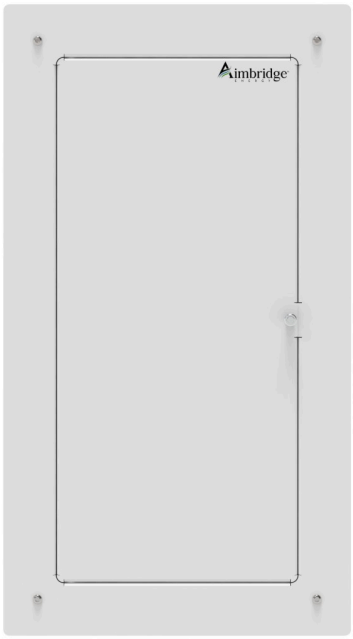
RECESSED WALL-MOUNT DC LOADCENTER

DCL-18 DC Loadcenter

DC power conversion, distribution and protection in one panel.

The DCL-18 combines DC/DC power conversion with power distribution and branch circuit protection in one recessed wall-mount loadcenter, simplifying the balance of system. Two buck-boost DC/DC converters, one per bus, deliver tightly regulated 12, 24 or 48 VDC outputs from a 9–60 VDC battery, so loads get a steady voltage as the battery charges and discharges or when long feeders drop voltage.

The split A/B bus supports redundant A and B power feeds for applications that require A/B redundancy, or the buses can be joined with the hot bus strap for single-feed operation. Up to 18 plug-in branch breakers are supported. A basic model without converters is also available.



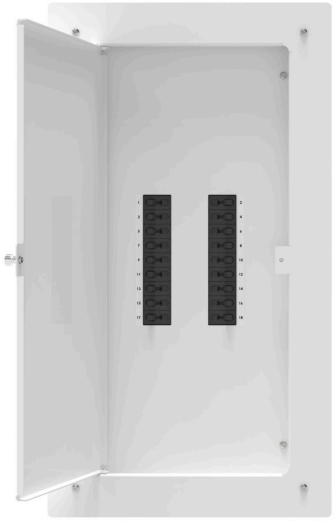
Product page & documents
aimbridgeenergy.com

9–60 VDC	12 / 24 / 48 VDC	3000 W	18	360 A
BATTERY INPUT	REGULATED OUTPUT	PER BUS	BRANCH POSITIONS	TOTAL INPUT

KEY FEATURES

- Two buck-boost DC/DC converters, one per bus, for tightly regulated 12, 24 or 48 VDC outputs
- 9–60 VDC battery input range (absolute minimum and maximum)
- Up to 3000 W of regulated output per bus
- 18 branch circuit positions, 9 A-side and 9 B-side
- Split A/B bus for redundant A/B power feeds, or single bus with the hot bus strap
- Telecom-grade hydraulic-magnetic plug-in breakers, 1–30 A per circuit
- Negative and ground bars included
- Steel NEMA Type 1 enclosure for recessed wall mounting

INTERIOR LAYOUT



Door open: 18 plug-in breaker positions, 9 per bus.

TECHNICAL SPECIFICATIONS

Specifications are typical at 77 °F (25 °C), nominal input voltage, and rated load unless otherwise noted.

DC/DC CONVERSION

Converters	Buck-boost DC/DC, one per bus (two on dual-converter models, one on -0 models)
Input voltage range	9–60 VDC (absolute minimum and maximum)
Regulated output voltage	12, 24 or 48 VDC per bus, by model
Regulated output power	3000 W per bus

MECHANICAL & ENVIRONMENTAL

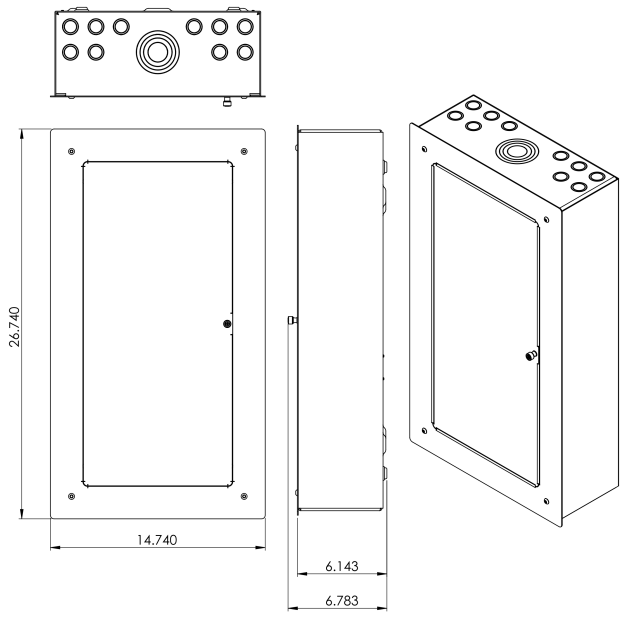
Mounting	Recessed wall mount
Enclosure	NEMA Type 1, indoor
Material	Steel
Weight	45 lb (20.4 kg), converter models
Humidity	5–95% RH, non-condensing
Cable entry	Top or bottom: 10 knockouts and 1 concentric knockout at each end
Operating temperature	−4 to +104 °F (−20 to +40 °C)

ELECTRICAL

Unregulated bus voltage (basic model)	48 VDC; suitable for 12 and 24 VDC systems
DC inputs	1 (single bus) or 2 (split A/B bus)
Input current (max)	Split A/B bus: 180 A per bus, 360 A total; single bus (hot bus strap installed): 360 A
Branch circuit positions	18 (9 A-side, 9 B-side)
Branch circuit protection	Telecom-grade hydraulic-magnetic plug-in breakers, 1–30 A, 80 VDC, 1-pole, mid trip, UL 489
Return and ground	Negative bar and ground bar included
Input termination	1/4-20 stud per input bus
Branch circuit wire size	#14 to #6 AWG
Branch circuit termination	Screw wire lug

DIMENSIONS

OUTLINE DIMENSIONS



Door closed. Drawing dimensions in inches.

Dimensions are nominal, in inches (mm). External depth includes the door latch.

KEY DIMENSIONS & WEIGHTS

External (H × W × D)	26.74 × 14.74 × 6.78 in (679 × 374 × 172 mm)
Depth, excluding latch	6.14 in (156 mm)
Enclosure box (H × W × D)	26.13 × 14.13 × 6.08 in (664 × 359 × 155 mm)

ORDERING INFORMATION

Order the loadcenter model, then select plug-in breakers for each branch circuit. The hot bus strap and breakers are sold separately.

PART NUMBER	DESCRIPTION	RATING
016-3000-10	DCL-18, basic model, no DC/DC converters	360 A total
016-3844-10	DCL-18-48-48, 48 V / 48 V DC/DC converters	48 / 48 VDC
016-3842-10	DCL-18-48-24, 48 V / 24 V DC/DC converters	48 / 24 VDC
016-3840-10	DCL-18-48-0, 48 V DC/DC on bus A; none on bus B	A: 48 VDC; B: unregulated
016-3822-10	DCL-18-24-24, 24 V / 24 V DC/DC converters	24 / 24 VDC
016-3821-10	DCL-18-24-12, 24 V / 12 V DC/DC converters	24 / 12 VDC
016-3820-10	DCL-18-24-0, 24 V DC/DC on bus A; none on bus B	A: 24 VDC; B: unregulated
016-3811-10	DCL-18-12-12, 12 V / 12 V DC/DC converters	12 / 12 VDC
016-3810-10	DCL-18-12-0, 12 V DC/DC on bus A; none on bus B	A: 12 VDC; B: unregulated

CONFIGURATION OPTIONS

OPTION	AVAILABLE SELECTIONS	NOTES
Input bus	Split A/B bus / Single bus	Single-bus operation uses the hot bus strap (750-1023-10): 360 A. Split bus: 180 A per bus, 360 A total.

ACCESSORIES & PLUG-IN BREAKERS

PART NUMBER	DESCRIPTION
750-1023-10	Accessory kit, DC loadcenter, hot bus strap: links the A and B buses
470-401-10	Plug-in breaker, 5/16 in bullet terminals, 5 A, 80 VDC, 1-pole, mid trip, UL 489
470-235-10	Plug-in breaker, 5/16 in bullet terminals, 10 A, 80 VDC, 1-pole, mid trip, UL 489
470-409-10	Plug-in breaker, 5/16 in bullet terminals, 15 A, 80 VDC, 1-pole, mid trip, UL 489
470-402-10	Plug-in breaker, 5/16 in bullet terminals, 20 A, 80 VDC, 1-pole, mid trip, UL 489
470-412-10	Plug-in breaker, 5/16 in bullet terminals, 25 A, 80 VDC, 1-pole, mid trip, UL 489
470-403-10	Plug-in breaker, 5/16 in bullet terminals, 30 A, 80 VDC, 1-pole, mid trip, UL 489

STANDARDS & COMPLIANCE

CATEGORY	EQUIPMENT / SCOPE	STANDARDS	STATUS
Safety	DCL-18 loadcenter	UL 67, UL 1741	Pending
EMC	DC/DC converter models	FCC Part 15 Class A	Pending

REVISION HISTORY

REV.	DATE	DESCRIPTION OF CHANGE
A	November 2026	Initial release.

Pricing and availability through authorized distributors.

W aimbridgeenergy.com E info@aimbridgeenergy.com T (888) 825-9001

Specifications subject to change without notice. © 2026 Aimbridge Energy. All rights reserved.