Yokogawa ADV869-P00 S1

01 Map the grouped field circuit

1 Retain group references

Record the KS9 cable and ST5 terminal identification. Preserve the common-minus grouping every 16 channels; do not assume a separate isolated return for each of the 32 inputs.

2 Separate input and output tests

Identify the 32 input and 32 output points in the application. Place their associated process functions in the approved test state before changing field wiring.

Input / output	32 / 32 channels
Cable	KS9
Grouping	Common minus every 16 channels

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02 Measure field-state conditions

1 Check voltage logic

Measure the actual field voltage in both states. A near-zero signal is ON under the defined source-resistance condition; 4.5–25 VDC is the OFF interval.

2 Check contact quality

For contact wiring, compare closed-contact resistance and open-contact leakage with the specified thresholds. Include the cable and terminal path when measuring from the module end.

ON contact	≤200 Ω
OFF contact	≥100 kΩ
Minimum sensing current	1.25 mA at short circuit

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03 Connect protected transistor loads

1 Verify every load branch

Confirm DC voltage, current and polarity before reconnecting outputs. The 30 VDC / 100 mA contact rating applies per output and does not authorize an AC load.

2 Preserve coil suppression

Inspect the spark-killer diode for each DC relay load. Confirm the field common group and cable assignment before energizing the external load circuit.

Output type	Transistor contact
Rated load	30 VDC / 100 mA
Module supply	5 VDC; maximum 800 mA

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04 Restore output timing

1. ### Load the intended point modes

   Restore status, pulse-width or time-proportional assignments from the approved project. Do not enable pushbutton counting on the status inputs.

2. ### Measure a timed cycle

   Exercise a known pulse duration and observe the actual field response. Distinguish the module resolution from controller scan and actuator travel time.

Pulse interval	8 ms–7200 s
Resolution	8 ms
Output response	≤16 ms

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05 Release the ST5 channel set

1 Prove groups independently

Exercise affected points in both 16-channel groups and confirm there is no common-return interchange. Check that intended output commands reach only their mapped loads.

2 Retain technical results

Record module style, KS9 and ST5 identities, threshold checks and tested timing modes. Resolve channel disagreement before returning the control function to service.

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

Related product navigation

Yokogawa NFBU200-S05 S2

Yokogawa AAI135-S50 S3

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