MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

YOKOGAWA

SB401-10 S1

ESB BUS INTERFACE MODULE

Used with the applicable CENTUM VP configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GS 33J60F20-01EN, pp. 1–3; SB401 family

General Specifications

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

CENTUM VP

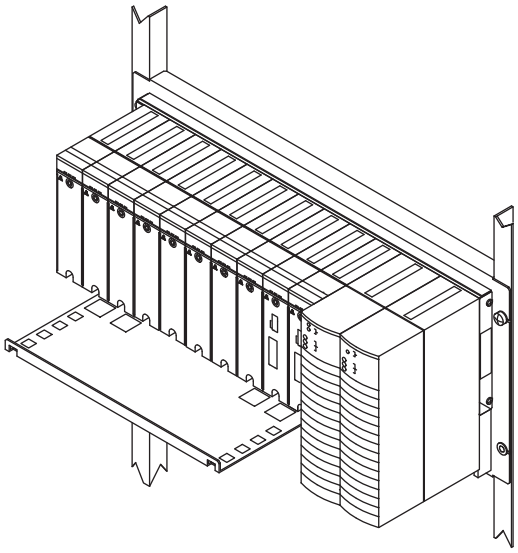
GS 33J60F20-01EN

[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.



F01.ai

■ 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, and A2LP131) can be mounted.

YOKOGAWA

Yokogawa Electric Corporation
2-9-32, Nakacho, Musashino-shi, Tokyo, 180-8750 Japan

GS 33J60F20-01EN
©Copyright Feb. 2015 (YK)
5th Edition July 18, 2019 (YK)

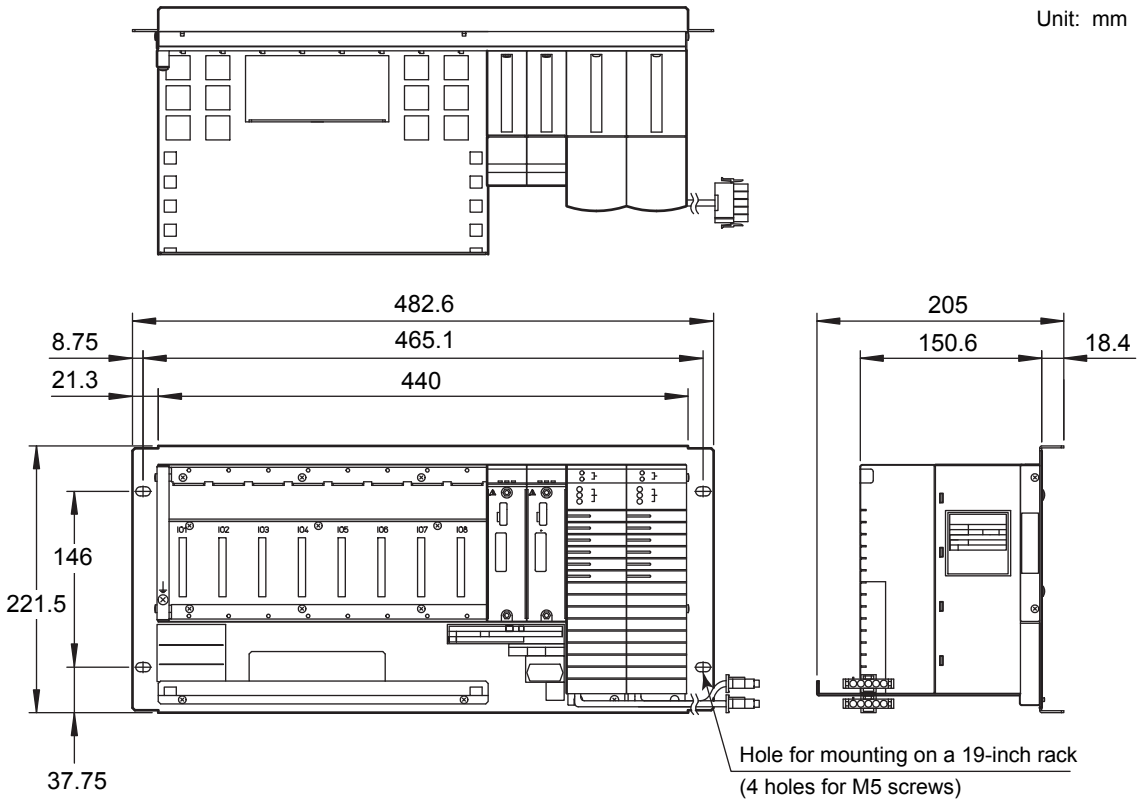
■ LIMITATIONS OF INSTALLATION AND NOTICES FOR INSTALLATION

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

Unit: mm



Note: The above drawings are for ANB10D.

Nominal Tolerances :

When the reference dimension is over 0.5 mm and equal or less than 120 mm, its nominal tolerance is ± 0.8 mm, while its combination of nominal tolerance is ± 1.5 mm.

When the reference dimension is over 120 mm, its nominal tolerance is in accordance with JEM 1459.

All Rights Reserved. Copyright © 2015, Yokogawa Electric Corporation

■ 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 ºC to 70 ºC) 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 ºC to 70 ºC) 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 ºC to 70 ºC) 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 ºC to 70 ºC) 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 ºC) option" can be selected.
*2: Select the option code "/ATDOC" to follow the ATEX/IECEx Directive 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.

■ TRADEMARKS

- CENTUM is either a registered trademark or trademark of Yokogawa Electric Corporation.
- All other company or product names appearing in this document are trademarks or registered trademarks of their respective holders.

All Rights Reserved. Copyright © 2015, Yokogawa Electric Corporation
Subject to change without notice.