

High-density Signal Conditioners 10-RACK

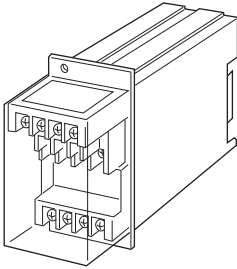
FREQUENCY TRANSDUCER

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 2000 V AC (input)

Typical Applications

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



MODEL: 10EHZ-[1][2][3]-R[4]

ORDERING INFORMATION

- Code number: 10EHZ-[1][2][3]-R[4]
Specify a code from below for each [1] through [4].
(e.g. 10EHZ-11A-R/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01)

[1] FREQUENCY

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

[2] INPUT

- 1: 110 V AC
- 2: 220 V AC

[3] OUTPUT

Current

- A: 4 – 20 mA DC (Load resistance 600 Ω max.)
- D: 0 – 20 mA DC (Load resistance 600 Ω max.)

- E: 0 – 16 mA DC (Load resistance 750 Ω max.)
- F: 0 – 10 mA DC (Load resistance 1200 Ω max.)
- G: 0 – 1 mA DC (Load resistance 12 k Ω max.)
- J: 0 – 5 mA DC (Load resistance 2400 Ω max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

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

POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V ± 10 %, ripple 10 %p-p max.)

[4] OPTIONS

blank: none

/Q: With options (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

Construction: Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear; terminal cover provided

Connection

Input: M3.5 screw terminals (torque 0.8 N·m)

Output: Card-edge connector and M3.5 screw terminals (torque 0.8 N·m)

Power input: Supplied from card-edge connector

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

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

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

Input burden: 1 VA max.

Operational range: 85 – 120 % of rating

Overload capacity: 150 % of rating for 10 sec., 120 % continuous

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 – 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 12 V maximum

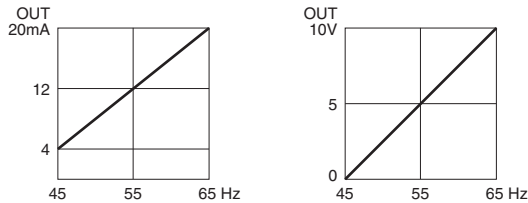
■ **DC Voltage:** 0 – 12 V DC

Minimum span: 5 mV

Offset: Max. 1.5 times span

Load resistance: Output drive 1 mA max.; at ≥ 0.5 V

■ **OPERATION DIAGRAM (example)**



Remark: When there is no input voltage, the transducer outputs as negative (–) overrange.

INSTALLATION

Current consumption: Approx. 80 mA

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Standard Rack 10BXx

Weight: 400 g (0.88 lb)

PERFORMANCE in percentage of span

Accuracy: ± 1.0 %

Temp. coefficient: ± 0.1 %/°C (± 0.06 %/°F)

Response time: ≤ 1 sec. (0 – 90 %)

Ripple: 0.5 %p-p max.

Line voltage effect: ± 0.1 % over voltage range

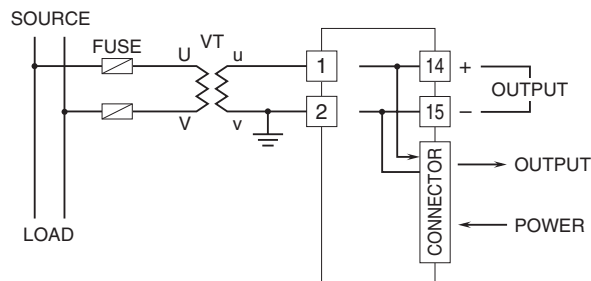
Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute

(input to output or power to ground)

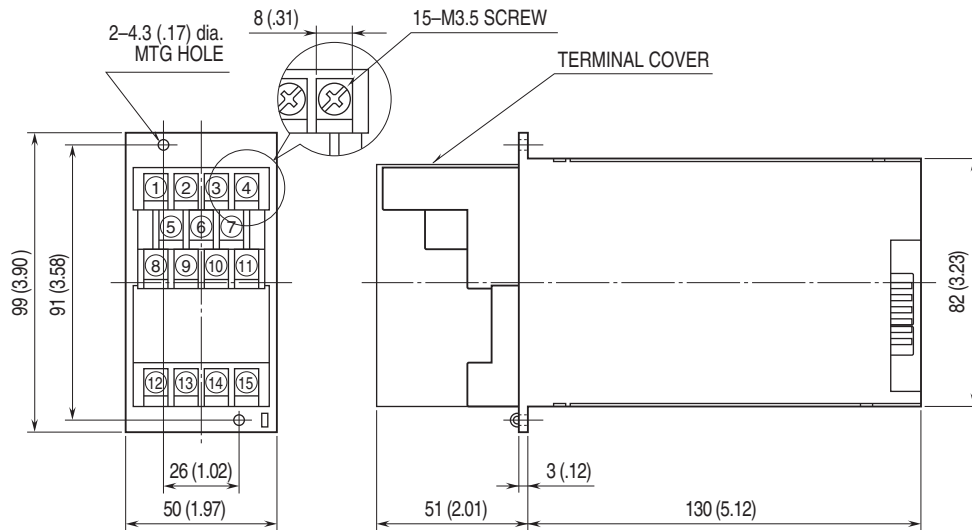
500 V AC @ 1 minute (output to power)

CONNECTION DIAGRAM



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

Terminals 8 through 11 are deleted.



Specifications are subject to change without notice.