

**Power Transducer Series LT-UNIT**

**AC CURRENT TRANSDUCER**

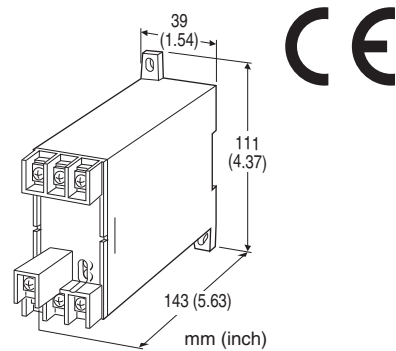
(RMS sensing)

**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.)**

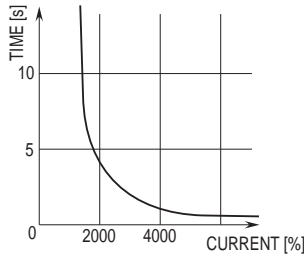
- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

**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)

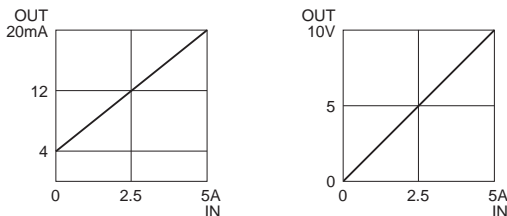
## INPUT SPECIFICATIONS

**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  $\geq 0.5$  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

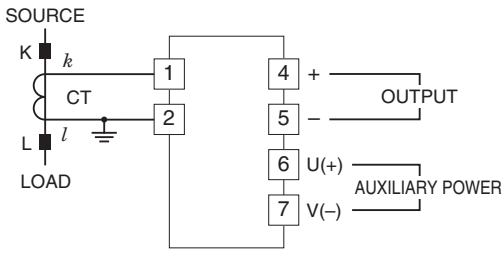
**Accuracy:**  $\pm 0.5$  % (at 23°C  $\pm 10$ °C or 73.4°F  $\pm 18$ °F, 45 - 65 Hz)  
**Magnetic field (ext. origin) effect:**  $\pm 0.5$  % (400 A/m)

**Response time:**  $\leq 1$  sec. (0 - 100 %  $\pm 1$  %)  
**Ripple:** 0.5 %p-p max.  
**Line voltage effect:**  $\pm 0.25$  % over voltage range  
**Insulation resistance:**  $\geq 100$  M $\Omega$  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  $\mu$ sec.,  $\pm 5$  kV  
 (input to output or ground)

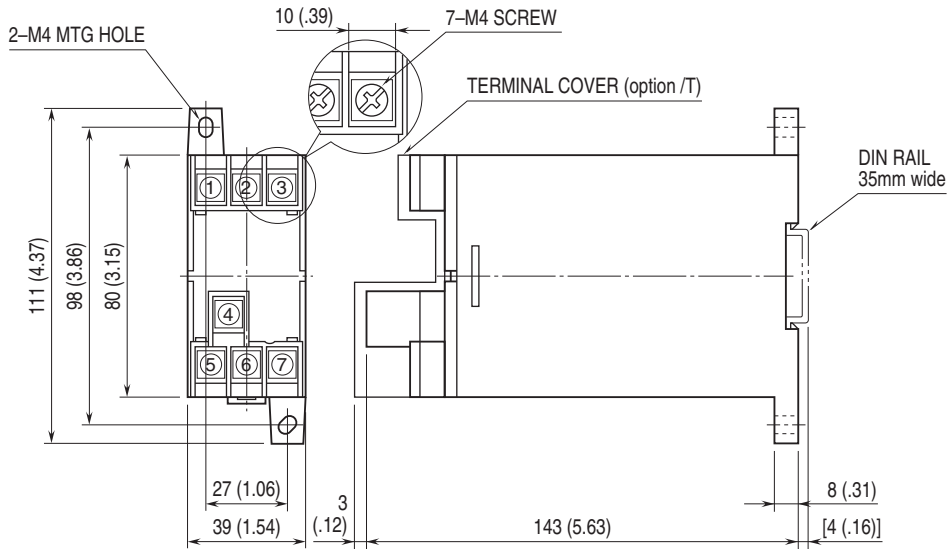
## STANDARDS & APPROVALS

**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.