

Power Transducer Series LT-UNIT

AC CURRENT TRANSDUCER

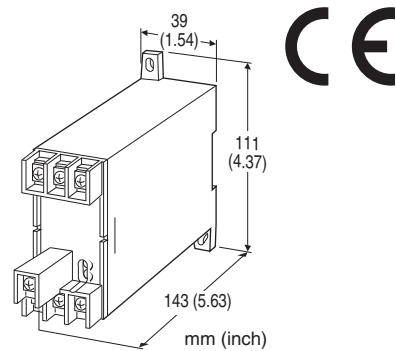
(RMS sensing)

Functions & Features

- Converts alternating current from a current transformer into a standard process signal
- Minimum ripple
- Isolation up to 2000 V AC
- High-density mounting
- Conforms to IEC 60688

Typical Applications

- Centralized monitoring and control of motors, pumps or heaters by DCS
- Monitoring power line and power supply current



MODEL: LTCE-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: LTCE-[1][2]-[3][4]
- Specify a code from below for each of [1] through [4]. (e.g. LTCE-5A-K3/T/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01)

[1] INPUT

Current

- 1: 0 - 1 A AC
- 2: 0 - 2 A AC
- 5: 0 - 5 A AC

[2] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 500 Ω max.)
- D: 0 - 20 mA DC (Load resistance 500 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1000 Ω max.)

- G: 0 - 1 mA DC (Load resistance 10 kΩ 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 kΩ min.)
- 2: 0 - 100 mV DC (Load resistance 100 kΩ min.)
- 3: 0 - 1 V DC (Load resistance 1000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 kΩ 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)

[3] AUXILIARY POWER SUPPLY

AC Power

- K3: 100 - 120V AC (Operational voltage range 85 - 132 V, 47 - 66 Hz)
- L3: 200 - 240V AC (Operational voltage range 170 - 264 V, 47 - 66 Hz)

DC Power

- R: 24 V DC (Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)
- V: 48 V DC (Operational voltage range 48 V ± 10 %, ripple 10 % p-p max.)
- P: 110 V DC (Operational voltage range 85 - 150 V, ripple 10 %p-p max.) (CE not available)

[4] OPTIONS (multiple selections)

Terminal Cover

- blank: Without
- /T: With

Other Options

- blank: none
- /Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

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

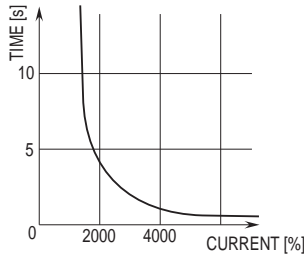
- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

GENERAL SPECIFICATIONS

- Connection:** M4 screw terminals (torque 1.2 N·m)
- Screw terminal:** Chrome-plated steel
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output to auxiliary power
- 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)

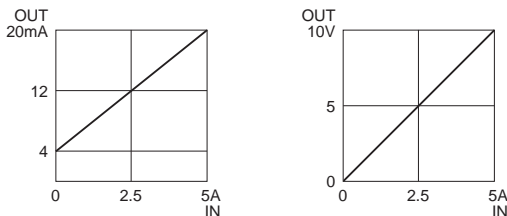
INPUT SPECIFICATIONS

Frequency: 50 or 60 Hz
Operational range: 0 - 120 % of rating
Overload capacity: 4000 % of rating for 1 sec., 2000 % for 4 sec.,
 120 % continuous
Input burden:
 0.1 VA (input 0 - 1 A)
 0.2 VA (input 0 - 2 A)
 0.5 VA (input 0 - 5 A)
 • **Overload Capacity**



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)**



INSTALLATION

Power Consumption
 • **AC:** Approx. 2 VA
 • **DC:** Approx. 1.7 W (15 mA at 110 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

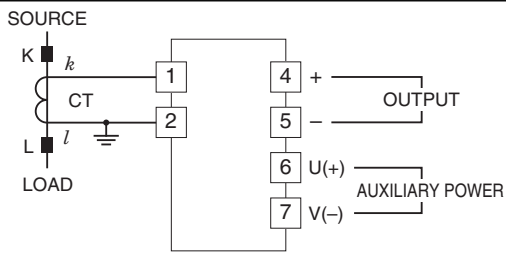
Accuracy: ± 0.5 % (at 23°C ± 10 °C or 73.4°F ± 18 °F, 45 - 65 Hz)
Magnetic field (ext. origin) effect: ± 0.5 % (400 A/m)

Response time: ≤ 1 sec. (0 - 100 % ± 1 %)
Ripple: 0.5 %p-p max.
Line voltage effect: ± 0.25 % 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)
Impulse withstand voltage: 1.2 / 50 μ sec., ± 5 kV
 (input to output or ground)

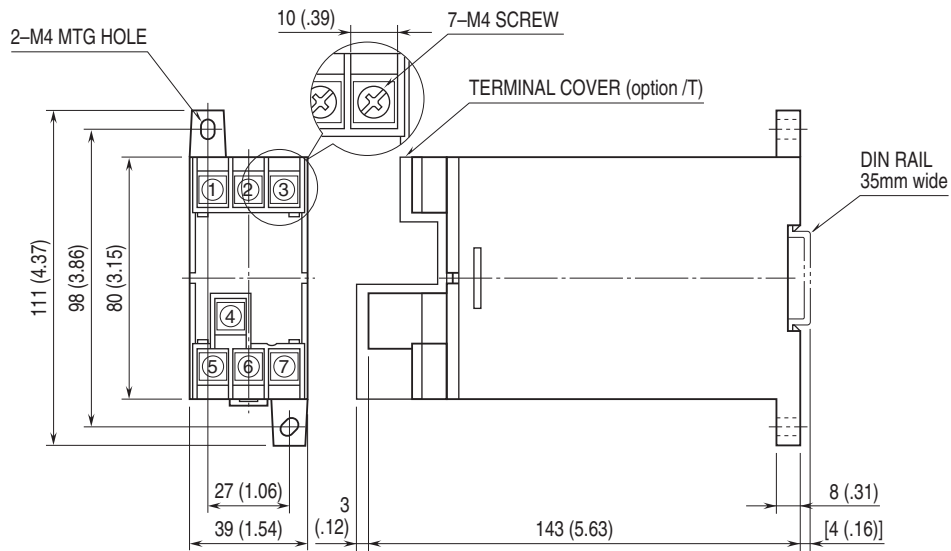
STANDARDS & APPROVALS

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 output or auxiliary power: Reinforced insulation (300 V)
 Output to auxiliary power: Reinforced insulation (300 V)
 RoHS Directive

CONNECTION DIAGRAM



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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



Specifications are subject to change without notice.