

ORDERING GUIDE

Infinity S-Flex Stackable Plants

Spring 2022



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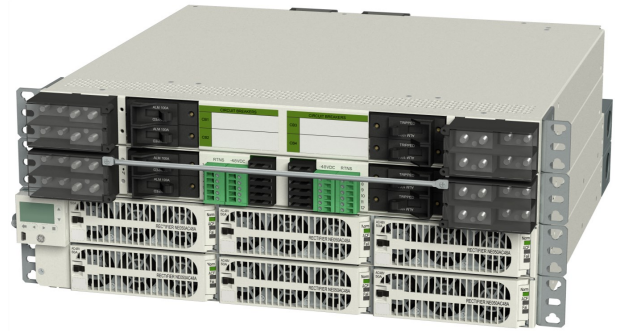
Section 2: Additional Information

Ordering Guide Revision Updates

REVISION	DATE	CHANGES/NOTES	IMPLEMENTATION DATE
1.0	April 2022	Initial Release	April 8, 2022
1.1	January 2024	Updated as per OmniOn template	January 17, 2024

Infinity S-Flex Specifications

Infinity S-Flex may be configured as a -48V voltage power system. Infinity S-Flex is configurable from 150A to 225A with a single rectifier shelf and single distribution (4 Circuit Breaker Load & 12 GMT Fuses with 2 Bulk Battery inputs) up to 250A with two rectifier shelves and any combination of distributions. Additional distribution panel options for 4 load breaker, 6 load breaker, and 8 to 12 Snappak breaker panels. The system includes optional low voltage battery disconnect.



Input	MIN	TYPICAL	MAX
Voltage Range			
• High-Line	175VAC	220VAC	305VAC
• Low-Line	85VAC	110VAC	140VAC
Frequency	45Hz	60Hz	66Hz
Power Factor	98%	99.5%	99.8%
Total Harmonic Distortion			5%

Primary Output	
Nominal Voltage	-48Vdc
Output Rating	250A
Vo Setpoint (Factory)	-54.5Vdc±1%
Vo Range	-42Vdc to -58Vdc
Regulation	±0.5%

Mechanical	
Height (in./mm)	3.5 / 89 (Base system with one power shelves and one distribution)
Width (in./mm)	19 / 484 (System Only - No Frame)
Depth (in./mm)	16.75 / 425 (No AC Cover); 18.75 / 476 (with AC cover)
Weight (Lb/Kg)	18 / 8.2 (Base System with one power shelves and one distribution)

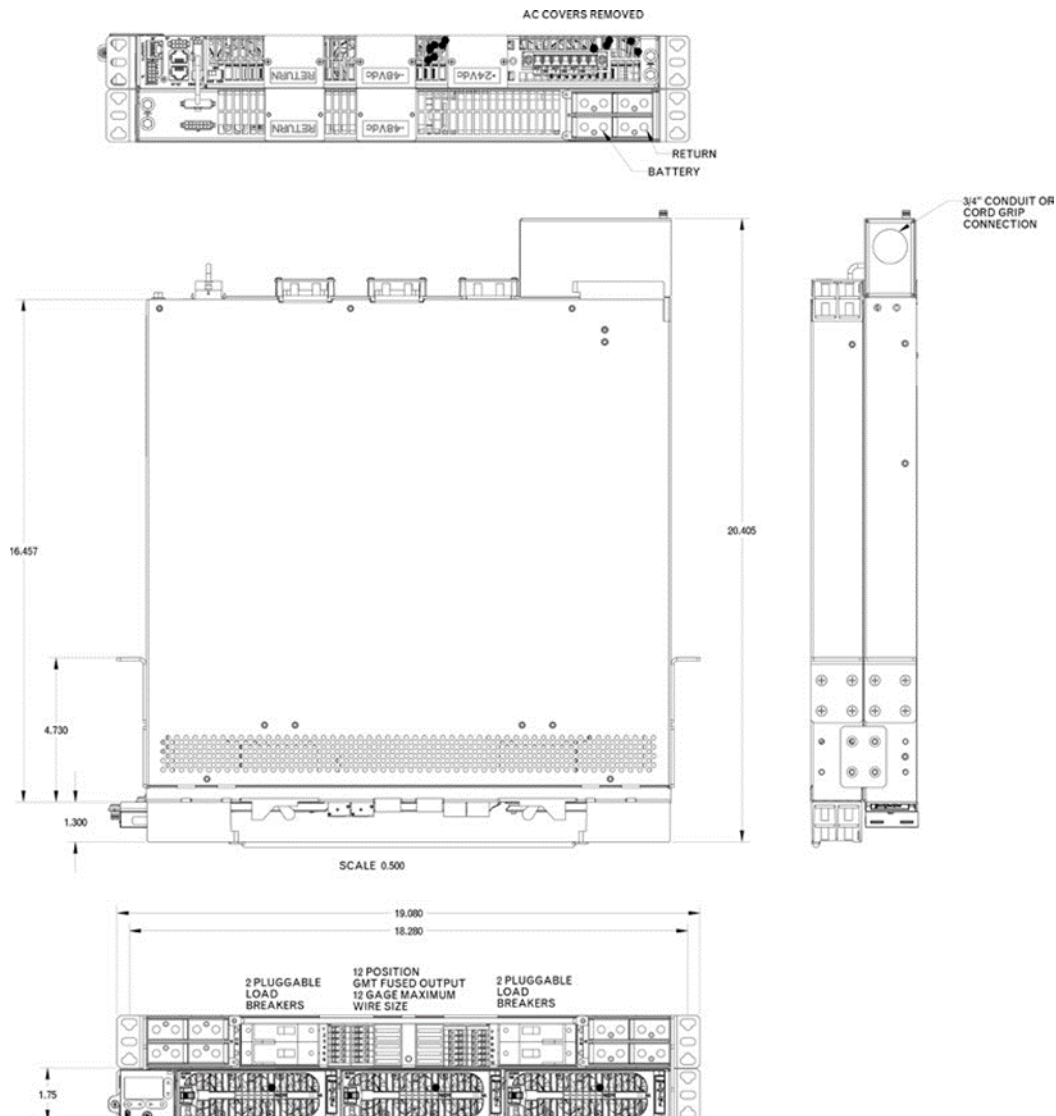
Environmental	
Operating Temperature	-40°C to +75°C (-40°F to 167°F)
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Relative Humidity	95% max, non-condensing
Altitude	4000M (for altitudes above 2000M, peak operating temperature de-rates 0.656° C /100M; 4000M peak temperature rating is 62 °C)

Specifications (continued)

Safety And Standards Compliance	
NEBS	Evaluated by independent NRTL test lab to Telcordia GR63-CORE & GR1089-CORE Issue 6 [Level 3]
Safety	ANSI/UL60950-1-2014 and CAN/CSA C22.2 No. 60950-1-07, Second Edition + A2:2014 (MOD), dated October 14, 2014
RoHS	Compliant to RoHS EU Directive 2002/95/EC RoHS 6/6
EMC	European Directive 2014/30/EU; EN55032, Class A; EN55035; FCC, Class A; GR1089-CORE Issue 6

Agency Certifications	
CSA / UL	CAN/CSA C22.2 No. 60950-1-07, Second Edition + A2:2014 (MOD), dated October 14, 2014
EMI/EMC	European Directive 2014/30/EU; EN55032 (CISPR22) Class A; EN55035 (CISPR24)
NEBS Level 3	GR1089-CORE, Issue 6 Special equipment room cooling may be needed - heat dissipation exceeds values of GR-63 Table 4-5









Drawings




Step 1: Select Base Power System - Infinity S-Flex

Infinity S-Flex







The below list of Infinity S-Flex plants, supplemental distribution modules and rectifier shelves. Systems can be purchased complete or assembled together in field based on site preferences and needs. Systems are 19" rack mountable with plant capacities limited to the rating of the battery panel. When assembling without a battery panel, systems can be configured based on the distributing the power shelves and distribution to limit current flow through the connective busses.

Comcode	Description	Feature	Qty	Picture
150036159 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-2U-AC5-PS3-DC12BR	Plug-in Breakers	4	
		GMT Positions	12	
		Battery Input	Bulk, 2	
		AC Input	Individual	
150036160 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-2U-AC5-PS3-DC12BR -LVBD	Plug-in Breakers	4	
		GMT Positions	12	
		Battery Input	LVBD, 2	
		AC Input	Individual	
150038170 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-3U-AC5-PS3-8DC12BR	Plug-in Breakers	8	
		GMT Positions	12	
		Battery Input	Bulk, 2	
		AC Input	Individual	
150047178 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-3U-AC3-PS3-8DC12BR	Plug-in Breakers	8	
		GMT Positions	12	
		Battery Input	Bulk, 2	
		AC Input	IEC C19	
150047177 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-2U-AC5-PS3-8DC	Plug-in Breakers	8	
		GMT Positions	N/A	
		Battery Input	N/A	
		AC Input	Individual	
150047178 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-3U-AC3-PS3-8DC12BR	Plug-in Breakers	8	
		GMT Positions	12	
		Battery Input	Bulk, 2	
		AC Input	IEC C19	
1600273618A 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-2U-AC3-PS3-6DCBR	Plug-in Breakers	6	
		GMT Positions	N/A	
		Battery Input	Bulk, 2	
		AC Input	IEC C19	
1600273617A 	150A Infinity S-Flex Power system equipped with 1 power shelf, 1 distribution and a slot for a Pulsar Edge controller. NES-2U-AC5-PS3-6DCBR	Plug-in Breakers	6	
		GMT Positions	N/A	
		Battery Input	Bulk, 2	
		AC Input	Individual	

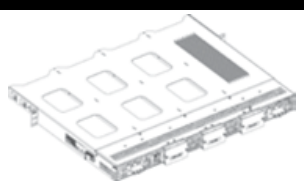
Step 1A: Select Controller - Infinity S-Flex

Comcode	Description	Feature	Type	Qty	Picture
150036348	Pulsar Edge Controller equipped with 6 Relay Output preprogrammed to Verizon Wireless Alarm configuration . Controller has Display, SNMPV3, IPV6 and Secure Protocol interface. NE841E_O16R_USB_DS	Outputs	Form-C	6	
		Inputs	Close to Battery	4	
		Local Connect		RS232	
		Remote Connect		RJ-45	

Step 1B: Select Supplemental Distributions

Comcode	Description	Feature	Qty	Picture
150034865 	250A Infinity S-Flex Distribution 4 Plug-In Breaker position and 12 GMT output. Model: J2013001L705	Plug-in Breakers	4	
		GMT Positions	12	
		DC Input	Bulk Bus	
		Rating	250A	
150034866 	250A Infinity S-Flex Distribution 4 Plug-In Breaker position output. Model: J2013001L706	Plug-in Breakers	4	
		GMT Positions	N/A	
		DC Input	Bulk Bus	
		Rating	250A	
150041093 	250A Infinity S-Flex Distribution 6 Plug-In Breaker position output. Model: J2013001L716	Plug-in Breakers	8	
		GMT Positions	N/A	
		DC Input	Bulk Bus	
		Rating	250A	

Step 1C: Select Supplemental Rectifier Shelves

Comcode	Description	Feature	Qty	Picture
150050584	19" Infinity S Rectifier Shelf with 3 universal positions. J5964803 L212 (AC3)	AC Input	IEC C-19	
		Rating	225A	
150026105	19" Infinity S Rectifier Shelf with 3 universal positions. J5964803 L216 (AC5)	AC Input	AC Term Block	
		Rating	225A	









Step 1D: Select AC Cord

Comcode	AC Type	Gauge	Shelf Termination	No. of Cords	Cord Type	Length	Customer Termination	120V Comp.	208/240 Comp.
CC848847368	AC3	12AWG	IEC C19	3	SO	8'	Unterminated	X	X
CC848850801				3	SO	8'	5 - 20P	X	
CC848850834				3		8'	6 - 20P		X
CC848850842				3		8'	L6 - 20P		X
CC848895961				3	SO	14.5'	L6 - 20P		X

Step 2: Select Rectifier and Converter Modules

Rectifier Modules


Infinity rectifiers are designed to operate in all Infinity based power systems. They are designed and qualified to operate 40°C to +55°C with extended operation to +75°C. The 48V rectifiers are programmable from 42 - 58Vout, whereas the 24V rectifiers are programmable from 21 - 29Vout. All rectifiers of the same output voltage type will operate in parallel and load share based on the percentage of load capacity of each rectifier, ensuring that no one rectifier is loaded more than others.

Comcode	Description	Input	Output	Float	Max	Picture
109158878 	NEO50AC48ATEZ	95 - 145Vac	1200W	44A	25A (48V)	
		175 - 305Vac	2725W	100A	57A (48V)	
		Input Current	15A - 12A			
		Heat Release	158 Watts	539 BTU/hr.		
109163473 	NEO75AC48ATEZ	95 - 145Vac	1200W	22A	25A (48V)	
		175 - 305Vac	4085W	75A	82A (48V)	
		Input Current	22A - 16A			
		Heat Release	249 Watts	652 BTU/hr.		
1600248701A 	NEO75AC48ATEZ+	95 - 145Vac	1200W	22A	25A (48V)	
		175 - 305Vac	4085W	75A	82A (48V)	
		Input Current	22A - 16A			
		Heat Release	191 Watts	594 BTU/hr.		
150025074 	NEO50ECO48ATEZ	95 - 145Vac	1200W	44A	50A (48V)	
		175 - 305Vac	2725W	100A	114A (48V)	
		Solar 100 - 300Vdc	Full output above 250Vdc			
		Input Current	15A - 12A			
		Heat Release	174 Watts	594 BTU/hr.		

Blank Rectifier Inserts

Ordering Code	Description	Picture
109170668	Infinity Rectifier/Converter slot filler (full chassis)	
848798702	Blank panel for use in empty rectifier / converter positions	

Step 3: Select Alarm Output and Input Cables

Ordering Code	Description	Picture
848890153	5ft Auxiliary input alarm cable for Pulsar Plus Controller	
CC848865980	15ft Auxiliary input alarm cable for Pulsar Plus Controller	
848817651	50ft Auxiliary input alarm cable for Pulsar Plus Controller	
848890161	5ft alarm cable for Pulsar Edge Controller	
848890178	15ft alarm cable for Pulsar Edge Controller	
CC848890186	50ft alarm cable for Pulsar Edge Controller	

Step 4: Distribution Components

Bullet Style Load Circuit Breakers

Infinity distribution panels support plug-in (bullet style) breakers modules. Larger breakers can be 2 or even 3 poles. The multi-pole breakers require output bus bar adapters, with returns either using the battery return bus or additional adapters connected to the load return bus.

Ordering Code	Amperage	CB Positions	Min Wire Gauge	Picture
407998137	3	1	10	
407998145	5	1	10	
407998152	10	1	10	
407998160	15	1	10	
407998178	16	1	10	
407998186	20	1	10	
407998194	25	1	10	
407998202	30	1	10	
408213486	40	1	10	
407998210	45	1	8	
407998228	50	1	8	
407998236	60	1	6	
407998244	70	1	6	
407998251	80	1	4	
407998269	90	1	4	
407998277	100	1	2	
CC848808551	100	2	2	
408185353	125	2	2	
408185346	150	2	1	
848756916	2-pole Adapter bus for 100-150A breakers; used for 1/4"-20 on 5/8" lugs (order 2 per 2 pole breaker to accommodate load and return lugs)			
850021775	2-pole Adapter bus for 100-150A breakers; used for 3/8" on 1" lugs (order 2 per 2 pole breaker to accommodate load and return lugs)			

GMT Fuses

Ordering Code	Amperage	Picture
405006222	0.25	
3150439	0.5	
405673146	1.33	
405181983	2	
406976985	3	
406159061	5	
405725433	7.5	
406159236	10	
407845197	12	
406473959	15	
408515823	Fuse Puller	

Step 4: Distribution Components (cont.)

Bullet Style Battery Circuit Breakers

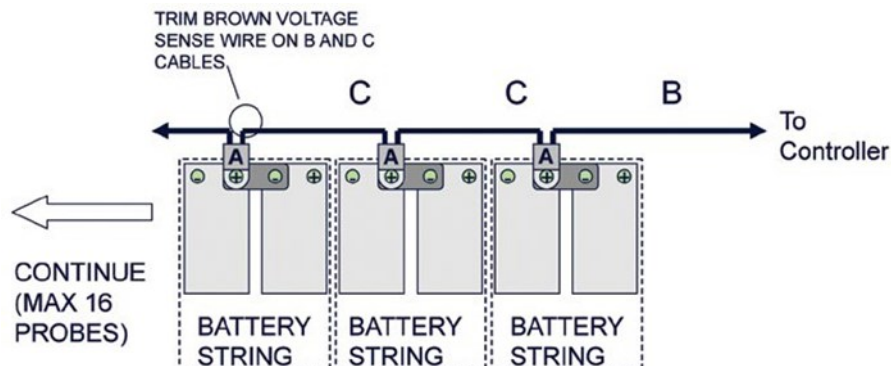
Infinity S 48V Only systems have the capability of using battery breakers in the selectable portion of the distribution panel or in the stackable distribution panel that is inclusive of battery breaker outputs. Below is a list of breakers for this application.

Ordering Code	Amperage	Picture
CC408612758	30	
CC408612766	40	
CC408612774	45	
CC408574370	50	
408560123	60	
CC408574387	70	
CC408574395	100	
CC408574404	125 (2-pole)	
CC408574412	150 (2-pole)	
CC408574420	200 (2-pole)	
CC109106548	100A battery bullet bus strap (substitute for battery breaker)	

Step 5: Select Battery Monitoring

Ordering Code	Amperage	Picture
109142980	QS873A Thermal Probe (A)	
150026698	QS873B Ambient Thermal Probe (A)	
CC848817024	10 ft wire set (B: thermal probe to controller)	
109157434	20 ft wire set (B: thermal probe to controller)	
850052679	40 ft wire set (B: thermal probe to controller)	
848822560	1 ft wire set (C: thermal probe to thermal probe)	
848719803	5 ft wire set (C: thermal probe to thermal probe)	
CC848822321	10 ft wire set (C: thermal probe to thermal probe)	
850027334	20 ft wire set (C: thermal probe to thermal probe)	
7000253598A	30 ft wire set (C: thermal probe to thermal probe)	
8600089209P	40 ft wire set (C: thermal probe to thermal probe)	

Temperature probes are needed for battery monitoring. They are connected to each battery or battery string to provide slope thermal compensation and temperature alarms



Additional Information

Product Documentation for Infinity S-Flex

Ordering Code	Description
NES-Flex-Systems	Infinity S-Flex Configuration drawing
CC848836981	User Guide for the Galaxy Pulsar Edge System Controller
850042636	Edge Supplement
850033855	1U Stackable Dist Shelf J2013001
850039275	NE J5694803 L213-L218 19in Universal Power Shelf

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