

# JUXTA F Series General Specification

Model FX3□-AS (Variable software type)  
Adder/Subtractor

JUXTA

## 1. GENERAL

This is a variable software type computing unit which accepts two mV signal inputs from various converters and outputs an isolated DC voltage or current signal after 2-input addition and subtraction are performed.

## 2. SPECIFICATIONS

Model No.	FX3A-AS, FX3V-AS
Input signal	mV signal: 2 points
Measuring range	-2 to 10 mV (There is accuracy limitation for spans of more than 3 mV and less than 10 mV.) -10 to 50 mV (For span of more than 10 mV) -50 to 250 mV (For span of more than 50 mV) -100 to 1250 mV (For span of more than 250 mV) (*1)
Input resistance	1 MΩ (At power failure: More than 3 KΩ)
Output signal	4 to 20mA, 2 to 10mA, 1 to 5mA, 0 to 20mA, 0 to 16mA, 0 to 10mA or 0 to 1mA DC 0 to 10mV, 0 to 100mV, 0 to 1V, 0 to 10V, 0 to 5V, 1 to 5V or -10 to +10V DC
Computing equation	$Y = K3 \{K1 (X1 + A1) + K2 (X2 + A2)\} + A3$ Where, Y: Output signal (%) X1 and X2: Input signal (%) K1 to K3: Gain (No unit) (*2) A1 to A3: Bias (%) (*3)
Gain/bias setting range	Gain: $\pm 7.990$ and bias: $\pm 799.0\%$ Both correspond to $\pm 799.0\%$ . Determine the ranges so that the computing and the computed values do not exceed $\pm 800.0\%$ .
Basic accuracy	$\pm 0.3\%$ of measuring span
Signal insulation	Between input signal and output signal/power supply circuits, and between output signal and power supply circuits
Insulation resistance	Between input signal and output signal/power supply circuits Between output signal and power supply circuits: 100 MΩ/500 V DC
Dielectric strength	Between input signal and output signal/power supply circuits: 1500 V AC/min Between output signal and power supply circuits: 500 V AC/min
Power supply voltage	24 V DC $\pm 10\%$
Ambient temperature/humidity	0 to 50°C (32 to 122°F) and 5 to 93% relative humidity (No condensation)
Effect of ambient temperature	$\pm 0.2\%$ of span for 10°C (50°F) change
Effect of power supply voltage	$\pm 0.2\%$ of span for 24 V DC $\pm 10\%$ variation
Power consumption	24 V DC, 56 mA (Voltage output) and 24 V DC, 78 mA (Current output)
Dimensions	72 (2.83") H × 24 (0.94") W × 127 (5.00") D mm (inch)
Weight	Approx. 130 g
Accessories	Tag number label : 1 sheet Mounting blocks: 2 pcs.

Specify the following:

(\*1) Measuring range from □ to □ mV

Range accuracy for span of less than 10 mV:  $0.2 \times 10 / (\text{mV input span}) \%$

(\*2) Gain K1, K2 and K3 within the range between -7.990 and 7.990

(\*3) Biases A1, A2 and A3 within the range between -799.0 and 799.0%

FX3□ - □□ - 1□ \* B

MODEL

SOFTWARE TYPE

3: Variable Type

OUTPUT

A: Current

V: Voltage

INPUT SIGNAL

1: Voltage signal

OUTPUT SIGNAL

- |                                    |                                    |
|------------------------------------|------------------------------------|
| A: 4~20mA DC                       | 1: 0~10mV DC                       |
| B: 2~10mA DC                       | 2: 0~100mV DC                      |
| C: 1~5mA DC                        | 3: 0~1V DC                         |
| D: 0~20mA DC                       | 4: 0~10V DC                        |
| E: 0~16mA DC                       | 5: 0~5V DC                         |
| F: 0~10mA DC                       | 6: 1~5V DC                         |
| G: 0~1mA DC DC                     | 7: -10~+10 DC                      |
| Z: Specify current.<br>(30mA max.) | 0: Specify voltage.<br>(-10V~+10V) |

Ordering Information

Input Measuring Range		
Range name	Allowable min. span	Allowable Measuring Range
HH	250 mV	-100 ~ 1250 mV
H	50 mV	-50 ~ 250 mV
L	10 mV	-10 ~ 50 mV
LL	3 mV	-2 ~ 10 mV
However, accuracy of less than 10 mV span is $0.2\% \times \frac{10 \text{ mV}}{\text{Input span (mV)}} (\%)$		
Recommended Input Range		
Voltage signal	0 ~ 10 mV DC	
	0 ~ 100 mV DC	
	0 ~ 1V DC	

OUTPUT RESISTANCE AND LOAD RESISTANCE

Output Signal	Load Resistance	Output Impedance
4 to 20mA DC	0 to 750Ω	5MΩ or more
2 to 10mA DC	0 to 1500Ω	
1 to 5mA DC	0 to 3000Ω	
0 to 20mA DC	0 to 750Ω	
0 to 16mA DC	0 to 900Ω	
0 to 10mA DC	0 to 1500Ω	
0 to 1mA DC	0 to 15kΩ	

Output Signal	Load Resistance	Output Impedance
0 to 10mV DC	100kΩ or more	100Ω or less
0 to 100mV DC		
0 to 1V DC	2kΩ or more	1Ω or less
0 to 5V DC		
1 to 5V DC		
0 to 10V DC	10kΩ or more	
-10 to +10V DC		

Subject to change without notice for grade up quality and performance