

ORDERING INFORMATION

Model : JPS3

PLEASE FILL IN THIS SECTION



Model _____

Company _____

Name _____

P/O No. _____

M-SYSTEM USE ONLY



Job No. _____ Inspected by: _____

Ser No. _____ - _____

Sales _____ Inspected by: _____

Fill in blank sections or mark with if necessary.

■ PULSE INPUT, SPECIFIC TO EACH INPUT TYPE

Choose among A, A2, B and H, and mark with .

A : Open Collector

A2 : Mechanical Contact

B : Voltage Pulse

PARAMETER	SET VALUE	STANDARD	COMMENTS
PULSE AMPLITUDE	V p-p	MUST BE SPECIFIED	These values are required to accurately understand the input waveform. DC offset value is usually set as the detecting level. Maximum voltage across the input terminals: 50V
DC OFFSET	V	MUST BE SPECIFIED	

H : Two-wire Current Pulse

PARAMETER	SET VALUE	STANDARD	COMMENTS
PULSE AMPLITUDE	mA p-p	MUST BE SPECIFIED	These values are required to accurately understand the input waveform. DC offset value is usually set as the detecting level.
DC OFFSET	mA	MUST BE SPECIFIED	

■ NOISE FILTER SETTING

PARAMETER	SET VALUE	STANDARD	COMMENTS
NOISE FILTER	<input type="checkbox"/> Provided <input type="checkbox"/> Not provided	Not provided (Provided for mechanical contact input)	
MAXIMUM INPUT FREQUENCY	Hz	100 kHz (10 Hz for mechanical contact input)	Specify the maximum frequency only when the noise filter is to be provided. Must meet the following conditions: High noise filter for the maximum input frequency ≤ 10 Hz; Low noise filter for ≤ 500 Hz

■ SOFTWARE SETTING

PARAMETER	SET VALUE	STANDARD	COMMENTS
SCALING FACTOR I/O pulse set count 1...1 000 000 pulses 1 pulse increments	/	1 / 1	Scaling factor = Output pulse set count / Input pulse set count Scaling factor must be an integer.
SAMPLING TIME	sec.	0.1 second	Specify only when necessary. Refer to Page 3.
MAXIMUM OUTPUT FREQUENCY 0.5 Hz ... 100 000.0 Hz 0.1 Hz increments	Hz	10 Hz	Limited to max. 20 Hz for the output suffix code R (noncontact AC/DC switch)

■ PULSE OUTPUT

PARAMETER	SET VALUE	STANDARD	COMMENTS
ONE-SHOT PULSE WIDTH 0.030 ... 300 msec.	msec.	50 milliseconds	Specify only when necessary. Maximum output frequency $\leq (\text{One-shot pulse width} \times 2)^{-1}$

■ I/O PULSE CHARACTERISTICS

Mark with ✓.

OUTPUT WAVEFORM		INPUT 1 & 2 WAVEFORM	Voltage Pulse 2-wire Current Pulse		Open Collector or Mechanical Contact	
			<input type="checkbox"/>		<input type="checkbox"/>	
Voltage Pulse or RS-422 Line Driver Pulse	Non ^{*1} Inverted	No conversion to one-shot	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse rise 	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse drop 	<input type="checkbox"/>		<input type="checkbox"/>	
	^{*1} Inverted	No conversion to one-shot	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse rise 	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse drop 	<input type="checkbox"/>		<input type="checkbox"/>	
Open collector or Noncontact AC/DC Switch	Non ^{*1} Inverted	No conversion to one-shot	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse rise 	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse drop 	<input type="checkbox"/>		<input type="checkbox"/>	
	^{*1} Inverted	No conversion to one-shot	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse rise 	<input type="checkbox"/>		<input type="checkbox"/>	
		One-shot, detecting input pulse drop 	<input type="checkbox"/>		<input type="checkbox"/>	

The pulse width in one-shot means the bold lined section of a pulse waveform.

*1. Specified by model number suffix code.

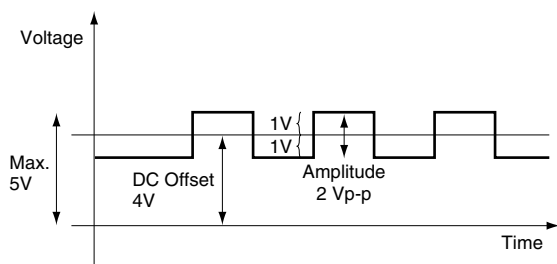
■ INPUT AMPLITUDE, DC OFFSET and MAX. VOLTAGE ACROSS THE INPUT TERMINALS FOR VOLTAGE PULSE INPUT

The JPS3 will not be able to detect input pulses if the input amplitude and the maximum voltage across the input terminals do not match the values in the following table:

PULSE AMPLITUDE	MAX. INPUT VOLTAGE
50 – 100V p-p	50V
25 – 50V p-p	50V
10 – 25V p-p	25V
5 – 10V p-p	10V
1 – 5V p-p	5V
0.5 – 1V p-p	1V
0.1 – 0.5V p-p	0.5V

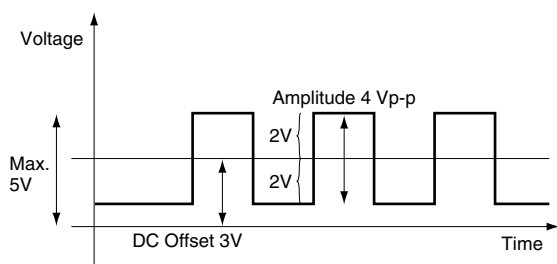
EXAMPLE 1.

With the input amplitude 2 Vp-p, the maximum voltage across the input terminals is of 5V according to the above table. Offset is allowed up to 4V.



EXAMPLE 2.

With the input amplitude 4 Vp-p, the maximum voltage across the input terminals is of 5V according to the above table. Offset is allowed up to 3V.



■ EXPLANATIONS OF TERMS AND FUNCTIONS

• SCALING FACTOR, INPUT PULSE SET COUNT & OUTPUT PULSE SET COUNT

The scaling factor, rate of number of output pulses divided by number of input pulses, is determined by two parameters: input pulse set count and output pulse set count.

The JPS3 output is designed to be proportional in number of pulses relative to the input. For example, when the pulse rate is set to 0.0583, the JPS3, provided with 10000 input pulses (input 1 and 2 added), outputs 583 pulses. However, the output is not supplied in a constant frequency. The JPS3 counts the number of input pulses during the sampling time (period) and stores it in the internal buffer counter, and provides the number of output pulses multiplied by the scaling factor for the number of input pulses, by the end of next sampling cycle. With the maximum output frequency limit, those pulses exceeding the limit are still in the buffer and output only in the following cycle.

• SAMPLING TIME

The sampling time is defined as a time period required by the JPS3 to count the input signals for one cycle. With its factory default setting (0.1 sec.), the output is refreshed every 100 milliseconds.

This setting is not usually be changed unless for a specific purpose.

• MAXIMUM OUTPUT FREQUENCY LIMIT

You can limit the maximum output frequency from the JPS3.

The JPS3 multiplies the number of input pulses by the scaling factor. However when the output pulses are supplied to a low-speed response counter, the number of output pulses (output frequency of the JPS3) may have to be limited within a certain level.

Those surplus pulses remains in the buffer and are output in the following sampling cycles within the limit.