

# 250TPA08/nrg250TPA08 - 250A Dual-Feed TPA Fuse Panel

**Power:: 8/8 Position TPA Fuse Panel** 

**Overview** 

The Amphenol Network Solutions 250TPA08/nrg250TPA08 fuse panels are 250A dual-feed and provide 8/8 TPA fuse positions. Our 250TPA08/nrg250TPA08 panels feature ±12/±24/±48V operating voltages to serve both legacy and "next-gen" network applications. Engineered into a standard 1RU footprint, each circuit supports up to



Fig. 1: nrg250TPA08-SENS-16 Front View

50A TPA fuses 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 TPA fuse locations. Also featured are front LED indicators for power/fuse alarms, monitoring status, rear connections for form C relay alarms, and optional nrgSMART connections.



Fig. 2: 250TPA08-16F Rear View

Each of the 250A feeds provide power for up to eight output positions. The panel includes removable 1RU TPA fuse holders. These 1RU TPA fuse holders feature an ergonomic front grip for easy removal, sliding top cover to protect the fuse from above, and red alarm plunger to indicate a failed fuse. Field replaceable TPA fuses are available from 5A to 50A per position. Breakers are available from 5A to 60A per position. The panel supports universal voltages (±12VDC to ±48VDC).

#### **Primary Benefits**

- Universal voltage (±12VDC, ±24VDC and ±48VDC) enables standardization on a single part number for multiple voltages
- Up to 50A fuses 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
- Fail alarm LEDs indicate fuse and power failures
- Clear, flame-retardant polycarbonate cover (94V-0) protects input and output power connections and wiring from damage
- 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: nrg250TPA08-C-16F Rear View

### **Ordering Information**

TPA Fuse Panel:	Part Number:
250A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	250TPA08-16F
250A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	250TPA08-C-16F
250A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	250TPA08-SC-16F
nrgSMART Circuit Monitoring, Controller, 250A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	nrg250TPA08-CTRL-16F
nrgSMART Circuit Monitoring, Sensor, 250A Dual-Feed, 8/8 Panel, Vertical Inputs, Output Terminal Blocks	nrg250TPA08-SENS-16F
nrgSMART Circuit Monitoring, Controller, 250A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	nrg250TPA08-CTRL-C-16F
nrgSMART Circuit Monitoring, Sensor, 250A Dual-Feed, 8/8 Panel, Horizontal Inputs, Connectorized Outputs, Standard Tie Bar (Connectors purchased separately)	nrg250TPA08-SENS-C-16F
nrgSMART Circuit Monitoring, Controller, 250A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg250TPA08-CTRL-SC-16F
nrgSMART Circuit Monitoring, Sensor, 250A Dual-Feed, 8/8 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg250TPA08-SENS-SC-16F



Stud Input/Lug Output



Connectorized/Horizontal Input "-C"



Connectorized/Stud Input "-SC"



Accessories (Purchased Separately):	Part Number:
Blanking Cover: Single, covers unused fuse holder or breaker positions	150203+03
4 Post Mounting Bracket Kit: 22"-36" Brackets, Mounting Hardware	307622
(requires Tie Bar, -C Versions only)	
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	307608
Replaceable Alarm Card, nrgSMART	307710
Replaceable Controller Board, nrgSMART	400822
Replaceable Sensor Board, nrgSMART	307607
1RU TPA Fuse Holder	307492
Breaker Cover Kit: Slimline, Cover, Hardware	307689
19" Mounting Bracket Kit: 2x 19" Brackets, Mounting Hardware	PMTG19
23" Mounting Bracket Kit: 2x 23" Brackets, Mounting Hardware	PMTG23
Connectors (Purchased Separately):	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
TPA Fuses:	Part Number:
5A, 170VDC	124818
10A, 170VDC	124819
15A, 170VDC	124820
20A, 170VDC	124821
25A, 170VDC	125244
30A, 170VDC	122734
40A, 170VDC	122738
50A, 170VDC	122739
Circuit Breakers:	Part Number:
5A, standard delay, UL489, without cover	149710
10A, standard delay, UL489, without cover	149711
15A, standard delay, UL489, without cover	149712
20A, standard delay, UL489, without cover	149713
25A, standard delay, UL489, without cover	149714
30A, standard delay, UL489, without cover	149715
40A, standard delay, UL489, without cover	149716
50A, standard delay, UL489, without cover	149718
60A, standard delay, UL489, without cover	149719





## **Specifications**

Voltage range (nominal voltage)	Inputs:	Specifications:
Max. input load rating		
Short circuit withstand rating  Nominal power loss at full load  Percentage of full power dissipation at nominal voltage Less than 45W per side @12,000W full load per side (250A x 48V); 250A @ 45°C per panel  Percentage of full power dissipation at nominal voltage Less than 45W per side @12,000W full load per side (250A x 48V); 250A @ 45°C per panel  Percentage of full power dissipation at nominal voltage Less than 0.5%  Max. input interrupt device  Optional (Standard and -SC versions): Vertical input terminal studs (with Keps nuts fath washers) for dual-hole compression lugs  Optional (*C Versions): Horizontal input terminal landings (with Keps nuts, fath washers, and bolts) for dual-hole compression lugs  Input wire size  Input wire size  Barth GND terminal bolts (with washers) for dual-hole compression lug  Grounding:  Barth GND terminal bolts (with washers) for dual-hole compression lug  Ground wire size  ### AWG to ### AWG  Output 15  Output 17  Ground wire size  ### AWG to ### AWG  Output 18  Optional (Standard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Connectors  (purchased separately)  Optional (*C and -SC Versions): Output wire size, single-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  Optional (*C and -SC Versions): Output wire size, songle-hole compression lug  **Alarm real contacts**  ### AWG to ### AWG  Optional (*C and -SC Versions): Output wire size, songl		· · · · · · · · · · · · · · · · · · ·
Less than 45W per side @ 12,000W full load per side (250A x 48V); 250A @ 45°C per panel		
Percentage of full power dissipation at nominal voltage Max. Input interrupt device Optional (Standard and -SC versions): Vertical input terminal studs (with Keps nuts and flat washers) for dual-hole compression lugs Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs Input wire size Olitoputs Grounding: Specifications Output R luse Output Ib Aluse Optional (Standard Versions): Terminal blocks, single-hole compression lug  Ground a specifications Optional (Standard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Connectors (purchased separately) Optional (Standard Versions): Connectors (purchased separately) Optional (-C and -SC Versions): Output wire size, sone-hole compression lug  Alarm relay contacts  Alarm relay contacts  Alarm relay contacts  Dimensions  2504 Perpanel  Less than 0.5%  Tree sets of 3/k-16 studs on 1° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  Two pairs of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  Two pairs of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  Two pairs of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  Two pairs of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 150 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 50 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> -10° centers per terminal [max. lug width of 50 in/lb. (-17 N-m), max.  The wash of 3/k <sup>-</sup> holes on 5/k <sup>-</sup> holes on 5/k <sup>-</sup> to 15 mm		
Less than 0.5%   Less	Nominal power loss at full load	
Max. input interrupt device Optional (Standard and -SC versions): Vertical input terminal studs (with Keps nuts and flat washers) for dual-hole compression lugs Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and boits) for dual-hole compression lugs Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and boits) for dual-hole compression lugs Input wire size  Grounding: Earth GND terminal bolts (with washers) for dual-hole compression lug Grounding: Earth GND terminal bolts (with washers) for dual-hole compression lug Ground wire size  Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Connectors (purchased separately)  Optional (C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  Fy A tuses  Alarm relay contacts  Max. alarm card power rating  Alarm relay contacts  Max. alarm card power rating  Mire wrap or mates with TE Connectivity 3-640428-3  Specifications:  1.75° (44 mm)  Depth: 1.75° (44 mm)  Depth: 1.70° (432 mm) without brackets  Width: 1.70° (432 mm) without brackets	Described as of full recover discination at recovery lands	····
Optional (Standard and -SC versions): Vertical input terminal studs (with Keps nuts and flat washers) for dual-hole compression lugs  Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs  Input wire size  Ground ding:  Earth GND terminal bolts (with washers) for dual-hole compression lug  Earth GND terminal bolts (with washers) for dual-hole compression lug  Earth GND terminal bolts (with washers) for dual-hole compression lug  For 12 mm socket) to 50 in/lb. (5.6 N-m), max.  Specifications:  Three sets of 1/x-20 threaded holes on 5/x² centers. Torque bolts (using 7/x² or 12 mm socket) to 50 in/lb. (5.6 N-m), max.  Specifications:  Three sets of 1/x-20 threaded holes on 5/x² centers. Torque bolts (using 7/x² or 12 mm socket) to 50 in/lb. (5.6 N-m), max.  Specifications:  Three sets of 1/x-20 threaded holes on 5/x² centers. Torque bolts (using 7/x² or 12 mm socket) to 50 in/lb. (5.6 N-m), max.  Specifications:  Output TPA fuse  Output TPA fuse  Output Glandard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Output wire size, single-hole compression lug  Optional (Standard Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Alarms:  Specifications:  16, P40 connector plugs, latching, safe touch  Width:  172 AWG to #6 AWG  Cooper Bussmann  Specifications:  Specifications:  Specifications:  182 AWG to #6 AWG  Cooper Bussmann  Specifications:  Specifications:  182 AWG to #2 AWG, typical #28 to #20 AWG)  Wire wap or mates with TE Connectivity 3-640428-3  Dimensions:  Specifications:  1876 (44 mm)  Depth:  1877 (475 mm) without tie bar  219" (557 mm) without tie bar  219" (557 mm) without brackets		
terminal studs (with Keps nuts and flat washers) for dual-hole compression lugs  Optional (C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs  Input wire size  Grounding:  Earth GND terminal bolts (with washers) for dual-hole compression lug  Two pairs of ½° holes on 5½° -1 centers per terminal [max. lug width of 1.5° (38.1 mm)]. Torque bolt and nut (using 9½° or 15 mm sockets) to 150 in/lb. (-17 N·m), max.  2/0 AWG to 350 MCM  Specifications:  Earth GND terminal bolts (with washers) for dual-hole compression lug  Ground wire size  #6 AWG to #1 AWG  Output TPA fuse  Output TPA fuse  Optional (Standard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Connectors (purchased separately)  Optional (C and -SC Versions): Output wire size, connectors  TPA (uses  Alarm relay contacts  Alarm relay contacts  Alarm reriay as a specifications:  Dimensions:  Specifications:  #12 AWG to #4 AWG  Obleton (C and -SC Versions): Output wire size, ennectors  (purchased separately)  Optional (C and -SC Versions): Output wire size, ennectors  (purchased separately)  Alarm relay contacts  Alarm relay contacts  Alarm resize  #24 AWG, typical (#26 to #20 AWG)  Alarm wire size  #24 AWG, typical (#26 to #20 AWG)  Wire wrap or mates with TE Connectivity 3-640428-3  Dimensions:  \$\$  \$\$  \$\$  \$\$  \$\$  \$\$  \$\$  \$\$  \$\$		
dual-hole compression lugs   (-17 N·m), max     Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs		
Optional (-C Versions): Horizontal input terminal landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs Input wire size  Grounding:  Earth GND terminal bolts (with washers) for dual-hole compression lug  Ground wire size  Minimum short circuit interrupt rating  Gobical (Standard Versions): Terminal blocks, single-hole compression lugs  Optional (Standard Versions): Coutput wire size, single-hole compression lug  Optional (Cand -SC Versions): Connectors  Ground (-C and -SC Versions): Connectors  Ground (-C and -SC Versions): Connectors  Ground (-C and -SC Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Output wire size, single-hole compression lug  Ground wire size  Gro	· · ·	, , , , , , , , , , , , , , , , , , , ,
landings (with Keps nuts, flat washers, and bolts) for dual-hole compression lugs  Forunding:  Earth GND terminal bolts (with washers) for dual-hole compression lug street size  Ground wire size  Ground wire size  Ground wire size  Earth GND terminal bolts (with washers) for dual-hole compression lug  Ground wire size  #6 AWG to #1 AWG  #6 AWG  #		
dual-hole compression lugs   150 in/lb. (-17 N·m), max.		
Input wire size  Grounding: Specifications:  Three sets of 1/2-20 threaded holes on 5/6" centers. Torque bolts (using compression lug  Ground wire size  Ground wire size  Output TPA fuse  Output PA fuse  Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, singlehole compression lugs  Optional (Standard Versions): Output wire size, singlehole compression lugs  Optional (Cand -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, single-hole compressions):  Alarm relay contacts  Alarm relay contacts  Alarm reminals  Dimensions:  250TPA08/nrg250TPA08-C  Height: Depth: D		
Specifications:   Specifications:   Three sets of 1/4-20 threaded holes on 5/8" centers. Torque bolts (using compression lug compression lug		
Earth GND terminal bolts (with washers) for dual-hole compression lug  Ground wire size  Outputs:  Output TPA fuse  Output load  Mo continuous TPA Fuse  40A continuous Circuit Breaker  Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, single-hole compression lug  Optional (Standard Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, sonnectors  Alarm relay contacts  Alarm relay contacts  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08-C  Pixed AWG  AWG to #1 AWG  #14 AWG to #1 AWG  #14 AWG to #1 AWG  #14 AWG to #4 AWG  #15 AWG to #4 AWG  #16, P40 connector plugs, latching, safe touch  #18 AWG to #1 AWG  #19 AWG to #1 AWG  #19 AWG to #1 AWG  #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #16, P40 connector plugs, latching, safe touch  #18 AWG to #4 AWG  #19 AWG to #4 AWG  #19 AWG to #4 AWG  #10 Connector plugs, latching, safe touch  #11 AWG to #6 AWG  #12 AWG to #6 AWG  #12 AWG to #6 AWG  #13 AWG to #6 AWG  #14 AWG to #6 AWG  #15 AWG to #6 AWG  #16, P40 connector plugs, latching, safe touch  #18 AWG to #6 AWG  #19 AWG to #6 AWG  #19 AWG to #6 AWG  #10 AWG  #11 AWG to #6 AWG  #12 AWG to #6 AWG  #13 AWG to #6 AWG  #14 AWG to #6 AWG  #15 AWG to #1 AWG  #16, P40 connector plugs, latching, safe touch  #16, P40 connector plugs, latching, safe touch  #18 AWG to #1 AWG  #19 AWG to #1 AWG  #10 AWG to #1 AWG  #11 AWG to #2 AWG  #12 AWG to #6 AWG  #13 AWG to #1 AWG  #14 AWG to #4 AWG  #15 AWG to #1 AWG  #16, P40 connector plugs, latching, safe touch  #17 AWG to #4 AWG  #18 AWG to #1 AWG  #19 AWG to #1 AWG  #19 AWG to #1 AWG  #10 AWG to #1 AWG  #10 AWG to #1 AWG  #10 AWG to #1 AWG  #14 AWG to #1 AWG  #15 AWG to #1 AWG  #16, P40 connector plugs, latching, safe touch  #18 AWG to #1 AWG  #19 AWG to #1 AWG  #19 AWG to #1 AWG  #10 AWG to #1 AWG  #11 AW		
compression lug  Ground wire size  #6 AWG to #1 AWG  Outputs:  Output IPA fuse  Output Ioad  Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, single- nole compression lugs  Optional (Standard Versions): Output wire size, single- nole compression lugs  Optional (C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  #16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20  in/lb. (2.3 N•m), max.  #14 AWG to #4 AWG  Optional (-C and -SC Versions): Output wire size, single- nole compression lug  #15, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20  in/lb. (2.3 N•m), max.  #14 AWG to #4 AWG  Optional (-S to #4 AWG  Optional (-S to #4 AWG  Optional (-C and -SC Versions): 0utput wire size, single- nole compression lug  #16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20  in/lb. (2.3 N•m), max.  #14 AWG to #4 AWG  Optional (-S to #4 AWG  Opt		•
Ground wire size #6 AWG to #1 AWG Output TPA fuse 500 Output IPA fuse 40A continuous TPA Fuse 48A continuous Circuit Breaker 5000A Optional (Standard Versions): Terminal blocks, single-hole compression lug in/lb. (2.3 N-m), max. Optional (Standard Versions): Output wire size, single-hole compression lug Optional (C and -SC Versions): Connectors (purchased separately) Optional (-C and -SC Versions): Output wire size, single-hole compression lug Optional (-C and -SC Versions): Output wire size, single-hole compression lug Optional (-C and -SC Versions): Connectors (purchased separately) Optional (-C and -SC Versions): Output wire size, single-hole compression lug Optional (-C and -SC Versions): Output wire size, connectors TPA fuses Cooper Bussmann Alarms: Specifications: Alarm relay contacts		· · · ·
Output TPA fuse 50A Output load 40A continuous TPA Fuse 48A continuous Circuit Breaker  Minimum short circuit interrupt rating 5000A Optional (Standard Versions): Terminal blocks, singlehole compression lugs 116, #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, singlehole compression lug Optional (-C and -SC Versions): Connectors (purchased separately) Optional (-C and -SC Versions): Output wire size, connectors TPA fuses  Alarms:  Specifications:  TPA fuses  Alarm relay contacts Alarm relay contacts Alarm reraly contacts Alarm reraly contacts Alarm rerinals Dimensions:  250TPA08/nrg250TPA08  Height: Depth: Width:  Vidth:  Vidth:  Vidth:  Vidth:  Vidth: V		,
Output TPA fuse 50A  Output load 40A continuous TPA Fuse 48A continuous Circuit Breaker  Minimum short circuit interrupt rating 5000A  Optional (Standard Versions): Terminal blocks, singlehole 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, singlehole compression lug 44 AWG  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses Cooper Bussmann  Alarms: Specifications:  Alarm relay contacts Alarm card power rating 2A @ 30 VDC; 0.6A @ 60 VDC  Max. alarm card power rating 212V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  Alarm Terminals Wire wrap or mates with TE Connectivity 3-640428-3  Dimensions: Specifications:  250TPA08/nrg250TPA08 Height: Depth: 13.5" (344 mm)  Vidth: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C Height: 1.75" (44 mm)  Depth: 41.75" (44 mm)  Depth: 42.75 mm) without tie bar 21.9" (557 mm) without trackets 17.0" (432 mm) without brackets		
Output load  40A continuous TPA Fuse 48A continuous Circuit Breaker  Minimum short circuit interrupt rating 5000A  Optional (Standard Versions): Terminal blocks, single- hole compression lugs in/lb. (2.3 N-m), max.  Optional (Standard Versions): Output wire size, single- hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Alarm relay contacts  Alarm relay contacts  Alarm size  Alarm rerminals  Dimensionss  250TPA08/nrg250TPA08  Height: Depth: 17.5" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar 21.9" (557 mm) without brackets 2000  Votional (-C and -SC Versions): Output wire size, connectors  #12 AWG to #4 AWG  #14 AWG to #4 AWG  #15 AWG  #16, P40 connector plugs, latching, safe touch  #16, P40 connector plugs, latching, safe touch  #17 AWG  #18 AWG  #19 AWG  #19 AWG  #10 AWG  #10 AWG  #10 AWG  #11 AWG to #4 AWG  #11 AWG to #4 AWG  #12 AWG  #13 AWG  #14 AWG to #4 AWG  #15 AWG  #16, P40 connector plugs, latching, safe touch  #17 AWG  #18 AWG  #19 AWG  #19 AWG  #10 AWG  #10 AWG  #10 AWG  #10 AWG  #10 AWG  #10 AWG  #11 AWG to #4 AWG  #11 AWG to #4 AWG  #12 AWG  #13 AWG  #14 AWG to #4 AWG  #15 AWG  #16, P40 connector plugs, latching, safe touch  #16, P40 connector plugs, latching, safe touch  #17 AWG  #18 AWG  #19 AWG  #19 AWG  #19 AWG  #19 AWG  #10 AWG  #11 AWG to #4 AWG  #10 AWG  #10 AWG  #10 AWG  #10 AWG  #10 AWG  #11 AWG to #4 AWG  #12 AWG  #12 AWG to #6 AWG  #18 AWG  #19 AWG  #19 AWG  #19 AWG  #10 AWG  #1		
Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, single- hole compression lugs  Optional (Standard Versions): Output wire size, single- hole compression lug  Optional (Cand -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Alarms:  Alarms:  Alarm relay contacts  Max. alarm card power rating  Alarm vire size  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Height: Depth: 17.0" (432 mm) without tie bar 21.9" (557 mm) with tie bar 17.0" (432 mm) without brackets  Votional (-C and -SC Versions): Output wire size, connectors  #12 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #40-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screws to 20 in/lb. (2.3 N-m), max.  #14 AWG to #4 AWG  16, #10-32 screws [max. lug with of .50" (12.7)]. Torque screws to 20 in/lb. (2.4 NG)  #15 AWG to #6 AWG  16, P40 connector plus, latching, s	Output TPA fuse	50A
Minimum short circuit interrupt rating  Optional (Standard Versions): Terminal blocks, single-hole compression lugs  Optional (Standard Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Alarms:  Alarm relay contacts  Alarm relay contacts  Alarm wire size  Alarm wire size  Alarm wire size  #24 AWG, typical (#26 to #20 AWG)  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Height: Depth: 17.5" (44 mm)  Vidth: 17.0" (432 mm) without tie bar  21.9" (657 mm) without brackets  17.0" (432 mm) without brackets  Width: 17.0" (432 mm) without brackets	Output load	40A continuous TPA Fuse
Optional (Standard Versions): Terminal blocks, single- hole compression lugs Optional (Standard Versions): Output wire size, single- hole compression lug Optional (-C and -SC Versions): Connectors (purchased separately) Optional (-C and -SC Versions): Output wire size, connectors TPA fuses Cooper Bussmann Alarms: Specifications: Alarm relay contacts Alarm are lay contacts Alarm Terminals Dimensions: 250TPA08/nrg250TPA08  Person Alarm Signary Alar		48A continuous Circuit Breaker
hole compression lugs  Optional (Standard Versions): Output wire size, single-hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Cooper Bussmann  Alarms:  Alarm relay contacts  Alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Peight:  1.75" (44 mm)  Depth:  Depth:  1.75" (44 mm)  Depth:  1.75" (44 mm)  Depth:  1.75" (44 mm)  Depth:  Depth:  1.75" (44 mm)  Depth:  1.75" (45 mm) without tie bar  21.9" (557 mm) with tie bar  Width:  1.7.0" (432 mm) without brackets	Minimum short circuit interrupt rating	5000A
Optional (Standard Versions): Output wire size, single- hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Cooper Bussmann  Alarms:  Alarm relay contacts  Alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08-C  Depth:  1.75" (44 mm) Depth: Depth: Depth: Depth: 1.75" (44 mm) Depth: 1.75" (45 mm) without tie bar 21.9" (557 mm) without brackets 17.0" (432 mm) without brackets 17.0" (432 mm) without brackets	Optional (Standard Versions): Terminal blocks, single-	16, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20
hole compression lug  Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Alarm relay contacts  Max. alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08-C  Plant Alarm Card Power Patent  Depth: 1.75" (44 mm)  Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) without brackets  Wich connectors plugs, latching, safe touch  16, P40 connector plus, safe touch  16, P40 connector plu	hole compression lugs	in/lb. (2.3 N•m), max.
Optional (-C and -SC Versions): Connectors (purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Alarms:  Alarm relay contacts  Max. alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Pleight:  Depth:  Depth:	Optional (Standard Versions): Output wire size, single-	#14 AWG to #4 AWG
(purchased separately)  Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Cooper Bussmann  Alarms:  Alarm relay contacts  Max. alarm card power rating  Alarm Terminals  Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) without tie bar 21.9" (557 mm) without brackets  17.0" (432 mm) without brackets  17.0" (432 mm) without brackets  17.0" (432 mm) without brackets  24.24 AWG to #6 AWG  Cooper Bussmann  #12 AWG to #6 AWG  #13 AWG to #6 AWG  #14 AWG to #6 AWG  #15 AWG  #16 AWG  #17 AWG to #6 AWG  #18	hole compression lug	
Optional (-C and -SC Versions): Output wire size, connectors  TPA fuses  Cooper Bussmann  Alarms:  Alarm relay contacts  Alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  250TPA08-C/nrg250TPA08-C  250TPA08-C/nrg250TPA08-C  Page 12 AWG to #6 AWG  Cooper Bussmann  Specifications:  2A @ 30 VDC; 0.6A @ 60 VDC  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  #24 AWG, typical (#26 to #20 AWG)  Wire wrap or mates with TE Connectivity 3-640428-3  Specifications:  1.75" (44 mm)  Depth: 13.5" (344 mm)  Width: 17.0" (432 mm) without brackets  19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm)  Depth: 18.7" (475 mm) without tie bar  21.9" (557 mm) with tie bar  17.0" (432 mm) without brackets	Optional (-C and -SC Versions): Connectors	16, P40 connector plugs, latching, safe touch
connectors         Cooper Bussmann           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)           Alarm Terminals         Wire wrap or mates with TE Connectivity 3-640428-3           Dimensions:         Specifications:           250TPA08/nrg250TPA08         Height: 1.75" (44 mm)           Vidth: 17.0" (432 mm) without brackets           19" and 23" brackets included with panel           250TPA08-C/nrg250TPA08-C         Height: 1.75" (44 mm)           Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar 21.9" (557 mm) without brackets           Width: 17.0" (432 mm) without brackets	(purchased separately)	
TPA fuses  Alarms:  Alarm relay contacts  Alarm card power rating  Alarm Terminals  Dimensions:  250TPA08-C/nrg250TPA08-C  TPA fuses  Specifications:  2A @ 30 VDC; 0.6A @ 60 VDC  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  @ 12V: 18mA (0.22W) @ 24V: 20mA (0.48W); @ 48V: 30mA (1.44W)  ### With Common	Optional (-C and -SC Versions): Output wire size,	#12 AWG to #6 AWG
Alarms: Alarm relay contacts  Alarm relay contacts  Alarm wire size Alarm Terminals  Dimensions:  250TPA08-C/nrg250TPA08-C  Height: Depth: Dep	connectors	
Alarm relay contacts  Alarm card power rating  Alarm wire size  Alarm Terminals  Dimensions:  2A @ 30 VDC; 0.6A @ 60 VDC  @12V: 18mA (0.22W) @24V: 20mA (0.48W); @48V: 30mA (1.44W)  #24 AWG, typical (#26 to #20 AWG)  Wire wrap or mates with TE Connectivity 3-640428-3  Specifications:  250TPA08/nrg250TPA08  Height: Depth: Uidth:  1.75" (44 mm) 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: Depth: 1.75" (44 mm) 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	TPA fuses	Cooper Bussmann
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)           Alarm Terminals         Wire wrap or mates with TE Connectivity 3-640428-3           Dimensions:         Specifications:           250TPA08/nrg250TPA08         Height: 1.75" (44 mm)           Depth: 13.5" (344 mm)         Width: 17.0" (432 mm) without brackets           19" and 23" brackets included with panel           250TPA08-C/nrg250TPA08-C         Height: 1.75" (44 mm)           Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar 41.0" (432 mm) without brackets           Width: 17.0" (432 mm) without brackets	Alarms:	Specifications:
Alarm wire size #24 AWG, typical (#26 to #20 AWG)  Wire wrap or mates with TE Connectivity 3-640428-3  Dimensions:  250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 13.5" (344 mm) Width: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	Alarm relay contacts	2A @ 30 VDC; 0.6A @ 60 VDC
Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	Max. alarm card power rating	@12V: 18mA (0.22W) @24V: 20mA (0.48W); @48V: 30mA (1.44W)
Alarm Terminals  Dimensions:  250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	Alarm wire size	#24 AWG, typical (#26 to #20 AWG)
Dimensions:  250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 13.5" (344 mm) Width: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		, , , , , , , , , , , , , , , , , , , ,
250TPA08/nrg250TPA08  Height: 1.75" (44 mm) Depth: 13.5" (344 mm) Width: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		·
Depth: Vidth: 13.5" (344 mm)  17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm)  Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		
Width: 17.0" (432 mm) without brackets 19" and 23" brackets included with panel  250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm) Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		· · ·
250TPA08-C/nrg250TPA08-C  Height: 1.75" (44 mm)  Depth: 475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	-	
Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		
Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		
Depth: 18.7" (475 mm) without tie bar 21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets	250TPA08-C/nrg250TPA08-C Height:	1.75" (44 mm)
21.9" (557 mm) with tie bar Width: 17.0" (432 mm) without brackets		
Width: 17.0" (432 mm) without brackets	· ·	
	Width:	· · · · · · · · · · · · · · · · · · ·
19 and 25 brackets included with parier		19" and 23" brackets included with panel



		Tie bar included with panel
		<u> </u>
		Cable-end connectors not included with panel
250TPA08-SC/nrg250TPA08-SC	Height:	1.75" (44 mm)
•	Depth:	13.5" (344 mm) without tie bar
		17.0" (432mm) with tie bar
	Width	17.0" (432 mm) without brackets
		19" and 23" brackets included with panel
		Tie bar and cable-end connectors not included with panel
Weights:		Specifications:
250TPA08/nrg250TPA08		12.0 lb. Unpopulated / 15.6 lb. Populated
250TPA08-C/nrg250TPA08-C		14.6 lb. Unpopulated / 18.2 lb. Populated
250TPA08-SC/nrg250TPA08-SC		12.0 lb. Unpopulated / 15.6 lb. Populated
Compliance:		Specifications:
UL		Listed (TPA Fuses Only)
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:		
• Voltage measurement may be slightly diff	erent than at	input terminal blocks due to the voltage drop within the panel.
• Sensors are factory calibrated and do not	•	adjustment.
Current Sensor (nrgSMART model only)	i	Specifications:
Precision / accuracy		±5% precision, ±0.25A accuracy
		Example: 40A current, will measure 40A ± (40A*5%) ± 0.25A
		$= 40A \pm 2.0A \pm 0.25A$
		= 37.75A to 42.25A
Communication (nrgSMART model only	):	Specifications:
nrgOS minimum required version nrgOS		nrgOS 4.1.0
nrgNET communication protocol		Proprietary serial protocol used to communicate between panels and
		1

controller

Removable 5-pin connector with screw down terminals

nrgNET OUT to downstream nrgSMART panel

nrgNET IN from the Controller or upstream nrgSMART panel

nrgNET connector

nrgNET connector functions