

Power Transducer Series *LT-UNIT*

FREQUENCY TRANSDUCER
(self-powered)

MODEL **LTHZN**

MODEL & SUFFIX CODE SELECTION

LTHZN-□□□□

MODEL _____

FREQUENCY _____

1 : 45 – 55 Hz
2 : 55 – 65 Hz
3 : 45 – 65 Hz

VT INPUT _____

1 : 110V AC
2 : 220V 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

OPTIONS _____

/T : Terminal cover

ORDERING INFORMATION

Specify code number and variables.

- **Code number** (e.g. LTHZN-11A/T)
- **Special output range** (For codes Z & 0)

Functions & Features

- Providing a DC output signal in proportion to deviation (± 5 Hz) from center frequency (50 Hz or 60 Hz)
- DC output containing little ripple is ideal for computer input
- Isolation up to 2000V AC
- High-density mounting
- Conforms to IEC 60688
- No auxiliary power supply required

Typical Applications

- Centralized monitoring and control of power management system in manufacturing facility or building
- Measuring frequency for UPS

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

Computation: one-shot

Overrange output: approx. -10 – +120% at 1 – 5V

Front adjustments: zero and span; $\pm 5\%$

INPUT & OUTPUT**INPUT**

Operational range: 85 – 110% of rating

Overload capacity: 150% of rating for 10 sec.,
110% continuous

Input burden: 3VA

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

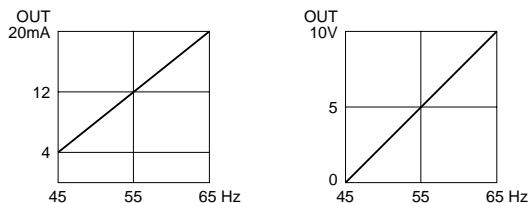
• **DC Voltage:** 0 – 12V DC

Minimum span: 5mV

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 1mA maximum at $\geq 0.5V$

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**

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: $\pm 0.2\%$ (at 23°C $\pm 10^\circ\text{C}$ or 73.4°F $\pm 18^\circ\text{F}$,
45 – 65 Hz)

Magnetic field (ext. origin) effect: $\pm 0.2\%$ (400A/m)

Response time: ≤ 1 second (0 – 100% $\pm 1\%$)

Ripple: 0.5% p-p max.

Insulation resistance: $\geq 100M\Omega$ with 500V DC

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

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

STANDARDS & APPROVALS

CE conformity: Electromagnetic Compatibility

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 – Reinforced insulation

Max. operating voltage 300V

IEC Standard: IEC 60688

CONNECTION DIAGRAM