

Power Transducer Series *LT-UNIT*

AC VOLTAGE TRANSDUCER

MODEL **LTPE**

MODEL & SUFFIX CODE SELECTION

MODEL _____ LTPE-□□-□□

INPUT _____

1 : 0 – 110V AC
 2 : 0 – 220V AC
 4 : 0 – 90V AC
 5 : 0 – 150V AC
 6 : 0 – 300V AC
 7 : 0 – 550V AC

OUTPUT _____

Current	Voltage
A : 4 – 20mA DC	1 : 0 – 10mV DC
D : 0 – 20mA DC	2 : 0 – 100mV DC
F : 0 – 10mA DC	3 : 0 – 1V DC
G : 0 – 1mA DC	4 : 0 – 10V DC
J : 0 – 5mA DC	5 : 0 – 5V DC
Z : Specify current	6 : 1 – 5V DC
	0 : Specify voltage

AUXILIARY POWER SUPPLY _____

AC Power	DC Power
K3: 100 – 120V AC	R : 24V DC
L3: 200 – 240V AC	V : 48V DC
	P : 110V DC*

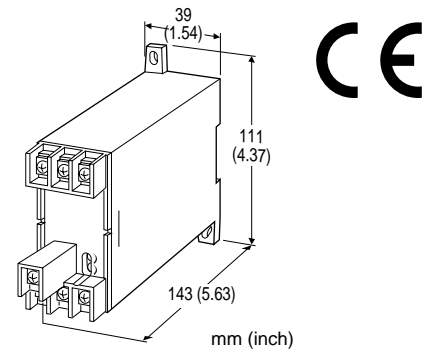
*CE marking unavailable

OPTIONS _____

/T : Terminal cover

ORDERING INFORMATION

- Specify code number and variables.
- **Code number** (e.g. LTPE-5A-K3/T)
 - **Special output range** (For codes Z & 0)



Functions & Features

- Converting an alternating voltage from a voltage transformer into a standard process signal
- Minimum ripple
- True RMS sensing
- Isolation up to 2000V AC
- High-density mounting
- Conforms to IEC 60688

Typical Applications

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

GENERAL SPECIFICATIONS

- Construction:** stand-alone; terminal access at the front
- Connection:** M4 screw terminals
 (chrome-plated steel; torque 1.2 N·m)
- Housing material:** flame-resistant resin (black)
- Isolation:** input to output to power
- Input waveform:** up to 15% of 3rd harmonic content
- Overrange output:** 0 – 120% at 1 – 5V
- Front adjustments:** zero and span; ±5%

INPUT & OUTPUT

■INPUT: 0 – 110V AC, 0 – 220V AC,
0 – 90V AC, 0 – 150V AC,
0 – 300V AC, 0 – 550V AC

Frequency: 50 or 60 Hz

Input burden: 0.5VA (1VA for 0 – 550V range)

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

Operational range: 0 – 120% of rating

■OUTPUT

•DC Current: 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 10V maximum

Output	Load Resistance
4 – 20mA	: 500 (Ω maximum)
0 – 20mA	: 500
0 – 10mA	: 1000
0 – 1mA	: 10k
0 – 5mA	: 2000

•DC Voltage: 0 – 12V DC

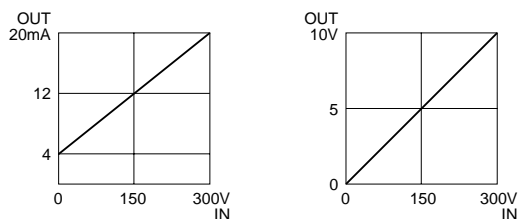
Minimum span: 5mV

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 1mA maximum at ≥0.5V

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 1000
0 – 10V	: 10k
0 – 5V	: 5000
1 – 5V	: 5000

■OPERATION DIAGRAM (example)



INSTALLATION

Auxiliary power supply

AC: operational voltage range for K3: 85 – 132V or L3: 170 – 264V
47 – 66 Hz, approx. 2VA

DC: operational voltage range for R, V: rating ±10% or P: 85 – 150V; ripple 10% p-p max. approx. 1.7W (15mA at 110V)

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

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

Mounting: surface or DIN rail

Dimensions: W39×H111×D143 mm (1.54"×4.37"×5.63")
*D147 mm (5.79") with terminal cover
See General Spec. Sheet Figure A-1.

Weight: 400 g (0.88 lbs)

Terminal assignment: See General Spec. Sheet Figure B-1.

PERFORMANCE in percentage of span

Accuracy: ±0.5% (at 23°C ±10°C or 73.4°F ±18°F, 45 – 65 Hz)

Response time: ≤1 second (0 – 100% ±1%)

Ripple: 0.5% p-p max.

Line voltage effect: ±0.1% over voltage range

Insulation resistance: ≥100MΩ with 500V DC

Dielectric strength: 2000V AC @1 minute
(input to output to power to ground)

Impulse withstand voltage: 1.2/50 μsec., ±5kV
(input to output or ground)

Magnetic field (ext. origin) effect: ±0.5% (400A/m)

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (73/23/EEC)

Installation category II

Pollution degree 2

Input to output or power – Reinforced insulation

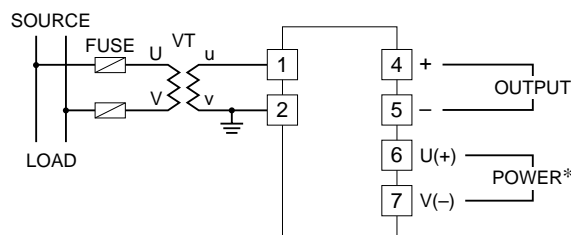
Max. operating voltage 550V

Output to power – Reinforced insulation

Max. operating voltage 300V

IEC Standard: IEC 60688

CONNECTION DIAGRAM



*The transducer can be powered from the input voltage when the voltage is sufficiently stable and meets within the range of auxiliary power supply of the unit specified in the data sheet/instruction manual.