# Yokogawa ADV869-P00 S1

## 01 Function and selected configuration

### Product function

Yokogawa ADV869-P00 S1 retains field contact sensing and switched control signals when a compatible ST5 interface is used with FIO hardware. Input-state interpretation and output timing are configured separately, so the field circuit must match both sides of the module.

### Selected configuration

The ADV869-P00 design combines contact or voltage-status acquisition with transistor-contact outputs. The -P option provides pulse-width and time-proportional output capability. The 00 suffix specifies the basic type. The offered S1 style marking must be retained when checking the installed FIO hardware. Pulse-width output uses two contiguous terminals, starting at an odd-numbered terminal; configured PW/TP pairs must follow the permitted function-assignment pattern.

### Functional path

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|---|---|---|---|
| Field contact / load | KS9 interface | ADV869 I/O conversion | CENTUM FIO controller |

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|---|---|
| I/O allocation | 32 inputs and 32 outputs |
| Isolation | Common minus side every 16 channels |
| Field connection | KS9 dedicated cable; ST5 compatibility |

Contact input is ON at 200 Ω or less and OFF at 100 kΩ or more. For voltage input, ON is ±1 VDC with source resistance no greater than 200 Ω, while OFF is 4.5–25 VDC. Input contacts require a rating of at least 5 VDC, 20 mA; minimum short-circuit sensing current is 1.25 mA.

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## 02 Technical operating envelope

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|---|---|
| Input channels | 32 |
| Output channels | 32 |
| Channel isolation | Common minus side every 16 channels |
| Contact ON threshold | ≤200 Ω |
| Contact OFF threshold | ≥100 kΩ |
| Input contact rating | ≥5 VDC / 20 mA |
| Short-circuit sensing current | Minimum 1.25 mA |
| Voltage ON threshold | ±1 VDC; source resistance ≤200 Ω |

| | |
|---|---|
| Voltage OFF threshold | 4.5–25 VDC |
| Output contact rating | 30 VDC / 100 mA |
| Input response | 8 ms, status input |
| Output response | ≤16 ms |
| Pulse width | 8 ms to 7200 s |
| Pulse resolution | 8 ms; additional ON/OFF delay ≤1 ms |
| 5 V current consumption | Maximum 800 mA |
| Field cable | KS9 |

Thresholds distinguish contact and voltage input modes. Output ratings and timing refer to the selected module, not to every device on the shared field cable.

### Signal interpretation

Common minus side every 16 channels determines how field references may be grouped. Preserve the installed KS9 cable and terminal-board circuit; a similar connector does not establish compatibility.

### Interface boundary

The voltage-input ON condition is near zero volts, not a conventional positive 24 V ON threshold. Verify contact polarity and source resistance before proving the field state.

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## 03 System integration and applications

### Contact-state acquisition

32 input channels acquire approved field contacts with the defined ON and OFF resistance limits.

### Transistor load switching

32 output channels switch DC loads within the stated voltage/current and suppression requirements.

### Timed actuation

Pulse-width or time-proportional configuration supplies controlled output durations within the module timing limits.

### ST5 field migration

The KS9 connection maintains the compatible ST5 field interface while the module operates in the supported FIO system.

### System and supply context

The module uses a KS9 dedicated cable with a compatible ST5 field interface. Its host FIO unit, cable, field terminal assembly and external loads are separate parts of the installed system.

### Application boundary

Contact status, transistor switching and timed outputs are supported functions. Preserve the configured point modes and load protection; these are not arbitrary high-speed counter inputs.

### Why can a high voltage represent OFF on ADV869-P00 S1?

Its voltage-input OFF range is 4.5–25 VDC, while ON is near zero volts, within ±1 VDC with source resistance no greater than 200 Ω. This differs from a conventional positive-voltage ON input.

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## 04 Engineering selection decisions

### Can all 32 inputs of ADV869-P00 S1 be treated as individually isolated?

No. The module uses common groups of 16 channels. Preserve the common-minus arrangement when mapping field signals and comparing terminal boards.

### Which field cable carries the ST5 interface to ADV869-P00 S1?

Use the dedicated KS9 cable for the compatible ST5 interface. The terminal assignment must match the installed ST5 field circuit.

### Does ADV869-P00 S1 support pushbutton edge counting?

No. ADV869 has status input without the pushbutton-input function. Do not configure it as a pulse-counting substitute for another module.

### When should a commanded output transition appear from ADV869-P00 S1?

The output response specification is 16 ms or less. Evaluate the whole control path separately, because controller scan and field-device response add to the module delay.

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|---|---|
| Protect DC relay loads | Fit the required suppression diode and observe output polarity and 30 VDC / 100 mA ratings. |
| Restore point modes | Check status, pulse-width and time-proportional output assignments after configuration changes. |

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## 05 Configuration boundary and references

### Lifecycle and support

The current manufacturing and factory-support phase of ADV869-P00 S1 is not confirmed. Product availability alone does not establish its lifecycle status.

### Replacement assessment

Match ADV869-P00 S1, ST5 terminal hardware, KS9 cable and field reference arrangement. Preserve individual input and output point assignments.

### Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; it does not replace manufacturer instructions.

### Technical basis

Yokogawa Digital I/O Modules (for FIO), GS 33J60F70-01EN, 5th edition.

### Related product navigation

- Yokogawa ADV551-P00 S2
- Yokogawa NFCP100-S05 S3

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries