

Power Transducer Series L-UNIT

PT/CT TRANSDUCER

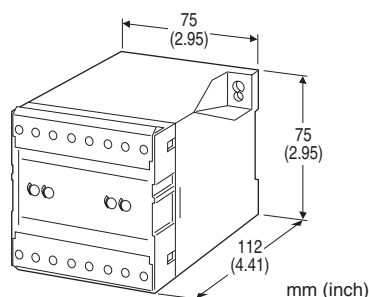
(RMS sensing)

Functions & Features

- VT and CT transducers combined in one housing
- Minimum ripple
- Isolation up to 2000 V AC
- High-density mounting

Typical Applications

- Centralized monitoring and control of power line and power supply voltages measured at switch boards
- Centralized monitoring and control of current in motors
- Monitoring abnormal voltage drops at switch boards and abnormal current in motors for detecting overload



MODEL: LPCE-[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: LPCE-[1][2][3]-[4][5]
- Specify a code from below for each [1] through [5].
(e.g. LPCE-55A-C/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] VT INPUT

Voltage

- 5: 0 - 150 V AC
6: 0 - 300 V AC

[2] CT INPUT

Current

- 1: 0 - 1 A AC
5: 0 - 5 A AC

[3] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 500 Ω max.)
D: 0 - 20 mA DC (Load resistance 500 Ω max.)
E: 0 - 16 mA DC (Load resistance 625 Ω max.)
F: 0 - 10 mA DC (Load resistance 1000 Ω max.)
G: 0 - 1 mA DC (Load resistance 10 k Ω max.)
J: 0 - 5 mA DC (Load resistance 2000 Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k Ω min.)
2: 0 - 100 mV DC (Load resistance 100 k Ω min.)
3: 0 - 1 V DC (Load resistance 1000 Ω min.)
4: 0 - 10 V DC (Load resistance 10 k Ω min.)
5: 0 - 5 V DC (Load resistance 5000 Ω min.)
6: 1 - 5 V DC (Load resistance 5000 Ω min.)
0: Specify voltage (See OUTPUT SPECIFICATIONS)

[4] AUXILIARY POWER SUPPLY

AC Power

- B: 100 V AC
C: 110 V AC
D: 115 V AC
F: 120 V AC
G: 200 V AC
H: 220 V AC
J: 240 V AC

DC Power

- R: 24 V DC
V: 48 V DC

[5] 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.)

- /C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Stand-alone; terminal access at the front

Connection: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to auxiliary power, between

channels

Input waveform: Up to 15 % of 3rd harmonic content

Overrange output: 0 to 120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

Frequency: 50 or 60 Hz

• VT Input

Input burden: 0.3 VA

Overload capacity: 150 % of rating for 10 sec.,
120 % continuous

Operational range: 0 - 120 % of rating

• CT Input

Input burden: 0.5 VA

Overload capacity: 1000 % of rating for 3 sec., 200 % for 10
sec., 120 % continuous

Operational range: 0 - 120 % of rating

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 - 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 10 V max.

■ **DC Voltage:** 0 - 12 V DC

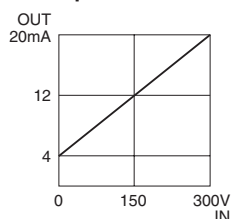
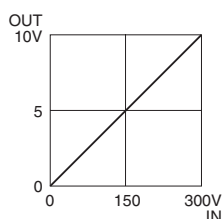
Minimum span: 5 mV

Offset: Max. 1.5 times span

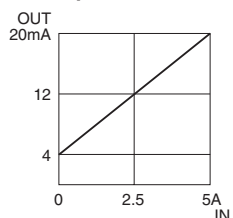
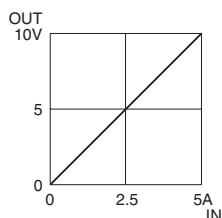
Load resistance: Output drive 1 mA max.; at ≥ 0.5 V

■ **OPERATION DIAGRAM (example)**

•VT Input



•CT Input



INSTALLATION

Auxiliary power supply

• **AC:** Operational voltage range: rating -15/+10 %,
50/60 Hz, approx. 3 VA

• **DC:** Operational voltage range: rating ± 10 %
ripple 10 %p-p max., approx. 3 W (125 mA at 24 V)

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

Operating humidity: 30 to 85 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 400 g (0.88 lb)

PERFORMANCE in percentage of span

Accuracy: ± 0.5 % (at 23°C $\pm 10^\circ\text{C}$ or 73.4°F $\pm 18^\circ\text{F}$,
45 - 65 Hz)

Response time: ≤ 1 sec. (0 - 100 % ± 1 %)

Ripple: 0.5 %p-p max.

Line voltage effect: ± 0.1 % over voltage range

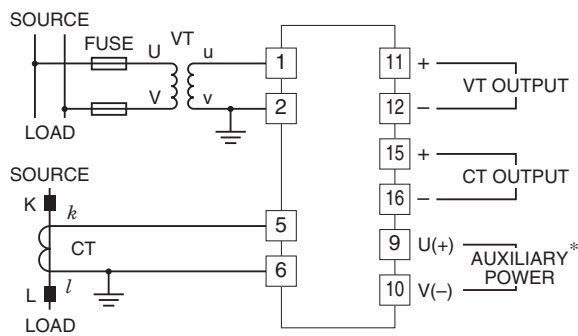
Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute

(input to output to auxiliary power to ground, between
channels)

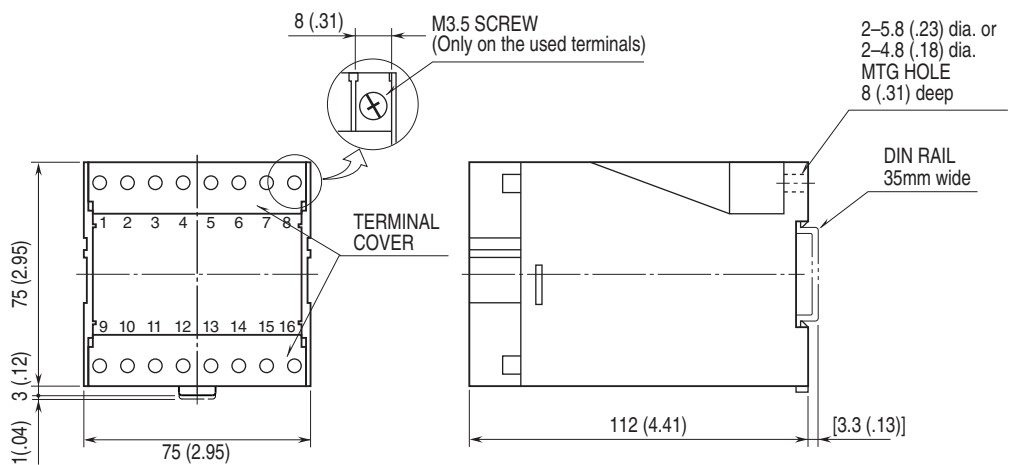
Impulse withstand voltage: 1.2 / 50 $\mu\text{sec.}$, ± 5 kV
(input to output or ground)

CONNECTION DIAGRAM



* The transducer can be powered from the input voltage when the voltage is sufficiently stable and meets other supply voltage requirements.

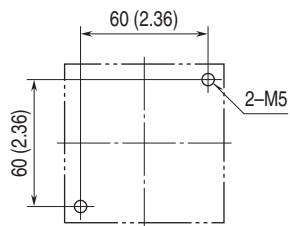
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



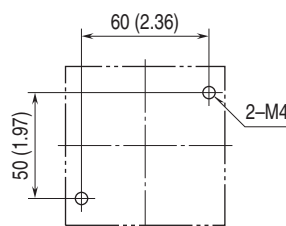
•When mounting, no extra space is needed between units.

MOUNTING REQUIREMENTS unit: mm (inch)

■ M5 SCREWS



■ M4 SCREWS



Specifications are subject to change without notice.