

General Specifications

GS 33J50D10-01EN

AVR10D
Duplexed V net Router
(YCB111, YCB141, YCB148, YCB149
V net related components)

CENTUM *VP*

[Release 6]

■ GENERAL

These Bus Converters connect CENTUM VP Human Interface Stations (HISes) on the Vnet/IP to CENTUM VP/CENTUM CS 3000/CENTUM CS stations on the V net, CENTUM CS 1000 stations on the VL net in other domain.

To connect to CENTUM CS 3000/CENTUM CS System, VP6H4450 Multiple Project Connection Package and VP6E5450 Multiple Project Connection Builder are required. To connect to CENTUM CS 1000 System, an Ethernet, as well as these packages, is also required.

■ STANDARD SPECIFICATIONS

For the installation specifications and environmental conditions that are common to the systems, refer to the GS "Integrated Production Control System CENTUM VP System Overview" (GS 33J01A10-01EN).

Communication on the Vnet/IP Side

Communication Speed: 100 Mbps, Full Duplex
Connection: UTP cable (CAT5e or better), RJ45 connector
Interface: 100Base-TX compliance
Max. distance: 100 m (Distance between AVR10D and Layer 2 switch)

Communication on the V net Side

Communication Speed: 10 Mbps
Connection: Coaxial cable, BNC type
Dual-redundant or single
For CENTUM VP, CENTUM CS 3000 and CENTUM CS

Communication on the VL net Side

Communication Speed: 10 Mbps
Connection: Coaxial cable, BNC type
Dual-redundant or single
For CENTUM CS 1000

Configuration

Nest

Mounting

19-inch Rack Mounting: Rack mount (4 x M5 screws), Insulation bush (accessory)

Connection

Power Supply: M4 screw terminal connection
Grounding: M4 screw terminal connection
V net and VL net Side: T-junction BNC connection
Vnet/IP Side: UTP cable (CAT5e or better)

Power Supply

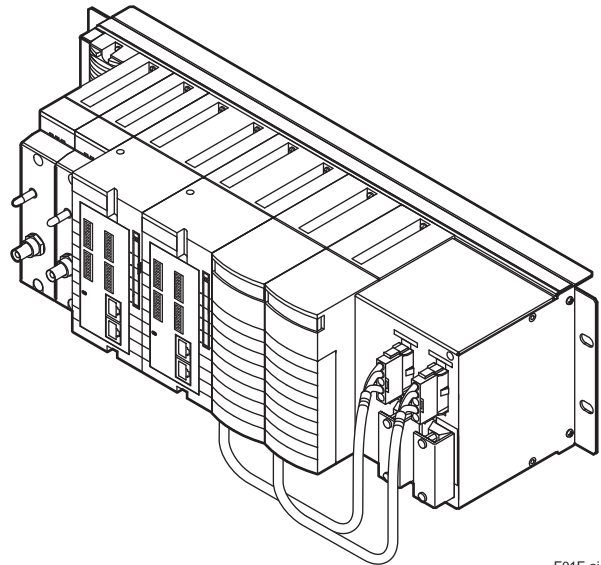
(Specify with Suffix Code)
Voltage: 100-120 V AC, Frequency: 50/60 Hz
Voltage: 220-240 V AC, Frequency: 50/60 Hz
Voltage: 24 V DC

Power Consumption

100-120 V AC: 80 VA
220-240 V AC: 110 VA
24 V DC: 1.7 A
Power supply method dual-line or single power line

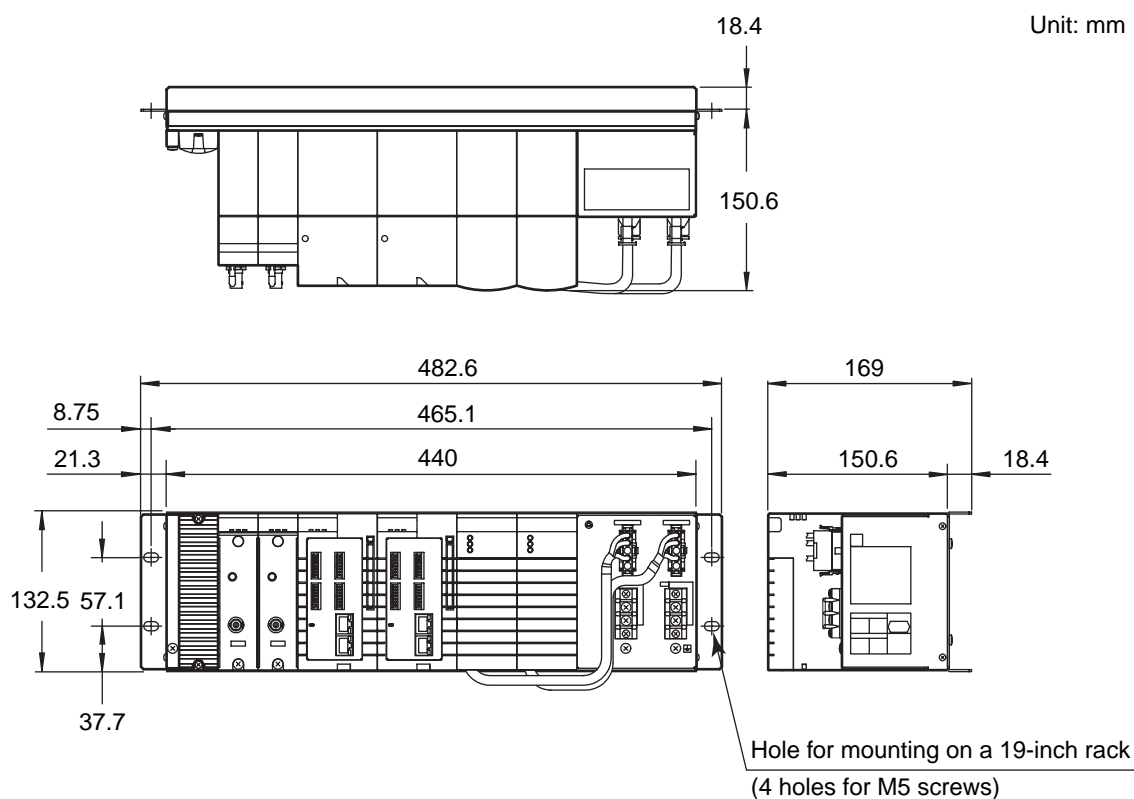
Weight

Approx. 5.8 kg



F01E.ai

■ EXTERNAL DIMENSIONS



F02E.ai

Note: The above drawings are for AVR10D-□□20□□.

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.

■ REQUIREMENTS FOR USING SEM (SEQUENCE OF EVENTS MANAGER)

To use SEM for Vnet/IP, firmware revision of VI451 should be R6 or later. (Firmware revision No. is indicated under "F" on the revision sticker on the component)

For details, refer to "SEM Sequence of Events Manager" (GS 33J30D10-01EN).

■ MODELS AND SUFFIX CODES

Duplexed V net Router

		Description
Model	AVR10D	Duplexed V net Router (Duplexed communication module, Duplexed power module)
Suffix Codes	-A1	For Single VL net
	-A2	For Dual-Redundant VL net
	-Q1	For Single V net (10BASE-2)
	-Q2	For Dual-Redundant V net (10BASE-2)
	1	Single Power Supply
	2	Dual Power Supply
	0	Always 0
	1	100-120 V AC Power Supply
	2	220-240 V AC Power Supply
	4	24 V DC Power Supply
	0	Basic type
	1	With ISA Standard G3 option

Note: For compliance with EMC Standards, AVR10D must be installed in a keyed metallic cabinet.

■ ACCESSORIES AND SPARE PARTS

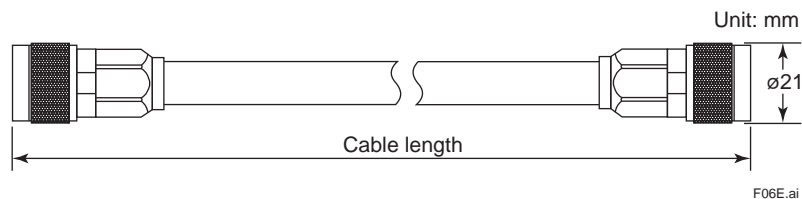
Parts Names	Parts Numbers	Description	Quantity	Remarks
Insulating bush	S9049PM	—	4	Accessory
Accessory assembly	S9768UK	AVR10D-□1	1	Accessory of VC401
Accessory assembly	S9768UK	AVR10D-□2	2	Accessory of VC401

Content of S9768UK

Parts Names	Parts Numbers	Description	Quantity	Remarks
Coaxial connector	A1120JA	—	1	T junction
Cover	T9072MB	—	1	
Cover	T9072MC	—	1	

■ V NET RELATED COMPONENTS

YCB111 V net Cable (10BASE-5 cable)



Nominal tolerances of cable length: +5%, -0%.

		Description
Model	YCB111	V net Cable (10BASE-5 cable)
Suffix Codes	-M003	Cable length 2.5 m
	-M005	Cable length 5 m
	-M008	Cable length 7.5 m
	-M□□□	Enter Cable length in □□□ every 5 m. Max. cable length 500 m (Suffix code: -M500).

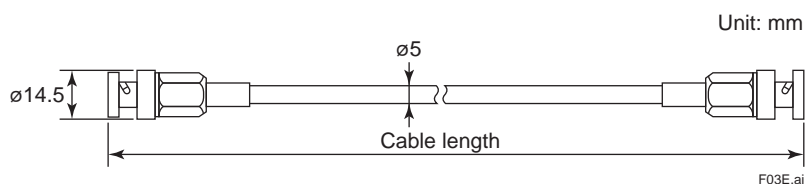
Note: A term from Ethernet "10BASE-5" is used to show wire size of V net cable simply.

V net specifications differ from Ethernet specifications.

Use this Yokogawa-specified cable.

Note: Six cores (All79MN) are attached.

YCB141 V net Cable (10BASE-2 cable)



Nominal tolerances of cable length: +5%, -0%.

		Description
Model	YCB141	V net Cable (10BASE-2 cable)
Suffix Codes	-M001	Cable length 1 m
	-M002	Cable length 2 m
	-M005	Cable length 5 m
	-M010	Cable length 10 m
	-M□□□	Enter Cable length in □□□ every 5 m. Max. cable length 185 m (Suffix code: -M185).
Option Code	/NL	Supports CSA Non-Incendive instrumentation

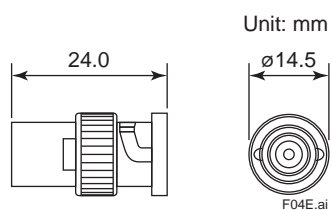
Note: A term from Ethernet "10BASE-2" is used to show wire size of V net cable simply.

V net specifications differ from Ethernet specifications.

Use this Yokogawa-specified cable.

Note: Use under the temperature environment (-20 to 70 °C).

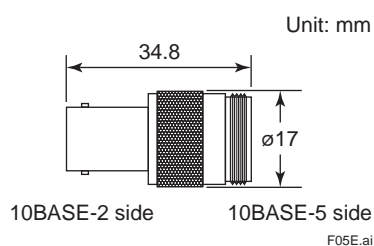
Note: Minimum bending radius of YCB141 is 50 mm.

YCB148 V net Terminator (for 10BASE-2 cable)**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.

		Description
Model	YCB148	V net Terminator (for 10BASE-2 cable)

YCB149 V net Converter Connector (10BASE-2/10BASE-5)**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.

		Description
Model	YCB149	V net Converter Connector (10BASE-2/10BASE-5)

Note: Insulation sheets, one T9072MD and one T9072ME, are attached.

■ APPLICABLE STANDARDS

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

■ ORDERING INFORMATION

Specify model and suffix codes.

■ TRADEMARK ACKNOWLEDGMENT

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