FREQUENCY TRANSDUCER

S3-FD

FEATURES

- Accuracy: ± 0.025% RO.
- Self powered
- Excellent long term stability (4 ~ 20mA, 500Ω)
- High impulse & surge protection (5KV)
- The case can be mounted on a 35mm rail which complies with DIN 46277

DESCRIPTION

S3-FD transducer to measure power frequency and provide a DC output directly proportional to the change of input within the specified span. The input signal is shapped to square wave by the wave shappers circuit. The duty cycle of the square wave is change with the frequency of the input signal. Then the square wave is fed into an integrated circuit and the produced DC output is proportional to the input frequency.

SPECIFICATION

• INPUT

Input Range		Input Burden	Max. Input Over capability
Frequency	Voltage		
45 ~ 55HZ	110V± 20% or 220V± 20%	≤3.5VA	1.2 x rated continuous 2 x rated 10 sec. 4 x rated 1 sec.
55 ~ 65HZ			
45 ~ 65HZ			

• OUTPUT

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0 ~ 1V	≥ 1KΩ	≤0.05Ω	≤0.5% RO. (Peak)	≤400mS. 0 ~ 99%
0 ~ 5V				
1 ~ 5V				
0 ~ 10V				
0 ~ 1mA	0 ~ 10KΩ	≥20MΩ		
0 ~ 10mA	0 ~ 1KΩ	≥5MΩ		
0 ~ 20mA	0 ~ 500Ω			
4 ~ 20mA				

Accuracy ..... ± 0.025% Rated of Output
Output load effect ..... ≤0.025%RO.
Magnetic field strength ..... ≤0.025% RO. 400A/M
Span adjustment range ..... ≥5% RO.
Zero adjustment range ..... ≥1% RO.
Operating temperature range ..... 0 ~ 60˚C
Storage temperature range ..... -10 ~ 70˚C
Temperature coefficient ..... ≤100 PPM from 0 to 60˚C
≤60PPM, 25˚C ±10˚C
Max. relative humidity 95%
Isolation ..... Input/output/case
Insulation resistance ..... ≥100MΩ, DC 500V
Dielectric withstand voltage ..... Between input/output/case
(IEC 414, 688,ANSI C37) AC 2.6KV, 60HZ, 1 min.
Impulse withstand test ..... 5KV, 1.2 X 50μS
(IEC 255-4, ANSI C37 90a) ..... Common mode & differential mode
Performance ..... Designed to comply with IEC 688
Safety requirements ..... IEC 414, BS5458

ORDERING INFORMATION

S3-FD [ ] [ ] [ ]

Model

Input Frequency
45: 45 ~ 55HZ
56: 55 ~ 65HZ
46: 45 ~ 65HZ
00: Option

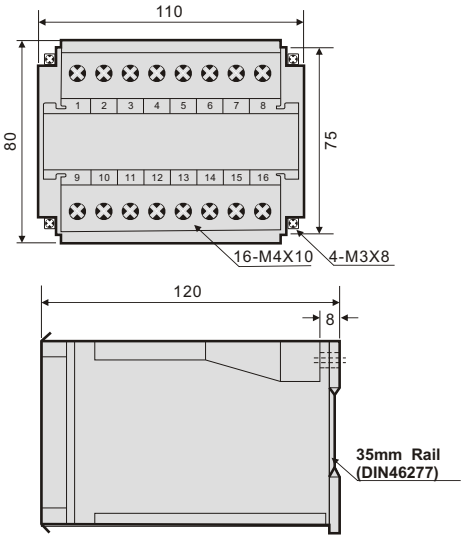
Input Voltage
1: 110V
2: 220V
0: Option

Output Range

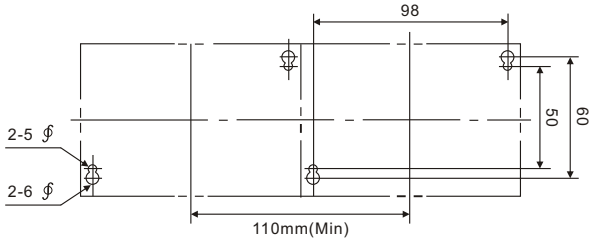
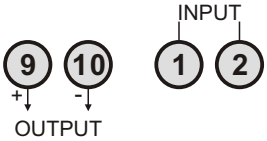
V1: 0 ~ 1V	A1: 0 ~ 1mA
V2: 0 ~ 5V	A2: 0 ~ 10mA
V3: 1 ~ 5V	A3: 0 ~ 20mA
V4: 0 ~ 10V	A4: 4 ~ 20mA

00: Option

THE OUTSIDE DIMENSION (UNIT:mm)



• PANEL MOUNTING HOLES (UNIT:mm)



CONNECTION DIAGRAM