● 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 field and the system as well as between each channel.

These two modules can be used in dual redundant configuration.

Items		Specifications		
Model		**AAI135 (*1)**	**AAI835 (*1)**	
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	—
Withstanding voltage		Between input and system: 500 V AC, For 1 minute Between input channels: 500 V AC, For 1 minute (*2)	Between input/output and system: 500 V AC, For 1 minute Between input/output channels: 500 V AC, For 1 minute (*2)	
Input resistance	**Power ON**	290 Ω (at 20 mA) to 450 Ω (at 4 mA) (*3)		
	Power OFF	500 kΩ or more		
Allowable load resistance		—	—	0 to 750 Ω (*4)
Circuit-open detection		—	—	Less than 0.65 mA
Accuracy		±16 μA	Input: ±16 μA	Output: ±48 μA
Data update period		10 ms		
Transmitter power supply		15.0 V or more (at 20 mA) 29.3 V or less (at 0 mA) (*5)	15.0 V or more (at 20 mA) 29.3 V or less (at 0 mA) (*5)	—
Temperature drift		±16 μA/10 °C		
Maximum current consumption		360 mA (5 V DC), 450 mA (24 V DC)	360 mA (5 V DC), 450 mA (24 V DC)	
Weight		0.3 kg		
External connection		Pressure clamp terminal, MIL connector cable, Dedicated cable (KS1)		
HART communication (*6)		Available	Available	

*1: This module does not allow a Zener barrier to be connected. If the module is to be used in intrinsically safe applications, use an isolation barrier.

*2: The withstanding voltage for using MIL connector cable depends on the electrical specifications of its cable.

*3: Viewed from the terminals, module input resistance is, depending on the current flowing:

$$250\ \Omega + \frac{\text{voltage drop (0.8 V maximum) in the input protection circuit}}{\text{current value}}$$

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*4: When installing to a remote node that conforms to the temperature environment and using it under the temperature environment (60 to 70 ˚C), the allowable load resistance is 200 to 750 Ω.

*5: This voltage is developed between connecting terminals for this module's 2-wire transmitter. When calculating if transmitter minimum operating voltage requirement will be satisfied, remember to allow for voltage drop in external wiring.

*6: When installing the HART compliant module to a remote node, the firmware of EB401 must be Rev 2 or later.
For HART function specifications, refer to "HART Communication Package (for A□I□□□-H) (GS 33M15F30-40E)."

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■ MODELS AND SUFFIX CODES

		Description
Model	AAI135	Analog Input Module (4 to 20 mA, 8-channel, Isolated channels)
Suffix Codes	-S	Standard type
	-H	With digital communication (HART protocol)
	0	Always 0
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
Option Codes	/13A00	With KS Cable Interface Adapter [Model: ATI3A-00]
	/K4A00	With KS Cable Interface Adapter [Model: ATK4A-00]
	/13S00	With Pressure Clamp Terminal Block for Isolated Analog [Model: ATI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Isolated Analog (surge absorber) [Model: ATI3S-10]
	/13D00	With Dual Pressure Clamp Terminal Block for Isolated Analog [Model: ATI3D-00]
	/13D10	With Dual Pressure Clamp Terminal Block for Isolated Analog (surge absorber) [Model: ATI3D-10]
	/CCC01	With Connector Cover for MIL Cable [Model: ACCC01]

		Description
Model	AAI835	Analog I/O Module (4 to 20 mA, 4-channel input/4-channel output, Isolated channels)
Suffix Codes	-S	Standard type
	-H	With digital communication (HART protocol)
	0	Always 0
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
Option Codes	/B3A00	With KS Cable Interface Adapter [Model: ATB3A-00]
	/K4A00	With KS Cable Interface Adapter [Model: ATK4A-00]
	/13S00	With Pressure Clamp Terminal Block for Isolated Analog [Model: ATI3S-00]
	/13S10	With Pressure Clamp Terminal Block for Isolated Analog (surge absorber) [Model: ATI3S-10]
	/13D00	With Dual Pressure Clamp Terminal Block for Isolated Analog [Model: ATI3D-00]
	/13D10	With Dual Pressure Clamp Terminal Block for Isolated Analog (surge absorber) [Model: ATI3D-10]
	/CCC01	With Connector Cover for MIL Cable [Model: ACCC01]

		Description
Model	AAT145	TC/mV Input Module (16-channel, Isolated channels)
Suffix Codes	-S	Standard type
	0	Always 0
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option

		Description
Model	AAR145	RTD/POT Input Module (16-channel, Isolated channels)
Suffix Codes	-S	Standard type
	0	Always 0
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option

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