

General Specifications

Models FA5A, FA5V
Distributor
(with Square Root Extractor)

JUXTA

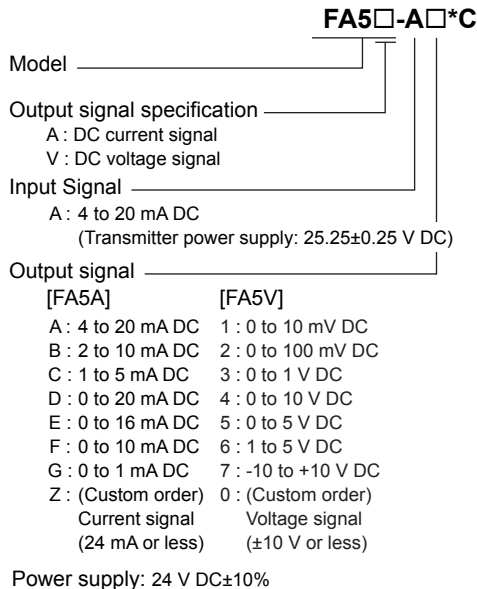
GS 77J08A05-01E

General

The FA5A/FA5V is a compact, front terminal connection type distributor that is used in combination with a two-wire transmitter, and extracts the square root of 4 to 20 mA DC input signals from the transmitter and converts them into isolated DC current or DC voltage signals.

- Zero/span adjustment, I/O monitoring can be made using the optional Parameter Setting Tool (VJ77) or Handy Terminal (JHT200).

Model and Suffix Codes



Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. FA5V-A6*C

Input/Output Specifications

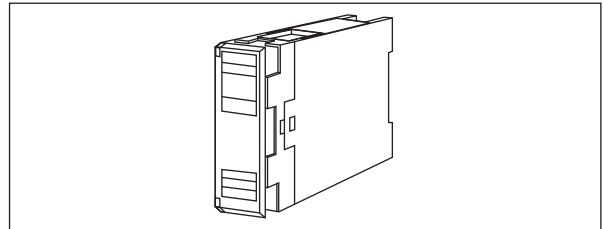
Input signal: 4 to 20 mA DC signal from two-wire transmitter

Input resistance: 250 Ω

Maximum allowable input: 40 mA DC

Transmitter power supply: 25.25±0.25 V DC
(provided with a current limiter to keep the current between 25 and 35 mA)

Allowable conductor resistance (RL):
Up to [(20 –transmitter’s minimum operating voltage) V/0.02 A] Ω



Input-output characteristics:

$$Y = \left(\sqrt{\frac{X - (\text{input } 0\% \text{ value})}{\text{input span}}} \right) \times (\text{output span}) + (\text{output } 0\% \text{ value})$$

X: Input value, Y: Output value

Output signal: DC current or DC voltage signal
Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

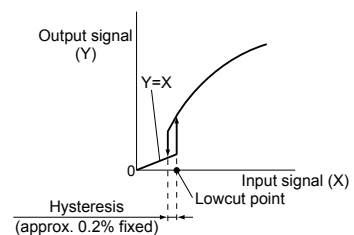
Input adjustment: ±1% of span (Zero/Span)

Output adjustment: ±10% of span (Zero/Span)

In the case of output specification code 7, it is ±5% of span.

Lowcut point setting range: 0.3 to 100% (0.6% for factory default)

Output characteristic: Output for lowcut point or less is cramped with straight line proportional to input.



Standard Performance

Accuracy rating: ±0.1% of span

Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.

Accuracy is ±1% of span for output level 2% or less.

Response speed: 200 ms, 63% response (10 to 90%)

Insulation resistance: 100 MΩ or more at 500 V DC

between input and output, output and power supply, and input and power supply.

Withstand voltage: 1500 V AC/min. between input and (output and power supply). 500 V AC/min. between output and power supply.

■ Environmental Conditions

Operating temperature range: 0 to 50°C
 Operating humidity range: 5 to 90% RH (no condensation)
 Power supply voltage: 24 V DC±10%
 Effect of power supply voltage fluctuations: ±0.1% of span or less for fluctuation within the operating range of power supply voltage specification.
 Effect of ambient temperature change: ±0.2% of span or less for a temperature change of 10°C.
 Current consumption:
 100 mA (FA5A), 90 mA (FA5V)

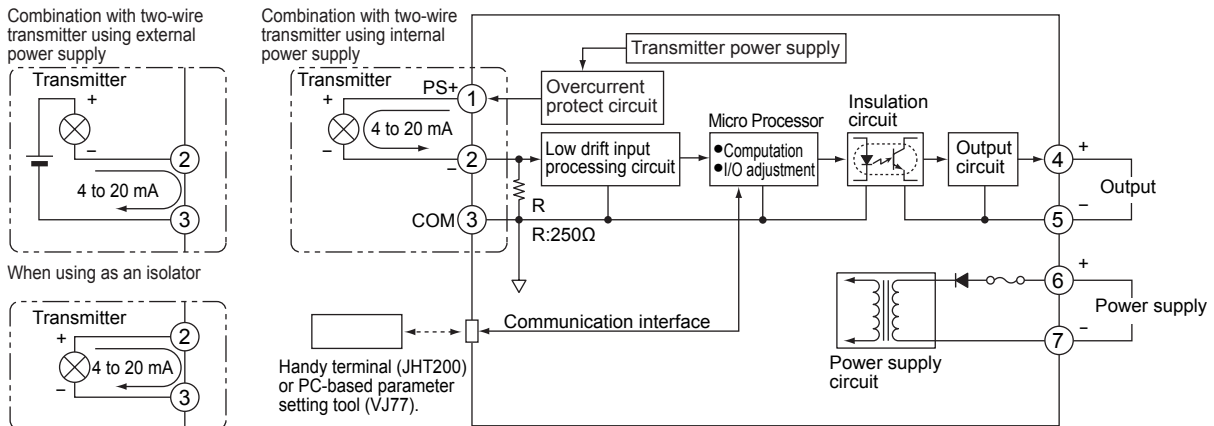
■ Mounting and Dimensions

Material: ABS resin (Case body)
 Mounting method: Rack, Wall or DIN rail mounting
 Connection method: M4 screw terminals
 External dimensions: 72 × 24 × 127 mm (H x W x D)
 Weight: Approx.130 g

■ Standard Accessories

Tag number label: 1
 Mounting block: 2
 Mounting screw: M4 screw x 2

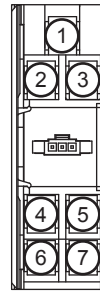
■ Block Diagram



■ Custom Order Specifications

	Current signal	Voltage signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



1	Input	(PS+)
2	Input	(-)
3	Input	(COM)
4	Output	(+)
5	Output	(-)
6	Supply	(+)
7	Supply	(-)

■ External Dimensions

