EATON BY SPIKE ELECTRIC CONTROLS

SN7SPP
Factory Sealed Panelboards

Discover unparalleled safety and reliability with SN7SPP Factory Sealed Panelboards. Meticulously designed to house circuit breakers, switches, and vital components securely, their factory-sealed construction offers robust protection from environmental factors and tampering. Built for efficiency and longevity, these panelboards are the ultimate solution for industries demanding uncompromising electrical performance.

5914 E. Sam Houston Pkwy S. Houston TX 77034 | Toll Free 1.844.279.8295 | Local Factory Support 832.243.5372 | Fax 832.569.5645
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Revision Date: 9/29/2023

SN7SPP

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SN7SPP Panelboards:

High quality factory-sealed & non-factory-sealed solution for lighting, power & heat tracing circuits designed for use in hazardous locations.

SN7SPP Factory Sealed:

Factory-sealed panelboards provide a flexible, labor cost saving solution for the field. Panels can be pre-wired to max capacity in order to safely add additional circuits in the field while holding the factory-sealed integrity.

Applications:

- In hazard locations where flammable gases, vapors, and combustible dust is present.
- In areas where weather, dampness and corrosion is present
- For branch protection to motors, starters, pumps, lighting, heat tracing etc.
- For indoor/outdoor use in refineries and chemical plants where hazards exist.

Standard Materials:

- Panel board enclosure--copper-free aluminum
- Terminal housing--316 stainless steel
- External operating handles--copper-free aluminum. Operating shafts, washers, breather/drain-stainless steel
- Panel board bus--copper
- Neutral and ground-tin plated aluminum

316 SS Heavy Duty Hinges

Certifications & Compliances:

NEC/CEC:

- Class I, Division 1 & 2, Groups B, C, D
- Class II, Division 1 & 2, Groups E, F, G
- Class III
- cUL & UL Standard 1203, 67
- NEMA Type 3, 3R, 4, 7BCD, 9EFG
- Enclosure Type 4X (requires selecting 4X option)

Electrical Rating Range:

- Breather/Drain
- Cast aluminum terminal housing (SN7SPP)
- Inverted Orientation
- Wire for max circuit (SN7SPP)

Options:

- Breather/Drain
- Cast aluminum terminal housing(SN7SPP)
- Inverted Orientation
- Wire for max circuit (SN7SPP)

Terminal Housing Integral Drainage Channel

- Integral drainage channel prevents liquids or other solid contaminants from running in our falling into the enclosure when the door is opened
- Minimizes gasket path Contamination

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Factory Sealed Panelboards

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Example Part Number

SN7SPP 12 150332T - 6130,6140 - S756V

Factory sealed panelboards catalog prefix

SN7SPP 12 [1]225 33 2 [2]T - [3]6130,6140 - [4]S756

Poles

#	Description
6	6 Circuits
12	12 Circuits
18	18 Circuits
24	24 Circuits
30	30 Circuits
36	36 Circuits
42	42 Circuits
6BF	6 Circuits w/ back fed main breaker
12BF	12 Circuits w/ back fed main breaker
18BF	18 Circuits w/ back fed main breaker
24BF	24 Circuits w/ back fed main breaker
39BF	39 Circuits w/ back fed main breaker

Wiring System

33	480 V 3PH 3W

Bus Amps

1	100A
2	225A
3	400A
4	600A

2 Power Entry

T	Top Feed
B	Bottom Feed

3 Branch Breakers

480V

Type	Poles	Amps
EGB	1	15-125A
EGB	2	15-125A
EGB	3	15-125A

Disconnect AMPS

AMPS	Description
30-255A	Vertical main
10-100A	Back fed main
MLO	Main lug only
400A	Vertical Main
600A	Vertical Main

4 Enclosure Modification And Accessories

S756	Drain Class I,B,C & D, Class II,E,F & G, Class III
S756V	Breather/Drain Class I,B,C & D, Class II,E,F & G, ClassIII
CJB	Cast Aluminum Junction Box
MC	Pre-Wire For Max Circuits
INV	Inverted Orientation
OS	Oversized Junction Box

Breaker Format:

Qty,type,poles,amps (Each configuration will be followed by a comma)
EG is standard and does not require a type prefix.
Example: 1130,2230,1140

Back Fed Main Breaker

Catalog Number	Available	Phases	Voltage	Bus	Drawing	Dimensions							
SN7SPP6BF331*-*-*	6	3	480	100	AA	17.09	17.07	10.82	5.44	114.76	17.25	10	30.47
SN7SPP12BF331*-*-*	12	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP18BF331*-*-*	18	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP24BF331*-*-*	24	3	480	100	CC	29.44	17.44	11.63	17.5	14.94	17.25	14	42.77
SN7SPP24	24	3	480		AA	29.59	23.59	12.06	17.1	22.19	17.25	14	42.27
SN7SPP24	24	3	480		BB	29.59	23.59	12.06	17.1	22.19	17.25	21.5	41.90

SN7SPP

Factory Sealed Panelboards

Main lug only

Catalog Number	Available Poles	Phases	Voltage Rating	Bus Amps	Drawing Figure	Dimensions a	b	c	d	e	f	g	h
SN7SPP6MLO331*-*-*	6	3	480	100	AA	17.09	17.07	10.82	5.44	114.76	17.25	10	30.47
SN7SPP12MLO331*-*-*	12	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP18MLO331*-*-*	18	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP24MLO331*-*-*	24	3	480	100	CC	29.44	17.44	11.63	17.5	14.94	17.25	14	42.77
SN7SPP24MLO332*-*-*	24	3	480	225	CC	29.44	17.44	11.63	17.5	14.94	17.25	14	42.77
SN7SPP30MLO332*-*-*	30	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP36MLO332*-*-*	36	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP42MLO332*-*-*	42	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP42	42	3	480	225	AA	29.59	23.59	12.3	17.1	22.37	17.25	14	42.27

Vertical Main Breaker

Catalog Number	Available Poles	Phases	Voltage Rating	Bus Amps	Drawing Figure	Dimensions a	b	c	d	e	f	g	h
SN7SPP6*331*-*-*	6	3	480	100	AA	17.09	17.07	10.82	5.44	11.48	17.25	10	30.47
SN7SPP12*331*-*-*	12	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP18*331*-*-*	18	3	480	100	BB	23.31	17.31	11.13	11.5	14.94	17.25	10	36.45
SN7SPP24*331*-*-*	24	3	480	100	CC	29.44	17.44	11.63	17.5	14.94	17.25	14	42.77
SN7SPP24*332*-*-*	24	3	480	225	CC	29.44	17.44	11.63	17.5	14.94	17.25	14	42.77
SN7SPP30*332*-*-*	30	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP36*332*-*-*	36	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP42*332*-*-*	42	3	480	225	DD	41.22	17.19	11.92	29.5	14.94	17.25	14	54.53
SN7SPP42	42	3	480		CC	41.84	23.84	12.34	28.26	22.37	17.25	14	53.94
SN7SPP42	42	3	480			41.84	23.84	12.34	28.26	22.37	12	21.56	53.54

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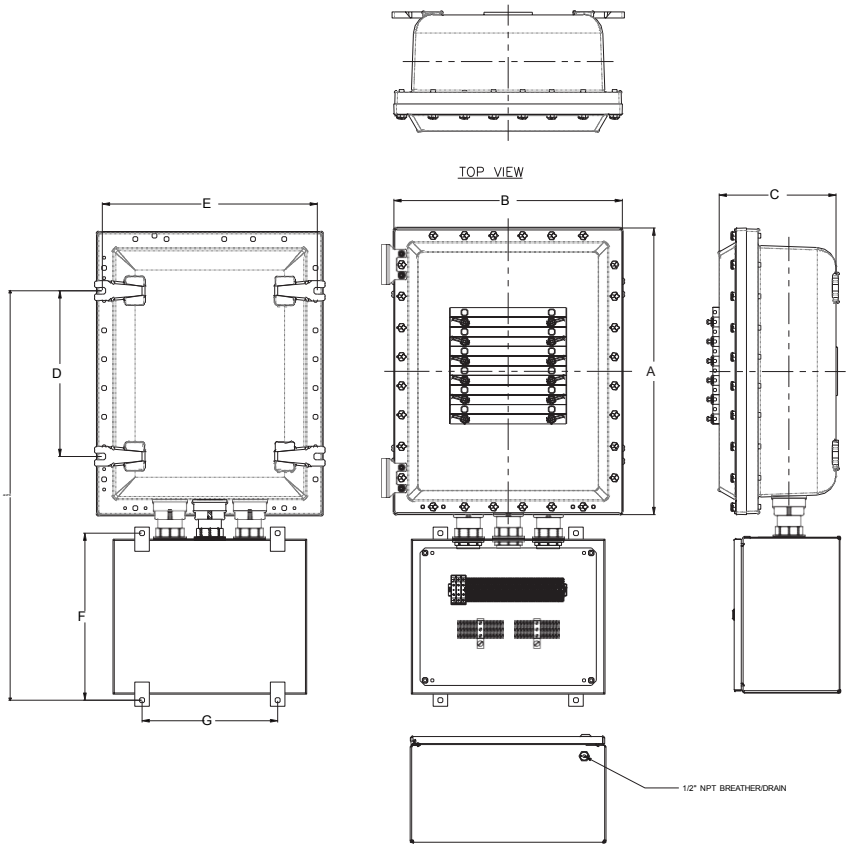


BACK FED MAIN/MLO
UP TO 24CKT

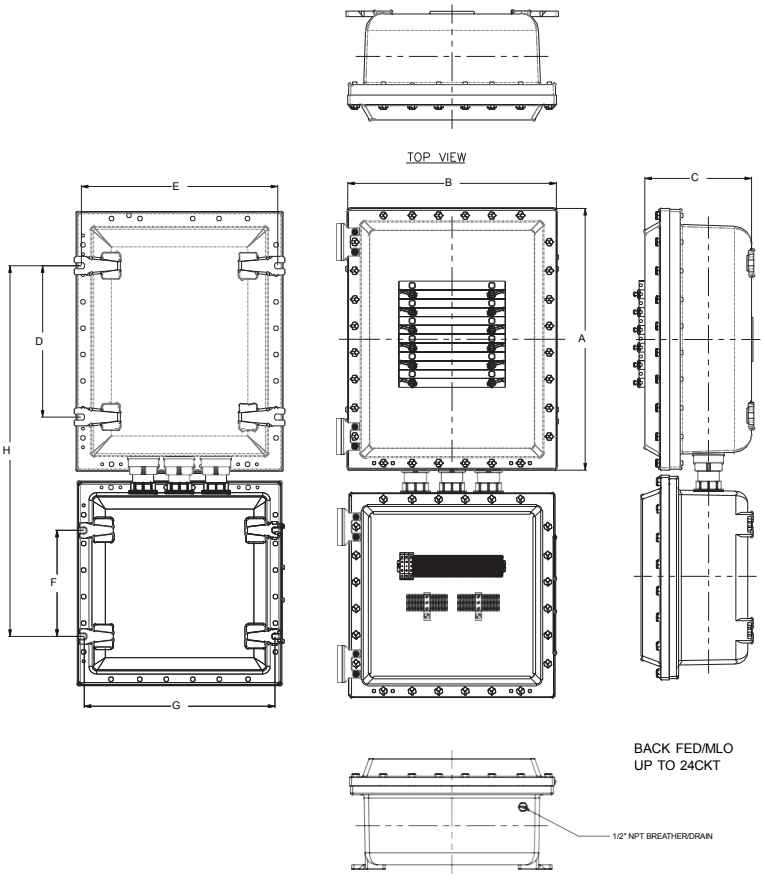
FIGURE "AA"

Green Energy from Spike Electric Controls

Green Energy Efficient:

The SN7SPP factory-sealed panelboards are at the forefront of green energy efficiency due to their innovative design and advanced technologies. These panelboards are engineered with meticulous attention to energy conservation, utilizing high-performance components that minimize energy loss and maximize overall efficiency. The factory-sealed construction ensures optimal insulation and protection, reducing thermal leakage and enhancing the panelboards' ability to maintain stable operating temperatures.

Furthermore, the integration of smart metering and monitoring systems enables real-time energy consumption analysis, empowering users to make informed decisions about their energy usage. By combining cutting-edge engineering with sustainable practices, SN7SPP's green energy-efficient panelboards stand as a prime example of modern electrical solutions that significantly contribute to a more environmentally conscious and resource-efficient future.



BACK FED/MLO
UP TO 24CKT

FIGURE "BB"

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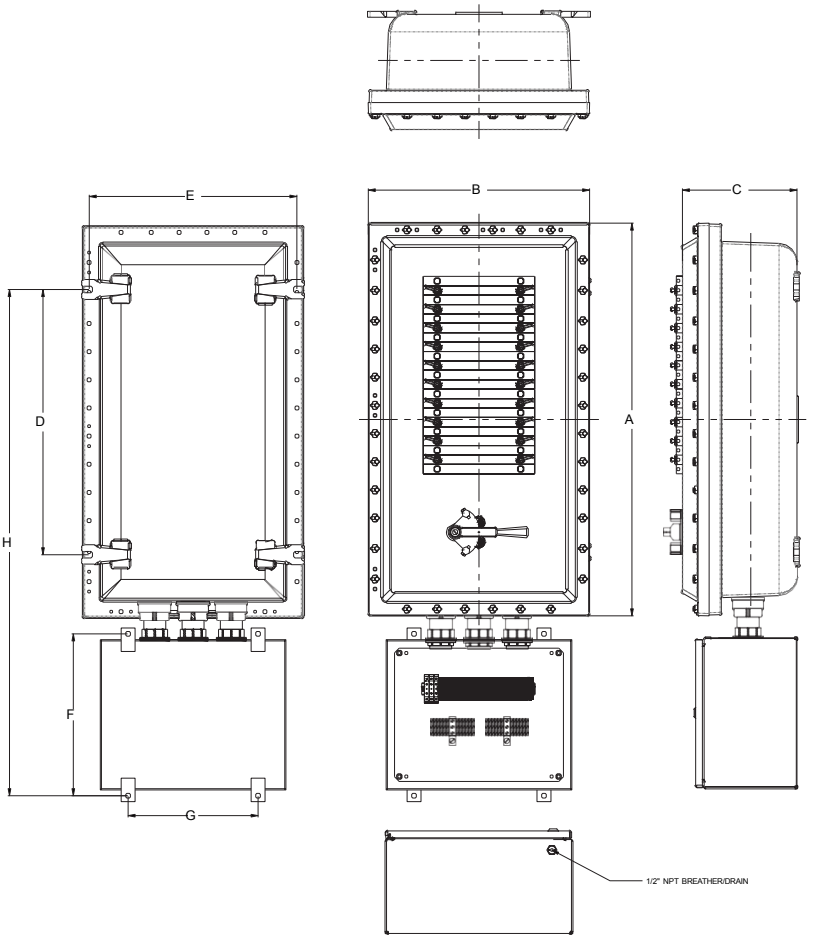
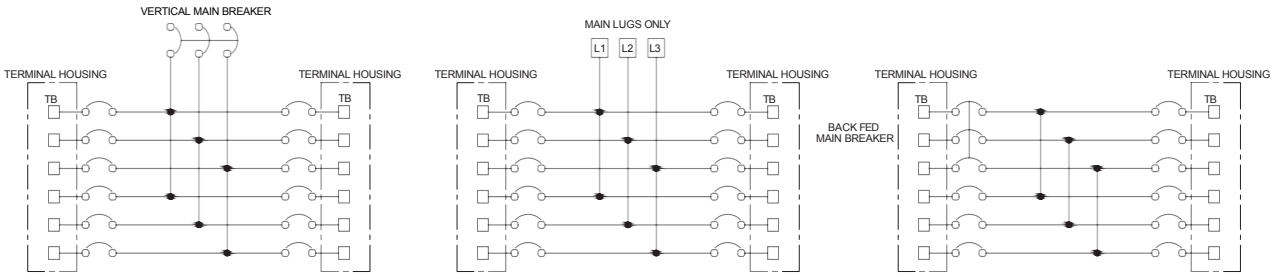


VERTICAL MAIN
UP TO 42CKT

FIGURE "CC"

TYPICAL WIRING DIAGRAM FOR SN7SPP PANEL BOARDS



THREE PHASE WIRING DIAGRAM

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SN7SPP

Factory Sealed Panelboards

Service:

- Three-phase, four-wire 208Y/120 V,
- 240/120 V delta and 480Y/277 V
- Single-phase, three-wire 120/240 V
- Single-phase, two-wire 120 V
- Three-phase, three-wire
- 240 and 480 V
- Two-wire 125 Vdc

- Two-wire 250 Vdc

Suitable for service entrance applications when specified.

Mains:

For available mains, refer to Table 22.3-8.

Main breakers, 100, 150 and 225 A, Types EG, EHD, FD, FDE, FDB, HFD, HFDE and FDC may be horizontally mounted, same as branch breakers. All other main breakers are vertically mounted.

Branch Circuits:

For available branch devices, refer to Table 22.3-9.

Main Lugs Only:

The short-circuit rating of the MLO assembled panelboard will be fully rated based upon the lowest rated branch device or may be series rated with an approved upstream device. Main lugs only ampere ratings: 100, 250, 400 and 600.

Main Circuit Breakers:

The short-circuit rating shown is that of the main breaker only. The short circuit rating of the assembled panelboard is the rating of the lowest fully rated main or branch device, or the rating of an approved series rated combination.

Panelboard Ratings:

Voltage:

- 240 Vac maximum
- 480 Vac maximum
- 250 Vdc maximum

Main Lugs:

- 100-600 A

Main Breakers:

- 100-600 A

Branches:

- 240 Vac 15–125 A
- 480 Vac 15–125 A

Interrupting Capacity (Symmetrical):

- 240 Vac: 25–100 kA fully rated
- 240 Vac: 65–100 kA series rated
- 480 Vac: 18–65 kA fully rated
- 480 Vac: 65–100 kA series rated

Table 22.3-8. Main Circuit Breakers

Breaker Frame (Amperes)	Breaker Type	Interrupting Rating (kA Symmetrical)		
		240 Vac	480 Vac	250 Vdc
125	EGB ①	35	18	10
125	EGS ①	100	35	35
125	EGH ①	200	65	42
225	EDB	22	—	—
225	EDS	42	—	—
225	ED	65	—	—
225	EDH	100	—	—
225	EDC	200	—	—
225	FD, FDE	65	35	10
225	HFD, HFDE	100	65	22
225	FDC	200	100	22
400	DK	65	—	—
400	KD	65	35	10
400	HKD	100	65	22
400	LHH	100	65	—
400	KDC	200	100	22
600	LGE	65	35	22
600	LGH	100	65	22

① Horizontally/branch mounted.

Table 22.3-9. Branch Circuit Breakers

Breaker Type	Ampere Rating	Number of Poles	Interrupting Rating (kA Symmetrical)				
			120 Vac ©	240 Vac	277 Vac ©	480 Vac	250 Vdc
EGB	15–125	1, 2, 3	25	25	18	18	10
EGS	15–125	1, 2, 3	85	85	35	35	35
EGH	15–125	1, 2, 3	100	100	65	65	42

© Applicable to single-pole devices only.

Series Rated Combinations

Refer to series rating tables beginning on **Page 22.0-14** for the approved series rated combinations available for the branch circuit breakers listed in **Table 22.3-9**.

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Technical Data and Specifications

Bussing:

100–600 A: Copper is standard

Modifications:

Through-Feed Lugs, Sub-Feed Lugs (Main Lug Panels Only) and Sub-Feed Breakers (One Per Panel)

Shunt Trips

Shunt trips are available on two- and three-pole breakers.

Ground Bar:

Standard bolted in box. Aluminum is standard, copper is available as an option.

Surge Protective Device (SPD) :

Integrated onto panelboard chassis. For complete product description and available ratings, contract factory

General Construction Features:

Our assembled panelboards are designed for sequence phase connection of branch circuit devices. This allows complete flexibility of circuit arrangement (single-, two-or three-poles) to allow balance of the electrical load on each phase.

Sturdy, rigid chassis assembly ensures accurate alignment of interior with panel front; prevents flexing and minimizes possibility of loosening or damage to current carrying parts during and after installation.

Four point in-and-out adjustment of panel interior is provided to meet critical depth dimensions on flush installations. This compensates for possible misalignment of box at installation.

Main lugs are mechanical solderless type and approved for copper and aluminum conductors.

Available Rating:

The panelboards are rated at 240 Vac, 480 Vac and 600 Vac. Fault current is available up to 200 kAIC at 240 Vac, 100 kAIC at 480 Vac and 65 kAIC at 600 Vac. The short- circuit current rating of the panelboard is determined by the low short-circuit current rating of the lowest rated overcurrent device in the panelboard.

Standards and Certifications:

UL® 67 Listed for wall-mounted applications from 600 A National Electrical Code®

Standards:

All our panelboards are designed to meet the following applicable industry standards, except where noted:

1. Underwriters Laboratories
   a. Panelboards: UL 67
   b. Cabinets, boxes and trims: UL 50

*Note: Only panelboards containing UL listed devices can be UL labeled.

2. National Electrical Code
3. NEMA Standards: PB 1
4. Federal Specification W-P-115c
   Circuit breaker—Type I Class 1
   Fusible switch—Type II Class 1

Panelboard Options:

- Copper and silver-plated copper
- Copper lugs
- Density-rated bus
- Ground bars
- Customer-owned meters
- Service equipment construction

- Surge protective devices

Seismically qualified panelboards

Panelboard Short-Circuit Rating:

The short-circuit rating of Eaton's assembled panelboards are test verified by, and listed with, Underwriters Laboratories. Generally, these ratings are that of the lowest interrupting rated device in the panel. Certain exceptions to this rule exist where branch devices have been UL tested in combination with specific main devices having a higher interrupting rating. Where these defined main breaker and branch breaker combinations are used, the series short-circuit rating of the assembled panelboard will be the same as the series tested rating of the approved rated main breaker. All combinations shown are UL tested and listed.
These series ratings apply to panels having main devices, or main lug only panelboards fed remotely by the device listed in the series ratings chart as the main, for which UL listed tests were conducted.

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