Power: 8/8 Position Circuit Breaker Panel

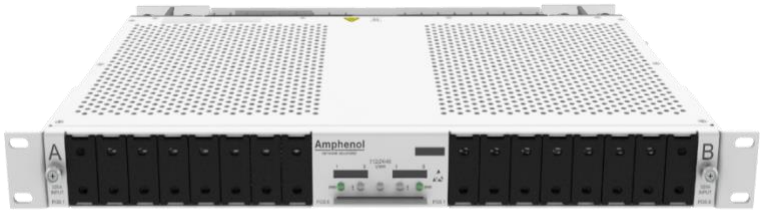

Fig. 1: nrg300CB08-SENS Front View

All the different versions of the Amphenol 300CB08 circuit breaker panels have dual feed 325A inputs and provide 8/8 breaker positions. Our 300CB08/nrg300CB08 panels feature ±12/±24/±48V operating voltages to serve legacy and “next gen” network applications. Engineered into a standard 1RU footprint, each circuit supports up to 60A breakers in each position, providing ample capacity for distribution to a broad range of components. Advanced circuit-level monitoring features are available as an option. The panel is available in standard terminal block outputs or connectorized outputs.

This platform provides front access to alarm enable/disable switch configuration for uninstalled breaker locations. Also featured are front LED indicators for power/breaker alarms, monitoring status, rear connections for form C relay alarms, and optional nrgSMART connections.

Fig. 2: 300CB08 Rear View

Each of the 325A feeds provides power for up to eight output positions. Field replaceable circuit breakers are available from 2A to 60A per position. The front of the panel features individual circuit breaker touch guards to prevent inadvertent switching.

Primary Features

- Universal voltage (±12VDC, ±24VDC, and ±48VDC) enables standardization on a single part number for multiple voltages
- Up to 60A breakers for distribution to a variety of network elements
- UL and NEBS compliant to ensure industry-standard safety and functional requirements
- Form C relay contacts provide reliable alarm connections
- Integrated designation card holder for simple circuit identification
- Alarm LEDs indicate breaker and power failures
- Clear, flame-retardant polycarbonate cover (94V-0) protects input and output power connections and wiring
- Either vertical feed inputs and staggered output terminal blocks to facilitate waterfall cable management, horizontal feed inputs, and output connectors that speed up installation and allow cables

to exit straight back from the panel, or vertical feed inputs and output connectors that allow input cables to be routed directly from above and speed up installation of outputs.

- Optional Individual Circuit Monitoring provides high accuracy, 100% passive monitoring
- Collect voltage and current for both feed and output circuit
- Collect temperature using optional nrgTEMP probes

Applications

- Wireless
- Central office
- Co-location
- Remote sites
- Secondary distribution

Fig. 3: nrg300CB08-C Rear View

Ordering Information

Circuit Breaker Panel	Part Number:
325A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	300CB08
325A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	300CB08-C
325A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	300CB08-SC
nrgSMART Circuit Monitoring, Controller, 325A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	nrg300CB08-CTRL
nrgSMART Circuit Monitoring, Sensor, 325A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	nrg300CB08-SENS
nrgSMART Circuit Monitoring, Controller, 325A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	nrg300CB08-CTRL-C
nrgSMART Circuit Monitoring, Sensor, 325A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	nrg300CB08-SENS-C
nrgSMART Circuit Monitoring, Controller, 325A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg300CB08-CTRL-SC
nrgSMART Circuit Monitoring, Sensor, 325A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg300CB08-SENS-SC

Stud Input/Lug Output

Connectorized/Horizontal Input “-C”

Connectorized/Stud Input “-SC”

Accessories (Purchased Separately):	Part Number:
1RU Circuit Breaker Puller	307491
Extra Blanking Covers (sheet of 16): to cover unused breaker positions (sheet of 16 included with panel)	149568
4 Post Mounting Bracket Kit: 22”-36” Brackets, Mounting Hardware (*Requires Tie Bar, -C Versions only)	307622
Tie Bar Kit: Connectorized, Rear Mount Tie Bar, Mounting Hardware (-SC Versions only)	307661
nrgSMART Temperature Sensor, ACC, 6ft	nrgTemp
Replacement Components:	**Part Number:**
Replaceable Alarm Card (for use with non-nrgSMART Panels)	307608
Replaceable Alarm Card, nrgSMART	090-1000-0003
Replaceable Controller Board, nrgSMART	090-1000-0004
Replaceable Sensor Board, nrgSMART	090-1000-0005
19” Mounting Bracket Kit: 2x 19” Brackets, Mounting Hardware	PMTG19
23” Mounting Bracket Kit: 2x 23” Brackets, Mounting Hardware	PMTG23
Replacement – set of 16 Breaker covers	307794
Connectors:	**Part Number:**
P40 Connector Kit: TPA, 8-6 AWG, Plug, Retainer, 2x Contacts	150326
P40 Connector Kit: TPA, 12-10 AWG, Plug, Retainer, 2x Contacts	150325
P40 Replaceable Contact: TPA, 8-6 AWG, Single Contact	150333
P40 Replaceable Contact: TPA, 12-10 AWG, Single Contact	150334
Crimp Tool: 14-6 AWG, Daniels, M300BT	150793
Crimp Tool Locator: Universal, Daniels, UH2-5	150794
Contact Removal Tool: P40 Connector	150797
Single-pole Breakers:	**Part Number:**
2A, standard delay, UL489	151723
3A, standard delay, UL489	152805
5A, standard delay, UL489	149710
10A, standard delay, UL489	149711
15A, standard delay, UL489	149712
20A, standard delay, UL489	149713
25A, standard delay, UL489	149714
30A, standard delay, UL489	149715
40A, standard delay, UL489	149716
50A, standard delay, UL489	149718
60A, standard delay, UL489	149719
***TPA Fuses (For use with TPA fuses, requires TPA fuse holder 307492):**	**Part Number:**
TPA Fuse Holder	307492
5A, 170VDC	124818
10A, 170VDC	124819
15A, 170VDC	124820
20A, 170VDC	124821
25A, 170VDC	125244
30A, 170VDC	122734
40A, 170VDC	122738
50A, 170VDC	122739

**Note: The use of TPA fuses requires TPA fuse holder. For more information, see 250TPA08-16F Datasheet*

Fig. 4: nrg300CB08-CTRL

Specifications

Inputs:	Specifications:
Voltage range (nominal voltage)	±12VDC, ±24VDC and ±48VDC
Max. input load rating	325A @ 45°C per panel
Short circuit withstand rating	5000A
Max. input interrupt device	125% of panel rating (for 325A rated feeds)
Optional (Standard and -SC versions): Vertical input terminal studs (with Keps nuts and flat washers) for dual-hole compression lugs	Two pairs of $^{3}/_{8}$-16 studs on 1" centers per terminal [max. lug width of 1.15" (29.2 mm)]. Torque nut (using $^{9}/_{16}$" or 15 mm socket) to 150 in/lb. (~17 N•m), max.
Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs	Two pairs of $^{3}/_{8}$" holes on $^{5}/_{8}$"-1" centers per terminal [max. lug width of 1.5" (38.1 mm)]. Torque bolt and nut (using $^{9}/_{16}$" or 15 mm sockets) to 150 in/lb. (~17 N•m), max.
Input wire size	2/0 AWG to 350 MCM
Grounding:	**Specifications:**
Earth GND terminal bolts (with spring washers and flat washers) for dual-hole compression lug	Three sets of $^{1}/_{4}$-20 threaded holes on $^{5}/_{8}$" centers. [max. lug width of .50" (12.7 mm)]. Torque bolts (using $^{7}/_{16}$" or 12 mm socket) to 50 in/lb. (5.5 N•m), max.
Ground wire size	#14 AWG to #4 AWG
Outputs:	**Specifications:**
Output circuit breaker	Single-pole: 60A
Minimum short circuit interrupt rating	5000A
Optional (Standard Versions): Terminal blocks, single-hole compression lugs	16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N•m), max.
Optional (Standard Versions): Output wire size, single-hole compression lug	#14 AWG to #4 AWG
Optional (-C and -SC Versions): Connectors (purchased separately)	16, P40 connector plugs, latching, safe touch
Optional (-C and -SC Versions): Output wire size, connectors	#14 AWG to #6 AWG
Circuit breakers	AIRPAX 1U Series
Alarms:	**Specifications:**
Alarm relay contacts	2A @ 30 VDC; 0.6A @ 60 VDC
Max. alarm card power rating	@12V: 18mA (0.22W) @24V: 20mA (0.48W); @48V: 30mA (1.44W)
Alarm wire size	#24 AWG, typical (#26 to #20 AWG)
Terminals	Wire wrap or mates with TE Connectivity 3-640428-3
Dimensions:	**Specifications:**
300CB08 (all non-connectorized versions) Height:	1.75" (44 mm)
Depth:	13.0" (331 mm)
Width:	17" (432 mm) without brackets 19" and 23" brackets included with panel
300CB08-C/nrg300CB08-C Height:	1.75" (44 mm)
Depth:	18.8" (478 mm) without tie bar 22.0" (559 mm) with tie bar
Width:	17" (432 mm) without brackets 19" and 23" brackets included with panel Tie bar included with panel Cable-end connectors not included with panel

300CB08-SC/nrg300CB08-SC	Height: Depth: Width:	1.75" (44 mm) 13.0" (331 mm) without tie bar 16.5” (420 mm) with tie bar 17" (432 mm) without brackets 19” and 23” brackets included with panel Tie bar and cable-end connectors not included with panel
Weights:		**Specifications:**
300CB08/nrg300CB08		12.0 lb. Unpopulated / 17.0 lb. Populated
300CB08-C/nrg300CB08-C		14.6 lb. Unpopulated / 19.6 lb. Populated
300CB08-SC/nrg300CB08-SC		12.0 lb. Unpopulated / 17.0 lb. Populated
Compliance:		**Specifications:**
UL		Listed
NEBS		Level 3
Voltage Sensor (nrgSMART model only):		**Specifications:**
Sensor accuracy		-19.99 to +19.99V: ± 0.3V -20V to -60V: ± 0.1V +20V to +60V: ± 0.1V
Voltage measurement range		-60 to +60 VDC
NOTE: Sensors are factory calibrated and do not require user adjustment.		
Current Sensor (nrgSMART model only):		**Specifications:**
Precision / accuracy		±5% precision, ±0.25A accuracy Example: 40A current, will measure 40A ± (40A*5%) ± 0.25A = 40A ± 2.0A ± 0.25A = 37.75A to 42.25A
Communication (nrgSMART model only):		**Specifications:**
nrgOS minimum required version		nrgOS 4.1.0
nrgNET communication protocol		Proprietary serial protocol used to communicate between panels and controller
nrgNET connector		Removable 5-pin connector with screw down terminals
nrgNET connector functions		nrgNET IN from the Controller or upstream nrgSMART panel nrgNET OUT to downstream nrgSMART panel