

RISH Ducer F12 Transducer for measuring frequency

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In Housing E8 for rail and wall mounting

Application

The RISH Ducer F12 measuring transducer is used for frequency measurement. The output signal is proportional to load-independent DC current or DC voltage.

Features/Benefits

- Measuring output: Dc current signal (Load-independent) or DC voltage signal directly proportional to the change of input within a specified span.
- Electrical isolation between all transducer connection circuits / prevents interference voltages and currents being transmitted.
- Narrow housing, 35 mm /saves space and therefore cost.
- Provision for either snapping the transducer onto top-hat rails or securing it with screws it with screws to a wall or panel.

Mode of operation

Input signal X is galvanic ally separated from the mains network using a voltage transformer (a). The input signal is given to frequency to voltage converter (b) which is then filtered (c) and amplified (d). The power module (n) connected either to an AC or DC voltage source, supplies the transducer with the required power supply.

Technical Data

Measuring Input X

Nominal input voltage : 63.5, 100, 110, 120, 220, 230, 240, 380, 400, 415, 440 and 480V

Measuring Ranges : 45-55 Hz, 55-65Hz, 45-65 Hz, 360-440 Hz

Own consumption : < 2VA Overload Capacity : 1.2 x rated voltage continuous 1.5 x rated voltage for 10 seconds

Measuring output Y

Standard Ranges : 0/1 mA in to 0-10 K Ohms, 0/5mA in to 0-2K Ohms, 0/10 mA in to 0-1 K Ohms, 0/20 mA in to 0-500 Ohms, 4/20 mA in to 0-500 Ohms, 0/5V 1K Ohms minimum load, 0/10V 1 K Ohms minimum load. Current output Protection: Fully protected against open and short circuited output. Voltage output Protection : Fully protected against open circuit output. Output Ripple: < 0.5 % of full rated output. Response Time : <400 ms Accuracy Reference Value: Measuring Span f Basic Accuracy : Class 0.2 of O/P end value

Reference conditions :

Ambient Temperature : 230 °C, +/- 2 K Power Supply : +/- 1 % Warm up Time : > 15 min

Power Supply

Read Value	Rated operating Range
AC 24V	22.... 26V
AC 110 V	99....121V
AC 120V	108....132V
AC 230V	207....253V
AC 380 V	360....440V

Rated operating range of frequency : 45...50...60...65Hz. Power consumption: AC < 4VA at rated value.



Fig. 1. RISH Ducer Frequency F12

Version with AC/DC power pack : (DC and 45...400Hz)

Rated Voltage	Permissible variation
24....60V AC/DC	DC-15 +33%
85....230V AC/DC	AC +/- 15%

Power Consumption: < 4VA Self power version available

Installation Data

Mechanical Design : Housing E8

Material of housing : Lexan 940 Polycarbonate Flammability Class -0 According to UL 94 self-extinguishing, non-tripping Free of halogen

Mounting : For rail or wall mounting

Mounting position : Any

Electrical Connections : Screw-type terminals with indirect wire pressure max 2 x 2.5 mm² or 1 x 6 mm²

Regulations :

Test Voltage : Measuring input versus Measuring output 3.7 kV, 50 Hz, 1 min.

Measuring input versus Housing 3.7kV, 50 Hz, 1min.

Measuring output versus Housing 0.5 kV/50Hz/1min.

Environmental Conditions :

Operating Temperature : 0°C to +60°C Storage Temperature : -20°C to +70°C Humidity Range : Up to 75% RH

Electrical Connections

Connection	Terminals
Measuring Input	- 2
	- 5
Measuring Output	+ 13
	- 14
Power Supply	-,+ 21
	-,+ 22

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