

Yokogawa ADV869-P00 S1

Digital I/O Module for Compatible ST5

Product scope

- Combines 32 status inputs and 32 transistor outputs in one ST5-compatible module.
- Uses common-minus isolation groups of 16 channels and a dedicated KS9 cable.
- Supports status, pulse-width and time-proportioning output assignments.
- Requires exact channel, common and field-load verification before replacement.

Manufacturer source

Yokogawa General Specifications GS 33J60F70-01EN, Digital I/O Modules (FIO).

The enclosed record and retained manufacturer pages identify the exact product and explain its function, operating principle, application and critical matching requirements.

Request a fast quote	Product reference	
Email: info@apterpower.com Phone: +86 18106909650 apter.com/inquiry.php	Yokogawa ADV869-P00 S1	

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Yokogawa ADV869-P00 S1

Digital I/O Module for Compatible ST5

Manufacturer-source product record

This record consolidates exact-model facts from the manufacturer references listed below. It is included to identify the ordering configuration before the retained source pages.

I/O channels	32 status inputs and 32 transistor outputs
Isolation grouping	Common minus side every 16 channels
Contact-input OFF state	100 kOhm or more
Contact-input ON state	200 ohm or less
Minimum short-circuit contact current	1.25 mA
Voltage-input OFF state	4.5 to 25 V DC
Voltage-input ON state	+/-1 V DC, 200 ohm or less
Status-input response	8 ms
Output type	Transistor contact
Output rating	30 V DC, 100 mA for inductive or resistive load
Output response	16 ms or less
Pulse width	8 ms to 7200 s
Pulse resolution	8 ms plus up to 1 ms ON/OFF delay
Current consumption	800 mA at 5 V DC
External connection	Dedicated KS9 cable
Compatible card	ST5 compatible
Dimensions	32.8 x 127.2 x 130 mm
Approximate weight	0.30 kg

Official references

- Yokogawa General Specifications GS 33J60F70-01EN, Digital I/O Modules (FIO).
- Official source: <https://web-material3.yokogawa.com/GS33J60F70-01EN.pdf>

Only the exact configuration shown above is represented. Adjacent model variants, optional assemblies and system accessories are not treated as part of this ordering identity.

Function, operating principle and application

The notes below explain how this product is used and how its documented signal, power or control path operates. They remain limited to the manufacturer evidence for this model.

Function

The module replaces the signal role of an ST5-compatible interface by combining 32 status-input points and 32 transistor-output points in one CENTUM VP FIO assembly.

Input operation

Dry-contact or voltage states are evaluated against the documented ON and OFF thresholds. Each input state is transferred to the control system on the published 8 ms response basis.

Output operation

The controller writes status, pulse-width or time-proportioning commands to the output points. Transistor contacts then switch the connected 30 V DC field loads within the stated current limit.

Channel assignment

Input points occupy channels 1 through 32, while output functions use channels 33 through 64. Pulse-width operation uses contiguous terminal pairs beginning with an odd-numbered terminal.

Installation boundary

Use the dedicated KS9 cable, preserve the common-minus grouping every 16 channels and fit suppression diodes when driving DC relays. The complete P00/S1 execution must be checked against the installed node records.

● Digital I/O Modules (CENTUM-ST Compatible)

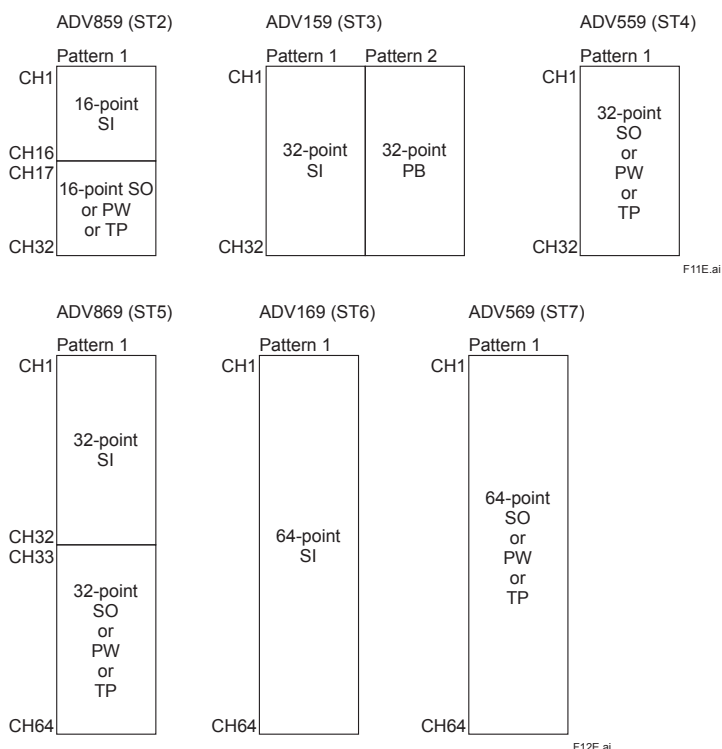
The Digital I/O Modules (CENTUM-ST Compatible) receive contact or voltage status signals from the field, and/or output status signals to the field via transistor contacts.

Item Model	Specifications		
	ADV859	ADV159	ADV559
Number of I/O channels	16-channel input, 16-channel output	32-channel input	32-channel output
Signal isolation	Isolated channels	Isolated channels	Isolated channels
Input signal	Contact input: OFF signal 100 kΩ or more ON signal 200 Ω or less Minimum current value when contact is short-circuited: 1.25 mA Voltage input: OFF signal 4.5 to 25 V DC ON signal ±1 V DC, 200 Ω or less		—
Input contact rating	5 V DC, 20 mA or more		—
Pushbutton input function	Not supported	Supported	—
Input response time	8 ms (for status input)	8 ms (for status input)	—
Minimum ON detection time	—	20 ms (for pushbutton input)	—
Maximum ON/OFF cycle	—	25 Hz (for pushbutton input)	—
Output signal	Transistor contact	—	Transistor contact
Output contact rating	Inductive load, resistive load: 30 V DC, 100 mA (*1)	—	Inductive load, resistive load: 30 V DC, 100 mA (*1)
Output response time	16 ms or less	—	16 ms or less
Pulse width	8 ms to 7200 s	—	8 ms to 7200 s
Pulse width resolution	8 ms, add max. 1ms for ON/OFF delay time	—	8 ms, add max. 1ms for ON/OFF delay time
Maximum current consumption	450 mA (5 V DC)	330 mA (5 V DC)	570 mA (5 V DC)
Weight	Approx. 0.30 kg	Approx. 0.40 kg	Approx. 0.30 kg
External connection	Dedicated cable (KS2)	Dedicated cable (KS2)	Dedicated cable (KS2)
Compatible card	ST2 compatible	ST3 compatible	ST4 compatible

*1: Connect a diode when driving DC relay.

Item Model	Specifications		
	ADV869	ADV169	ADV569
Number of I/O channels	32-channel input, 32-channel output	64-channel input	64-channel output
Signal isolation	Common every 16-channel	Common every 16-channel	Common every 16-channel
Input signal	Contact input: OFF signal 100 kΩ or more ON signal 200 Ω or less Minimum current value when contact is short-circuited: 1.25 mA Voltage input: OFF signal 4.5 to 25 V DC ON signal ±1 V DC, 200 Ω or less		—
Input contact rating	5 V DC, 20 mA or more		—
Pushbutton input function	Not supported	Not supported	—
Input response time	8 ms (for status input)	8 ms (for status input)	—
Output signal	Transistor contact	—	Transistor contact
Output contact rating	Inductive load, resistive load: 30 V DC, 100 mA (*1)	—	Inductive load, resistive load: 30 V DC, 100 mA (*1)
Output response time	16 ms or less	—	16 ms or less
Pulse width	8 ms to 7200 s	—	8 ms to 7200 s
Pulse width resolution	8 ms, add max. 1 ms for ON/ OFF delay time	—	8 ms, add max. 1 ms for ON/ OFF delay time
Maximum current consumption	800 mA (5 V DC)	800 mA (5 V DC)	800 mA (5 V DC)
Weight	Approx. 0.30 kg	Approx. 0.30 kg	Approx. 0.30 kg
External connection	Dedicated cable (KS9)	Dedicated cable (KS9)	Dedicated cable (KS9)
Compatible card	ST5 compatible	ST6 compatible	ST7 compatible

*1: Connect a diode when driving DC relay.



For PW (pulse width output), use two contiguous terminal numbers; the first of these must be odd-numbered. If both PW and TP (time-proportioning ON/OFF output) are used together, successive pairs of terminals must be either PW or TP terminals, as shown in the example below.

Example:

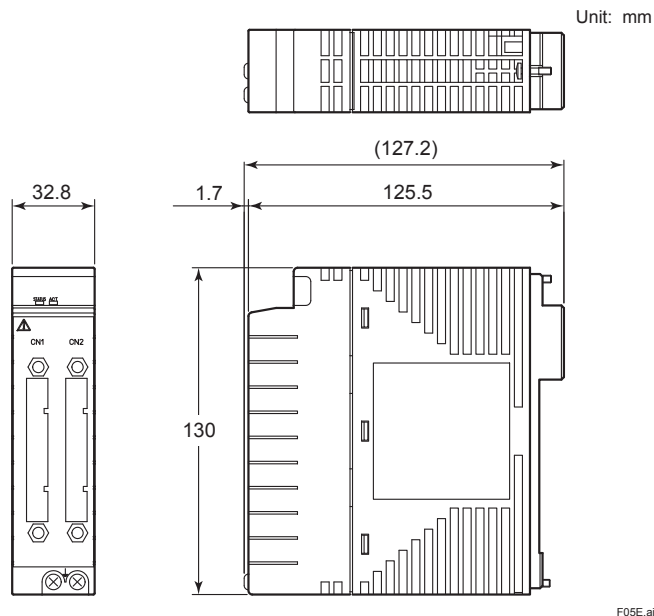
Terminals 1 and 2	PW (one PW output, two contiguous terminal nos.)
Terminals 3 and 4	TP (two outputs, two contiguous terminal nos.)
Terminals 5 and 6	TP (two outputs, two contiguous terminal nos.)
⋮	⋮
Terminals 15 and 16	PW (one PW output, two contiguous terminal nos.)

For PW output, use two contiguous terminal numbers; the first of these must be odd-numbered. Also if SO and TP terminals are used together with PW, individual terminals that are not PW can be either SO or TP terminals.

Example:

Terminals 1 and 2	PW (one PW output, two contiguous terminal nos.)
Terminal 3	TP or SO
Terminal 4	TP or SO
⋮	⋮
Terminal 16	TP or SO

● ADV859, ADV159, ADV559 Digital I/O Module for Compatible ST

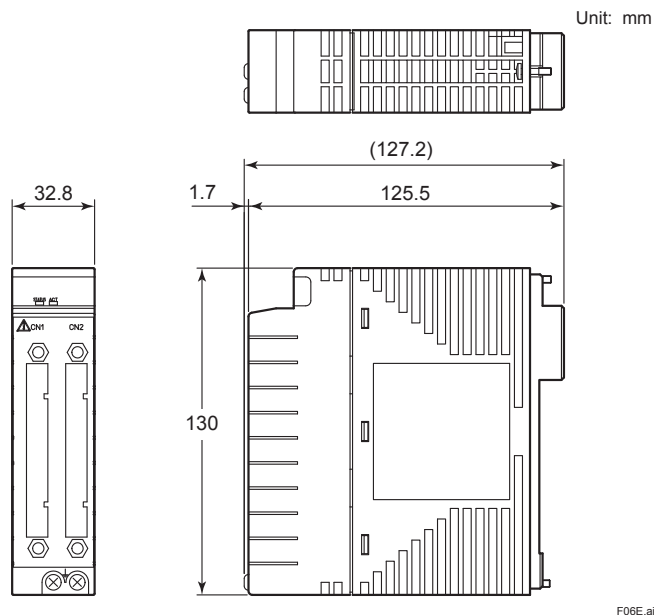


Nominal Tolerances :

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.

● ADV869, ADV169, ADV569 Digital I/O Module for Compatible ST



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.

Digital I/O Module

		Description
Model	ADV859	Digital I/O Module for Compatible ST2 (16-channel input/16-channel output, Isolated channels)
Suffix Codes	-P	With pulse width function/time-proportional output function
	0	Always 0
	0	Basic type
	1	With ISA Standard G3 option

		Description
Model	ADV159	Digital Input Module for Compatible ST3 (32-channel, Isolated channels)
Suffix Codes	-P	With pushbutton input
	0	Always 0
	0	Basic type
	1	With ISA Standard G3 option

		Description
Model	ADV559	Digital Output Module for Compatible ST4 (32-channel output, Isolated channels)
Suffix Codes	-P	With pulse width function/time-proportional output function
	0	Always 0
	0	Basic type
	1	With ISA Standard G3 option

		Description
Model	ADV869	Digital I/O Module for Compatible ST5 (32-channel input/32-channel output, Isolated, Common Minus Side Every 16-channel)
Suffix Codes	-P	With pulse width function/time-proportional output function
	0	Always 0
	0	Basic type
	1	With ISA Standard G3 option

		Description
Model	ADV169	Digital Input Module for Compatible ST6 (64-channel, Isolated, Common Minus Side Every 16-channel)
Suffix Codes	-P	Standard type
	0	Always 0
	0	Basic type
	1	With ISA Standard G3 option

		Description
Model	ADV569	Digital Output Module for Compatible ST7 (64-channel output, Isolated, Common Minus Side Every 16-channel)
Suffix Codes	-P	With pulse width function/time-proportional output function
	0	Always 0
	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 codes.

For selecting the right products for explosion protection, please refer to TI 33Q01J30-01E without fail.

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