

Public Safety Systems

DC Backup Power Systems

ORDERING GUIDE



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GUIDE FOR SELECTING INDOOR POWER SYSTEMS FOR 24VDC AND 48VDC LOADS

Information required to select system and battery

1) Maximum load size in watts

2) Run time required: 2, 12 or 24 Hours

3) Does the specification require an End of Life design margin added for battery?*

Ordering Equipment:

Section 1: Power System & Batteries	Item 1: Power System & Rectifier Modules (only required for 1.2kW Rectifier Options) Item 2: Batteries
Section 2: Mounting Options	Item 1: Plinth Kit (Optional) Item 2: Wall Mount Kit (Optional)
Section 3: Distribution Circuits	Item 1: Additional Distribution Circuits (Optional)



PS41-2730 Enclosure with (8) batteries and Cordex® 48-1.2kW

Battery Calculations and Selection

Use of this ordering guide to select systems and batteries will ensure that the UL 2524 requirements are met. Refer to the PS27-2220-DC and the PS41-2730-DC manuals for a description of battery calculation. All configurations in this ordering guide were calculated with a 24-hour battery recharge time.

*What is an end of life design margin?

An end-of-life design margin of 25% is a method of sizing batteries such that the battery rating exceeds the actual capacity rating by a factor of 1.25 (sometimes referred to as the aging factor). This allows the batteries to be replaced when its actual capacity drops to 80% of its rated capacity.

Example:

If you have an actual load size of 400W, you will multiply 400W by 1.25.

$$400W \times 1.25 = 500W$$

The battery capacity would be calculated for 500W instead of 400W. This ensures the batteries will continue to provide the specified run time once it has degraded to 80% capacity.

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Step 1

Step 1a - Select Desired Run Time & Load Size

Step 1b: Order the corresponding items

NOTE - Load size and battery capacity was calculated for a 208/240VAC input

2 Hour Rate System Selection

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
275W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	181-013-10	34Ah Std Life Battery	2	
320W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810226	AlphaCell® XTV 100	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
550W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(2) in front & (2) behind
	Batteries:	181-013-10	34Ah Std Life Battery	4	
950W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810226	AlphaCell® XTV 100	4	
1300W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(2) in front & (2) behind
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810227	AlphaCell® XTV 150	4	
1900W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810477	NSB 100FT HT Red	4	



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2 Hour Rate System Selection with an End Of Life Design Margin of 25%

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
200W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	181-013-10	34Ah Std Life Battery	2	
300W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810491	AlphaCell® XTV 100	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
475W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(2) in front & (2) behind
	Batteries:	181-013-10	34Ah Std Life Battery	4	
750W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810226	AlphaCell® XTV 100	4	
975W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(2) in front & (2) behind
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810227	AlphaCell® XTV 150	4	
1500W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810477	NSB 100FT HT Red	4	



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12 Hour Rate System Selection

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
60W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	181-013-10	34Ah Std Life Battery	2	
100W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810226	AlphaCell® XTV 100	2	
190W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810229	AlphaCell® XTV 240	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
150W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(2) in front & (2) behind
	Batteries:	181-013-10	34Ah Std Life Battery	4	
350W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(4) in a row
	Batteries:	1810477	NSB 100FT HT Red	4	
625W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810495	NSB 170FT HT Red	4	
1250W	Power System:	0570192-101	PS41-2730, Indr, CX1.2, 48V, 2BT, Rd, NEMA4	1	(4) in a row (both shelves)
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810495	NSB 170FT HT Red	8	

12 Hour Rate System Selection with an End Of Life Design Margin of 25%

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
75W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810226	AlphaCell® XTV 100	2	
150W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810229	AlphaCell® XTV 240	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
150W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(2) in front & (2) behind
	Batteries:	181-013-10	34Ah Std Life Battery	4	
300W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(4) in a row
	Batteries:	1810477	NSB 100FT HT Red	4	
600W	Power System:	0570192-101	PS41-2730, Indr, CX1.2, 48V, 2BT, Rd, NEMA4	1	(4) in a row (both shelves)
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810477	NSB 100FT HT Red	8	
950W	Power System:	0570192-101	PS41-2730, Indr, CX1.2, 48V, 2BT, Rd, NEMA4	1	(4) in a row (both shelves)
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810495	NSB 170FT HT Red	8	

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24 Hour Rate System Selection

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
50W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810226	AlphaCell® XTV 100	2	
100W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810229	AlphaCell® XTV 240	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
100W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(2) in front & (2) behind
	Batteries:	1810226	AlphaCell® XTV 100	4	
200W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(4) in a row
	Batteries:	1810477	NSB 100FT HT Red	4	
380W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810445	NSB 170FT HT Red	4	
750W	Power System:	0570192-101	PS41-2730, Indr, CX1.2, 48V, 2BT, Rd, NEMA4	1	(4) in a row (both shelves)
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810445	NSB 170FT HT Red	8	

24 Hour Rate System Selection with an End of Life Design Margin 25%

24VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
50W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810227	AlphaCell® XTV 150	2	
120W	Power System:	0570196-101	PS27-2220, Indr, PSU24-400-GMT-NEMA4	1	(2) in a row
	Batteries:	1810477	NSB 100FT HT Red	2	
48VDC LOADS					
LOAD SIZE (WATTS)	PART NUMBER		DESCRIPTION	QTY	BATTERY POSITION
220W	Power System:	0570190-101	PS27-2220, Indr, PSU48-650-GMT-NEMA4	1	(4) in a row (both shelves)
	Batteries:	1810477	NSB 100FT HT Red	4	
300W	Power System:	0570191-101	PS41-2730, Indr, CX1.2, 48V, 1BT, Rd, NEMA4	1	(4) in a row
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	1	
	Batteries:	1810445	NSB 170FT HT Red	4	
600W	Power System:	0570192-101	PS41-2730, Indr, CX1.2, 48V, 2BT, Rd, NEMA4	1	(4) in a row (both shelves)
	Rectifiers:	010-619-20-041	Cordex® 48-1.2kW	2	
	Batteries:	1810445	NSB 170FT HT Red	8	

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Step 2 - Select Plinth Kit (Optional)

PART NUMBER	DESCRIPTION	COMMENTS
740-760-23	Kit, 8" Plinth, PS27, Aluminum, Red	Plinth kit for PS27 enclosure
0370231-002	Kit, 4" Plinth, PS41, Aluminum, Red	Plinth kit for PS41 enclosure
0370531-001	Kit, Wall Mount Bracket, PS27-2220	Wall mount kit is for PS27 enclosure only

Step 3 - Additional Distribution Circuits (Optional)

PART NUMBER	DESCRIPTION	COMMENTS
470-346-10	CB, 1P, 60A, 80VDC, 5/16" Bull, Seris-trp, Aux	
7400849-003	Assy, Pnl, 48V, GMT Fuse, 8 Pos, 1 RU, Blk	

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