ABB SDCS-IOB-22 3BSE005177R1

01 Separate field voltage classes

1 Separate field voltage classes
2 Inspect external board installation
3 Validate input thresholds and timing
4 Test relay and transistor circuits separately
5 Restore drive permissives

Work sequence

Identify the actual input supply and distinguish relay loads from open-collector loads. Record the software function of each point before isolating the drive and external circuits.

Acceptance condition

The retained wiring identifies voltage class, channel and software function together.

Digital inputs	8, optocoupled
Nominal input voltage	115 V AC

Voltage-version boundary: The IOB-22 input voltage and impedance must not be replaced by values belonging to IOB-21 or IOB-23.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to inspect external board installation.

ABB SDCS-IOB-22 3BSE005177R1

02 Inspect external board installation

1 Separate field voltage classes

2 **Inspect external board installation**

3 Validate input thresholds and timing

4 Test relay and transistor circuits separately

5 Restore drive permissives

Work sequence

Check mounting, control-board cable and field-terminal engagement. Preserve the intended external I/O architecture and avoid transferring analog-board wiring to the digital interface.

Acceptance condition

The board and its connections match the intended drive arrangement.

Logic 0 input range	0–20 V
Logic 1 input range	60–130 V

Filter timing: Channel assignment affects input filtering. Review a moved signal against the 10 ms and 2 ms groups.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to validate input thresholds and timing.

ABB SDCS-IOB-22 3BSE005177R1

03 Validate input thresholds and timing

1 Separate field voltage classes

2 Inspect external board installation

3 **Validate input thresholds and timing**

4 Test relay and transistor circuits separately

5 Restore drive permissives

Work sequence

Apply controlled field states and compare the measured voltage with the defined logic bands. Check the faster channels separately when the assigned function depends on response time.

Acceptance condition

Each input changes state in the expected drive function without an undefined voltage condition.

Input filter, channels 7–8	2 ms time constant
Relay outputs	6 normally open

Output technology: Separate relay-contact circuits from open-collector circuits during load selection and testing.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to test relay and transistor circuits separately.

ABB SDCS-IOB-22 3BSE005177R1

04 Test relay and transistor circuits separately

1 Separate field voltage classes

2 Inspect external board installation

3 Validate input thresholds and timing

4 **Test relay and transistor circuits separately**

5 Restore drive permissives

Work sequence

Use a test method appropriate to each output technology. Confirm external DC supply and current for open-collector points and actual contact operation for relay points. Review load protection and polarity.

Acceptance condition

Each output operates its assigned circuit within the correct voltage and current envelope.

Relay AC rating	250 V AC / 3 A maximum
Relay DC rating	24 V / 3 A or 115/230 V / 0.3 A maximum

Voltage-version boundary: The IOB-22 input voltage and impedance must not be replaced by values belonging to IOB-21 or IOB-23.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to restore drive permissives.

ABB SDCS-IOB-22 3BSE005177R1

05 Restore drive permissives

1. Separate field voltage classes
2. Inspect external board installation
3. Validate input thresholds and timing
4. Test relay and transistor circuits separately
5. **Restore drive permissives**

Work sequence

Exercise the required command, status and shutdown paths through the drive program. Remove temporary test states and retain the final channel-function map.

Acceptance condition

The restored I/O participates correctly in the drive control and protection sequence.

Input assignment	Drive-software selectable
Output assignment	Drive-software selectable

ABB SDCS-PIN-4

ABB SDCS-POW-1C

ABB SDCS-IOB-3 3BSE004086R1

Related products require separate compatibility assessment. Retain the final configuration and signed test outcome.