General Specifications

Models ANB10S, ANB10D, ANR10S, ANR10D Node Units (for FIO)

*CENTUM VP*

GS 33M50F20-40E

■ GENERAL

The 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.

The ANB10S and ANB10D are called "ESB Bus Node Units" (Local Nodes) because they are connected directly to a FCU via an ESB bus, whereas the ANR10S and ANR10D are called "ER Bus Node Units" (Remote Nodes) because they are connected to an EB401 (ER Bus Interface Master Module) installed in an ESB Bus Node Unit via an ER bus.

A power supply module, bus interface module and I/O module are installed in the node unit.

A single or dual-redundant configuration can also be selected for the node unit. For details on the I/O modules, refer to the General Specifications of the I/O Modules (for FIO) (GS 33M50F25-40E, GS 33M50F30-40E, GS 33M50F40-40E, GS 33M50G10-40E, GS 33M50G20-40E).
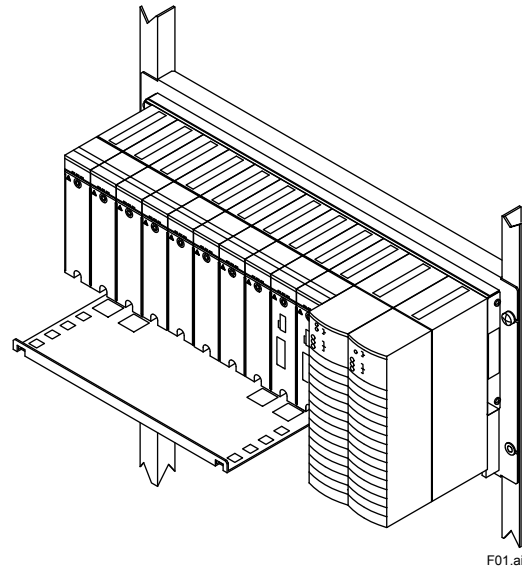
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■ HARDWARE SPECIFICATIONS

For the installation specifications and environmental conditions that are common to the systems, refer to "FIO System Overview (GS 33M50F10-40E)."

● No. of Node Units Connectable

Type of Equipment	Local Node Units Connected per FCU	Remote Node Units Connected per FCU	Total Number of Local and Remote Node Units Connected per FCU
Compact Field Control Unit (for FIO) Basic Field Control Unit (for FIO, for Vnet/IP)	Max. 3/FCU	Max. 3/FCU	Max. 3/FCU
Enhanced FCS with expanded databases	Max. 10/FCU	Max. 14/FCU (*1)	Max. 15/FCU
Basic Field Control Unit (for FIO, for Vnet/IP) + Application Capacity Expansion Package	Max. 9/FCU	Max. 14/FCU (*1)	Max. 14/FCU
Others	Max. 10/FCU	Max. 9/FCU (*1)	Max. 10/FCU

*1: Up to 8 remote nodes per ER bus can be connected.

● Remote Node Connection

ER Bus: Max.4/FCU

When connecting a Remote Node to a Local Node or Compact Field Control Unit (for FIO), install ER Bus Interface Mater Module (EB401) to the Local Node or Compact Field Control Unit (for FIO).

To make single configuration, EB401 must be installed in an odd-number slot, and make a space on the right side of the installed EB401.

See "ER Bus Interface Master Module (for FIO)" (GS 33M50F25-40E) for further information.

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● **Local Node Connection**

When connecting a Local Node to Compact Field Control Unit (for FIO), install ESB Bus Coupler Module (EC401) to Compact Field Control Unit (for FIO).

EC401 must be installed in slot 7 and slot 8. To make single configuration, EC401 must be installed in slot 7, and Slot 8 must be empty.

● **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 IOMs)

● **Regulatory Compliance**

For the detailed information of following standards, see "System Overview" (GS 33M01A10-40E).

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]   (Remote Node only, 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

● **Rack Mounting**

Card configuration
    Power Supply Module: 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.
    ER Bus Interface Slave Module (EB501): Two modules in case of a dual-redundant configuration.

■ 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 "Limitations and Precautions for Installation" (GS 33M50F10-40E).

■ EXTERNAL DIMENSIONS

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

Unit: mm

Hole for 19" rack mounting
(4 x M5 screw holes)
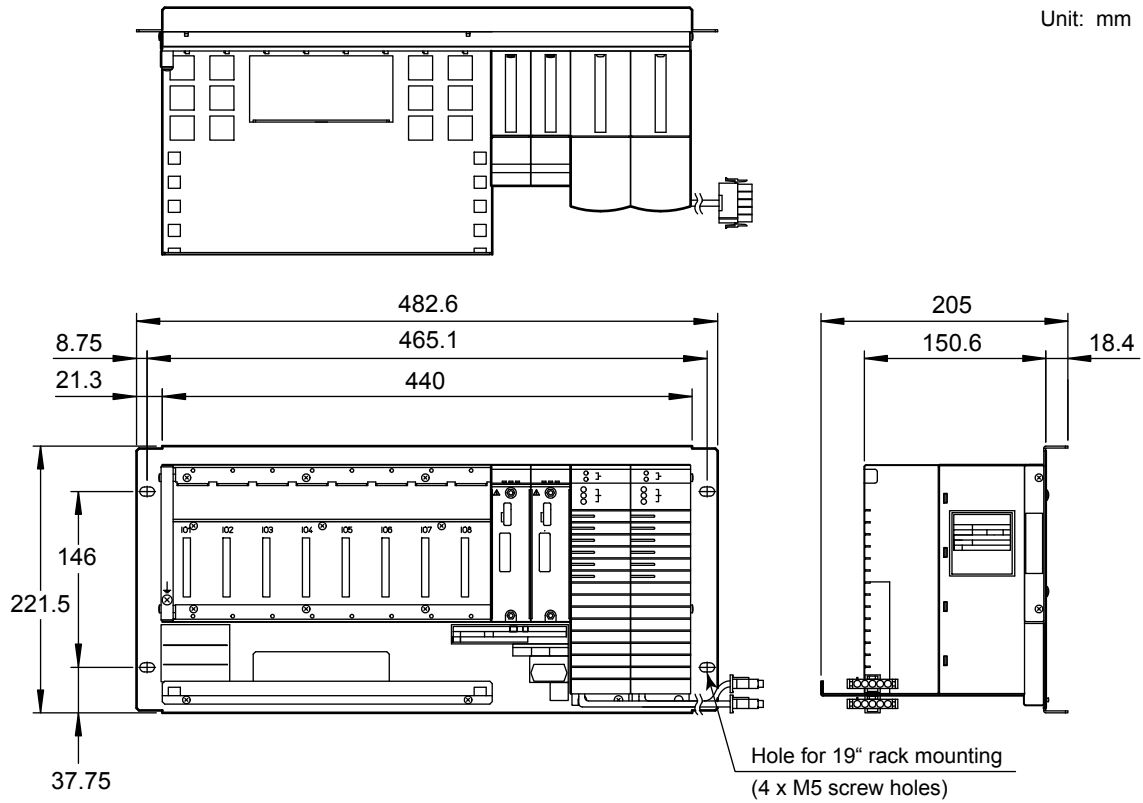
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● ANR10D, ANR10S Node Unit for ER Bus (Figure of ANR10D)

Unit: mm

Hole for 19" rack mounting
(4 x M5 screw holes)
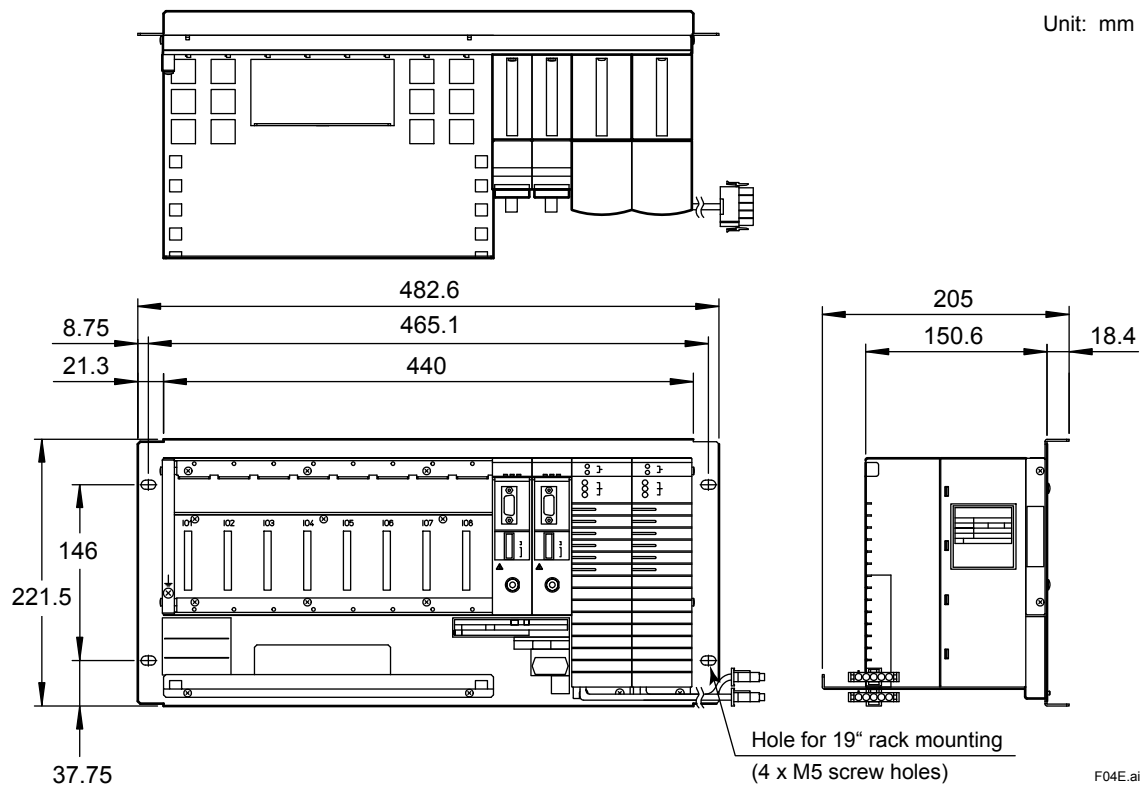
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■ MODELS AND SUFFIX CODES

Node Unit for Single ESB Bus (19" Rack Mountable)

		Description
Model	ANB10S	Node Unit for Single ESB Bus (19" Rack Mountable)
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
	7	With ISA Standard G3 option and no explosion protection
	E	Basic type with explosion protection
	G	With ISA Standard G3 option and explosion protection
Option Codes	/CU1N	Connector Unit for ESB Bus
	/CU1T	Connector Unit with Terminator for ESB Bus
	/ATDOC	Explosion Protection Manual
	/NDEL	Software License for Node Expansion (Mandatory for connection with AFF50□ or AFV10□)

Node Unit for Dual-Redundant ESB Bus (19" Rack Mountable)

		Description
Model	ANB10D	Node Unit for Dual-Redundant ESB Bus (19" Rack Mountable)
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
	7	With ISA Standard G3 option and no explosion protection
	E	Basic type with explosion protection
	G	With ISA Standard G3 option and explosion protection
Option Codes	/CU2N	Connector Unit for ESB Bus
	/CU2T	Connector Unit with Terminator for ESB Bus
	/ATDOC	Explosion Protection Manual
	/NDEL	Software License for Node Expansion (Mandatory for connection with AFF50□ or AFV10□)

Node Unit for Single ER Bus

		Description
Model	ANR10S	Node Unit for Single ER Bus (19" Rack Mountable)
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 G3 option, temperature (-20 ˚C to 70 ˚C) option, and no explosion protection
	E	Basic type with explosion protection
	F	With ISA G3 option, temperature (-20 ˚C to 70 ˚C) option, and explosion protection
Option Codes	/ATDOC	Explosion Protection Manual
	/NDEL	Software License for Node Expansion (Mandatory for connection with AFF50□ or AFV10□)

Note: T-type Connector of ER Bus (YCB146) is supplied with this unit.

Node Unit for Dual-Redundant ER Bus

		Description
Model	ANR10D	Node Unit for Dual-Redundant ER Bus (19" Rack Mountable)
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 G3 option, temperature (-20 ˚C to 70 ˚C) option, and no explosion protection
	E	Basic type with explosion protection
	F	With ISA G3 option, temperature (-20 ˚C to 70 ˚C) option, and explosion protection
Option Codes	/ATDOC	Explosion Protection Manual
	/NDEL	Software License for Node Expansion (Mandatory for connection with AFF50□ or AFV10□)

Note: T-type Connector of ER Bus (YCB146) is supplied with this unit.

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
Accessory assembly	S9768UK	ANR10S	1	
Accessory assembly	S9768UK	ANR10D	2	
Clamp filter	A1193MN	ANR10S	2	
Clamp filter	A1193MN	ANR10D	4	
Content of S9768UK				
Coaxial connector	A1120JA	–	1	T junction
Cover	T9072MB	–	1	
Cover	T9072MC	–	1	

■ 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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