Yokogawa ADV151-P60

32-Channel 24V DC Digital Input Module

Yokogawa ADV151-P60 receives 32 discrete field signals for a CENTUM FIO control system, providing a concentrated interface for status contacts and pushbutton duties. Its 24 V DC sink/source input arrangement supports common field-signalling applications, while the P version adds pushbutton input capability and the 6 suffix provides status display. ADV151-P60 should be selected by its input type and configured point mode, rather than by channel count alone; it is distinct from digital output and sequence-of-events variants.



Technical Specifications

Product Identity	
Manufacturer	Yokogawa
Complete model	ADV151-P60
Dimensions (W × H × D)	32.8 × 130 × 107.5 mm; module only
Functional Configuration	
Function	Digital input; status or pushbutton input
Channels	32
Input type	24 V DC sink/source; all input signals use the same polarity
Common arrangement	Common every 16 channels
ON signal	18–26.4 V DC
OFF signal	5 V DC or less
Performance & Power	
Maximum allowable input	30 V DC
Input current	4.1 mA ±20% per channel
Response / pushbutton limits	Status ≤8 ms; minimum ON 20 ms; maximum cycle 25 Hz
Maximum 5 V consumption	500 mA
Environment	
Protection option	Input-status display version without explosion protection

Selected original manufacturer pages follow on pages 3–5.

Celine unity@mvme.cn +86-18020776786

Compatibility & Selection Guide

System compatibility. ADV151-P60 is a CENTUM FIO digital input module for the applicable field control units and ANB10/ANB11 node arrangements. Select the status-input or pushbutton point-mode pattern in the system configuration. P denotes pushbutton support, 6 denotes status display without explosion protection and 0 the basic type. Check terminal hardware and installed hardware Style before replacement.

Wiring & Installation Reference

Signal and connection checks

ON input. 18–26.4 V DC · Maximum allowable 30 V DC

OFF input. ≤5 V DC · Confirm field-device residual voltage

Common. 16 channels per group · All inputs must use the same polarity

Module fit and configuration

Confirm the system position.. Match the field control unit, node type, complete module code and existing configuration before replacement.

Match termination and dimensions.. Use the specified terminal/cable interface and check the module envelope against the installed assembly.

Verify the configured function.. Confirm -P60 pushbutton capability, status display, hardware Style and input polarity; do not substitute an output or SOE-capture version.

Installation precautions. Verify field polarity and common grouping before energizing input circuits. Do not exceed the 30 V DC allowable input or apply output-driver wiring to this input module.

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

Manufacturer sources: Digital I/O Modules (for FIO).

General Specifications

Digital I/O Modules (for FIO)

CENTUM VP

GS 33J60F70-01EN

[Release 6]

■ GENERAL

This GS covers the hardware specifications of the Digital I/O Modules (FIO) that can be installed in the ESB Bus Node Unit (ANB10S, ANB10D), Optical ESB Bus Node Unit (ANB11S, ANB11D), and the Field Control Unit (AFV30S, AFV30D, AFV40S, AFV40D).

■ STANDARD SPECIFICATIONS

● Digital Input Modules

The Digital Input Modules receive 32-channel or 64-channel 24 V DC ON/OFF signals.
The ADV151 and ADV161 can be used in dual redundant configuration.

Item	Specifications	
Model	**ADV151-P/ADV151-E (*1)**	**ADV161**
Number of input channels	32	64
Rated input voltage (*2)	24 V DC (sink/source)	24 V DC (sink/source)
Input ON voltage	18 to 26.4 V DC	20 to 26.4 V DC
Input OFF voltage	5.0 V DC or less	5.0 V DC or less
Input current (at rated input voltage)	4.1 mA±20 % / channel	2.5 mA±20 % / channel
Maximum allowable input voltage	30.0 V DC	30.0 V DC
Withstanding voltage	Between input signal and system: 2 kV AC, For 1 minute Between commons: 500 V AC, For 1 minute, common every 16-channel (*3)	
Functions		
Status input	Function for detecting ON/OFF status	Function for detecting ON/OFF status
Pushbutton input	Function for counting the pushbutton edges	Function for counting the pushbutton edges
SOE input	Function for capturing the SOE data	—
Input response time	8 ms or less (for status input)	
Minimum ON detection time	20 ms (for pushbutton input)	
Maximum ON/OFF cycle	25 Hz (for pushbutton input)	
Maximum current consumption	500 mA (5 V DC)	550 mA (5 V DC)
Weight	Approx. 0.30 kg	Approx. 0.30 kg
External connection	Pressure clamp terminal, Dedicated cable (AKB331), MIL connector cable	Dedicated cable (AKB337), MIL connector cable

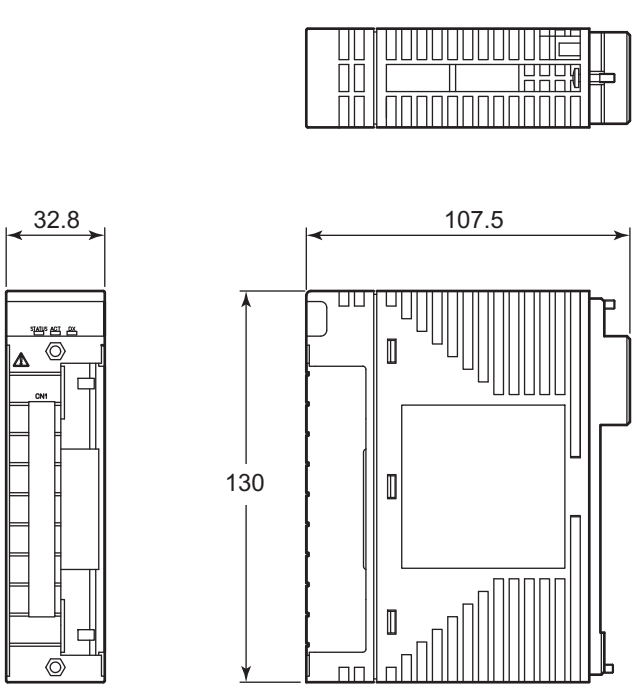
*1: ADV151-E cannot be installed in the ER Bus Node Unit.
*2: ADV151 and ADV161 are common every 16-channel. All voltage input signals to be connected (24 V DC) must be in the same polarity.
*3: The withstanding voltage for using a dedicated cable is 500 V AC (between input signal and system).
The withstanding voltage for using MIL connector cable depends on the electrical specifications of its cable.

Yokogawa Electric Corporation
2-9-32, Nakacho, Musashino-shi, Tokyo, 180-8750 Japan
GS 33J60F70-01EN
©Copyright Feb. 2015 (YK)
7th Edition Jan. 21, 2019 (YK)

■ EXTERNAL DIMENSIONS

● ADV151, ADV551 Digital I/O Module

Unit: mm



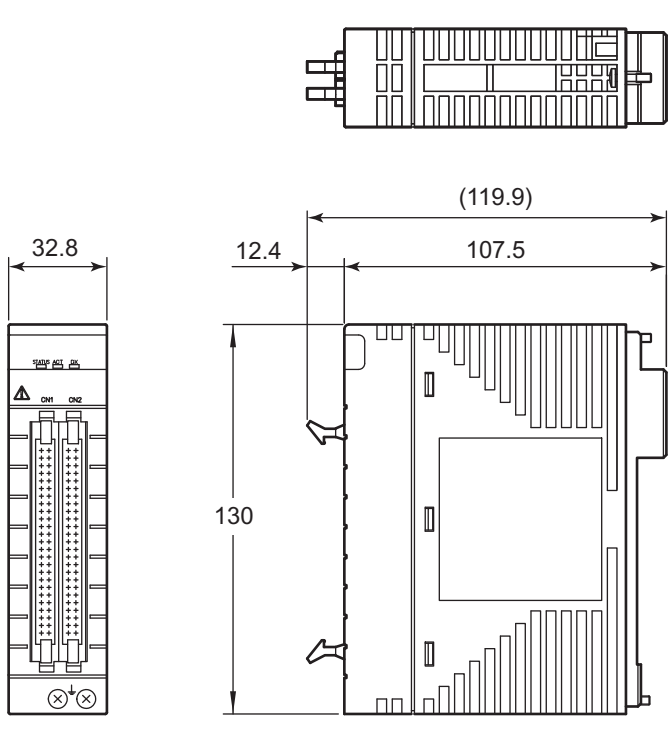
Nominal Tolerances :

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.

● ADV161, ADV561 Digital I/O Module

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.

All Rights Reserved. Copyright © 2015, Yokogawa Electric Corporation

■ MODELS AND SUFFIX CODES

Digital Input Module

		Description
Model	ADV151	Digital Input Module (32-channel, 24 V DC, Isolated)
Suffix Codes	-P	With pushbutton input
	-E	With SOE capture (*1)
	5	Without status display; with no explosion protection
	6	With status display; with no explosion protection
	E	Without status display; with explosion protection
	F	With status display; with explosion protection
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
Option Codes	/D5A00	With KS Cable Interface Adapter for 32-channel digital [Model: ATD5A-00]
	/B5S00	With Pressure Clamp Terminal Block for Digital Input [Model: ATB5S-00]
	/B5S10	With Pressure Clamp Terminal Block for Digital Input (surge absorber) [Model: ATB5S-10]
	/B5D00	With Dual Pressure Clamp Terminal Block for Digital Input [Model: ATB5D-00]
	/B5D10	With Dual Pressure Clamp Terminal Block for Digital Input (surge absorber) [Model: ATB5D-10]
	/CCC01	With Connector Cover for MIL Cable [Model: ACCC01]

*1: Please refer to GS 33J30D10-01EN when using it.

		Description
Model	ADV161	Digital Input Module (64-channel, 24 V DC, Isolated)
Suffix Codes	-P	With pushbutton input
	5	Without status display; with no explosion protection
	E	Without status display; with explosion protection
	0	Basic type
	1	With ISA Standard G3 option

Digital Output Module

		Description
Model	ADV551	Digital Output Module (32-channel, 24 V DC, Isolated)
Suffix Codes	-P	With pulse width output function/time-proportional output function
	5	Without status display; with no explosion protection
	6	With status display; with no explosion protection
	E	Without status display; with explosion protection
	F	With status display; with explosion protection
	0	Basic type
	3	With ISA Standard G3 option and temperature (-20 to 70 °C) option
Option Codes	/D5A00	With KS Cable Interface Adapter for 32-channel Digital [Model : ATD5A-00]
	/D5S00	With Pressure Clamp Terminal Block for Digital Output [Model : ATD5S-00]
	/D5S10	With Pressure Clamp Terminal Block for Digital Output (surge absorber) [Model : ATD5S-10]
	/D5D00	With Dual Pressure Clamp Terminal Block for Digital Output [Model : ATD5D-00]
	/D5D10	With Dual Pressure Clamp Terminal Block for Digital Output (surge absorber) [Model : ATD5D-10]
	/CCC01	With Connector Cover for MIL Cable [Model : ACCC01]

		Description
Model	ADV561	Digital Output Module (64-channel, 24 V DC, Isolated)
Suffix Codes	-P	With pulse width output function/time-proportional output function
	5	Without status display; with no explosion protection
	E	Without status display; with explosion protection
	0	Basic type
	1	With ISA Standard G3 option

All Rights Reserved. Copyright © 2015, Yokogawa Electric Corporation