Emerson KJ4005X1-BC1

01 Right-Hand LocalBus Carrier Extender / system role

Product function

Emerson KJ4005X1-BC1 supports a planned carrier layout where the right-hand end connection must remain consistent with the mating extender, cable route and overall LocalBus length.

Selected configuration

The right-hand extender is one part of a complete carrier arrangement. Verify the mating side, extender cable and connected carrier before ordering; the extender does not provide an independent controller or I/O function.

Integration checkpoints

- Horizontal carrier extension
- Cabinet I/O layout
- Carrier maintenance
- Enclosure interconnection

Assembly role	Right-hand carrier extension connection
Service boundary	De-energize before disconnecting carrier hardware
Layout control	Assess the complete carrier-and-extender route

The total combination of I/O carriers and LocalBus extenders must remain within the permitted system length. Interconnecting cables between enclosures require conduit, and cable routing must preserve connector engagement without mechanical strain.

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02 Technical operating envelope

Extender position	Right-hand, one-wide	Relative humidity	5–95%, non-condensing
LocalBus power rating	12 V DC at 15 A	Shock rating	10 g, half-sine, 11 ms
Carrier-plus-extender length	6.5 m maximum	Vibration, 13.2–150 Hz	0.7 g
Ambient temperature	−40 to +70 °C	Airborne contaminants	ISA-S71.04 G3

Ratings apply to the stated hardware execution and operating conditions; companion hardware and configured functions require separate compatibility checks.

Whole-route limit

Count the complete I/O-carrier and LocalBus-extender combination when checking the 6.5 m limit. A cable that fits physically can still make the total arrangement unsuitable.

Power isolation

Remove system power before connecting or disconnecting carriers, extenders, extension cables or power plugs. Do not treat the passive appearance of an extender as permission for live service.

Enclosure transitions

Use conduit for interconnecting cables between enclosures. Inspect support and strain at the cabinet transition so that cable routing does not load the mating connector.

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03 System integration and applications

Horizontal carrier extension

Continue the approved S-series carrier arrangement at its right-hand end.

Cabinet I/O layout

Route LocalBus extension hardware within the permitted total length.

Carrier maintenance

Restore a damaged right-hand extender while retaining the system layout.

Enclosure interconnection

Connect the approved carrier route with protected inter-enclosure cabling.

Application and compatibility boundary

Carrier, extender and power-plug work requires system power to be removed. The assembly has no user-serviceable internal parts and does not require calibration; restoration is verified through the connected system and its I/O behavior.

Available unit verification

Check right-hand orientation, mating contacts, connector latches and carrier mounting condition. Confirm right-hand extender, mating extender and extension cable only as itemized in the quotation. Evaluate the actual interfaces and included accessories against the installed arrangement.

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04 Engineering selection decisions

Can KJ4005X1-BC1 be disconnected while the connected controller remains powered?

No. Remove system power before disconnecting the extender or related carrier hardware, following the applicable installation procedure.

Why must the complete carrier route be measured when using KJ4005X1-BC1?

The limit applies to the combination of I/O carriers and LocalBus extenders, not only one cable segment. Evaluate the full installed arrangement.

Does KJ4005X1-BC1 add another independent I/O channel or controller?

No. It is carrier-extension hardware. I/O and controller functions belong to the connected modules.

How should a cable crossing between enclosures from KJ4005X1-BC1 be protected?

Use the required conduit and provide support so that the enclosure transition does not strain the connector or compromise the approved route.

What prevents a left-hand extender from being substituted casually for KJ4005X1-BC1?

The mating orientation and carrier-side function differ. Confirm the right-hand execution and the matching cable arrangement before ordering.

Does KJ4005X1-BC1 require periodic calibration after installation?

No calibration is required. Verify mechanical connection, power and the connected system response; do not disassemble the unit for adjustment.

What should be inspected if downstream I/O becomes intermittent after servicing KJ4005X1-BC1?

Check connector seating, latching, cable strain, route length and the connected carrier power arrangement before changing I/O configuration.

How should the system be accepted after replacing KJ4005X1-BC1?

Confirm stable communication and operation of all affected downstream modules, then validate representative field I/O and the intended fault response.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and manufacturer-support stage for this exact model is not confirmed.

Replacement assessment

Retain the right-hand extender execution and the approved carrier/cable layout. A left-hand component is not interchangeable merely because it belongs to the same series.

Available unit details

Offered reference: Emerson KJ4005X1-BC1. Condition: New, original product. Check right-hand orientation, mating contacts, connector latches and carrier mounting condition. Confirm right-hand extender, mating extender and extension cable only as itemized in the quotation; companion equipment is included only when itemized.

Document roles: The original excerpt retains manufacturer tables and drawings; this brief addresses selection and system context; the separate installation guide covers field procedures and acceptance.

Technical basis: DeltaV S-Series System Carriers, ATEX60, January 2024.

Related product navigation

- Emerson KJ3222X1-BA1 12P2532X122
- Emerson KJ3224X1-EA1 12P4367X022
- Emerson KJ2003X1-BB1 12P3439X012

Related products for separate application assessment; verify the platform and interface. No interchangeability is implied.

Product enquiries