## GS 77J08A01-01E

## General

The FA1A / FA1V is a compact, front terminal connection type distributor that is used in combination with a two-wire transmitter to convert the transmitter's 4 to 20 $m A D C$ signals into isolated DC current or DC voltage signals.

## Model and Suffix Codes

| FA1 $\square$-A $\square$ * |  |
| :---: | :---: |
| Model |  |
| Output signal specific <br> A : DC current signa <br> V : DC voltage sign | ation |
| Input Signal $\qquad$ A: 4 to 20 mADC (Transmitter power | supply: $26.5 \pm 1.5 \mathrm{~V}$ DC) |
| Output signal $\qquad$ <br> [FA1A] | [FA1V] |
| A : 4 to 20 mADC <br> B : 2 to 10 mADC | 1 : 0 to 10 mV DC <br> 2 : 0 to 100 mV DC |
| C : 1 to 5 mADC | $3: 0$ to 1 V DC |
| D : 0 to 20 mADC | 4:0 to 10 V DC |
| E : 0 to 16 mADC | 5:0 to 5V DC |
| F : 0 to 10 mADC | 6:1 to 5 V DC |
| $\mathrm{G}: 0$ to 1 mADC | 7: -10 to +10 V DC |
| Z : (Custom order) | 0 : (Custom order) |
| Current signal (See "Custom | Voltage signal Order Specifications") |
| Power supply |  |
| 24 V DC $\pm 10 \%$ |  |

## Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. FA1A-AA*C


## Input/Output Specifications

Input signal: 4 to 20 mA DC signal from two-wire transmitter
Input resistance: $250 \Omega$
Maximum allowable input: 40 mADC or less
Transmitter power supply: $26.5 \pm 1.5 \mathrm{~V}$ 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) $\mathrm{V} / 0.02 \mathrm{~A}] \Omega$
Output signal: DC current or DC voltage signal
Zero adjustment: -1 to $+1 \%$
Span adjustment: 95 to 105\%


Allowable load resistance:

| DC current <br> output | Allowable load <br> resistance | DC voltage <br> output | Allowable load <br> resistance |
| :--- | :--- | :--- | :--- |
| 4 to 20 mA | $750 \Omega$ or less | 0 to 10 mV | $250 \mathrm{k} \Omega$ or more |
| 2 to 10 mA | $1500 \Omega$ or less | 0 to 100 mV | $250 \mathrm{k} \Omega$ or more |
| 1 to 5 mA | $3000 \Omega$ or less | 0 to 1 V | $2 \mathrm{k} \Omega$ or more |
| 0 to 20 mA | $750 \Omega$ or less | 0 to 10 V | $10 \mathrm{k} \Omega$ or more |
| 0 to 16 mA | $900 \Omega$ or less | 0 to 5 V | $2 \mathrm{k} \Omega$ or more |
| 0 to 10 mA | $1500 \Omega$ or less | 1 to 5 V | $2 \mathrm{k} \Omega$ or more |
| 0 to 1 mA | $15 \mathrm{k} \Omega$ or less | -10 to +10 V | $10 \mathrm{k} \Omega$ or more |

## Standard Performance

Accuracy rating: $\pm 0.1 \%$ 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.
Response speed: $150 \mathrm{~ms}, 63 \%$ response (10 to 90\%)
Insulation resistance: $100 \mathrm{M} \Omega$ or more at 500 V DC between input and output, output and power supply, and input and power supply.
Withstand voltage: $1500 \mathrm{~V} \mathrm{AC} / \mathrm{min}$. between input and (output and power supply). $500 \mathrm{~V} \mathrm{AC} / \mathrm{min}$. between output and power supply.

## Environmental Conditions

Operating temperature range: 0 to $50^{\circ} \mathrm{C}$
Operating humidity range: 5 to $90 \% \mathrm{RH}$ (no condensation)
Power supply voltage: 24 V DC $\pm 10 \%$ (percentage ripple is $5 \%$ p-p or less)
Effect of power supply voltage fluctuations: $\pm 0.1 \%$ of span or less for the fluctuation within the operating range of power supply voltage specification.
Effect of ambient temperature change: $\pm 0.2 \%$ of span or less for a temperature change of $10^{\circ} \mathrm{C}$.
Current consumption:
24 V DC 110 mA (FA1A), 75 mA (FA1V)

- Mounting and Dimensions

Material: ABS resin (Case body)
Mounting method: Rack, Wall or DIN rail mounting
Connection method: M4 screw terminals
External dimensions: $72 \times 24 \times 127 \mathrm{~mm}(\mathrm{H} \times \mathrm{W} \times \mathrm{D})$
Weight: Approx. 130 g

## Standard Accessories

Tag number label: 1
Mounting block: 2
Mounting screw: M4 screw $\times 2$
■ 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

Z: Zero-adjustment volume
S: Span-adjustment volume

## ■ Block Diagram


$■$ External Dimensions


