240GT54/nrg240GT54 - 240A Dual-Feed Combination Fuse Panel

Power :: 5/4 Position GMT/TPA Fuse Panel

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Overview

The Amphenol Network Solutions 240GT54/nrg240GT54 combination fuse panels are 240A dual-feed and provide 5/5 GMT fuse positions and 4/4 TPA fuse or circuit breaker positions. Our 240GT54/nrg240GT54 panels feature ±12/±24/±48V operating voltages to serve both legacy and

Fig. 1: 240GT54 Front View

"next-gen" network applications. Engineered into a standard 1RU footprint, with circuits that support up to 20A GMT fuses and 50A TPA fuses or 60A breakers in each position, providing ample capacity for distribution to a broad range of components. The panel is available in standard terminal block outputs or connectorized outputs.
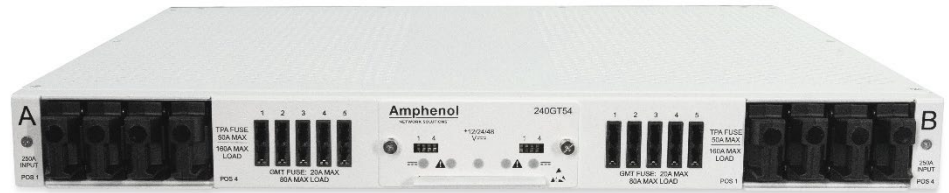
This platform provides front access to alarm enable/disable switch configuration for uninstalled TPA fuse or breaker locations. Also featured are front LED indicators for power/fuse alarms, monitoring status, rear connections for form C relay alarms, and optional nrgSMART connections.

Fig. 2: 240GT54 Rear View

Each of the 240A feeds provide power for up to five GMT and four TPA or breakers 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. Circuit breakers are an optional accessory and can be installed with a protective cover to protect against unintended on or off switching. Circuit breaker covers are included with all panels. Field replaceable GMT fuses are available from 18/100A to 20A. 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 or 60A breakers for distribution to a variety of network elements

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- 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: 240GT54-C Rear View

Ordering Information

GMT/TPA Combination Fuse Panel:	Part Number:
240A Dual-Feed, 5/4 Panel, Vertical Inputs, Output Terminal Blocks	240GT54
240A Dual-Feed, 5/4 Panel, Horizontal Inputs, Connectorized Outputs (Connectors purchased separately)	240GT54-C
240A Dual-Feed, 5/4 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	240GT54-SC
nrgSMART Circuit Monitoring, Controller, 240A Dual-Feed, 5/4 Panel, Vertical Inputs, Output Terminal Blocks	nrg240GT54-CTRL
nrgSMART Circuit Monitoring, Sensor, 240A Dual-Feed, 5/4 Panel, Vertical Inputs, Output Terminal Blocks	nrg240GT54-SENS
nrgSMART Circuit Monitoring, Controller, 240A Dual-Feed, 5/4 Panel, Horizontal Inputs, Connectorized Outputs (Connectors purchased separately)	nrg240GT54-CTRL-C
nrgSMART Circuit Monitoring, Sensor, 240A Dual-Feed, 5/4 Panel, Horizontal Inputs, Connectorized Outputs (Connectors purchased separately)	nrg240GT54-SENS-C
nrgSMART Circuit Monitoring, Controller, 240A Dual-Feed, 5/4 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg240GT54-CTRL-SC
nrgSMART Circuit Monitoring, Sensor, 240A Dual-Feed, 5/4 Panel, Vertical Inputs, Connectorized Outputs (Tie Bar and Connectors purchased separately)	nrg240GT54-SENS-SC

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Accessories (Purchased Separately):	Part Number:
Blanking Cover: Single, Covers unused fuse holder positions	150203+03
1RU Circuit Breaker Puller	307491
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	307608
Replaceable Alarm Card, nrgSMART	307710
Replaceable Controller Card, nrgSMART	400822
Replaceable Sensor Card, nrgSMART	307607
1RU TPA Fuse Holder	307492
Dummy GMT fuse	132748
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
P24 Connector Kit: GMT, 12-10 AWG, Plug, Retainer, 2x Contacts	150336
P24 Connector Kit: GMT, 14-12 AWG, Plug, Retainer, 2x Contacts	150342
P24 Replaceable Contact: GMT, 12-10 AWG, Single Contact	150343
P24 Replaceable Contact: GMT, 14-12 AWG, Single Contact	150344
Crimp Tool: 14-6 AWG, Daniels, M300BT	150793
Crimp Tool Locator: Universal, Daniels, UH2-5	150794
Contact Removal Tool: P40 Connector	150797
GMT Fuses:	**Part Number:**
18/100A	130781
1/4A	100151
1/2A	004001
3/4A	004008
1A	100991
1-1/3A	004006
1-1/2A	004011
2A	004002
2-1/2A	130783
3A	004012
3-1/2A	130782
4A	004013
5A	004014
7-1/2A	004010
10A	004015
12A	102287
15A	102288
20A	127240
20A with cover	131340

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

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Specifications

Inputs:	Specifications:
Voltage range (nominal voltage)	±12VDC, ±24VDC and ±48VDC
Max. input load rating	240A @ 45°C per panel (De-rated to 160A @ 65°C)
Short circuit withstand rating	5000A
Nominal power loss at full load	Less than 45W per side @11,520W full load per side (240A x 48V); 240A @ 45°C per panel
Percentage of full power dissipation at nominal voltage	Less than 0.5%
Max. input interrupt device	125% of panel rating (for 240A 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 fuse	20A GMT fuse 50A TPA fuse 60A circuit breaker
Output load	16A continuous GMT fuse 40A continuous TPA fuse 48A continuous circuit breaker
Minimum short circuit interrupt rating	5000A
Optional (Standard Versions): Terminal blocks, single-hole compression lugs	10, #6-32 screws [max. lug width of .32" (8.1)]. Torque screw to 8 in/lb. (.9 N•m), max. GMT fuse 8, #10-32 screws [max. lug width of .50" (12.7)]. Torque screw to 20 in/lb. (2.3 N•m), max. TPA fuse or circuit breaker
Optional (Standard Versions): Output wire size, single-hole compression lug	#22 AWG to #6 AWG, GMT fuse #14 AWG to #4 AWG, TPA fuse or circuit breaker
Optional (-C and -SC Versions): Connectors (purchased separately)	10, P24 connector plugs, latching, safe touch, GMT fuse 8, P40 connector plugs, latching, safe touch, TPA fuse or circuit breaker
Optional (-C and -SC Versions): Output wire size, connectors	#14 AWG to #10 AWG, GMT fuse #12 AWG to #6 AWG, TPA fuse or circuit breaker
GMT fuses	Cooper Bussmann and Littelfuse
TPA fuses	Cooper Bussmann
Circuit breaker	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

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Dimensions:		Specifications:
240GT54/ nrg240GT54	Height:	1.75" (44 mm)
	Depth:	13.5" (344 mm)
	Width:	17.0" (432 mm) without brackets
		19" and 23" brackets included with panel
240GT54-C/nrg240GT54-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
		19" and 23" brackets included with panel
		Tie bar included with panel
		Cable-end connectors not included with panel
240GT54-SC/nrg240GT54-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

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:
• 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.

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

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