Yokogawa EC401-50

1-Port ESB Bus Coupler Module

Yokogawa EC401-50 provides the ESB communication link between a CENTUM field control unit and supported I/O nodes, allowing field I/O data to pass through the system bus. Its single front ESB port serves one node connection path, and the module can be used in a single or dual-redundant arrangement. EC401-50 is an ESB bus coupler, not an Ethernet switch or a field analog I/O card. The hardware Style is particularly important when it is used with a CP471 processor.



Technical Specifications

Product Identity	
Manufacturer	Yokogawa
Complete model	EC401-50
Dimensions (W × H × D)	32.8 × 130 × 129.5 mm
Functional Configuration	
Function	ESB bus coupler for N-IO/FIO
Ports	1 ESB bus port
Maximum connected nodes	9 specified node/interface units
Applicable node/interface types	ANB10S/D, ANT401, ANT411, ANT421
CP471 compatibility	EC401 hardware Style S3 or later
Single / redundant arrangement	Single module in slot 7; redundant modules in slots 7 and 8
Performance & Power	
I/O data transmission speed	128 Mbps
Maximum ESB cable length	10 m
Current consumption	0.5 A
Environment	
Protection option	Standard version without explosion protection

Selected original manufacturer pages follow on pages 3–4.

Celine unity@mvme.cn +86-18020776786

Compatibility & Selection Guide

System compatibility. EC401-50 supports the specified AFV30/AFV40, A2FV50 and A2FV70 field control units. A CP471 configuration requires EC401 hardware Style S3 or later. For the supported SEM function on Vnet/IP, EC401 Style 2 or later is required. Confirm the processor, system release, connected node types and redundancy arrangement before selecting a spare.

Wiring & Installation Reference

Signal and connection checks

ESB port. One bus port · Use the specified ESB cable

Cable length. 10 m maximum · Check the complete ESB cable run

Node count. Up to 9 · Only the specified node/interface types

Module fit and configuration

Single configuration.. Install the coupler in slot 7 with the specified dummy module in slot 8.

Dual-redundant configuration.. Use the specified pair in slots 7 and 8; confirm the existing node and bus arrangement.

Check the system conditions.. For a CP471 system, require EC401 Style S3 or later; also match the one-port ESB topology, node types and redundancy arrangement.

Installation precautions. Verify EC401 Style S3 or later when the processor is CP471. In a single configuration use slot 7 with the specified dummy module in slot 8; use slots 7 and 8 for the redundant arrangement.

View connection specifications (PDF) · PDF page 3 | View mounting dimensions (PDF) · PDF page 4

Manufacturer sources: Model EC401 ESB Bus Coupler Module (for N-IO/FIO, 1-Port).

General Specifications

Model EC401
ESB Bus Coupler Module
(for N-IO/FIO, 1-Port)

CENTUM VP

GS 33J60E50-01EN

[Release 6]

■ GENERAL

The ESB Bus Coupler Module is a communication module to connect the Field Control Unit and the Node Unit for ESB Bus via the ESB bus.

This module can be installed in the Field Control Unit for FIO (AFV30S, AFV30D, AFV40S, AFV40D, A2FV50S, A2FV50D, A2FV70S, A2FV70D).

By installing two modules in the Field Control Unit for FIO, dual-redundant ESB bus can be configured.

■ STANDARD SPECIFICATIONS

Function: ESB bus interface function
Number of connectable units: Max. 9 units (*1)
Transmission speed: 128 Mbps (I/O module data transmission)
Transmission distance: Max. 10 m
Current consumption: 0.5 A
Weight: Approx. 0.24 kg

*1: The number of ANB10S, ANB10D, ANT401, ANT411, and ANT421 which can be connected to EC401 is up to 9.

If ESB bus is non- redundant, the ESB Bus Coupler Module needs to be installed in the 7th slot of AFV30S, AFV30D, AFV40S, AFV40D, A2FV50S, A2FV50D, A2FV70S, A2FV70D, and slot 8th must be covered by a dummy module.

And when ESB bus is dual-redundant, the modules need to be installed in both the 7th and 8th slots.

Only the style code S3 or later of EC401 can be combined with the processor module CP471.

■ REQUIREMENTS FOR USING SEM (Sequence of Events Manager)

To use SEM for Vnet/IP, EC401 should be style 2 or later. (Style No. is indicated on the component tag)

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

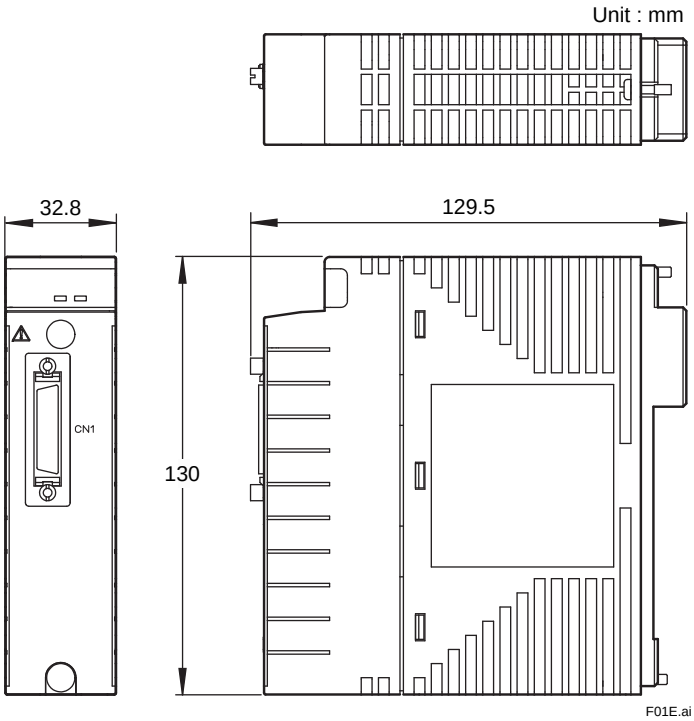
YOKOGAWA

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

GS 33J60E50-01EN
©Copyright Feb. 2015 (YK)
5th Edition Nov. 5, 2020 (YK)

■ EXTERNAL DIMENSION

Unit : mm



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.

■ MODEL AND SUFFIX CODES

		Description
Model	EC401	ESB Bus Coupler Module (for N-IO/FIO, 1-Port)
Suffix Codes	-5	Standard type with no explosion protection
	-E	Standard type with explosion protection
	0	Basic type
	1	With ISA Standard G3 option

■ APPLICABLE STANDARDS

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

■ ORDERING INFORMATION

Specify the model and suffix code(s).
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.

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