

General Specifications

Models ANB10S, ANB10D
ESB Bus Node Units (for FIO)



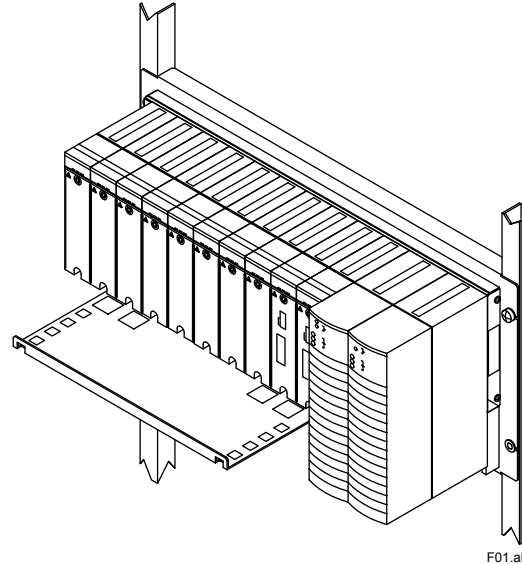
GS 33K50F20-50E

[Release 5]

■ GENERAL

The ESB Bus Node Unit has an interface function that communicates the analog I/O signals and contact I/O signals of a field with a Field Control Unit (FCU) via an ESB bus, as well as a function that supplies power to the I/O Modules.

This node units are connected to FCU via an ESB bus.



■ HARDWARE SPECIFICATIONS

For the installation specifications and environmental conditions that are common to the systems, refer to "FIO System Overview (for Vnet/IP) (GS 33K50F10-50E)."

● No. of Node Units Connectable

Vnet/IP

Field Control Unit	Database	Total Number of ESB Bus Node Units (ANB10□) and Optical ESB Bus Node Units (ANB11□) Connected per FCU
AFV30□ AFV40□ (*1)	Control Function for Field Control Station (LFS1700)	Max. 3
	Control Function for Field Control Station (LFS1700) plus Node Expansion Package (LFS1750-V1)	Max. 9
	Control Function for Field Control Station (LFS1700) plus Node Expansion Package (LFS1750-V2)	Max. 13

*1: Up to 11 node units per 1 cabinet can be installed in AFV40□.

Field Control Unit	Database	ESB Bus Node Units (ANB10□) Connected per FCU	ER Bus Node Units (ANR10□) Connected per FCU	Total Number of ESB Bus Node Units (ANB10□) and ER Bus Node Units (ANR10□) Connected per FCU
AFV10□	Control Function for Field Control Station (LFS1500)	Max. 3	Max. 3	Max. 3
	Control Function for Field Control Station (LFS1500) plus Application Capacity Expansion Package (LFS1550)	Max. 9	Max. 14	Max. 14

Vnet

Field Control Unit	Database	ESB Bus Node Units (ANB10□) Connected per FCU	ER Bus Node Units (ANR10□) Connected per FCU	Total Number of ESB Bus Node Units (ANB10□) and ER Bus Node Units (ANR10□) Connected per FCU
AFF50□	Control Function for Compact Field Control Station (LFS1350)	Max. 3	Max. 3	Max. 3
AFG30□ AFG40□	Control Function for Enhanced Field Control Station (LFS1330) with Node expanded databases	Max. 10	Max. 14	Max. 15
Others		Max. 10 (*1)	Max. 9 (*1)	Max. 10 (*1)

*1: In Case of AFG81□ and AFG82□, there are total number with SIO Nest (for CENTUM V or CENTUM-XL).
Total number of SIO: Max 5/FCU

● ESB Bus Node Connection

When connecting an ESB Bus Node Unit to FCU, install ESB Bus Coupler Module (EC401 or EC402) to FCU (*1). EC401 or EC402 must be installed in slot 7 and slot 8. To make single configuration, EC401 or EC402 must be installed in slot 7, and Slot 8 must be empty.

EC402 can be installed in AFV30□ or AFV40□.

*1: AFV30□, AFV40□, AFV10□, or AFF55□.

● Power Supply

Specify with Suffix Codes

Voltage: 100-120 V AC, Frequency: 50/60 Hz

Voltage: 220-240 V AC, Frequency: 50/60 Hz

Voltage: 24 V DC

● Electric Power Consumption

100-120 V AC: 200 VA, 120 W

220-240 V AC: 230 VA, 120 W

24 V DC: 5.5 A

● Weight

10 kg (incl. 8 I/O Modules)

● Mounting

19-inch Rack Mounting

Rack mount (M5 x 4 screws)

Insulation bash (accessory)

● Regulatory Compliance

For the detailed information of following standards, see "System Overview" (GS 33K01A10-50E).

Safety Standards

[CSA] (for 100-120 V AC and 24 V DC power supply)

[CE Marking] (for 100-120 V AC, 220-240 V AC and 24 V DC power supply)

EMC Conformity Standards

[CE Marking] (for 100-120 V AC, 220-240 V AC and 24 V DC power supply)

[C-Tick Marking] (for 220-240 V AC and 24 V DC power supply)

[KC Marking] (for 100-120 V AC, 220-240 V AC and 24 V DC power supply)

Standards for Hazardous Location Equipment

[CSA Non-Incendive] (for 100-120 V AC and 24 V DC power supply)

[FM Non-Incendive] (for 100-120 V AC, 220-240 V AC and 24 V DC power supply)

[Type n] (for 24 V DC power supply)

■ CONFIGURATION

● Module configuration

Power Supply Module (PW481 or PW482 or PW484): Two modules in case of a dual-redundant configuration.

Power supply to the I/O Modules, and supply power to the transmitters.

The power supply terminals use M4 screws.

ESB Bus Interface Slave Module (SB401): Two modules in case of a dual-redundant configuration.

I/O Modules (*1): Max. 8

*1: Non-standard components.

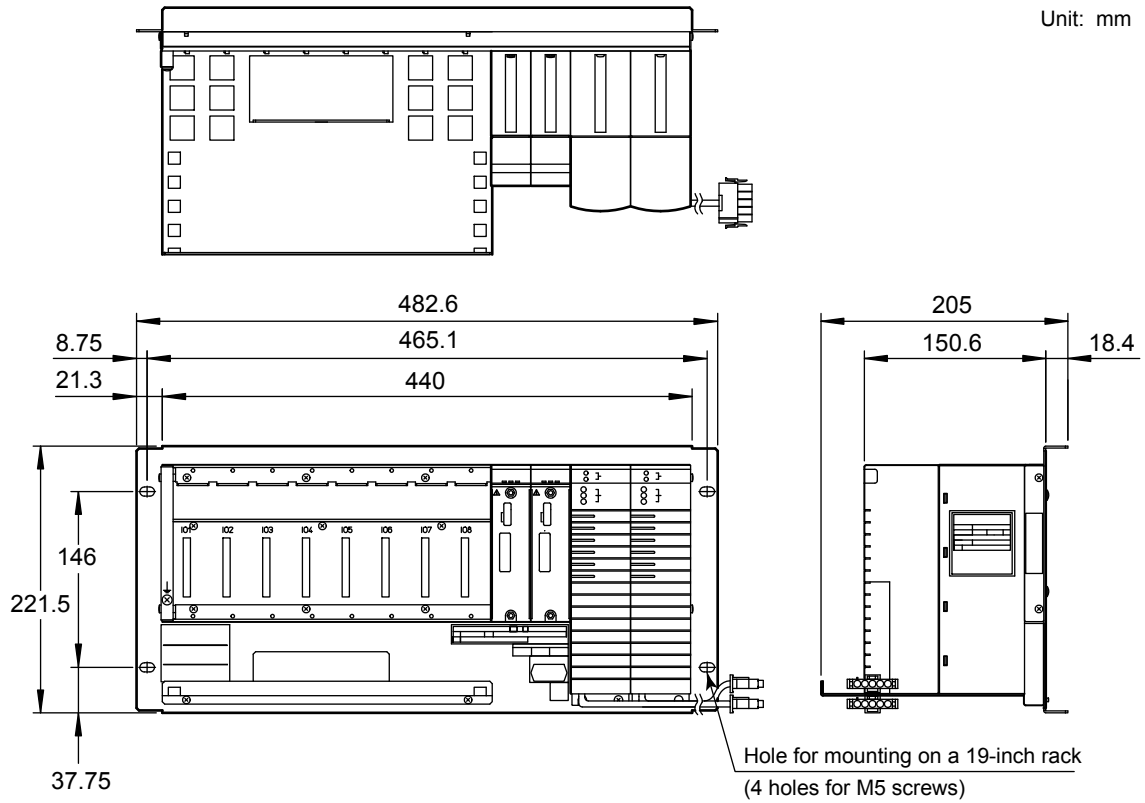
■ LIMITATIONS OF INSTALLATION AND NOTICES FOR INSTALLATION

For installing I/O modules in node unit, the quantity and allocation are limited. Also, when installing a node unit to the dedicated cabinet, there are limitations of installation under the ambient operating temperature conditions. When modules with built-in barriers are installed in any node unit, an insulating partition (Part No. T9083NA) must be installed.

For details, please refer to "FIO System Overview (for Vnet/IP)" (GS 33K50F10-50E) and "Installation Guidance" (TI 33K01J10-50E).

EXTERNAL DIMENSIONS

● ANB10D, ANB10S ESB Bus Node Unit (Figure of ANB10D)



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MODELS AND SUFFIX CODES

Node Unit for Single ESB Bus

		Description
Model	ANB10S	Node Unit for Single ESB Bus
Suffix Codes	-3	Single power supply
	-4	Dual-redundant power supply
	1	100 - 120 V AC power supply
	2	220 - 240 V AC power supply
	4	24 V DC power supply
	5	Basic type with no explosion protection
	6	With ISA Standard G3 option, temperature (-20 °C to 70 °C) option, and no explosion protection (*1)
	7	With ISA Standard G3 option and no explosion protection
	E	Basic type with explosion protection
	F	With ISA Standard G3 option, temperature (-20 °C to 70 °C) option, and explosion protection (*1)
G	With ISA Standard G3 option and explosion protection	
Option Codes	/CU1N	Connector Unit for ESB Bus [part No.: S9562FA]
	/CU1T	Connector Unit with Terminator for ESB Bus [part No.: S9564FA]
	/ATDOC	Explosion Protection Manual (*2)
	/NDEL	Software License for Node Expansion (*3)

Node Unit for Dual-Redundant ESB Bus

		Description
Model	ANB10D	Node Unit for Dual-Redundant ESB Bus
Suffix Codes	-4	Dual-redundant power supply
	1	100 - 120 V AC power supply
	2	220 - 240 V AC power supply
	4	24 V DC power supply
	5	Basic type with no explosion protection
	6	With ISA Standard G3 option, temperature (-20 °C to 70 °C) option, and no explosion protection (*1)
	7	With ISA Standard G3 option and no explosion protection
	E	Basic type with explosion protection
	F	With ISA Standard G3 option, temperature (-20 °C to 70 °C) option, and explosion protection (*1)
	G	With ISA Standard G3 option and explosion protection
Option Codes	/CU2N	Connector Unit for ESB Bus [part No.: S9562FA (2 pieces)]
	/CU2T	Connector Unit with Terminator for ESB Bus [part No.: S9564FA (2 pieces)]
	/ATDOC	Explosion Protection Manual (*2)
	/NDEL	Software License for Node Expansion (*3)

- *1: If ANB10□ is connected to the Optical ESB Bus Node Unit (ANB11□), "ISA Standard G3 option and temperature (-20 to 70 °C) option" may be specified.
- *2: Select the option code "/ATDOC" to follow the ATEX Directive for use in potentially explosive atmospheres.
- *3: It must be sure to specify the Option Code "/NDEL" to connect Node Unit with AFV10□, AFV30□, AFV40□ and AFF50□.

Dummy Cover

		Description
Model	ADCV01	Dummy Cover (for I/O Module)
	ADCV02	Dummy Cover (for Power Supply Module)

Insulating Partition

		Description
Part No.	T9083NA	Insulating Partition

Note: When mounting an FIO module with built-in barrier to a node unit, place this part to the 8th slot.

ACCESSORIES AND SPARE PARTS

Parts Names	Parts Numbers	Description	Quantity	Remarks
Insulating bush	S9049PM	-	4	Accessory

ORDERING INFORMATION

Specify the model and suffix codes. For selecting the right products for explosion protection, please refer to TI 33Q01J30-01E without fail.

TRADEMARKS

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