

● Current Output Module (Isolated)

This module provides 16 outputs of 4 – 20 mA signal. It can be used in dual-redundant configuration. (*1)

Items	Specifications	
Model	AAI543-□5□/-□E□	AAI543-□6□/-□F□ (*2)
Number of output channels	16, isolated, standard switch-over response in redundant configuration (*3)	16, isolated, fast switch-over response in redundant configuration (*3)
Output signal	4 to 20 mA	
Withstanding voltage	Between output and system: 1500 V AC, for 1 minute (*4)	
Allowable load resistance	0 to 750 Ω	
Circuit-open detection	Less than 0.65 mA	
Accuracy	±48 μA	
Data update period	10 ms	
Drift due to ambient temperature change	±16 μA/10 °C	
Maximum current consumption	230 mA (5 V DC), 540 mA (24 V DC)	
Weight	0.4 kg	
External communication	Pressure clamp terminal, MIL connector cable, dedicated cable (KS1)	
HART communication (*5)	Available	

*1: A dual-redundant configuration is enabled by using two identical modules with the same suffix codes.

*2: When AAI543-□6□/-□F□ is installed in a node unit that conforms to the temperature environment, use it in the ambient temperature within 0 to 60 °C range.

*3: When a switch over from control to stand-by module takes place in the dual-redundant configuration, the maximum period of time when the field output falls below 4 mA is 100 ms for AAI543-□5□/-□E□ (standard switch-over response) and 2 ms for AAI543-□6□/-□F□ (fast switch-over response). In case of connecting fast response type field devices, use AAI543-□6□/-□F□ (fast switch-over response) in the dual-redundant configuration.

*4: When the dedicated cable is used, the withstanding voltage is 500 V AC (between the input signal and the system). When the ML connector cable is used, the withstanding voltage depends on the electrical specifications of the cable.

*5: When this module is installed in a ER bus node unit with HART function, the EB401 firmware must be rev. 2 or later.

● Voltage Input Module (Isolated)

This module is for 16 inputs of 1 to 5 V or -10 to 10 V signal. It can be used in dual-redundant configuration.

Items	Specifications	
Model	AAV144	
Number of input channels	16, isolated	
Input signal	1 to 5 V	-10 to 10 V
Switching input signals	Input signals can be set together for CH1 to CH16	
Allowable input voltage	±30 V	
Withstanding isolated voltage	Between input and system: 1500 V AC withstanding voltage, for 1 minute (*1)	
Input resistance	Power ON	1 MΩ
	Power OFF	200 kΩ
Accuracy	±4 mV	±20 mV
Data update period	10 ms	
Drift due to ambient temperature change	±4 mV/10 °C	±20 mV/10 °C
Maximum current consumption	500 mA (5 V DC)	
Weight	0.2 kg	
External communication	Pressure clamp terminal, MIL connector cable, dedicated cable (KS1)	

*1: When the dedicated cable is used, the withstanding voltage is 500 V AC (between the input signal and the system). When the ML connector cable is used, the withstanding voltage depends on the electrical specifications of the cable.

		Description
Model	AAI143	Analog Input Module (4 to 20 mA, 16-channel, Isolated)
Suffix Codes	-S	Standard type
	-H	With digital communication (HART protocol)
	5	With no explosion protection
	E	With explosion protection
	0	Basic type
Option Codes	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
	/K4A00	With KS Cable Interface Adapter (For connecting AEA4D Terminal Board) [Model: ATK4A-00]
	/A4S00	With Pressure Clamp Terminal Block [Model: ATA4S-00]
	/A4S10	With Pressure Clamp Terminal Block (surge absorber) [Model: ATA4S-10]
	/A4D00	With Dual Pressure Clamp Terminal Block [Model: ATA4D-00]
	/A4D10	With Dual Pressure Clamp Terminal Block (surge absorber) [Model: ATA4D-10]
	/CCC01	With Connector Cover for MIL Cable [Model: ACCC01]

		Description
Model	AAI543	Analog Output Module (4 to 20 mA, 16-channel, Isolated)
Suffix Codes	-S	Standard type
	-H	With digital communication (HART protocol)
	5	Standard switch-over response in redundant configuration with no explosion protection(*1)
	6	Fast switch-over response in redundant configuration with no explosion protection(*2)
	E	Standard switch-over response in redundant configuration with explosion protection(*1)
	F	Fast switch-over response in redundant configuration with explosion protection(*2)
	0	Basic type
	1	With ISA Standard G3 option
Option Codes	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
	/K4A00	With KS Cable Interface Adapter (For connecting AEA4D Terminal Board) [Model: ATK4A-00]
	/A4S00	With Pressure Clamp Terminal Block [Model: ATA4S-00]
	/A4S10	With Pressure Clamp Terminal Block (surge absorber) [Model: ATA4S-10]
	/A4D00	With Dual Pressure Clamp Terminal Block [Model: ATA4D-00]
	/A4D10	With Dual Pressure Clamp Terminal Block (surge absorber) [Model: ATA4D-10]
	/CCC01	With Connector Cover for MIL Cable [Model: ACCC01]

*1: If "standard switch-over response in redundant configuration" is selected, "basic type" or "with ISA Standard G3 option and temperature (-20 to 70 °C) option" may be specified.

*2: If "fast switch-over response in redundant configuration" is selected, "basic type" or "with ISA Standard G3 option" may be specified.

		Description
Model	AAV144	Analog Input Module (-10 to +10 V, 16-channel, Isolated)
Suffix Codes	-S	Standard type
	5	With no explosion protection
	E	With explosion protection
	0	Basic type
Option Codes	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
	/K4A00	With KS Cable Interface Adapter [Model: ATK4A-00]
	/A4S00	With Pressure Clamp Terminal Block for Analog [Model: ATA4S-00]
	/A4S10	With Pressure Clamp Terminal Block for Analog (surge absorber) [Model: ATA4S-10]
	/A4D00	With Dual Pressure Clamp Terminal Block for Analog [Model: ATA4D-00]
	/A4D10	With Dual Pressure Clamp Terminal Block for Analog (surge absorber) [Model: ATA4D-10]
		/CCC01