -10 – +10 V DC (Input resistance 1 MΩ min.)
5W: -5 – +5 V DC (Input resistance 1 MΩ min.)

[2] DISPLAY COLOR

R: Red
YR: Orange

[3] POWER INPUT

AC Power

M2: 100 – 240 V AC (Operational voltage range 85 – 264 V, 50/60 Hz)

DC Power

R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)
P: 110 V DC
(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

[4] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's web site.)

Moving parts and indicators are not coated.
/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel

EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet (No. ESU-9514)

GENERAL SPECIFICATIONS

Construction: Panel flush mounting
Degree of protection: IP66; applicable to the front of the panel meter mounted according to the specified panel cutout
Connection: M3 separable screw terminal (torque 0.6 N·m)
Screw terminal: Nickel-plated steel (standard) or stainless steel
Housing material: Flame-resistant resin (gray)
Isolation: Input to power
Setting: (Front button)

- Scaled range
- Moving average
- Others

(Refer to the instruction manual for details)
Read rate: 40 times/sec. (25 msec.)
Averaging: None or moving average
Lockout setting: Prohibiting certain operations; protecting settings

DISPLAY

Display: 16 mm (.63) high, 4 ½ digits, 7-segment LED
Display range: -19999 to 19999
Decimal point position: 10^{-1}, 10^{-2}, 10^{-3}, 10^{-4} 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, amber ON or blink

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^2, inch, ℓ, ℓ/s, ℓ/min, ℓ/h, m^3, m^3/sec,
m^3/min, m^3/h, Nm^3/h, N·m, N/m^2, g, kg, kg/h,
N, kN, Pa, kPa, MPa, t, t/h, ℃, °F, %RH, J,
kJ, MJ, rpm, sec, min, min^{-1}, pH, %, ppm, etc.

INPUT SPECIFICATIONS

■ **DC Current**: Input resistor incorporated
Measurable range: -10 – +110 %
■ **DC Voltage**
Measurable range: -10 – +110 %

INSTALLATION

Power consumption
•**AC**: Approx. 4 VA
•**DC**: Approx. 2 W
Operating temperature: -10 to +55°C (14 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Panel flush mounting
Weight: 250 g (0.55 lb)

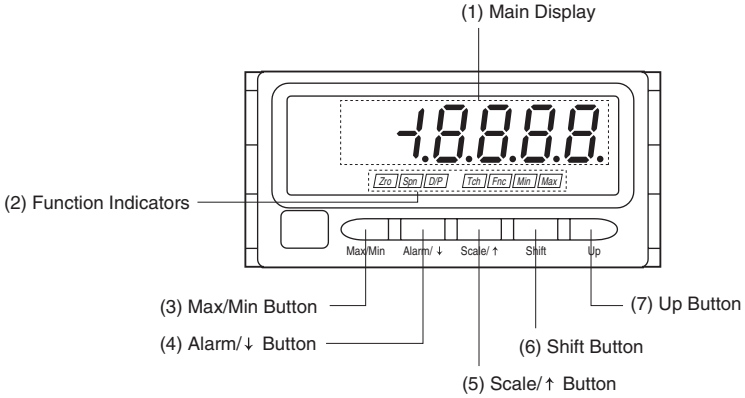
PERFORMANCE

Accuracy: ±0.1 % ±1 digit
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Input resolution: 16 bits
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 2000 V AC @ 1 minute
(input to power to ground)

STANDARDS & APPROVALS

EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
Low Voltage Directive
EN 61010-1
Installation Category II
Pollution Degree 2
Input to power: Reinforced insulation (300 V)
RoHS Directive
Protection against access to the terminal blocks:
Finger protection (VDE 0660-514)

EXTERNAL VIEW



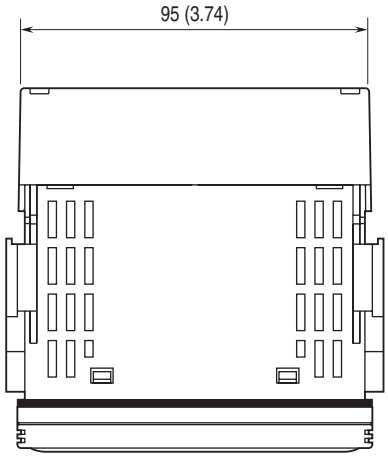
• COMPONENT IDENTIFICATION

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

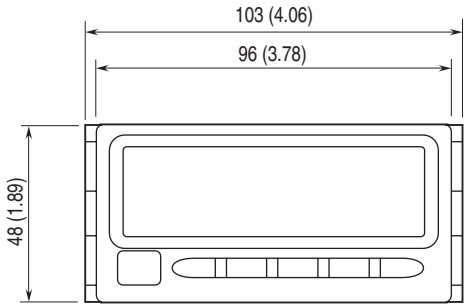
Note: Refer to the operating manual for details on each function.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

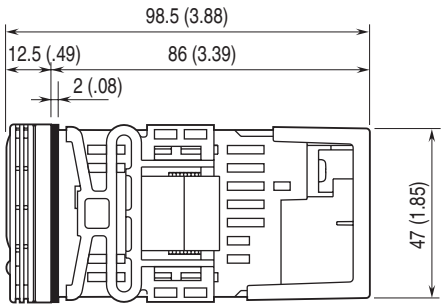
■ **TOP VIEW**



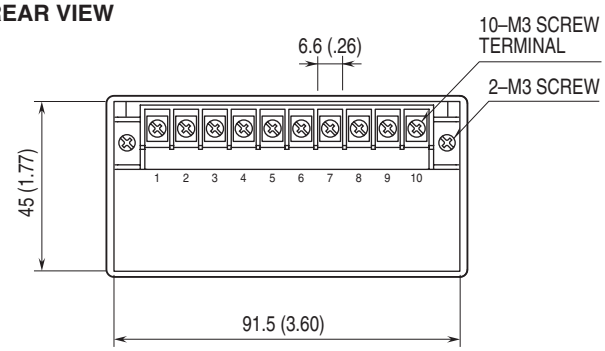
■ **FRONT VIEW**



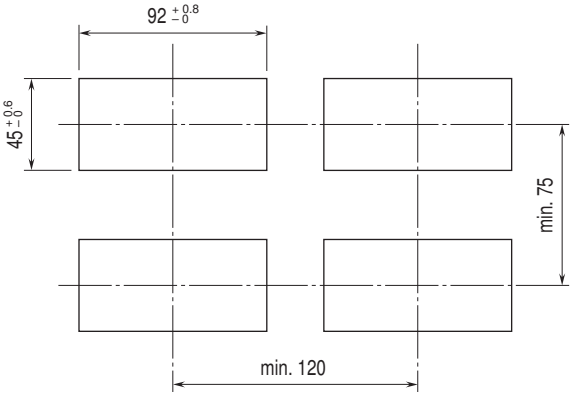
■ **SIDE VIEW**



■ **REAR VIEW**

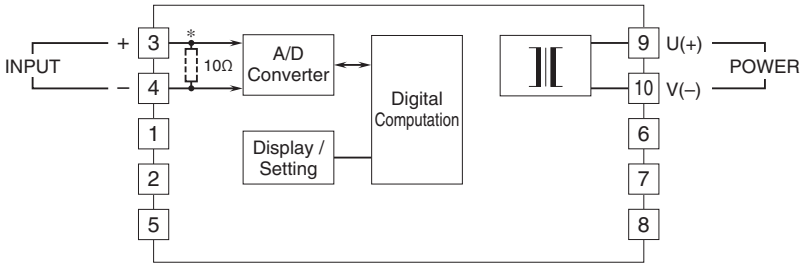


MOUNTING REQUIREMENTS unit: mm



Panel thickness: 1.6 to 8.0 mm

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Shunt resistor incoporated for current input.

⚠ Specifications are subject to change without notice.