ORDERING INFORMATION MODEL : JPA2

PLEASE FILL IN THIS SECTION	FACTORY USE ONLY	
Model	Job No.	Inspected by:
Company	Ser No. —	
Name	Sales	Inspected by:
P/O No.		

SOFTWARE SETTING Fill in blank sections or mark ❑ with ✔. Standard settings will be used if not otherwise specified.

ITEM	SET VALUE	STANDARD	COMMENTS
INPUT TYPE	❑ Open collector ❑ Mechanical contact ❑ Voltage pulse ❑ Two-wire current pulse	Open collector	Choose from the list to the left.
PULSE SENSING (voltage/two-wire current pulse input only)	❑ Capacitor coupled ❑ DC coupled	DC coupled	Choose from the list to the left. Choose 'capacitor coupled' when an appropriate detecting level cannot be selected because the offset level of the input waveform is too great.
PULSE AMPLITUDE (voltage/two-wire current pulse input only)	V p-p (mA p-p)	***Must be specified***	These values are required to accurately understand the input waveform. The detecting level is usually set to the DC offset value for the voltage or the two-wire current pulse.
DC OFFSET (voltage/two-wire current pulse input only)	V (mA)	***Must be specified***	For open collector or mechanical contact input, the detecting level is fixed at 2V. The maximum voltage applicable across the input terminals is 50V.
NOISE FILTER	❑ High ❑ Low ❑ No filter	Low	High noise filter must be specified for 0 – 1 Hz or lower ranges. Low noise filter must be specified for 0 – 10 Hz thr. 1 kHz ranges. No filter is selectable for 0 – 10 kHz or higher ranges.
INPUT ZERO FREQUENCY fz	Hz	0 Hz	Specify the frequency for 0% input. 0 Hz ≤ fz < fs
INPUT SPAN FREQUENCY fs	Hz	1000 Hz	Specify the frequency for 100% input. Min. 10% of the selected frequency range value required. fz < fs ≤ Max. value of the selected frequency range
LOW-END CUTOUT	%	-15.00%	Choose within -15 to +115% as percent of the input range (fs – fz). The transmitter forcibly provides an output equivalent to 0 Hz input. If the 'fs' value is set to 0 Hz, any setting lower than 0 Hz is invalid.
LOW-END CUTOUT DEADBAND	%	1.00%	Choose within 0 to 5% as percent of the input range (fs – fz). If the low-end cutout is set to 0%, the deadband is invalid.
ALARM MODE	❑ High alarm ❑ Low alarm ❑ No alarm	High alarm	Choose from the list to the left.
ALARM SETPOINT	%	100.00%	Specify within -15.00 to +115.00% if High/Low alarm is selected.
ALARM DEADBAND	%	1.00%	Specify within 0.00 to 20.00% if High/Low alarm is selected.
ALARM ON DELAY TIME AT START UP	sec.	3 sec.	Specifiy the delay time for the alarm trip after the power is turned on, within 2.0 to 1000.0 sec. if High/Low alarm is selected.

ITEM	SET VALUE	STANDARD	COMMENTS
NON-UNIFORM PULSE COMPENSATION		1	Non-uniform pulse waveform is compensated to uniform one by multiplying and dividing the number of pulses (in order to suppress the output pulsation). Input Zero/Span Freq. Range — Selectable Factor ≤ 0 – 100 Hz — 1 to 255 ≤ 0 – 1 kHz — 1 to 25 ≤ 0 – 10 kHz — 1 to 2 ≤ 0 – 100 kHz — Not selectable (Fixed)

LINEARIZATION Fill in the table only when the linearization is required. Refer to the example below.

INPUT (unit :)		OUTPUT (unit :)		INPUT (unit :)		OUTPUT (unit :)	
X (01)		Y (01)		X (09)		Y (09)	
X (02)		Y (02)		X (10)		Y (10)	
X (03)		Y (03)		X (11)		Y (11)	
X (04)		Y (04)		X (12)		Y (12)	
X (05)		Y (05)		X (13)		Y (13)	
X (06)		Y (06)		X (14)		Y (14)	
X (07)		Y (07)		X (15)		Y (15)	
X (08)		Y (08)		X (16)		Y (16)	

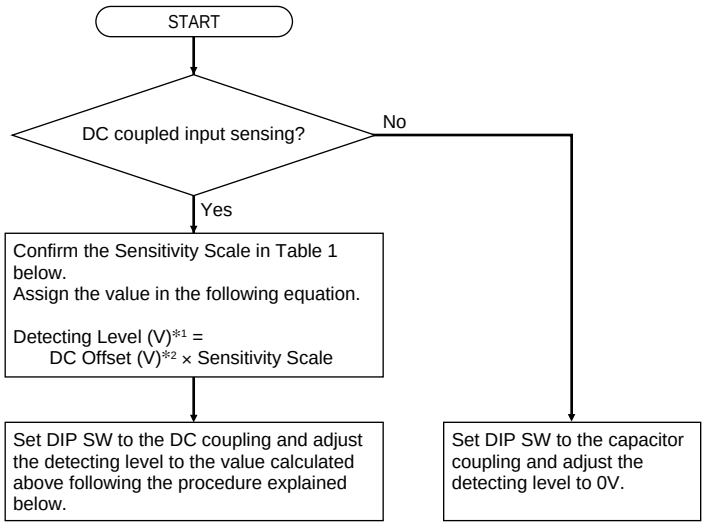
I/O data in % is acceptable.

EXAMPLE

X (01)	0.00 (Hz)	Y (01)	4.00 (mA)	X (09)	80.00 (Hz)	Y (09)	17.58 (mA)
X (02)	10.00	Y (02)	6.37	X (10)	90.00	Y (10)	18.81
X (03)	20.00	Y (03)	8.42	X (11)	100.00	Y (11)	20.00
X (04)	30.00	Y (04)	10.25	X (12)		Y (12)	
X (05)	40.00	Y (05)	11.92	X (13)		Y (13)	
X (06)	50.00	Y (06)	13.47	X (14)		Y (14)	
X (07)	60.00	Y (07)	14.92	X (15)		Y (15)	
X (08)	70.00	Y (08)	16.28	X (16)		Y (16)	

■ DETECTING LEVEL (voltage pulse and two-wire current pulse)

Determine the appropriate detecting level referring to the flow chart below.



*1. Divide a current input (mA) by 10 and convert it into voltage (V).
*2. Rounded off to one decimal place.

Table 1

SW	PULSE AMPLITUDE	SENSITIVITY SCALE
0	50 – 100V p-p	1/20
1	25 – 50V p-p	1/10
2	10 – 25V p-p	1/5
3	5 – 10V p-p	1/2
4	1 – 5V p-p	1
5	0.5 – 1V p-p	5
6	0.1 – 0.5V p-p	10
7	Open collector Mechanical contact Two-wire current pulse	1

A specific sensitivity scale is applied according to the pulse amplitude setting. The scaled input voltage is then compared to the preset detecting level.
With DC coupling, the scaled H level voltage must be higher than the detecting level so that the pulse state is accurately detected.

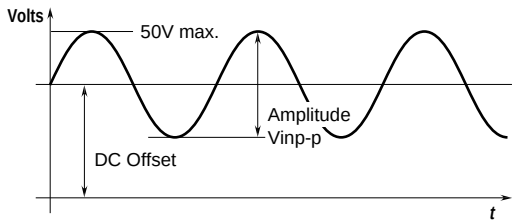
• Setting Examples

Voltage Input (DC Offset = Pulse Amplitude / 2)

PULSE AMPLITUDE (Vp-p)	AMPLITUDE RANGE (Vp-p)	DETECTING LEVEL (V)
50	50 – 100	1.3
50	25 – 50	2.5
30	25 – 50	1.5
25	10 – 25	2.5
15	10 – 25	1.5
10	5 – 10	2.5
7.5	5 – 10	1.9
5	1 – 5	2.5
3.5	1 – 5	1.8
2	1 – 5	1
1	0.5 – 1	2.5
0.5	0.1 – 0.5	2.5

Current Input (DC Offset = Pulse Amplitude / 2)

PULSE AMPLITUDE (mAp-p)	AMPLITUDE RANGE	DETECTING LEVEL (V)
15 (1.5Vp-p)	Set to open collector, mechanical contact or two-wire current pulse	0.8
25 (2.5Vp-p)		1.3

Set DC offset to 0V for 100Vp-p pulse input.

■ INPUT AMPLITUDE & DC OFFSET (voltage pulse example)