## Power Transducer Series LT-UNIT

## AC CURRENT TRANSDUCER

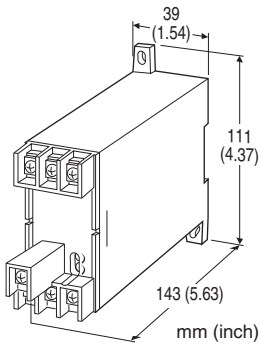
(RMS sensing)

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 our 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)



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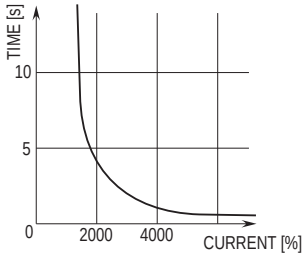
## INPUT SPECIFICATIONS

**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)

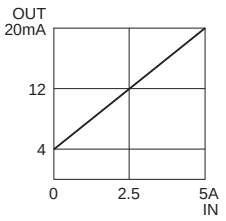
• **Overload Capacity**

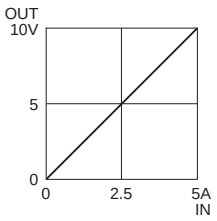



## OUTPUT SPECIFICATIONS

■ **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 MΩ 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 µsec., ±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



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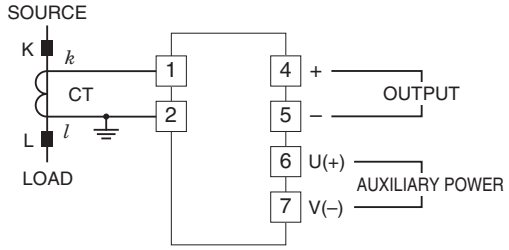
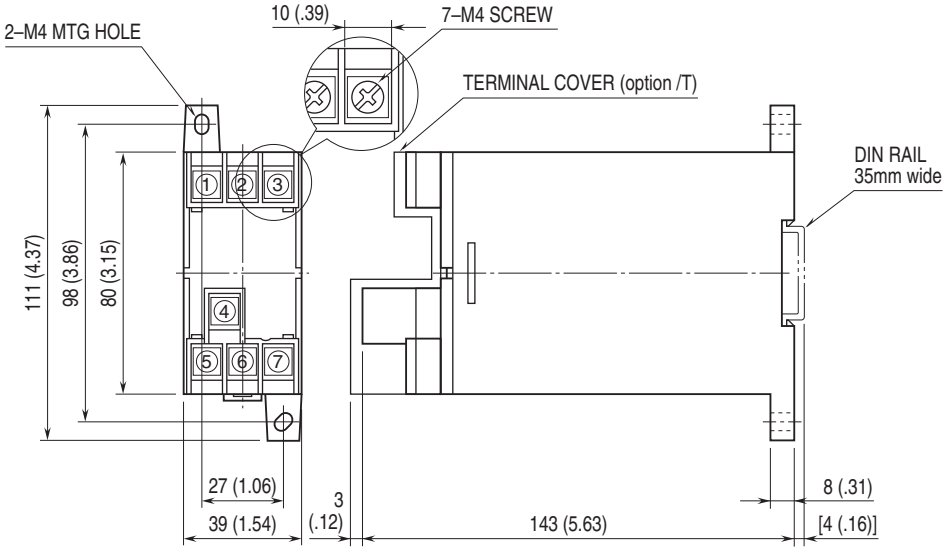
## CONNECTION DIAGRAM




## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]




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

⚠ Specifications are subject to change without notice.



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