

General Specifications

ANB10S, ANB10D
ESB Bus Node Units
(for N-IO/FIO)



GS 33J60F20-01EN

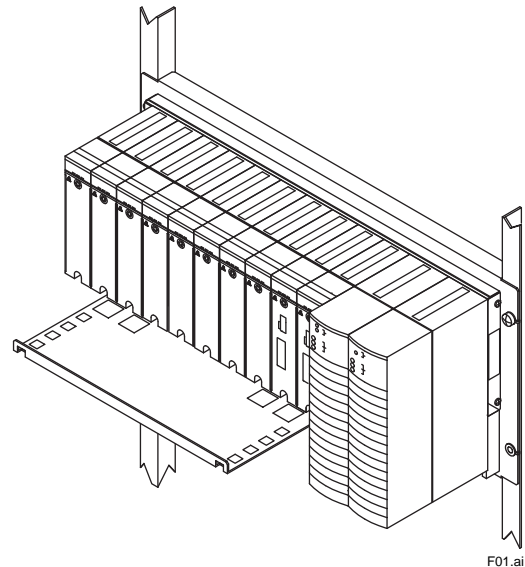
[Release 6]

■ 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.

AFV30□, AFV40□, A2FV50□, A2FV70□, ACB51, ANB10□, ANB11□, and ANT10U can also be constructed by combining the Base Plate and each module. Refer to "FIO System Overview" (GS 33J60A10-01EN), "N-IO System Overview" (GS 33J62A10-01EN) and "Field Control Unit" (GS 33J64E10-01EN).



■ STANDARD SPECIFICATIONS

For the installation specifications and environmental conditions that are common to the systems, refer to the GS N-IO System Overview" (GS 33J62A10-01EN) and "FIO System Overview" (GS 33J60A10-01EN).

● No. of Node Units Connectable

Field Control Unit	Software licence	Total Number of ESB Bus Node Units (ANB10□) and Optical ESB Bus Node Units (ANB11□) Connected per FCU
A2FV50□	Control Function for Field Control Station (VP6F1800)	Max. 8
A2FV70□	Control Function for Field Control Station (VP6F1900)	Max. 8
AFV30□ AFV40□ (*1)	Control Function for Field Control Station (VP6F1700)	Max. 13

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

● 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.

*1: A2FV50□, A2FV70□, AFV30□, or AFV40□.

● 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

Approx. 10 kg (incl. 8 I/O Modules)

● Mounting

19-inch Rack Mounting

- Rack mount (M5 x 4 screws)
- Insulation bash (accessory)

■ 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.

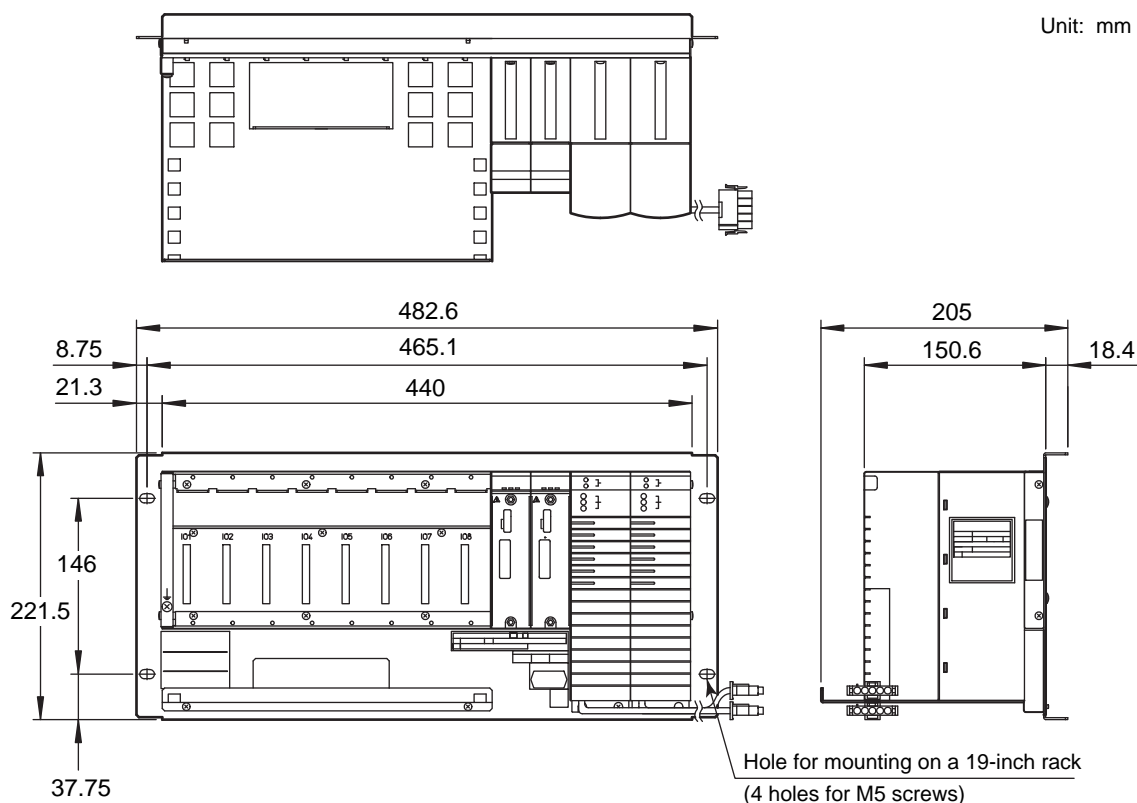
When ANB10□ is used with A2FV50□ or A2FV70□, only Communication modules (ALR111, ALR121, ALE111, ALF111, ALP121, A2LP131, and A2LP141) can be mounted.

■ 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 the GS "N-IO System Overview" (GS 33J62A10-01EN), "FIO System Overview" (GS 33J60A10-01EN), and "Installation Guidance" (TI 33J01J10-01EN).

■ EXTERNAL DIMENSIONS



F03E.ai

Note: The above drawings are for ANB10D.

Nominal tolerances :

Nominal tolerance is ± 0.8 mm for the dimensions of 0.5 mm or more and 120 mm or less, and the combined nominal tolerance is ± 1.5 mm.

The nominal tolerance is in accordance with JEM 1459 for the dimensions over 120 mm.

■ 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)

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)

Note: The existing ANB10□-□□□/NDEL for CENTUM VP R5 or earlier can be used with CENTUM VP R6.01 or later.

*1: Only if ANB10□ is connected to the Optical ESB Bus Node Unit (ANB11□), "ISA Standard G3 option and temperature (-20 to 70 °C) option" can be selected.

*2: Select the option code "/ATDOC" to follow the ATEX Directive and UKEX Regulation for use in potentially explosive atmospheres.

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	Quantity	Remarks
Insulating bush	S9049PM	4	Accessory

■ APPLICABLE STANDARDS

Refer to the GS “Integrated Production Control System CENTUM VP System Overview (GS 33J01A10-01EN).”

■ ORDERING INFORMATION

Specify the model and suffix codes.

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

■ TRADEMARK ACKNOWLEDGMENT

The names of corporations, organizations, products and logos herein are either registered trademarks or trademarks of Yokogawa Electric Corporation and their respective holders.