



## FEATURES

- Accuracy :  $\pm 0.025\%$  RO.
- Self powered
- Excellent long term stability (4~20 mA, 500  $\Omega$ )
- 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 shaped to square wave by the wave shapers 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 $\pm 20\%$	$\leq 3.5\text{VA}$	1.2 x rated continuous
55~65Hz	or 220V $\pm 20\%$		2 x rated 10 secs.
45~65Hz			4 x rated 2 sec.

### ● Output

DC Output Range	Load Resistance	Output Resistance	Output Ripple	Response Time
0~1V	$\geq 1\text{K}\Omega$	$\leq 0.05\ \Omega$	$\leq 0.5\%\text{RO.}$ (peak)	$\leq 400\text{ms.}$ $0\sim 99\%$
0~5V				
1~5V				
0~10V				
0~1mA	$0\sim 10\text{K}\Omega$	$\geq 20\text{M}\ \Omega$	$\geq 5\text{M}\ \Omega$	$0\sim 99\%$
0~10mA	$0\sim 1\text{K}\Omega$			
0~20mA	$0\sim 500\ \Omega$			
4~20mA				

Accuracy	$\pm 0.025\%$ Rated to Output
Output load effect	$\leq 0.025\%$ RO.
Magnetic field strength	$\leq 0.025\%$ RO. 400A/M
Span adjustment range	$\geq 5\%\text{RO.}$
Zero adjustment range	$\geq 1\%\text{RO.}$
Operating temperature range	-0~60°C
Storage temperature range	-10~70°C
Temperature coefficient	$\leq 100\text{PPM}$ from 0 to 60°C $\leq 60\text{PPM}$ , 25°C $\pm 10\%$
Max. relative humidity	.95%
Isolation	.Input/output/case
Insulation resistance	$\geq 100\text{M}\ \Omega$ , DC 500V
Dielectric withstand voltage	.Between input/output/case (IEC 414,688,ANSI C37) AC 2.6KV,60HZ,1min
Impulse withstand test	.5KV,1.2 x 50 $\mu\text{s}$ (IEC 255-4,ANSI C37 90a) Common mode & differential mode
Performance	.Designed to comply with IEC688
Safety requirement	.IEC414, BS5458

## ORDERING INFORMATION

S3-FD —

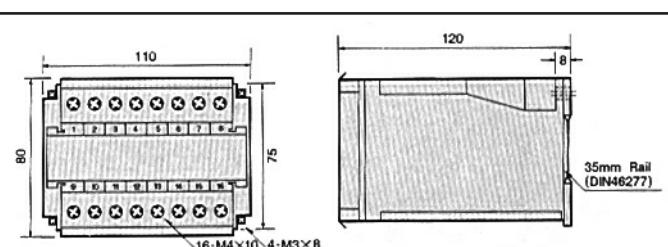
Model

**Input Frequency**   
 45 : 45~55Hz  
 56 : 55~65Hz  
 46 : 45~65Hz  
 00 : Option

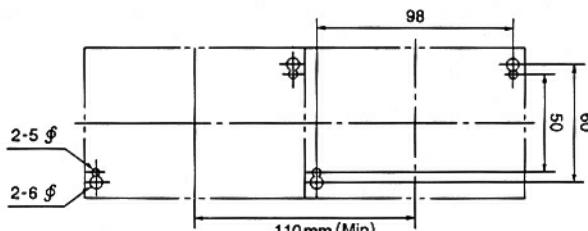
**Input Voltage**   
 1 : 110V  
 2 : 220V  
 0 : Option

**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 HOLE



## CONNECTION DIAGRAM

