01 / Identity and technical scope

EMERSON

KJ4001X1-BA2 VE3051C0 12P1562X042

Controller Carrier

Product role

Emerson KJ4001X1-BA2 VE3051C0 12P1562X042 is a DeltaV 2-wide power/controller carrier for mounting a system power supply and controller in a horizontal I/O arrangement.

System supply
Separate power module

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2-wide carrier
Controller position

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Horizontal I/O
Power and communication

Product type
2-wide power/controller carrier

Capacity
One system power supply plus one controller, or two system power supplies

Applicability
BA2 installation details apply to the carrier design; VE3051C0 identifies the 2-wide ordering configuration. Confirm the supplied 12P1562X042 assembly and installed-system revision.

02 / Functional architecture

System relationship

The KJ4001X1-BA2 carrier provides two positions for one system power supply and one controller, or for two system power supplies. In a simplex arrangement, the controller occupies the right-hand position. The separate system power-supply module converts its input into the system supply used by the controller and I/O; the carrier itself is the mounting and interconnection component. VE3051C0 is the 2-wide carrier ordering reference, and 12P1562X042 remains part of the offered assembly identity.

System supply
Separate power module

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2-wide carrier
Controller position

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Horizontal I/O
Power and communication

Circuit or component	Technical relationship
Controller position	Right slot in a simplex arrangement
System supply	Separate module supplies the controller and I/O
Side connectors	48-pin connections join adjacent carriers
I/O group	8-wide carriers are placed to the right

03 / Design facts and interface selection

Item	Verified design fact
Ordering reference	VE3051C0
Supplied assembly reference	12P1562X042
System family	DeltaV horizontal I/O
Carrier capacity	One system power supply and one controller, or two system power supplies
Simplex controller position	Right-hand slot
Adjacent carrier connection	48-pin side connectors
DIN rail profile, BA2 arrangement	35 mm T- or G-type
Recommended T-rail depth	15 mm
Carrier position	To the left of 8-wide I/O carriers
Redundant controller arrangement	Additional power/controller carrier required

Selection boundary

BA2 installation details apply to the carrier design; VE3051C0 identifies the 2-wide ordering configuration. Confirm the supplied 12P1562X042 assembly and installed-system revision.

04 / Configuration and integration

Operating arrangement

The BA2 installation arrangement uses standard 35 mm T- or G-type DIN rail, with different latching screws for the two rail profiles. The heavier 15 mm-deep T rail is recommended for the equipment weight distribution. Adjacent carriers connect by sliding their side-mounted 48-pin connectors together, and the 2-wide carrier is positioned to the left of the 8-wide I/O carriers. Latch engagement and connector alignment must both be established before installing the mounted modules.

Interfaces and system integration

The horizontal-carrier system carries power and communication between the controller and I/O interfaces. A redundant controller requires an additional carrier; redundancy is a system arrangement involving the selected controllers, supplies and connections. Carrier extensions support layouts across separate rails, while grounding follows the installed enclosure and power-system design. Keep the supplied BA2 and X042 assembly identity distinct from later carrier revisions when selecting a replacement.

Assembly control

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

05 / Engineering review and references

What can the two carrier positions accommodate?

The BA2 carrier supports one system power supply with one controller, or two system power supplies. The supplied modules and accessories must be identified separately in the quotation.

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 KJ2003X1-BB1 12P3439X012

Emerson KJ4002X1-BF2 12P3866X012

Discuss your installed configuration

Send the full unit marking and connection details.

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