Bently Nevada 1900/65A-01-01-03-00-01

01 Establish the selected monitor configuration

1 Identify the configured hardware

Confirm 1900/65A-01-01-03-00-01 as 110-220 V AC, 50-60 Hz through an external supply, attached display without a separate display cable, fiberglass NEMA 4X/IP66 weatherproof housing with a window door, no agency-approval option and Modbus communication. Compare the complete label with the installed arrangement before making connections. The local display and communication option have different roles: display access does not by itself prove that a host can retrieve process values through Modbus.

2 Capture the operating configuration

Use the configuration software and built-in Ethernet connection to retain the approved channel, variable, setpoint, relay and recorder settings. Save the existing file before making changes. The monitor retains configuration in non-volatile memory, but a separate controlled copy is needed to compare and recover the intended installation.

3 Define the protection boundary

Identify every relay contact that can affect a machine or process. Place those circuits in the approved maintenance state before disconnecting sensors or changing setpoints. Agree the planned tests and the conditions for restoring protection so that configuration work does not create an unintended trip or leave a bypass unnoticed.

Supplied configuration	AC / display / windowed housing / Modbus
Configuration access	PC through built-in Ethernet
Protection	Affected relays and maintenance states identified

1900/65A-01-01-03-00-01 / Prepare sensor and supply connections

02 Prepare sensor and supply connections

1 Map transducers to channel processing

For each of the four transducer channels, record sensor type, electrical connection, sensitivity and required measurement. Channel types include acceleration, velocity, radial vibration, thrust, position and speed. A physically connected sensor can produce an incorrect variable if the processing type or engineering units are configured incorrectly.

2 Identify temperature circuits separately

Record whether each temperature channel uses an E, J, K or T thermocouple or a two- or three-wire RTD. Preserve the actual sensor selection and terminal assignments. For two-wire RTDs, account for field-wire resistance rather than applying the accuracy expectation of a different connection arrangement.

3 Prepare the selected power and mounting

Identify the external 110-220 V AC, 50-60 Hz supply and distinguish its mains terminals from the monitor DC side. Isolate both before work. Inspect the window-door housing, cable entries and closure. Maintain the approved enclosure arrangement; the monitor DC current rating must not be used as the mains input-current rating.

Transducer channels	Four independently assigned inputs
Temperature channels	Four; exact sensor and wiring selected
Power preparation	110-220 V AC, 50-60 Hz through an external supply

1900/65A-01-01-03-00-01 / Set outputs and alarm logic deliberately

03 Set outputs and alarm logic deliberately

1 Map each recorder variable

Assign each 4-20 mA output to the required channel and variable, then align the receiver's engineering range with the monitor full scale. The four recorder outputs are independently configurable. Check loop supply and resistance; the specified maximum loop resistance is 600 ohms under the applicable supply conditions.

2 Review relay logic and contact behavior

Inspect the logic expression for each of the six SPDT relays alongside its latching and energized-state settings. AND ignores bypassed channels, while True AND includes them. This difference changes the voting result during maintenance and must be understood before a bypass test is accepted.

3 Configure the communication boundary

Record whether the host uses Ethernet, RS232 or RS485 and retain the matching communication settings. Map static variables, monitor status and event information to the intended receiver locations. Arrange the Modbus master time/date reference so event timestamps can be compared reliably with supervisory records during the acceptance test.

Recorders	Variable, full scale and receiver mapping
Relays	Logic plus latching and energized state
External data	Modbus transport, mapping and time reference

1900/65A-01-01-03-00-01 / Commission channels, loops and relays

04 Commission channels, loops and relays

1 Verify measurements with suitable references

Check each configured measurement using an appropriate sensor or signal reference and compare the engineering value with the expected range. Verify temperature sensor type, transducer sensitivity, filters and units. A plausible steady value is not sufficient to prove correct scaling throughout the required operating range.

2 Compare local and external indications

Apply controlled input conditions, then compare the local display, host variable, status information and assigned recorder signal. Verify the host is reading the intended variable and engineering range. Check event sequence and time reference under the approved test plan; successful network communication alone does not prove a correct protective action.

3 Exercise the approved alarm truth table

Under the controlled test plan, check Alert, Danger, Not OK, bypass and reset behavior for the programmed relays. Confirm both logic and physical contact action. A reset should clear a latched state only after the driving condition has cleared; it is not a remedy for an active sensor or process fault.

Measurement proof	Input type, sensitivity, filtering and units
Loop proof	Assigned variable reaches correct receiver
Relay proof	Logic and physical contact action agree

1900/65A-01-01-03-00-01 / Close maintenance and retain diagnostics

05 Close maintenance and retain diagnostics

1 Resolve unexpected states systematically

Compare an unexpected alarm with the live variable, sensor connection, channel OK state and configured setpoint. If a relay differs from expectation, inspect the logic operands, bypass treatment, latching and energized state. Avoid changing thresholds merely to suppress a symptom before the signal path has been understood.

2 Remove temporary bypasses deliberately

Review all maintenance inhibits and test connections before returning the monitor to its intended protective role. Restore the approved file if temporary commissioning changes were made, then verify the final state online. Retain the accepted alarm and recorder tests with the machine record rather than relying on a configuration filename alone.

3 Retain the final hardware and configuration scope

Record 1900/65A-01-01-03-00-01, the attached-display arrangement, external supply and enclosure, sensor map and accepted output tests. Retain the Modbus interface settings, receiver mapping and time synchronization result. Preserve the approved configuration file with the service record so later replacements can be evaluated against the actual installation.

Technical basis: 1900/65A General Purpose Equipment Monitor, 173401 Rev. AC.

Related product navigation

- Bently Nevada 330730-040-00-00
- Bently Nevada 330780-90-CN
- Bently Nevada 330780-50-CN

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