

Type BR Loadcenters and Circuit Breakers



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Overview

General Product Description

Loadcenters are enclosures specifically designed to house the branch circuit breakers and wiring required to distribute power to individual circuits. They contain either a main breaker when used at the service entrance point or a main lug when used as a sub-panel to add circuits to existing service. The main breaker protects the main entire panel and can be used as a service disconnect. The branch breakers protect the wires leading to individual electrical loads such as fixtures and outlets.

Plug-on Neutral Loadcenters

The BR Plug-on Neutral portfolio from Eaton offers a unique design that offers improved safety, ease of installation and leaves the end result with a clean and professional look and feel.

Features, Benefits and Functions

Plug-on Neutral Style Loadcenters

- The short-body BR electronic circuit breakers are optimized to save gutter space and installation time with an easier, more succinct installation process
- Unique self-leveling tabs to allow for quick drywall offset
- Added keyhole hanging feature on cover for ease of installation
- Common drive types on screw connections for added simplicity and convenience
- Inboard neutral to increase the gutter space for easier installation of conductors
- Backed-out neutral screws to allow for a quick connection of ground and neutral conductors
- Upgraded to embossed circuit numbers for a more clean and professional look

Loadcenter Construction

Eaton's Type BR loadcenters have standard tin-plated aluminum bus with a limited availability of copper bus.

The sum of the handle ratings connected to any stab is limited to 150 A maximum on the 100 and 125 A loadcenters, and 200 A on loadcenters with 150 A or higher main bus. NEMA Type 1 boxes or enclosures are manufactured from galvanized steel. Raintight boxes are manufactured from galvanized steel, then finished using an electrostatic powder coat, baked urethane paint process.

Neutrals

Eaton BR loadcenters feature three types of neutrals:

Inboard Plug-on Neutral

Code changes and higher safety standards are leading to more arc fault circuit interrupter (AFCI) installations. With the electrical contractor in mind, Eaton has revolutionized the way Combination AFCIs are installed with the Plug-on Neutral line of loadcenters and breakers.

Insulated/Bondable Split Neutral

Panels are supplied with split insulated neutrals with an insulated cross strap. For service entrance applications, the neutral must be bonded by using the bonding strap supplied with the panel.

For non-service entrance (sub-panel) applications, the panel may be installed with the bonding strap not connected to the neutral. Separate ground bars must be used on non-service entrance panels.

Insulated/Bondable Single Neutral

Panels are supplied with a single insulated neutral. For service entrance applications, all that is required to bond the neutral is to loosen the bonding screw and the neutral screw directly beside it, insert the bonding strap into the neutral bar, and re-tighten both connections. The single neutral can be moved by the contractor to the other side of the panel, if desired. When used as a service entrance panel, unused neutral connections may be used for the termination of equipment grounds. For non-service entrance (sub-panel) applications, the panel may be installed with the bonding strap not connected to the neutral. Separate ground bars must be used on non-service entrance panels.

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Product Selection

Single-Phase—Plug-on Neutral—Main Circuit Breaker Loadcenters—10/25 kAIC

Single-Phase Three-Wire—120/240 Vac—Insulated/Bondable Split Neutral

BRP10B100



Main Breaker Type	Main Amp Rating	Maximum Number 1-Inch (25.4 mm) Spaces	Maximum Number 1-Inch (25.4 mm) Poles	Enclosure Type	Box Size	Wire Size Range Cu/Al 60 °C or 75 °C for Main Breaker	Loadcenter Catalog Number with Combination 1 or NEMA Type 3R Cover ^{①②}	
BR	100	10	20	Indoor	X0	#4–1/0 2	BRP10B100	
		10	20	Outdoor	X1R		BRP10B100RF ^{③④}	
		12	24	Indoor	X1		BRP12B100	
		12	24	Outdoor	X1R		BRP12B100R ^④	
		16	32	Indoor	X2		BRP16B100	
		16	32	Outdoor	X2R		BRP16B100R ^④	
	125	125	20	40	Outdoor	X11R	#4–2/0	BRP20B100R ^④
			20	40	Indoor	X3		BRP20B100
			30	60	Indoor	X5		BRP30B100
			16	32	Indoor	X2		BRP16B125
BRH ^⑤	22 kAIC	12	24	Indoor	X1	#4–1/0	BRP12H100	
		20	40	Indoor	X3		BRP20H100	
CSR ^⑥	150	8	16	Outdoor	X11R	#2–300 kcmil	BRP08B150RF ^{③④}	
		16	32	Indoor	X4		BRP12B150	
		20	40	Indoor	X4		BRP20B150	
		24	48	Indoor	X6		BRP24B150	
		20	40	Outdoor	X5R		BRP20B150R ^④	
		30	60	Indoor	X6		BRP30B150	
	200	200	8	16	Outdoor	X11R	#2–300 kcmil	BRP08B200RF ^{③④}
			16	32	Indoor	X4		BRP16B200
			20	40	Outdoor	X5R		BRP20B200R ^④
			20	40	Indoor	X5		BRP20B200
			24	48	Indoor	X6		BRP24B200
			30	60	Indoor	X6		BRP30B200
			30	60	Indoor	X6		BRP30B200G
			30	60	Outdoor	X6R		BRP30B200R ^④
			40	80	Indoor	X8		BRP40B200
			40	80	Outdoor	X8R		BRP40B200R ^④
			60	120	Indoor	X10		BRP60B200
			60	120	Outdoor	X10R		BRP60B200R ^④

Notes

- ① Combination style covers may be used in surface or flush applications.
- ② All main circuit breaker loadcenters are listed for use as service entrance equipment and are shipped with neutral bonding screw preattached. The maximum rating of the panel is the main circuit breaker rating when used as service entrance equipment. Ground bar kits priced separately. See **Page V1-T1-71**.
- ③ Includes through-feed lugs for both phase and neutral conductors.
- ④ Rainproof panels are furnished with hub closure plates. For rainproof hubs, refer to **Page V1-T1-71**.
- ⑤ 22 kAIC series combination rating is obtained when Types BD, BR, BQ, BQC and ETN01 10 kAIC branch breakers are used in series with Type BRH main breaker.
- ⑥ 25 kAIC series combination rating is obtained when Types BD, BR, BQ, BQC and ETN01 10 kAIC branch circuit breakers are used in series with Type CSR main breaker.