MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

YOKOGAWA

NFAI135-S51 S2

ISOLATED ANALOG INPUT MODULE

Used with the applicable STARDOM configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Yokogawa GS 34P02Q31-01E

● **Current Input Module and Current I/O Module (Isolated Channels)**

The Current Input Module receives signals of 4 to 20 mA. The Current I/O Module receives and outputs signals of 4 to 20 mA. These two modules are isolated between the input/output signals and the system as well as between channels.

Items		Specifications		
Model		**NFAI135 (*5) (*8)**	**NFAI835 (*5) (*8)**	
Number of I/O channels		8-channel input, isolated channels	4-channel input/4-channel output, isolated channels	
I/O signal		4 to 20 mA	Input: 4 to 20 mA	Output: 4 to 20 mA
Allowable input current		25 mA	25 mA	—
Overcurrent protection		Provided	Provided	—
Withstanding voltage (*7)		Between input/output and system: 500 V AC for 1 minute, between channel: 500 V AC for 1 minute		
Input resistance	Power ON	250 Ω (*1)		
	Power OFF	500 kΩ or more		
Allowable load resistance		—	—	0 to 750 Ω
Circuit-open detection		—	—	0.65 mA or less
Accuracy		±0.1% of full scale	Inputs: ±0.1% of full scale	Outputs: ±0.3% of full scale
Data refresh cycle		10 ms		
Input step response time		100 ms	100 ms	—
Output step response time		—	—	100 ms
Output fallback (*4)		—	—	Set for each channel(*3)
Transmitter power supply		20.2 to 29.3 V (*2)	20.2 to 29.3 V(*2)	—
Temperature drift		Max. ±0.01%/°C		
Maximum current consumption		360 mA(5 V DC)	360 mA(5 V DC)	
		450 mA (24 V DC)	450 mA (24 V DC)	
Weight		0.3 kg		
External connection		Pressure clamp terminal, MIL connector cable (*7)		
HART Communication(*6)		Available	Available	

*1: A voltage drop by up to 0.8 V may occur due to the internal protection circuit.
*2: Depends on the actual voltage applied by analog field power supply (24 V DC) via base module.
*3: HOLD: To hold output in which fallback is detected.
SETV: To output a specified value when fallback is detected.
*4: Select fallback [Yes/No] for each module.
If [Yes] is selected for fallback, set [HOLD/SETV] for each channel.
Fallback detection time: 4 seconds
*5: When this I/O module is used, 24 V DC needs to be supplied to an analog field power supply terminal of the power supply module.
*6: For HART function specifications, refer to GS 34P02Q53-01E HART Communication Functions.
*7: The withstanding voltage for using MIL connector cable depends on the electrical specifications of its cable. If you are using KMS40 cable, withstanding voltage of between input and system is 500 V AC for 1 minute.
*8: A Zener barrier is not allowed to be connected with this module. Use an isolation barrier when the module is used in intrinsically safe application.

All Rights Reserved. Copyright © 2001, Yokogawa Electric Corporation

■ MODELS AND SUFFIX CODES

		Description
Model	NFAI135	Analog Input Module (4 to 20mA, 8-channel, Isolated channels)
Suffix Codes	-S	Standard type
	-H	With HART Communication
	5	With no explosion protection
	E	With explosion protection
	0	Basic type
	1	With ISA Standard G3 option
OptionCodes	/13S00	With Pressure Clamp Terminal Block for Isolated Analog [Model: NFTI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Isolated Analog (surge absorber) [Model: NFTI3S-10]
	/CCC01	With Connector Cover for MIL Cable [Model: NFCCC01]

		Description
Model	NFAI835	Analog I/O Module (4 to 20mA, 4-channel input/4-channel output, Isolated channels)
Suffix Codes	-S	Standard type
	-H	With HART Communication
	5	With no explosion protection
	E	With explosion protection
	0	Basic type
	1	With ISA Standard G3 option
OptionCodes	/13S00	With Pressure Clamp Terminal Block for Analog [Model: NFTI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Analog (surge absorber) [Model: NFTI3S-10]
	/CCC01	With Connector Cover for MIL Cable [Model: NFCCC01]

		Description
Model	NFAP135	Pulse Input Module (8-channel, Pulse count, 0 to 10kHz, Isolated channels)
Suffix Codes	-S	Standard type
	5	with no explosion protection
	E	with explosion protection
	0	Basic type
	1	With ISA Standard G3 option
	4	With Extended Temperature range (-40 to +70 ˚C) option
	5	With Extended Temperature range (-40 to +70 ˚C) and ISA Standard G3 option
OptionCodes	/13S00	With Pressure Clamp Terminal Block for Pulse [Model: NFTI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Pulse (surge absorber) [Model: NFTI3S-10]
	/CCC01	With Connector Cover for MIL Cable [Model: NFCCC01]

		Description
Model	NFAF135	Frequency Input Module (8-channel, Contact ON/OFF, Voltage Pulse, 0.1 Hz to 10kHz, Isolated channels)
Suffix Codes	-S	Standard type
	5	With no explosion protection
	E	With explosion protection
	0	Basic type
	1	With ISA Standard G3 option
OptionCodes	/13S00	With Pressure Clamp Terminal Block for Frequency [Model: NFTI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Frequency (surge absorber) [Model: NFTI3S-10]
	/CCC01	With Connector Cover for MIL Cable [Model: NFCCC01]

All Rights Reserved. Copyright © 2001, Yokogawa Electric Corporation