

RISH Ducer F11 Transducer for measuring frequency

RISH Ducer F11

Transducer for measuring frequency

Application

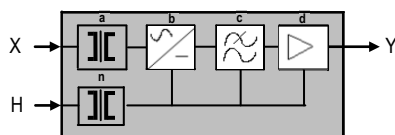
The RISH Ducer F11 measuring transducer is used for frequency measurement. The output signal is proportional to measured frequency and is either a load-independent DC current or a load-independent DC voltage.

Features/Benefits

- Measuring output : DC current signal or DC voltage signal (Load-independent) directly proportional to the change of input within a specified span.
- Electrical isolation between all transducer connection circuits / prevent 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 to a wall or panel.
- Two isolated outputs (Optional)
- Electric isolation between output 1 and output 2 is 500V

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



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,

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,0/10V external resistance > 200KΩ / V Current output Protection: Fully protected against open and short circuited output.V oltage output Protection : Fully protected against open circuit output.

F or One Output Transducer: - Residual Ripple in output current : < 0.5 %
Response Time : < 400 ms

For Two Output Transducer: - Residual Ripple in Output Current : < 2%
Response Time : < 800 ms

Accuracy:

Reference Value: Measuring SpanΔ f Basic Accuracy : Class 0.5 of output end value

Reference conditions :

Ambient Temperature :23° C,+/- 2 K Power Supply :+/- 1 % Warm up Time :> 15min



Fig. 1. RISH Ducer F11

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: < 4VA at rated value for One Output Transducer Power Consumption: < 8 VA for Two Output Transducer

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: < 4 VA / 4W for One Output Transducers elf power version available Power Consumption: < 8 VA / 8W for Two Output Transducer Self power version available

Installation Data

Mechanical Design : Housing E8 / E16 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, 1min. Measuring input versus Housing 3.7kV, 50 Hz, 1 min. Measuring output versus Housing 0.5 kV,50Hz,1min. Measuring output 1 versus Output 2 500 V,50Hz,1 min.

E environmental Conditions : Operating Temperature : 0 °C to +60 ° C
Storage Temperature : -2 0 °C to +70 °C Humidity Range : Up to 75% RH

Electrical Connections

| Connection | Terminals | | |
|--------------------|----------------------------------|--|---|
| | One Output Transducer E8 Housing | Two Output Transducer E8 Housing(AC Aux.) | Two Output Transducer E16 Housing (AC/DCAux.) |
| Measuring Input | ~ 5 | ~ 7 | ~ 9 |
| | ~ 6 | ~ 8 | ~ 10 |
| Measuring Output 1 | + 1 | + 4 | + 1 |
| | - 2 | - 3 | - 2 |
| Measuring Output 2 | | + 6 | + 11 |
| | | - 5 | - 12 |
| Power Supply | ~,+ 3 | ~ 1 | ~,+ 3 |
| | ~,- 4 | ~ 2 | ~,- 4 |

*Subject to change without notice

Rishabh Instruments Pvt. Ltd.,F-31, MIDC Satpur, Nashik. Ph 02532202160, Fax 0253- 2351064