01 / Job scope and preparation

EMERSON

KJ4001X1-BA2 VE3051C0 12P1562X042

Controller Carrier

Controlled maintenance scope

Plan installation or replacement of KJ4001X1-BA2 VE3051C0 12P1562X042 against the actual installed DeltaV M-series arrangement. Qualified personnel must use the applicable manufacturer instructions and approved site procedure.

Match the assembly label

Retain KJ4001X1-BA2, VE3051C0 and 12P1562X042 together. Confirm the assembly label and connectors against the installed carrier before ordering or replacement.

Use the correct rail latches

The BA2 arrangement uses different latching screws for T- and G-type rail. Confirm the rail profile and engage the correct latches under the original installation procedure.

Work boundary

After installation, verify controller status, I/O communication and the approved redundancy arrangement before returning the process system to service. Apply the actual module and system instructions.

02 / Readiness checks

Review	Acceptance relationship
Match the assembly label	Retain KJ4001X1-BA2, VE3051C0 and 12P1562X042 together. Confirm the assembly label and connectors against the installed carrier before ordering or replacement.
Use the correct rail latches	The BA2 arrangement uses different latching screws for T- and G-type rail. Confirm the rail profile and engage the correct latches under the original installation procedure.
Align side connectors	Inspect the 48-pin carrier connections and align adjacent carriers before fastening. Do not force misaligned or damaged contacts into engagement.
Keep the intended carrier position	Install the 2-wide power/controller carrier to the left of 8-wide I/O carriers. The simplex controller uses the right-hand position on its carrier.
Review power and grounding	Verify the selected power-supply modules, grounding and enclosure wiring. Isolate all affected sources before disturbing carrier connections; module hot-swap capability does not establish permission to remove the carrier live.

Record before disturbance

Retain the complete unit marking, connection photographs and approved system configuration. Resolve a mismatch before carrying over wiring or settings.

03 / Integration sequence

Identify
Unit and installed system

>

Prepare
Connections and configuration

>

Restore
Controlled verification

1. Establish carrier position

Place the 2-wide carrier to the left of the 8-wide I/O carriers. Confirm whether the installed system is simplex or redundant before moving modules.

2. Establish the rail connection

Identify the T- or G-type rail and use its corresponding latching screws. Check that the rail and mounting arrangement support the equipment.

3. Join adjacent carriers

Align the 48-pin side connections and secure the carrier with the correct rail latches. Inspect contact condition before mating.

4. Restore the mounted modules

For a simplex arrangement, install the controller in the right-hand position and the matched supply in its assigned position. Verify grounding, power and communication under the original system procedure.

04 / Acceptance and system review

Area	Relationship to verify
Simplex controller mounting	Mount the controller in the right-hand carrier position with the matched system power supply. The carrier establishes the mechanical and electrical connection to the horizontal subsystem.
System power arrangement	The two positions can carry one supply and one controller, or two supplies. Select the installed power architecture and verify the companion modules separately.
Horizontal I/O integration	Connect the carrier to the adjoining horizontal I/O carriers through the side connections. Keep the 2-wide carrier to the left of the 8-wide I/O group.
Redundant-system maintenance	A redundant controller requires an additional carrier and the appropriate controller and power arrangement. Preserve the complete system topology during replacement.

Acceptance evidence

Retain the complete offered and installed identities, final configuration and functional verification results. A common product family or similar connector does not independently establish an approved replacement.

05 / Service handover and reference basis

Support and service planning

Keep the installed configuration with the maintenance record. Obtain current Emerson lifecycle and replacement guidance using the full unit marking; quoted availability is separate from the manufacturer support phase.

Reference basis

Emerson Installing Your DeltaV Digital Automation System, D800001X152, March 2006; M-series I/O Subsystem Horizontal Carriers, January 2024.

Apter Power technical summary, not an Emerson-issued manual. BA2 installation details apply to the carrier design; VE3051C0 identifies the 2-wide ordering configuration. Confirm the supplied 12P1562X042 assembly and installed-system revision.

Related Emerson products

Navigation only; no substitution or compatibility claim.

Emerson KJ4001X1-NB1 12P3368X022

Emerson KJ3002X1-BE1 12P0682X052

Discuss your installed configuration

Send the full unit marking and connection details.

sales13@apterpower.com | +86 18030235313