The Amphenol nrg600BT10-C 600A dual-feed 10/10 circuit breaker load center features -48V operating voltage to fit in legacy and next-generation network applications. This panel has advanced circuit-level monitoring features engineered into a compact 2RU footprint.

Fig. 1: nrg600BT10-C

Each of the 600A dual feeds contain 10 positions for bullet-style breakers. The nrg600BT20S-C is a single-feed version that supports 20 positions for bullet-style breakers.

The panel provides total front access to fuses and LED status. All terminals for inputs, outputs, ground and alarms are on the rear of the panel. The open frame design allows easy access while the clear cover provides added protection after installation is complete.

NOTE: Load straps are required for each position a breaker is installed. See the ordering information at the end of this document.

Benefits

- Individual circuit-level monitoring
  - High accuracy, 100% passive monitoring, modular sensor modules
- Collect feed voltage, circuit current and temperature
- Network data collection:
  - SNMP interface comes standard when used with nrgCONTROL-BT

Key Features

- **Monitoring:** Gain insight to troubleshoot and prevent power issues in your network
- **Knowledge:** Real-time information on equipment usage at the circuit level
- **Savings:** Know your power usage and save energy

Available Models

Fig. 2: nrg600BT10-C Front view

Fig. 3: nrg600BT10-C

Specifications

Inputs	
Voltage range, nominal voltage	-40V to -60V, nominal -48 VDC
Max. input load rating	600A per feed
Short circuit withstand rating	5000A
Nominal power loss at full load	Less than 7W per side @ 28,000W full load (600A x 48V)
Percentage of full power dissipation at nominal voltage	Less than 1%
Input terminal studs (with nuts, flat washers and spring washers) for dual-hole compression lugs	• Two pair of 3/8-16 studs on one-inch centers per terminal [max. lug width of 1.94" (49.2 mm)] per pair • Torque nut (using 9/16-inch or 15 mm wrench) to 150in/lb. (~17 N•m), max.
Input wire size	#1 AWG to 750 MCM
Outputs	
Max. output circuit breaker or fuse holder	Single-pole: 100A Double-pole: 175A
Max. output load – continuous	Single-pole: 80A Double-pole: 175A
Min. short circuit interrupt rating	5000A
Max. total output load	550A per side
Output terminal studs (with KEPS, nuts and washers) for dual-hole compression lugs	• 1/4-20 studs on 5/8-inch centers [max. lug width of 0.625" (15.8 mm) for a BATT terminal and 0.70" (17.7 mm) for a RTN terminal] • Torque bolts (using 7/16-inch or 12 mm wrench) to 50 in/lb. (5.5 N•m), max.
Output wire size	• #10 AWG (min.) for a 25A single-pole interrupter to #2 AWG (min.) for a 100A single-pole interrupter • #2 AWG (min.) for double-pole interrupters from 100A to 175A • 2/0 AWG (min.) for triple-pole interrupters
Circuit breakers*	AIRPAX®-style LEL or Carling-style CA1**
* Amphenol suggests avoiding use of different types of circuit breakers in the same load center. Alarm contacts may vary among interrupter manufacturers and may incapacitate the alarm system ** Circuit breakers for this load center are designed and manufactured by Airpax Corporation and Carling Industries to meet the Amphenol Network Solutions symmetrical pin specifications. Order circuit breakers only from Amphenol.	
Grounding	
Earth GND terminal bolts (with washers) or dual-hole compression lug	• Two pair 1/4-20 threaded holes on 5/8-inch centers • Torque bolts (using 7/16-inch or 12 mm wrench) to 50 in/lb. (5.5 N•m), max.
Input wire size	#2 AWG (min.) for any input interrupt device 400A or more

Alarm	
Alarm wire size	#30 to #16 AWG
Alarm terminals	Removable 6-pin connector with screw down terminal
Relay contact ratings	Dry Form-C contacts (1A @ 30 VDC; 0.5A @ 60 VDC, 0.3A 125 VAC)
Max. alarm power rating	@ 24V: 72mA (1.73W) @48V: 147 mA (7.06W)
Voltage Sensor	
Sensor accuracy	0 to -19.99V: ± 0.3V -20V to -60V: ± 0.1V
Voltage measurement range	0 to -60 VDC
Feed voltage detection	0 to -19.99V: ± 0.3V -20V to -60V: ± 0.1V
NOTE: • Voltage measurement may be slightly different than at input terminal blocks due to the voltage drop within the panel • Sensors are factory calibrated and do not require user adjustment	
Communication	
nrgNET sensor alarm card power (via nrgNET cabling connection to an nrgCONTROL-BT controller)	-48 VDC nominal ***NOTE:*** The nrg600BT10-C and nrg600BT20S-C chassis MUST BE connected to a nrgCONTROL-BT controller via nrgNET cabling for LED Alarm Indicators to function
nrgNET data communication	RS-485
nrgNET connector	Removable 5-pin connector with screw down terminals
nrgNET connector functions	nrgNET IN from the nrgCONTROL or nrgSMART panel, nrgNET OUT to next in-line nrgSMART panel
LED Alarm Indicators (requires nrgNET & controller for power)	A/B bus power A/B fuse alarms nrgNET Comms active
Supported protocols	Proprietary nrgNET used to communicate between panels and controller
Fit and Finish	
Material	Cold-rolled steel
Color	Pewter grew powder coat
Mechanical	
Dimensions (L x W x H)	19" L x 15" W x 3.5" H (483 mm x 305mm x 88mm)
Rack space	2RU
Weight, without packaging and accessories	29.4 lbs. (13.3 kg)
Weight, shipping	33.8 lbs. (15.3 kg)
Environmental	
Operating temperature	-10°C (14°F) to 53°C (127°F)
Humidity	90%, non-condensing
Feed voltage detection	0 to -19.99V: Alarm -20V to -60V: Normal
Compliance	
	UL, NEBS Level 36
Warranty	
• Standard one-year warranty on all parts	

Ordering Information

Part Number	Description
Panels	
nrg600BT10-C	nrgSMART: 600A BULLET TERMINAL, DUAL-FEED 10/10, -48V, WITH nrgBT/SINGLE POLE-LOAD STRAPS
nrg600BT20S-C	nrgSMART: 600A, BULLET TERMINAL, SINGLE-FEED 20, -48V, WITH nrgBT/SINGLE POLE LOAD STRAPS
Accessories	
nrgCONTROL-BT	nrgSMART: CONTROLLER
143142	TERM BLOCK: RCPT, 1x4, 300V, 15A, 5.08 mm, MTG SCRW, 30-12 AWG, ROHS
nrg600BT1X-1PK	nrgSMART: LOAD STRAP KIT, 1 POLE, 1/4-20, 5/8 SPACING
nrg600BT1X-2PK	nrgSMART: LOAD STRAP KIT, 2 POLE, 1/4-20, 5/8 SPACING
nrg600BT1X-3PK	nrgSMART: LOAD STRAP KIT, 3 POLE, 1/4-20, 5/8 SPACING
306308	nrgSMART: AUX CARD
BT	nrgSMART: MOD, BT, PASS THROUGH, -48V
nrgBT	nrgSMART: MOD, BT, CURRENT SENSOR, -48V
nrgNET-500	nrgSMART: ACC, nrgNET CABLE, SPOOL, 500 FT
nrgNET-10	nrgSMART: ACC, nrgNET CABLE, UN-TERMINATED, 10 FT
nrgBT-HEX	nrgSMART: ACC, BT, HEX WRENCH
nrgTEMP	nrgSMART: ACC, TEMP SENSOR, 6 FT
141431	TERM BLOCK: RCPT, 1x5, 160V, 8A, 3.81 mm, 30-16 AWG, ROHS
02117-02+B7	BRKT: UNIVERSAL, 23IN, 2RU, PWTR GRAY

Single-Pole Breakers (Symmetric Alarm Pins)

Amperage	Part Number
5A	147604
10A	147605
15A	147606
20A	147607
25A	147608
30A	147609
40A	147610
50A	147611
60A	147612
70A	147613
80A	147614
90A	147615
100A	147616

Double-Pole Breakers (Symmetric Alarm Pins)

Amperage	Part Number
125A	148038
150A	148039
175A	148040