MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

YOKOGAWA

NFAI143-S01 S1

16-CHANNEL ISOLATED CURRENT INPUT MODULE

Used with the applicable STARDOM FCN configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Yokogawa GS 34P02Q31-01E, p. 3 (family specifications)

● Current Input Modules (Isolated)

Input of 4 to 20 mA signals of 16 channels.

Items		Specifications
Model		**NFAI143 (*1) (*4)**
Number of input channels		16-channel input, isolated
Input signal		4 to 20 mA
Allowable input current		24 mA
Withstanding voltage		Between input and system: 1500 V AC for 1 minute (*3)
Overcurrent protection		Provided
Input resistance	Power ON	250 Ω
	Power OFF	500 kΩ or more
Accuracy		±0.1% of full scale
Data refresh cycle		10 ms
Input step response time		100 ms
Transmitter power supply		24.0 to 25.5 V (output current limit:25 mA)
Setting of 2-wire or 4-wire transmitter		For each channel by setting pin
Temperature drift		Max. ±0.01%/°C
Maximum current consumption		230 mA (5 V DC)
		540 mA (24 V DC)
Weight		0.3 kg
External connection		Pressure clamp terminal, MIL connector cable (*3)
HART Communication(*2)		Available

*1: 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.
*2: For HART function specifications, refer to “HART Communication Functions” (GS 34P02Q53-01E).
*3: 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.
*4: 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.

● Current Output Modules (Isolated)

Output of 4 to 20 mA electric currents of 16 channels.

Items	Specifications
Model	**NFAI543 (*3)**
Number of output channels	16-channel output, isolated
Output signal	4 to 20 mA
Withstanding voltage	Between output and system: 1500 V AC for 1 minute (*5)
Allowable load resistance	0 to 750 Ω
Circuit-open detection	0.65 mA or less
Accuracy	±0.3% of full scale
Data refresh cycle	10 ms
Output step response time	100 ms
Output fallback (*2)	Set for each channel (*1)
Temperature drift	Max. ±0.01%/°C
Maximum current	230 mA (5 V DC)
consumption	540 mA (24 V DC)
Weight	0.4 kg
External connection	Pressure clamp terminal, MIL connector cable (*5)
HART Communication(*4)	Available

*1: HOLD: To hold output in which fallback is detected.
SETV: To output a specified value when fallback is detected.
*2: Select fallback [Yes/No] for each module.
If [Yes] is selected for fallback, set [HOLD/SETV] for each channel.
Fallback detection time: 4 seconds
*3: 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.
*4: For HART function specifications, refer to GS 34P02Q53-01E HART Communication Functions.
*5: 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.

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