

General Specifications

GS 33J01N20-01EN

A2FVX1, A2NBX1, A2CUX1, AEPV7D
Field Control Kit,
FIO Node Kit
Input Power Cable Kit (For A2CUKT4)



[Release 6]

■ GENERAL

This General Specifications (GS) describes the model for ordering multi-product required for Field Control Unit (FCU), etc.

Select the MS-CODE according to applications and order the products in bulk. The model for ordering multi-product is supported by CENTUM VP R6.01 and later.

The model for ordering multi-product

Model	Name
A2FVX1	Field Control Kit
A2NBX1	FIO Node Kit
A2CUX1	AEPV7D Input Power Cable Kit (for A2CUKT4)

● Field Control Kit A2FVX1

Field Control Kit A2FVX1 includes a Base Plate (for FCU), Power Supply Modules and Processor Modules that are required for FCU. Power supply voltage, explosion protection, G3 option, dual-redundant configuration, etc. can be selected from the MS-CODE. You can select a control function for the Field Control Station during installation. Select a control function according to the system to be used. Refer to the following table for the control function and system details.

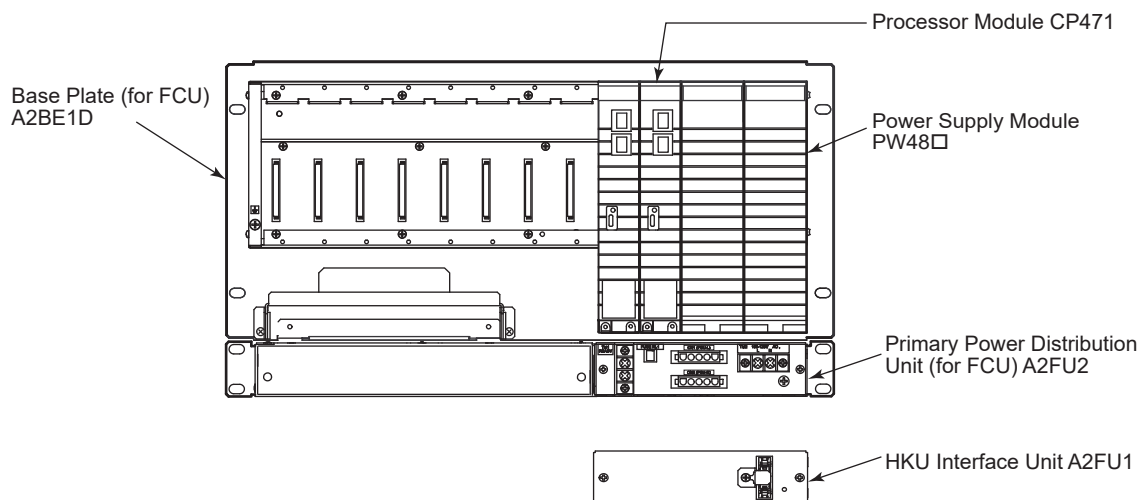
Control Function	GS No	GS Title	System
VP6F1700	GS 33J15C10-01EN	VP6F1700 Control Function for Field Control Station (for AFV30□/AFV40□)	FIO System
	GS 33J15A10-01EN	VP6F3100 Project I/O License	
VP6F1800	GS 33J15C15-01EN	VP6F1800 Control Function for Field Control Station (for AFV50□)	N-IO System
	GS 33J15A10-01EN	VP6F3100 Project I/O License	
VP6F1900	GS 33J15C20-01EN	VP6F1900 Control Function for Field Control Station (for AFV70□)	RIO System up grade
	GS 33J15A10-01EN	VP6F3100 Project I/O License	
VP6F8100	GS 33J15C80-01EN	VP6F8100 Compressor Control for FCS, VP6F8105 Compressor Control for FCS Simulator, Overview of Compressor Control System (Appendix)	Compressor Control System (*1)

*1: For Compressor Control System details, please refer to the reference document.

Refer to the GS "Base Plate (for FCU)" (GS 33J60E60-01EN) for details on hardware specifications and module installation restrictions. Refer to the IM "Field Control Stations"(IM 33J50E10-01EN) and "FCS for RIO System Upgrade"(IM 33J64A10-01EN) for details on handling.

Products in A2FVX1

The Field Control Kit A2FVX1 includes Base Plate (for FCU) A2BE1D, Power Supply Module PW48□, Processor Module CP471, HKU Interface Unit A2FU1 and Primary Power Distribution Unit (for FCU) A2FU2. These products are shipped as assembled. Refer to “GS 33J01N21-01EN” for details on the products that are included in each MS-CODE.



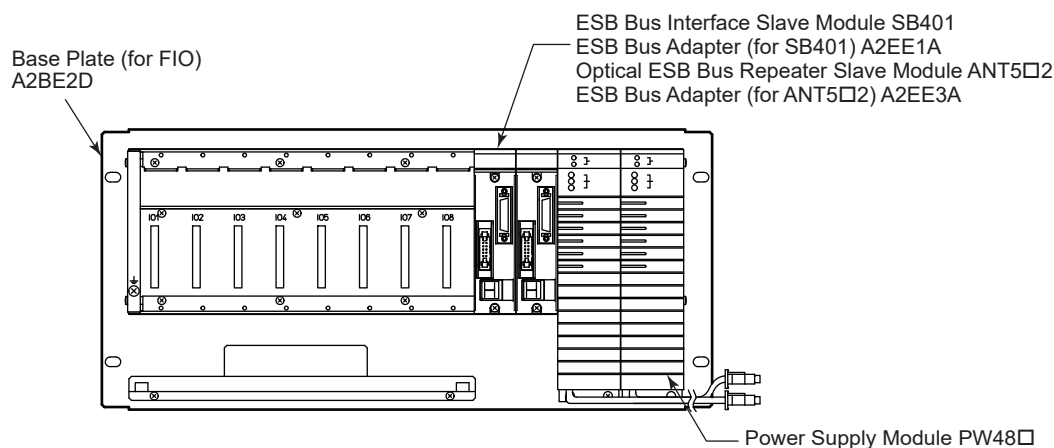
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● FIO Node Kit A2NBX1

The FIO Node Kit A2NBX1 includes a Base Plate (for FIO), Power Supply Modules and Bus interface Modules that are required for FIO Node Unit (ESB Bus Node Unit and Optical ESB Bus Node Unit) and Optical ESB Bus Repeater Unit. Power supply voltage, explosion protection, G3 option, Bus Interface Module, etc. can be selected from the MS-CODE. For the number of FIO Node Unit connectable, refer to “■ System Configurations”. And refer to “Base Plate (for FIO)” (GS 33J60G30) for details on hardware specifications and module installation restrictions.

Products in A2NBX1

The FIO Node Kit A2NBX1 includes the Base Plate (for FIO) A2BE2D, Power Supply Module PW48□, ESB Bus Interface Slave Module SB401 and Optical ESB Bus Repeater Slave Module ANT5□2. These products are shipped as assembled. Refer to “GS 33J01N21-01EN” for details on the products that are included in each MS-CODE.



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● AEPV7D Input Power Cable Kit (for A2CUKT4) A2CUX1

The AEPV7D Input Power Cable Kit (for A2CUKT4) A2CUX1 includes the cables that are required for installing A2CUKT4. The number of input power cables to connect A2CUKT4 Main PDB and AEPV7D depends on the MS-CODE of A2CUKT4. A2CUX1 provides cables that corresponds to A2CUKT4 configurations. Refer to “GS 33J01N21-01EN” for details on the products including in each the MS-CODE. And refer to “Cabinet Utility Kit A2CUKT4 GS 33J60K70-01EN “ when you order individual input power cables.

■ SYSTEM CONFIGURATION

● FIO System

The following figure shows the configuration example of an FIO system that comprises of FCU and FIO nodes.

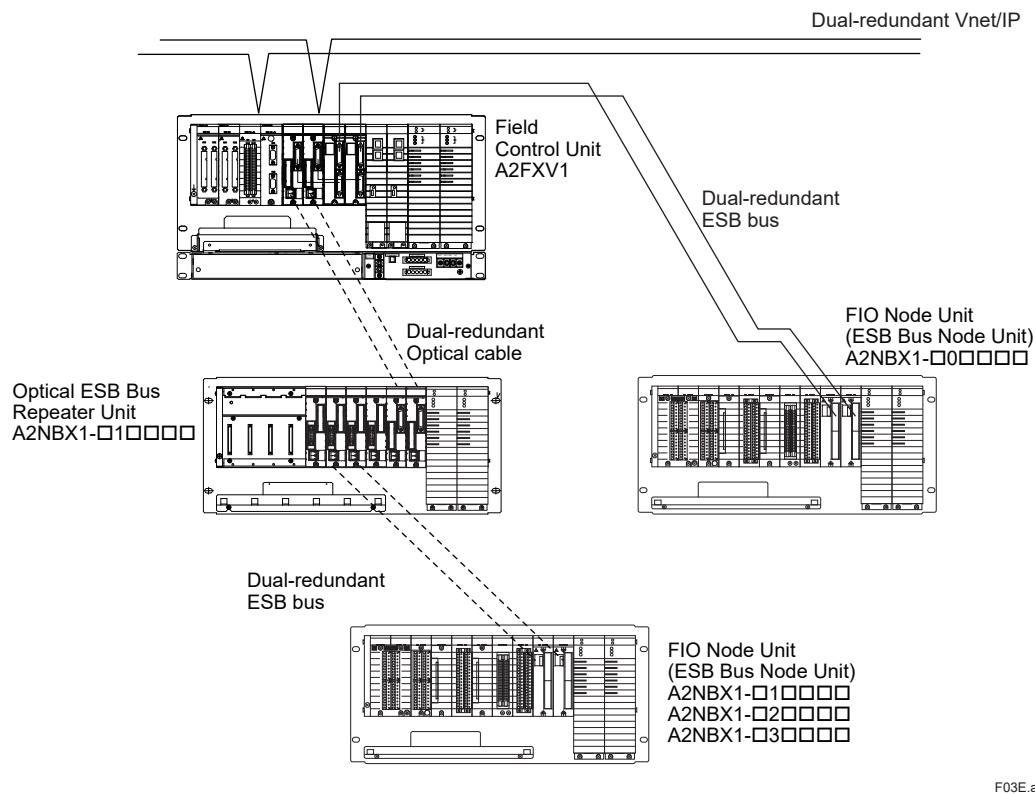


Figure FIO system configuration

Number of Node Connections

This section mentions the number of nodes that each FIO Node Unit can connect to. There is no limit to the number of nodes specified by the node expansion license, but the application capacity shall be selected as specified by the Software License (VP6F1700).

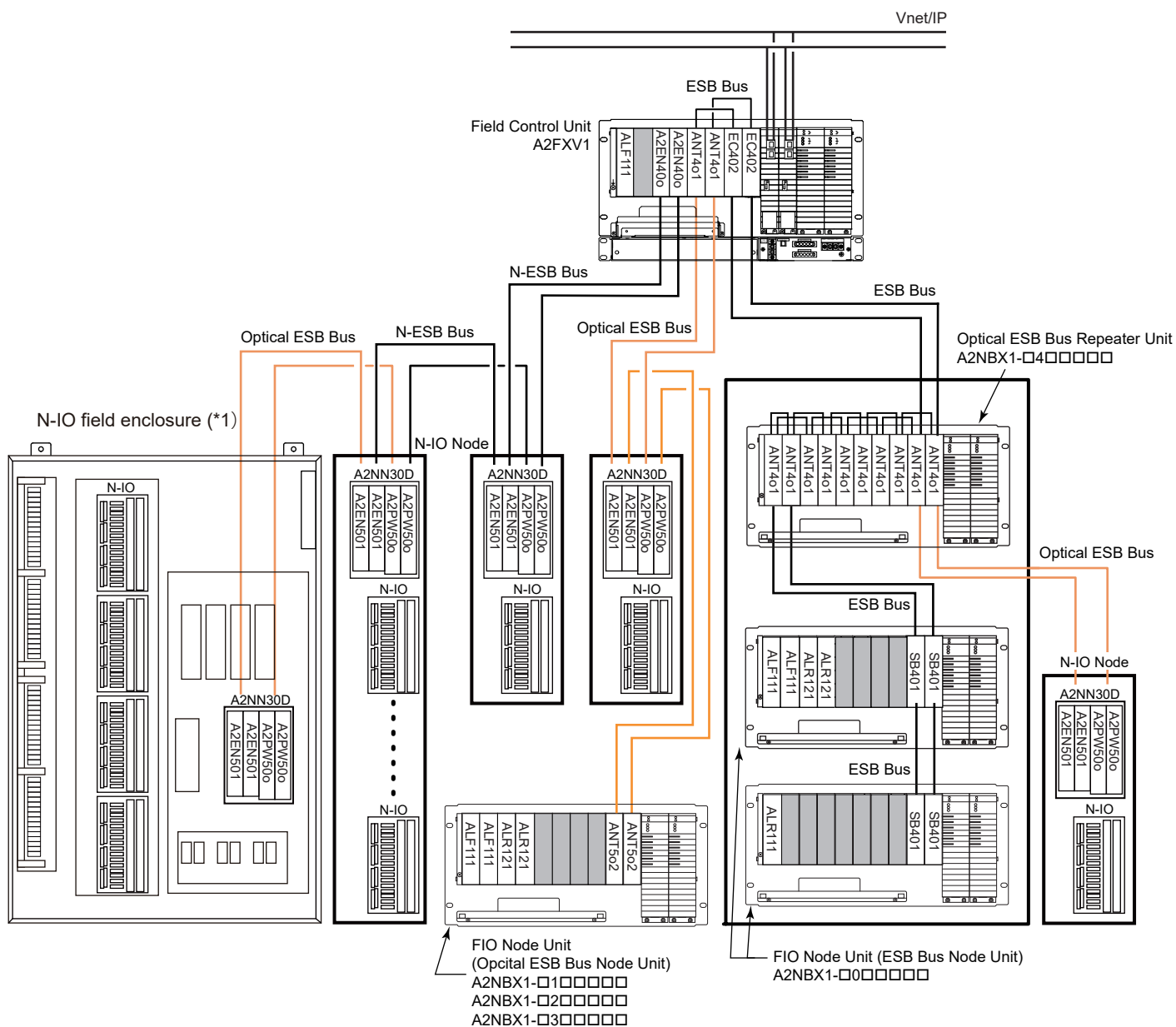
Control Function (VP6F1700)

FIO Node Unit ESB Bus Node Unit (Optical ESB Bus Node Unit)	Max. 13/ FCU
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Refer to “Base Plate (for FCU)” (GS 33J60E60-01EN) and “Base Plate (for FIO)” (GS 33J60G30-01EN) for details on module installation restrictions.

● N-IO System

The following figure shows the configuration example of an N-IO system that comprises of FCU, N-IO and FIO nodes.



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N-IO: I/O Unit for N-IO

ANT4□1: ANT4□1-□E, -□F

*1: For N-IO field enclosure, refer to the GS "N-IO field enclosure" (GS 33J62R10-01EN)

Figure N-IO system configuration

Installation Restrictions for Node Units

An N-IO node can be connected under EC4□1, A2EN40□, and ANT4□1 installed in A2FV50□ via an N-ESB bus or optical ESB bus. An FIO node can be connected only under EC4□1 and ANT4□1 installed in A2FV50□ via an ESB bus or optical ESB bus.

Number of Node Connections

This section mentions the number of nodes that each N-IO and FIO Node Unit can connect to. There is no limit to the number of nodes specified by the node expansion license, but the application capacity shall be selected as specified by the Software License (VP6F1800).

Control Function (VP6F1800)

N-IO node (*1)	Max. 32 / FCU
N-IO I/O unit (*2)	Max. 108 / FCU
FIO Node Unit (ESB Bus Node Unit, Optical ESB Bus Node Unit)	Max. 13 / FCU

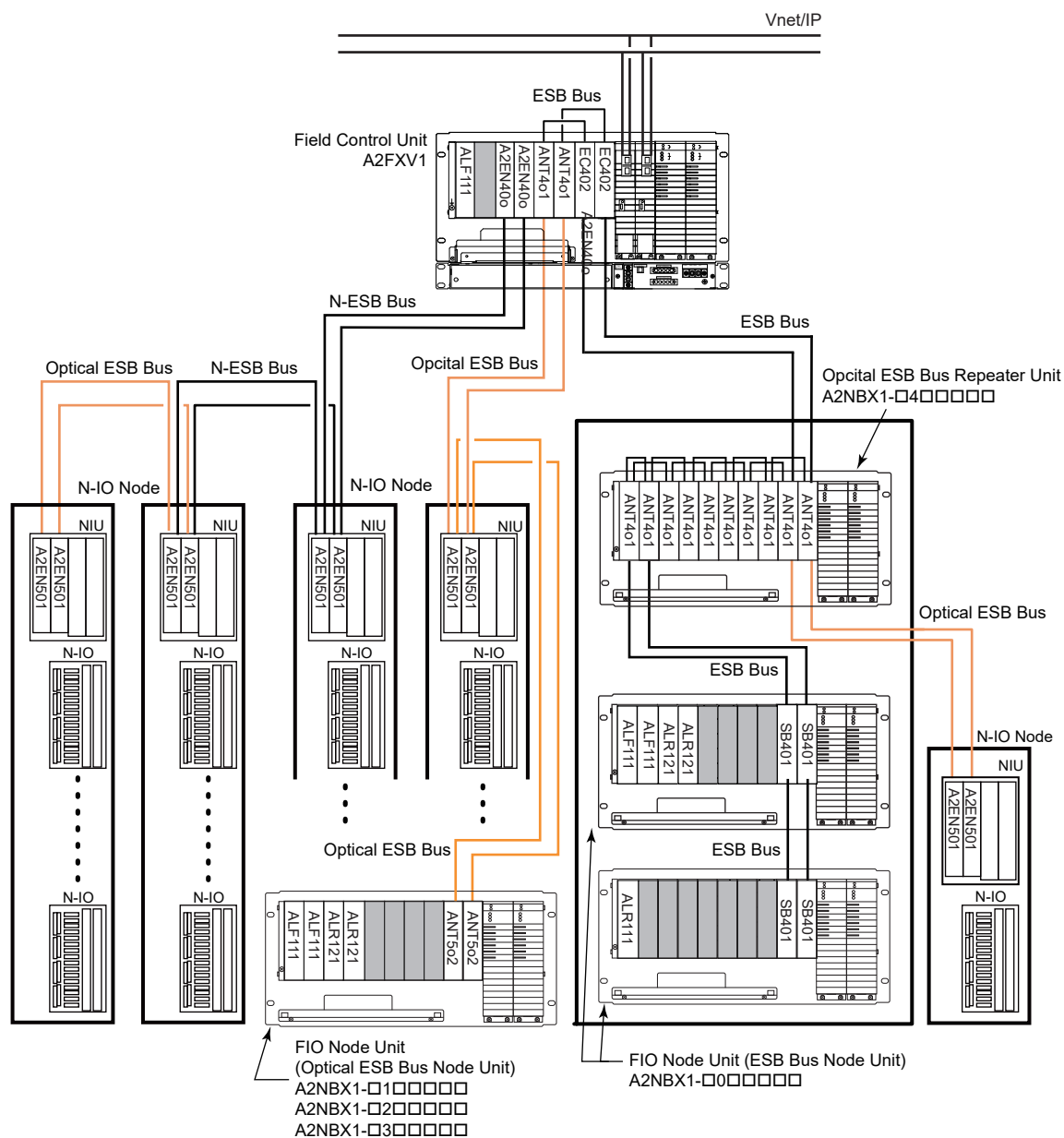
*1: An N-IO node consists of a node interface unit, I/O unit for N-IO, and associated cables. For details, refer to the GS "N-IO System Overview" (GS 33J62A10-01EN).

*2: A N-IO I/O unit consists of an I/O module and a base plate for N-IO. For details, refer to the GS "N-IO System Overview" (GS 33J62A10-01EN).

Refer to the GS "Base Plate (for FCU)" (GS 33J60E60-01EN) and "Base Plate (for FIO)" (GS 33J60G30-01EN) for details on module installation restrictions.

● N-IO System (RIO System Upgrade)

The following figure shows a configuration example of an N-IO system that comprises of FCU, N-IO and FIO nodes.



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NIU: Node interface unit (A2NN10D, A2NN20D or A2NN30D)

N-IO: N-IO I/O unit

ANT4□1: ANT4□1-□E, -□F

ANT5□2: AMT5□2-□E, -□F

Figure N-IO system configuration

Installation Restrictions for Node Units

An N-IO node can be connected to EC4□1, A2EN40□, and ANT4□1 installed in the A2FV70□ via an N-ESB bus or an optical ESB bus. An FIO node can be connected only to EC4□1 and ANT4□1 installed in the A2FV70□ via an ESB bus or an optical ESB bus.

Number of Node Connections

This section mentions the number of nodes that each N-IO and FIO Node Unit can connect to. There is no limit to the number of nodes specified by the node expansion license, but the application capacity shall be selected as specified by the Software License (VP6F1900).

Control Function (VP6F1900)

Number of N-IO node (*1)	Max. 8 / FCU
Number of N-IO I/O unit (*2)	Max. 40 / FCU
Sum of FIO Node Units (ESB Bus Node Unit, Optical ESB Bus Node Unit)	Max. 8 / FCU
Sum of ALR111/ALR121/ALE111/ALP121/A2LP131/A2LP141 modules	Max. 32 (16 pairs in dual-redundant configuration) / FCU
Sum of ALF111 modules	Max. 64 (32 pairs in dual-redundant configuration) / FCU
Sum of Communication Modules to be mounted (*3)	Max. 64 / FCU (*1)

- *1: An N-IO node consists of a node interface unit and N-IO I/O units. For details, refer to the GS "N-IO Node (for RIO System Upgrade)" (GS 33J64F10-01EN)
- *2: An N-IO I/O unit consists of I/O modules and I/O adaptors. For details, refer to the GS "N-IO Node (for RIO System Upgrade)" (GS 33J64F10-01EN)
- *3: This is the sum of ALR111, ALR121, ALE111, ALF111, ALP121, A2LP131, and A2LP141 modules. For details, refer to the GS "VP6F1900 Control Function for Field Control Station (for A2FV70□)" (GS 33J15C20-01EN) and the GS "VP6F3100 Project I/O License" (GS 33J15A10-01EN).

Refer to "Base Plate (for FCU) A2BE1D GS 33J60E60" and "Base Plate (for FIO) A2BE2D GS 33J60G30" for details on module installation restrictions.

MODELS AND SUFFIX CODES**Field Control Kit A2FVX1**

		Description
Model	A2FVX1	Field Control Kit
Suffix Codes	-S	Single processor module, single power supply
	-D	Dual redundant processor module, dual redundant 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	No explosion protection
	1	Explosion protection
	0	Basic type
	1	ISA Standard G3 option
	0	Always 0
Option Codes	/HKU	HKU interface (*1) (*2)
	/ATDOC	Explosion protection manual (*3)

- *1: When used in combination with ACUKT□ or A2CUKT□, specify this option code "/HKU". ACUKT□ and A2CUKT□ can be selected only when the control function is VP6F1700 (For AFV30□, AFV40□) or VP6F1900 (For A2FV70□).
- *2: FCU is not compliant with explosion protection standards and marine standards when "/HKU" is selected. Refer to the GS "Integrated Production Control System CENTUM VP System Overview" (GS 33J01A10-01EN).
- *3: Select the option code "/ATDOC" to follow the ATEX Directive and UKEX Regulation for use in potentially explosive atmospheres.

FIO Node Kit A2NBX1

		Description
Model	A2NBX1	FIO Node Kit
Suffix Codes	-S	Single power supply
	-D	Dual redundant power supply
	0	ESB Bus interface (SB401)
	1	Optical ESB Bus interface for 5km (ANT502)
	2	Optical ESB Bus interface for 5km to 50km (ANT512)
	3	Optical ESB Bus MMF interface for 4km (ANT522)
	4	No bus interface (for Optical ESB Bus Repeater Unit)
	1	100 - 120 V AC power supply
	2	220 - 240 V AC power supply
	4	24 V DC power supply
	0	No explosion protection
	1	Explosion protection
	0	Basic type
	3	ISA Standard G3 option with temperature (-20°C to 70°C)
	0	Extendable ESB Bus adapter (for SB401, ANT5□2)
	1	Terminated ESB Bus adapter (for SB401, ANT5□2)
	2	Extendable ESB Bus adapter with HKU I/F (for ANT5□2) (*1)
	3	Terminated ESB Bus adapter with HKU I/F (for ANT5□2) (*1)
	4	No ESB Bus adapter
	0	Always 0
Option Code	/ATDOC	Explosion protection manual (*2)

*1: It is only available when "Optical ESB Bus interface for 5km (A2NBX1-□1□□□□□)" or "Optical ESB Bus interface for 5km to 50km (A2NBX1-□2□□□□□)" is selected.

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

AEPV7D Input Power Cable Kit (For A2CUKT4) A2CUX1

		Description
Model	A2CUX1	AEPV7D Input Power Cable Kit (For A2CUKT4)
Suffix Codes	-A	Single power supply/ 100 - 120 V AC power supply / Kit for front and rear of cabinet
	-B	Single power supply/ 100 - 120 V AC power supply / Kit for front of cabinet
	-C	Single power supply/ 100 - 120 V AC power supply / Kit for rear of cabinet
	-D	Single power supply/ 220 - 240 V AC power supply / Kit for front and rear of cabinet
	-E	Single power supply/ 220 - 240 V AC power supply / Kit for front of cabinet
	-F	Single power supply/ 220 - 240 V AC power supply / Kit for rear of cabinet
	-G	Single power supply/ 24 V DC power supply / Kit for front and rear of cabinet
	-H	Single power supply/ 24 V DC power supply / Kit for front of cabinet
	-J	Single power supply/ 24 V DC power supply / Kit for rear of cabinet
	-K	Dual power supply/ 100 - 120 V AC power supply / Kit for front and rear of cabinet
	-L	Dual power supply/ 100 - 120 V AC power supply / Kit for front of cabinet
	-M	Dual power supply/ 100 - 120 V AC power supply / Kit for rear of cabinet
	-N	Dual power supply/ 220 - 240 V AC power supply / Kit for front and rear of cabinet
	-P	Dual power supply/ 220 - 240 V AC power supply / Kit for front of cabinet
	-Q	Dual power supply/ 220 - 240 V AC power supply / Kit for rear of cabinet
	-R	Dual power supply/ 24 V DC power supply / Kit for front and rear of cabinet
	-S	Dual power supply/ 24 V DC power supply / Kit for front of cabinet
	-T	Dual power supply/ 24 V DC power supply / Kit for rear of cabinet
	0	Always 0
	0	Always 0
	0	Always 0

■ Contents of the model for ordering multi-products

Refer to “GS 33J01N21-01EN” for detail on the products included in the model for ordering multi-products.

■ SPECIFICATIONS AND CONFORMING STANDARDS

A certification standard under the Kit model code of A2FVX1, A2NBX1 and A2CUX1 is not available.

Refer to the following General Specifications, for more details about the product specifications and certification standards for the hardware that is included in the model for ordering multi-products.

GS 33J01A10-01EN	Integrated Production Control System CENTUM VP System Overview
GS 33J60E60-01EN	A2BE1D Base Plate (for FCU)
GS 33J60G30-01EN	A2BE2D Base Plate (for FIO)
GS 33J60E70-01EN	PW481,PW482,PW484 Power Supply Module
GS 33J60E30-01EN	CP471 Processor Module
GS33J60G40-01EN	SB401 ESB Bus Interface Slave Module
GS 33J60F51-01EN	ANT401, ANT502 Optical ESB Bus Repeater Modules for 5km (for N-IO/FIO)
GS 33J60F52-01EN	ANT411, ANT512 Optical ESB Bus Repeater Modules for 5km to 50km (for N-IO/FIO)
GS 33J60F55-01EN	ANT421, ANT522 Optical ESB Bus Repeater Module for 4 km (for N-IO/FIO, Multimode Fiber)

■ ORDERING INFORMATION

Specify model and suffix code(s) and option code(s).

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