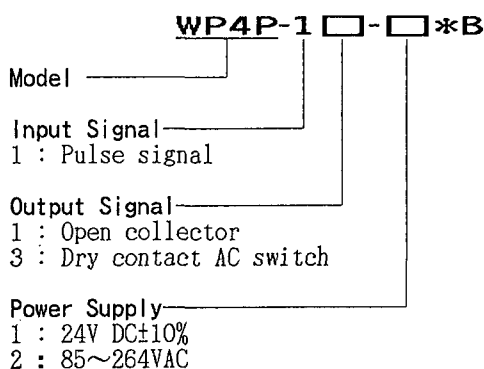


# General Specifications

WP4P  
Pulse Rate Scaler

JUXTA

This Pulse Rate Scaler receives contact pulse or voltage pulse from the field and after converting it into setup pulse rate, it outputs isolated transistor contacts.  
(2000V AC high voltage proof is also available upon request)



**ORDERING INFORMATION**

- Model Code : (Example) WP4P-11-2\*B
- Input Frequency : (Example) 0~5kHz
- Output Frequency : (Example) 0~10Hz

Input & Output
Input Frequency : 0~ $F_{i,100}$ [Hz] ( $F_{i,100} \leq 10\text{kHz}$ ) $F_{i,100}$ : 100% input frequency
Input Pulse Width : Pulse width of which duty would be within 50±30% when input of $F_{i,100}$
Voltage Pulse Input : Low level (VL) : -1~+8V High level (VH) : More than 2V VH-VL = 2~50V
Input Resistance : 10k $\Omega$
Output Frequency : 0~ $F_{o,100}$ [Hz] ( $F_{o,100} \leq 16.6\text{Hz}$ ) $F_{o,100}$ : 100% output frequency
Output Type : Open collector or dry contact AC switch
Maximum permissible Load : Open collector : 30V DC/200mA Dry contact AC switch : 100V AC/200mA
Note : This scaler can take out output 0~9999 optional pulses against input of 10000 pulses. However, pulses for input pulses multiplied by pulse rate are not always output equally. Be careful for this point when operating scaler.

Standard Performance																						
Contact Input Signal Source : 24V DC, 1mA																						
Pulse Rate Formular : Pulse rate = 100% output frequency/100% input frequency and rounds to 4 decimals. Setting resolution of pulse rate is 0.0001 (Refer Table 1)																						
Output ON Pulse Width : 30ms±3ms																						
Insulation Resistance : More than 100M $\Omega$ (500V DC) between input~output~power supply~ground																						
Withstand Voltage : (DC Drive) 1500V AC/minute between input~output~power supply 500V AC/minute between output~power supply (AC Drive) 1500V AC/minute between input~output~power supply~ground																						
Temperature Range : 0~50C																						
Humidity Range : 5~90% RH (no condensation)																						
Power Voltage : 85~264V AC, 47~63Hz or 24V DC±10%																						
Effect of Power Voltage Fluctuation : No erroneous movement for power voltage of 85~264V AC or 24V DC±10%																						
Effect of Ambient Temperature Change : No erroneous movement within using temperature range																						
Current Dissipation : 24V DC 60mA																						
Power Dissipation : 100V AC 6VA																						
Mounting, Shape & Accessories																						
Materials : Case ABS plastic																						
Mounting Method : Rack, Wall, DIN rail mountings																						
Connecting Method : M4 screw terminal connection																						
Outer Dimension : 72x48x127mm(HxWxD)																						
Weight : DC Drive Type : 150g AC Drive Type : 300g																						
Accessories : Tag Number Label.....1 Mounting Block ..... 2 M4 Screw .....4																						
<b>Table 1 Pulse Rate Setting Limit</b>																						
<table border="1"> <thead> <tr> <th>Max. Input Frequency</th> <th>Pulse Rate</th> </tr> </thead> <tbody> <tr> <td>0~16.6Hz</td> <td>No limit</td> </tr> <tr> <td>16.7~33.3Hz</td> <td>Below 0.4000</td> </tr> <tr> <td>33.4~83.3Hz</td> <td>" 0.2000</td> </tr> <tr> <td>83.4~166Hz</td> <td>" 0.1000</td> </tr> <tr> <td>167~333Hz</td> <td>" 0.0400</td> </tr> <tr> <td>334~833Hz</td> <td>" 0.0200</td> </tr> <tr> <td>0.834~1.66kHz</td> <td>" 0.0100</td> </tr> <tr> <td>1.67~3.33kHz</td> <td>" 0.0040</td> </tr> <tr> <td>3.34~8.33kHz</td> <td>" 0.0020</td> </tr> <tr> <td>8.34~10.0kHz</td> <td>" 0.0010</td> </tr> </tbody> </table>	Max. Input Frequency	Pulse Rate	0~16.6Hz	No limit	16.7~33.3Hz	Below 0.4000	33.4~83.3Hz	" 0.2000	83.4~166Hz	" 0.1000	167~333Hz	" 0.0400	334~833Hz	" 0.0200	0.834~1.66kHz	" 0.0100	1.67~3.33kHz	" 0.0040	3.34~8.33kHz	" 0.0020	8.34~10.0kHz	" 0.0010
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CUSTOM SPECS.

Table 2 Manufacturable Range

Output Frequency	Below 10kHz
Output ON Pulse Width	Over 40µs

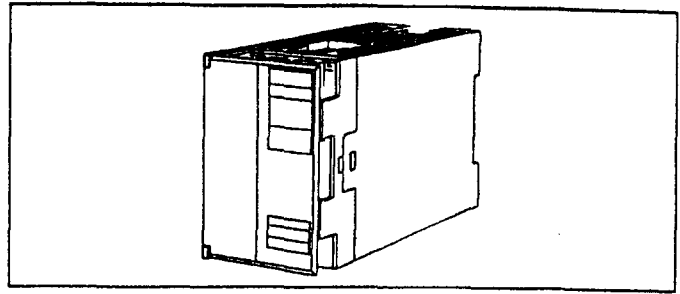
Whereas output pulse width should meet with the conditions below :

$$40\mu s \leq \text{Output ON pulse width} \leq \frac{1}{F_{1,00}} \times 0.5 \times n$$

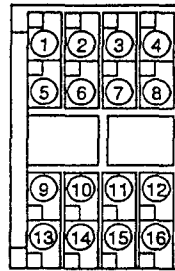
n varies according to pulse rate

Table 3

Pulse Rate	$\frac{F_{0,00}}{F_{1,00}}$	n
0.9999~0.4001		1
0.4000~0.2001		2
0.2000~0.1001		5
0.1000~0.0401		10
0.0400~0.0201		20
0.0200~0.0101		50
0.0100~0.0041		100
0.0040~0.0021		200
0.0020~0.0011		500
0.0010~0.0005		1000
0.0004~0.0003		2000
0.0002		5000
0.0001		10000

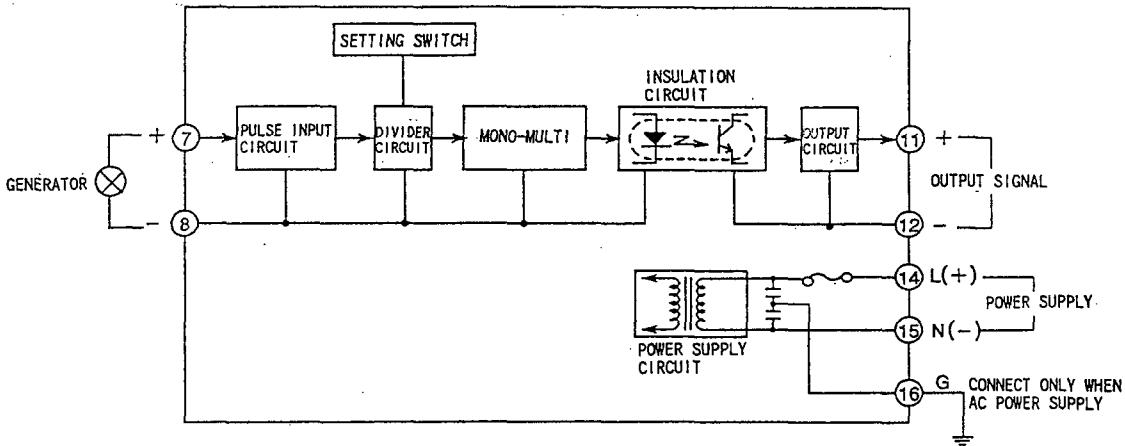


TERMINAL ARRANGEMENT

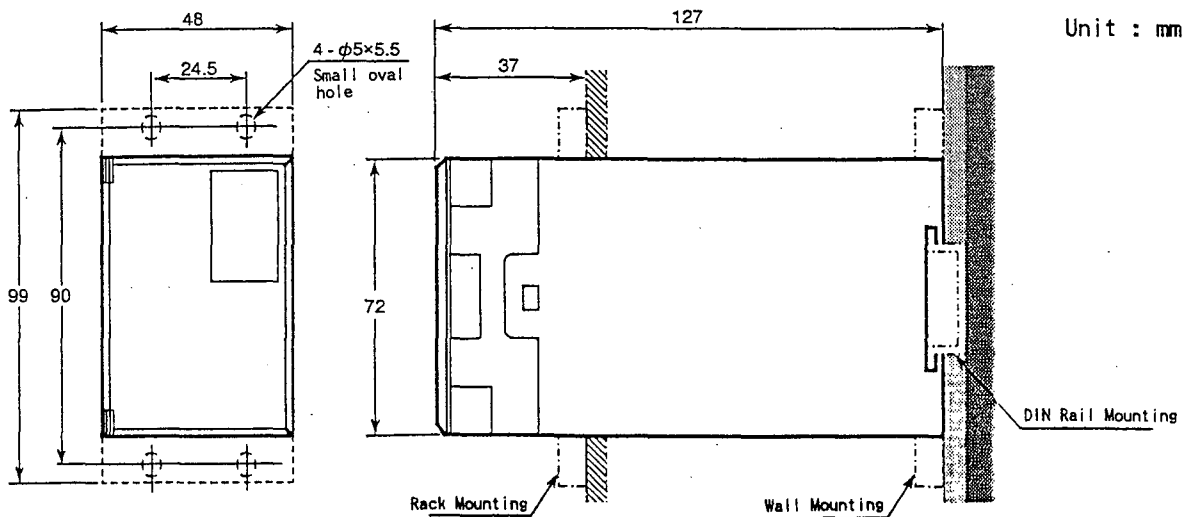


7	INPUT (+)
8	INPUT (-)
9	
10	
11	OUTPUT (+)
12	OUTPUT (-)
13	
14	SUPPLY (L+)
15	SUPPLY (N-)
16	GND (G)

BLOCK DIAGRAM



EXTERNAL DIMENSION



Subject to change without notice for grade up quality and performance