

General Specifications

Field Connection Specifications (for I/O Modules with Built-In Barrier and FIO)



GS 33J60A30-01EN

[Release 6]

■ GENERAL

This GS describes the connection between the Modules with Barrier (FIO) and field devices.

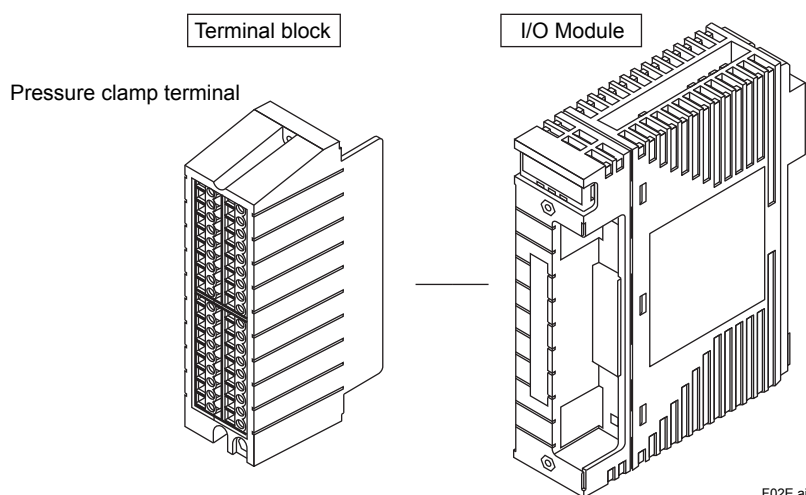
When installing these apparatuses with intrinsically safe circuit, "Explosion Protection" (TI 33Q01J30-01E) and "Explosion Protection of FIO Products" (IM 33K01J30-50E) for ATEX Approval should be referenced together with this GS.

■ SIGNAL CONNECTIONS

● Variation of Signal Connections

The I/O Module can be connected to field devices by terminal connection.

The following explains the terminal blocks as well as the signal wiring that can be paired with the I/O Modules.



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● Configuration of I/O Module Connection

A pressure clamp terminal block is provided for the terminal connection with field devices.

A dedicated terminal block is provided for a dual-redundant configuration.

Table Combinations of I/O Modules and Pressure Clamp Terminal Blocks

Model name	Module name	Single	Dual-redundant
—	Analog I/O Modules		
ASI133	Analog Input Module (4 to 20 mA, 8-Channel, Isolated)	ATSA3S	ATSA3D
ASI533	Analog Output Module (4 to 20 mA, 8-Channel, Isolated)	ATSS3S	ATSS3D
AST143	TC/mV Input Module (TC: B, E, J, K, N, R, S, T / mV: -100 to 150 mV, -50 to 75 mV, 16-Channel, Isolated)	ATST4S	ATST4D
ASR133	RTD/POT Input Module (RTD: Pt50, Pt100, Pt200, Pt500, Pt1000, Ni100, Ni200, Ni120 / POT: 0 to 10 kΩ, 8-Channel, Isolated)	ATSR3S	ATSR3D
—	Digital I/O Modules		
ASD143	Digital Input Module (16-Channel, NAMUR compatible, Isolated)	ATSB4S	ATSB4D
ASD533	Digital Output Module (8-Channel, U>12 V at I=40 mA, Isolated)	ATSD3S	ATSD3D

Note: One dual-redundant terminal block is used to connect two adjacent I/O Modules.

■ TERMINAL BLOCK AND CONNECTOR CONNECTION SPECIFICATIONS

Model Name	Signal Name	I/O Signal		
ASI133	IN□.1	2-wire transmitter input +	—	—
	IN□.2	2-wire transmitter input -	Current input +	
	GND	—	Current input -	
ASR133	IN□.1	2-wire RTD/POT input a+	3-wire RTD/POT input a+	4-wire RTD/POT input a+
	IN□.2	—	—	4-wire RTD/POT input a
	IN□.3	—	3-wire RTD/POT input b	4-wire RTD/POT input b
	IN□.4	2-wire RTD/POT input b-	3-wire RTD/POT input b-	4-wire RTD/POT input b-

□ is channel number.

● Pressure Clamp Terminals

ATSA3S/ATSA3D (for ASI133)

Signal name	Terminal No.		Signal name
IN1.1	A1	B1	IN1.2
	A2	B2	GND
IN2.1	A3	B3	IN2.2
	A4	B4	GND
IN3.1	A5	B5	IN3.2
	A6	B6	GND
IN4.1	A7	B7	IN4.2
	A8	B8	GND
	A9	B9	
IN5.1	A10	B10	IN5.2
	A11	B11	GND
IN6.1	A12	B12	IN6.2
	A13	B13	GND
IN7.1	A14	B14	IN7.2
	A15	B15	GND
IN8.1	A16	B16	IN8.2
	A17	B17	GND
	A18	B18	

 : No connected terminal

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ATSS3S/ATSS3D (for ASI533)

Signal name	Terminal No.		Signal name
OUT1+	A1	B1	OUT1-
	A2	B2	
OUT2+	A3	B3	OUT2-
	A4	B4	
OUT3+	A5	B5	OUT3-
	A6	B6	
OUT4+	A7	B7	OUT4-
	A8	B8	
	A9	B9	
OUT5+	A10	B10	OUT5-
	A11	B11	
OUT6+	A12	B12	OUT6-
	A13	B13	
OUT7+	A14	B14	OUT7-
	A15	B15	
OUT8+	A16	B16	OUT8-
	A17	B17	
	A18	B18	

 : No connected terminal

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ATST4S/ATST4D (for AST143)

Signal name	Terminal No.		Signal name
IN1+	A1	B1	IN1-
IN2+	A2	B2	IN2-
IN3+	A3	B3	IN3-
IN4+	A4	B4	IN4-
	A5	B5	
IN5+	A6	B6	IN5-
IN6+	A7	B7	IN6-
IN7+	A8	B8	IN7-
IN8+	A9	B9	IN8-
IN9+	A10	B10	IN9-
IN10+	A11	B11	IN10-
IN11+	A12	B12	IN11-
IN12+	A13	B13	IN12-
	A14	B14	
IN13+	A15	B15	IN13-
IN14+	A16	B16	IN14-
IN15+	A17	B17	IN15-
IN16+	A18	B18	IN16-

 : No connected terminal

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ATSR3S/ATSR3D (for ASR133)

Signal name	Terminal No.		Signal name
IN1.1	A1	B1	IN1.2
IN1.3	A2	B2	IN1.4
IN2.1	A3	B3	IN2.2
IN2.3	A4	B4	IN2.4
	A5	B5	
IN3.1	A6	B6	IN3.2
IN3.3	A7	B7	IN3.4
IN4.1	A8	B8	IN4.2
IN4.3	A9	B9	IN4.4
IN5.1	A10	B10	IN5.2
IN5.3	A11	B11	IN5.4
IN6.1	A12	B12	IN6.2
IN6.3	A13	B13	IN6.4
	A14	B14	
IN7.1	A15	B15	IN7.2
IN7.3	A16	B16	IN7.4
IN8.1	A17	B17	IN8.2
IN8.3	A18	B18	IN8.4

 : No connected terminal

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ATSB4S/ATSD4D (for ASD143)

Signal name	Terminal No.		Signal name
IN1+	A1	B1	IN1–
IN2+	A2	B2	IN2–
IN3+	A3	B3	IN3–
IN4+	A4	B4	IN4–
	A5	B5	
IN5+	A6	B6	IN5–
IN6+	A7	B7	IN6–
IN7+	A8	B8	IN7–
IN8+	A9	B9	IN8–
IN9+	A10	B10	IN9–
IN10+	A11	B11	IN10–
IN11+	A12	B12	IN11–
IN12+	A13	B13	IN12–
	A14	B14	
IN13+	A15	B15	IN13–
IN14+	A16	B16	IN14–
IN15+	A17	B17	IN15–
IN16+	A18	B18	IN16–

 : No connected terminal

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ATSD3S/ATSD3D (for ASD533)

Signal name	Terminal No.		Signal name
OUT1+	A1	B1	OUT1–
	A2	B2	
OUT2+	A3	B3	OUT2–
	A4	B4	
OUT3+	A5	B5	OUT3–
	A6	B6	
OUT4+	A7	B7	OUT4–
	A8	B8	
	A9	B9	
OUT5+	A10	B10	OUT5–
	A11	B11	
OUT6+	A12	B12	OUT6–
	A13	B13	
OUT7+	A14	B14	OUT7–
	A15	B15	
OUT8+	A16	B16	OUT8–
	A17	B17	
	A18	B18	

 : No connected terminal

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■ TRADEMARK

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