

General Specifications

F3XS04 Pulse Input Module

FA-M3

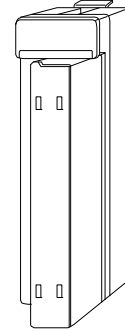


GS 34M06H54-01E

General

The F3XS04 Pulse Input Module receives and counts pulse signals from the field. A single module can receive up to 4 channels of pulse signals.

- It incorporates a 16-bit ring up-counter. The maximum ring value can be changed.
- It can have two preset values for each channel.
- It generates various types of outputs for different combinations of counter values and preset values.
- It can have a maximum of four external programmable outputs in a single channel.
- It generates an interrupt signal when the counter value coincides with a preset value or when it exceeds its maximum value and resets to 0.



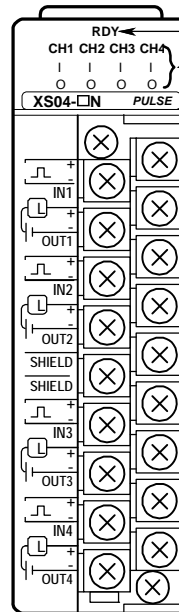
Specifications

Item		Specification	
		F3XS04-3N	F3XS04-4N
Counter	Number of channels	4	
	Count range	\$0000 to \$FFFF (16 bits)	
	Operating mode	Ring up-counter	
Input signal	Type	DC voltage	
	Rated input voltage	24 V DC	12 V DC
	Frequency	0 to 20 kHz	
	Minimum pulse width	10 μs	
	Filter	4 μs to 132 ms (for elimination of chattering)	
Output signal	Number of points	4	
	Type	Transistor contact	
	Rated load voltage	12 to 24 V DC	
Internal comparison		Counter value ≥ Preset values 1, 2 Counter value = Preset values 1, 2 Counter value = 0 reset ^{*1}	
Product Data	Insulation method	Photocoupler insulation (all input/output points are independent.)	
	External connection	18-point terminal block, M3.5 screws	
	External dimensions	28.9 (W) x 100 (H) x 83.2 (D) mm ^{*2}	
	Current consumption	230 mA	
	Weight	170 g	

*1: The counter value exceeds the maximum and resets to zero.

*2: Excluding protrusions (see external dimensions for details).

Components and Functions



RDY indicator
Lit when the internal circuit is functioning normally.

CH1 to CH4 indicators
The following indicators light up for each channel when the corresponding condition occurs.
I : The input signal goes on.
O : The output signal goes on.

■ Input/output Signal Specifications

● Electrical specifications

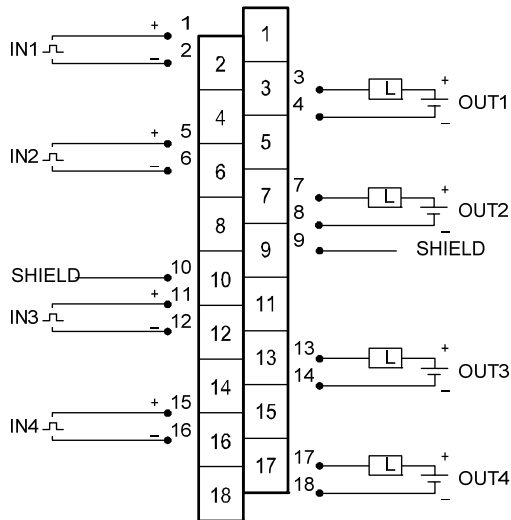
1. Input signals

Signal	Input	Rated Input Voltage (Operating Voltage Range)	Rated Input Current	Operating Voltage/Current	
				ON	OFF
F3XS04-3N	DC voltage	24 V DC (20.4 to 26.4 V DC)	11.2 mA	16 V min. 7.2 mA min.	6 V max. 2.5 mA max.
F3XS04-4N	DC voltage	12 V DC (10.2 to 13.2 V DC)	10.3 mA	8 V min. 6.3 mA min.	3.5 V max. 2.4 mA max.

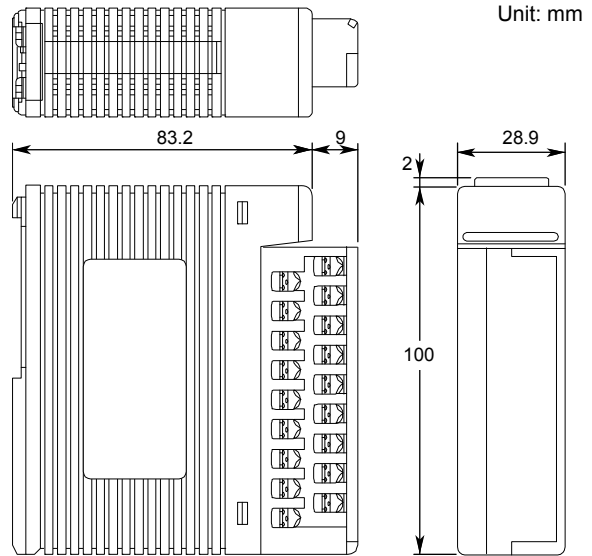
2. Output signals

Output	Rated Load Voltage (Maximum Load Voltage)	Maximum Load Current	Residual Voltage at ON	Leakage Current at OFF	Surge Protector
Transistor contact	12 to 24 V DC (26.4 V DC)	0.1 A/point	1.5 V DC max.	0.1 mA max.	None

External Connection Diagram



External Dimensions



■ External Connection Methods

		Terminal Block
Applicable wire size		0.30 to 0.75 mm ² (AWG 22 to 18)
Wire connection method		Solderless
Rated wire temperature		75°C min.
Wire material		Copper
Solderless terminal	Solderless terminal	For 3.5 mm screws
	Crimping torque	0.8 N·m (8 kgf·cm, 6.9 lbf·in)
	Applicable solderless terminal	Example: Japan Solderless Terminal Mfg. Co., Ltd.: V1.25-M3 Nippon Tanshi Co., Ltd.: RAV1.25-3.5

Operating Environment

There is no restriction on the type of CPU modules that can be used with this module.

Model and Suffix Codes

Model	Suffix Code	Style Code	Option Code	Description
F3XS04	-3N	24 V DC, 0-20 kHz, 4 points
	-4N	12 V DC, 0-20 kHz, 4 points

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Items to Specify When Ordering

1. Model and suffix codes