Yokogawa ADV161-P50 S2

01 64-input station and common-group map

1 Identify four groups of sixteen inputs

Save all 64 channel assignments and mark four separate 16-channel common groups. Record the -P50 pushbutton execution and S2 hardware marking, MIL connector positions and AKB337 cable identities. Do not equate two physical connectors with two electrical common groups.

2 Distinguish connector count from electrical grouping

Check the four common groups against the channel assignment record. The two physical MIL connectors do not reduce the electrical arrangement to two common groups; retain each group identity through the AKB337 cable mapping.

Record	Complete marking and installed position
Comparison	Field labels agree with application assignments
Input channels	64
Nominal signal	24 V DC, sink/source

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02 24 V input thresholds and polarity

1 Measure asserted and deasserted input levels

Check the 24 V field supply and verify 20–26.4 V at an asserted input and no more than 5 V when OFF. Inputs must not exceed 30 V DC. Confirm that every channel uses the same sinking or sourcing polarity arrangement.

2 Use one consistent sink or source arrangement

Verify that every channel follows the selected sinking or sourcing arrangement. Compare ON and OFF measurements with their respective limits; a nominal 24 V supply reading alone does not prove both input states.

Supply evidence	Measured at the device connection
Work condition	Power isolated while wiring is handled
Common grouping	16 channels per common
Input ON voltage	20 to 26.4 V DC

03 MIL connector and common restoration

1 Reconnect each field group to its assigned channels

Restore the four field-common groups and their individual channel connections. Verify each cable label against the station map before engaging connectors. Apply the insulation requirement of the actual cable assembly rather than using the module withstand rating alone.

2 Apply the cable-assembly insulation boundary

Check the connected cable type before selecting an insulation test condition. The complete connected path may have a different withstand limit from the module alone, so do not apply the module rating indiscriminately.

Wiring record	Connection-by-connection comparison
Physical inspection	Shield, connector and strain relief checked
Input OFF voltage	5 V DC maximum
Input current	2.5 mA ±20% per channel

04 Pushbutton timing and application addresses

1 Restore the -P50 input definitions

Load the approved input and pushbutton definitions into the compatible CENTUM station. Verify channel addresses and logical inversion. The pushbutton path requires at least 20 ms ON time and permits no more than 25 Hz, independently of the 8 ms response rating.

2 Separate response time from minimum pulse width

Use at least 20 ms ON duration for the pushbutton path and keep its frequency at or below 25 Hz. The 8 ms response rating is not a substitute for these pushbutton timing conditions.

Configuration	Approved settings restored
Diagnostic condition	Normal recognition before functional testing
Maximum input voltage	30 V DC
Response time	8 ms maximum

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05 Channel-by-channel input verification

1 Simulate each assigned input point

Simulate each used input individually and check its exact application point. Test representative pushbutton durations above the minimum, then verify OFF restoration. Check that the adjacent group remains unchanged and that intended interlocks respond only to their assigned channels.

2 Check adjacent groups remain unaffected

Record the application address that changes for each applied signal and confirm it returns to OFF. Include a cross-group check so an input that appears functional cannot hide a misplaced common connection.

Technical basis: Yokogawa Digital I/O Modules GS33J60F70-01EN, 5th Edition.

Related product navigation

Yokogawa AAI841-H00 S2

Yokogawa AAI835-S00 S2

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