

ABB BC810K01-3BSE031154R1

CEX-Bus Interconnection Unit Kit

Product description

ABB BC810K01-3BSE031154R1 is a CEX-Bus interconnection unit kit for ABB AC 800M controller hardware. The kit includes the BC810 interconnection unit, TP857 baseplate and TB850 CEX-Bus terminator.

01 / Overview

Separates the communication bus into independent segments.

02 / Overview

Supports availability with redundant communication interfaces.

03 / Overview

Provides distinct bus-activity and external-power indications.

04 / Overview

Uses a mechanically coded baseplate to identify the module position.

PARAMETER	SPECIFICATION
Country of origin	Sweden
HS / tariff code	8537101190
Shipping origin	Xiamen, Fujian, China
Stock / dispatch	1 / 3 days; fast shipment
Existing shipping dimensions / weight	18.5x6.5x12.6cm / 0.43 kg

Shipping dimensions and weight reproduce the existing commercial listing; they are not asserted to be ABB net dimensional data.

Technical specifications

ABB product data and separate integration notes

PARAMETER	SPECIFICATION
Type designation	BC810K01
Catalog description	CEX-Bus Interconnection Unit Kit
Kit contents	BC810, TP857 baseplate, TB850 terminator
Supply	24 V DC nominal; 19.2 to 30 V DC
Current consumption	50 mA typical; 70 mA maximum
Power dissipation	1.2 W typical

PARAMETER	SPECIFICATION
Protection	IP20
Hot swap	Supported
Power input connector	2-pin screw connector, L+ / L-
Baseplate	TP857, preset two-letter Alpha code lock
Interconnection cable	TK851
Status indicators	F red; R green; EPOK green; C1/C2 yellow

Technical notes

For ABB BC810K01-3BSE031154R1, distinguish BC810 hot-swap support from TP857 baseplate servicing: CEX-Bus baseplates must not be manipulated in a powered, running system. Confirm external supply limits, the TK851 interconnection arrangement and the primary/backup meaning of C1/C2 indicators.

Install the BC810 unit on its TP857 baseplate and use the documented TK851 interconnection arrangement. The processor supplies the unit through the CEX-Bus; the external input provides a redundant power path for the bus.

Applications and precautions

Four system uses and eight installation checks

Redundant interface segmentation

Divides the controller communication bus to support availability when communication interfaces are redundant.

CEX-Bus power resilience

Supports an external power path in addition to the processor-supplied CEX-Bus path.

Interconnection status checks

Allows the primary and backup bus indications to be interpreted separately during controller maintenance.

Keyed controller hardware assembly

Uses TP857 mechanical coding to maintain the intended interconnection-unit position.

01 / Check

Match the BC810 unit to the preset two-letter Alpha code on TP857; do not defeat the mechanical key.

02 / Check

Do not manipulate a CEX-Bus baseplate while the system is powered and running.

03 / Check

Before changing or removing a baseplate, remove all CEX modules on that segment under the shutdown procedure.

04 / Check

Check the external two-pin L+ / L- connection against the specified 19.2 to 30 V DC range.

05 / Check

Account for power received from the processor through the CEX-Bus as well as the external supply path.

06 / Check

Use the documented TK851 connection between the two BC810 modules.

07 / Check

Interpret C1 off as no CEX-Bus activity; assess the affected segment accordingly.

08 / Check

Interpret C2 according to primary or backup position: C2 is always off on the backup side.

Important Notice: Confirm ABB BC810K01-3BSE031154R1, the keyed TP857 baseplate, TB850 termination, TK851 cable and the primary/backup arrangement before service. Apply the separate baseplate shutdown requirement during maintenance.

Engineering FAQ

The public-page answers, reproduced without substitutions

Can ABB BC810K01-3BSE031154R1 separate a shared CEX-Bus into independent sections?

Yes. Its BC810 interconnection unit divides the CEX-Bus into two independent segments, supporting availability in systems with redundant communication interfaces.

Does an unlit C2 LED on the backup side of ABB BC810K01-3BSE031154R1 indicate a fault?

Not by itself. ABB states that C2 is always off on the backup side. On the primary side, C2 off means that the backup side is disconnected or inactive.

Which cable links two interconnection units in an ABB BC810K01-3BSE031154R1 arrangement?

ABB identifies the TK851 RCU Link Cable for interconnection between two BC810 modules. It is separate from the BC810, TP857 and TB850 items listed in this kit.

How does the baseplate in ABB BC810K01-3BSE031154R1 prevent installation of the wrong module type?

TP857 uses a preset two-letter Alpha code lock. Match the correct BC810 unit to its keyed baseplate; do not defeat the mechanical coding.

Does ABB BC810K01-3BSE031154R1 depend only on its external power connector?

No. BC810 receives power from the processor through the CEX-Bus. The external connector can provide redundant power support to that bus; assess both supply paths in the installed design.

What does an unlit C1 LED on ABB BC810K01-3BSE031154R1 tell the technician?

The BC810 indicator table defines C1 off as no CEX-Bus activity. Check the associated segment activity before interpreting this indication as a failed interconnection unit.

Does hot-swap support for ABB BC810K01-3BSE031154R1 permit live removal of its TP857 baseplate?

No. ABB prohibits manipulating CEX-Bus baseplates while the system is powered and running. Before changing or removing a baseplate, remove all CEX modules on that segment under the approved shutdown procedure.

Is an 18 V reading at the external input acceptable for ABB BC810K01-3BSE031154R1?

No. The specified external supply range is 19.2 to 30 V DC, nominally 24 V DC, at the two-pin L+ and L- connector. Correct the supply condition before relying on the external power path.

Catalogue links and support

Brand-qualified model labels with clickable product links

BRAND + MODEL	RELATION	PRODUCT LINK
ABB CI854BK01 3BSE069449R1	AC 800M communication interface	Explore ABB CI854BK01 3BSE069449R1 page
ABB CI857K01 3BSE018144R1	AC 800M communication interface	Explore ABB CI857K01 3BSE018144R1 page
ABB CI860-CI860K01 3BSE032444R1	AC 800M communication interface	Explore ABB CI860-CI860K01 3BSE032444R1 page
ABB CI854AK01 3BSE030220R1	AC 800M communication interface	Explore ABB CI854AK01 3BSE030220R1 page
ABB PM866K01 3BSE050198R1	AC 800M controller family	Explore ABB PM866K01 3BSE050198R1 page
ABB PM860K01 3BSE018100R1	AC 800M controller family	Explore ABB PM860K01 3BSE018100R1 page
ABB PM864AK02 3BSE018164R1	AC 800M controller family	Explore ABB PM864AK02 3BSE018164R1 page
ABB TB811 3BSE008568R1	AC 800M optical expansion	Explore ABB TB811 3BSE008568R1 page

Related catalogue navigation only. These entries are not a declaration of interchangeability, a replacement list or an approved complete-system configuration.

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Technical source: ABB System 800xA 6.1 AC 800M Controller Hardware Product Guide, 3BSE036352-610 Rev A, April 2019; sections 4.4, 4.13.3 and 6.3. Commercial fields supplied by Apter Power.