Certificate Number Report Reference Date	UL-US-L137750-144377-41117102-1 E137750-20171114 18-Jun-2021
Issued to:	ABB Power Electronics Inc 601 SHILOH RD PLANO, TX United States 75074-7210
This is to certify that representative samples of	QQGQ2 - Power Supplies, Information Technology Equipment Including Electrical Business Equipment - Component
	See Addendum Page for Product Designation(s).
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in

Standard(s) for Safety:	UL 60950-1, 2nd Ed., Issue Date: 2007-03-27, Revision Date: 2019-05-09
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information

complete equipment submitted for investigation to UL LLC.

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

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Bruce Mahrenholz, Director North American Certification Progra

UL LLC

Certificate Number Report Reference Date UL-US-L137750-144377-41117102-1 E137750-20171114 18-Jun-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
EDGECAB, EDGECABG4XX and BME80BATT48A, Edgecab Power supply system, Model EDGECAB, Component System Accessories, DC Distribution Panel, EDGECABG40XX series where XX=00, 01, 11, 20, 21, or 22 and Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series where y = Optional alpha numeric suffixes representing non-safety affecting options may be provided.	Power Supplies for AV, ITE, and AVICT Equipment
Power Distribution Unit, J2019001 L001(y), y = Optional alpha numeric suffixes representing non-safety affecting options may be provided).	Power Distribution Unit

Bamples



UL LLC



Certificate Number Report Reference Date	UL-CA-L137750-164377-41117102-1 E137750-20171114 18-Jun-2021
Issued to:	ABB Power Electronics Inc 601 SHILOH RD PLANO, TX United States 75074-7210
This is to certify that representative samples of	QQGQ8 - Power Supplies, Information Technology Equipment Including Electrical Business Equipment Certified for Canada - Component See Addendum Page for Product Designation(s).
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.
Standard(s) for Safety:	CSA C22.2 No. 60950-1 - 2nd Ed Issue Date: 2007-03-27 - Revision Date: 2014-10-01
Additional Information:	See the UL Online Certifications Directory at https://ig.ulprospector.com for additional information

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Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

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Bruce Mahrenholz, Director North American Certification Program

UL LLC

Certificate Number Report Reference Date UL-CA-L137750-164377-41117102-1 E137750-20171114 18-Jun-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
EDGECAB, EDGECABG4XX and BME80BATT48A, Edgecab Power supply system, Model EDGECAB, Component System Accessories, DC Distribution Panel, EDGECABG40XX series where XX=00, 01, 11, 20, 21, or 22 and Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series where y = Optional alpha numeric suffixes representing non-safety affecting	Power Supplies for AV, ITE, and AVICT Equipment
Power Distribution Unit, J2019001 L001(y), y = Optional alpha numeric suffixes representing non-safety affecting options may be provided).	Power Distribution Unit

Bamples



UL LLC



Certificate Number Report Reference Date	UL-US-2130411-0 E137750-20171114 18-Jun-2021
Issued to:	ABB Power Electronics Inc 601 SHILOH RD PLANO, TX United States 75074-7210
This is to certify that representative samples of	QQJQ2 - Power Supplies for Use with Audio/Video, Information and Communication Technology Equipment - Component See Addendum Page for Product Designation(s).
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.
Standard(s) for Safety:	UL 62368-1, 2nd Ed., Issue Date: 2014-12-01
Additional Information:	See the UL Online Certifications Directory at https://ig.ulprospector.com for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bamples

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Certificate Number Report Reference Date UL-US-2130411-0 E137750-20171114 18-Jun-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series, y = Optional alpha numeric suffixes representing non-safety affecting options may be provided.	Component Power Supply
EDGECAB	Component Power Supply
EDGECABG4XX and BME80BATT48A, where XX=00, 01, 11, 20, 21, or 22	Component Power Supply



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Certificate Number Report Reference Date

UL-CA-2125302-0 E137750-20171114 18-Jun-2021

Issued to: ABB Power Electronics Inc 601 SHILOH RD PLANO, TX United States 75074-7210

This is to certify that representative samples of

QQJQ8 - Power Supplies for Use with Audio/Video, Information and Communication Technology Equipment Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety:	CSA C22.2 NO. 62368-1-14, 2nd Ed., Issue Date: 2014-12- 01
Additional Information:	See the UL Online Certifications Directory at https://ig.ulprospector.com for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

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Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Progra

UL LLC

Certificate Number Report Reference Date UL-CA-2125302-0 E137750-20171114 18-Jun-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series, y = Optional alpha numeric suffixes representing non-safety affecting options may be provided.	Component Power Supply
EDGECAB	Component Power Supply
EDGECABG4XX and BME80BATT48A, where XX=00, 01, 11, 20, 21, or 22	Component Power Supply



Bruce Mahrenholz, Director North American Certification Program

UL LLC

File E137750 Project 4788198071

Issued: November 14, 2017 Revised: June 20, 2023

REPORT

On

QQGQ2, QQGQ8: COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT, INCLUDING ELECTRICAL BUSINESS EQUIPMENT

Complementary QQJQ2, QQJQ8:

COMPONENT - POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT

> ABB Power Electronics Inc. Plano, TX

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File E137750	Vol. 44	Sec. 26	Page 1	Issued:	2017-11-14
		and Report		Revised:	2023-06-20

DESCRIPTION

PRODUCTS COVERED:

USR/CNR - Component Power supply system, Model EDGECAB with combinations of Group Nos. as defined below, (EDGE CABINET), and Component System Accessories, DC Distribution/Battery Bus Panels, EDGECABG4(xx) series (xx = 00, 01, 10, 11, 12, 20, 21, or 22), Power Distribution Unit, J2019001 L001(y), and Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series (y = Optional alpha numeric suffixes representing non-safety affecting options may be provided).

EDGE CABINET is the marketing name used for cross-referencing purposes only.

MODEL EDGECAB					
GROUP	DESCRIPTION				
	FRAMEWORKS OPTIONS				
G000L	30"x42"x98", 52U high, with two replaceable G200 or G201 sticks on				
	left side, castors and lock feet.				
G000R	30"x42"x98", 52U high, with two replaceable G200 or G201 sticks on				
	right side, castors and lock feet.				
G001	28"x48"x84", 44U high, with G210 or G212 fixed sticks on left side,				
	with G211 or G213 fixed sticks on right side, castors and lock feet.				
	(No wire trays)				
G001L	28"x48"x84", 44U high, with G210 or G212 fixed sticks on left side,				
	wire trays on the right side, castors and lock feet.				
G001R	28"x48"x84", 44U high, with G211 or G213 fixed sticks on right side,				
	wire trays on the left side, castors and lock feet.				
G002	30"x42"x98", 52U high, with G202 or G204 fixed sticks on left side,				
	with G203 or G205 fixed sticks on right side, castors and lock feet.				
	(No wire trays)				
G002L	30"x42"x98", 52U high, with G202 or G204 fixed sticks on left side,				
	wire trays on the right side, castors and lock feet.				
G002R	30"x42"x98", 52U high, with G203 or G205 fixed sticks on right side,				
	wire trays on the left side, castors and lock feet.				
G007(L/R)	28"x48"x84", 44U high, with G242L or G251L fixed sticks on left side				
	or G242R or G251R fixed sticks on right side, with rail options,				
	G0197, and G0237, castors and lock feet.				
G008(L/R)	28"x48"x92", 48U high, with G233L or G252L fixed sticks on left side				
	or G243R or G252R fixed sticks on right side, with rail options,				
~ 0 1 0 -	GU198, and GU238, castors and lock reet.				
GOIOL	28"x48"x92", 480 high, with two fixed sticks on left side. Each				
	stick has three GPIOU Rectifier slots and three Battery Module				
0010D	STOLS. ONLY ONE OF the two Sticks has the GED controller stot.				
GUIUR	26"x46"x92", 480 High, with two lixed sticks on right side. Each				
	slots has three GP100 Rectifier slots and three Battery Module				
C001NG	29/4/29/4 All bick with C2211NG C242ING or C22511NG fixed				
GOOTINS	ations on left side and C222DNG C242DNG or C2251DNG fixed sticks				
	on right side, wire trave on both sides, castors and lock feet				
	"NS" denotes cost reduced version				
G001LNS	28"x48"x84", 44U high, with G223LNS, G242LNS, or G2251LNS fixed				
	sticks on left side, wire trave on the left side, castors and lock				
	feet. "NS" denotes cost reduced version				

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	MODEL EDGECAB						
GROUP	DESCRIPTION						
	FRAMEWORKS OPTIONS cont.						
G001RNS	28"x48"x84", 52U high, with G223RNS, G242RNS, or G2251RNS fixed						
	sticks on right side, wire trays on the right side, castors and lock						
000010	feet. "NS" denotes cost reduced version						
GUUZNS	30"X42"X98", 520 high, with G233LNS or GG252LNS fixed sticks on left						
	both sides, castors and lock feet.						
G002LNS	30"x42"x98", 52U high, with G233LNS or GG252LNS fixed sticks on left						
	side, wire trays on the left side, castors and lock feet.						
G002RNS	30"x42"x98", 52U high, with G233RNS or GG252RNS fixed sticks on						
	right side, wire trays on the right side, castors and lock feet.						
R.	AIL OPTIONS USED WITH FRAMES OPTIONS G007 AND G008 ONLY						
G0197	19" EIA Equipment Rails and Wire Trays for G007						
G0198	19" EIA Equipment Rails and Wire Trays for G008						
G0237	23" EIA Equipment Rails for G007						
G0238	23" EIA Equipment Rails for G008						
DOOR	S AND SIDE PANELS OPTIONS (x=blank, L, R, NS, LNS, or RNS)						
G030	Rear door for G000(x) and G002(x) cabinets						
G031	Rear door for G001(x) cabinet						
G036	Rear door for G010(x) cabinet						
G040	Front door for G000(x) and G002(x) cabinets						
G041	Front door for G001(x) cabinet						
G046	Front door for G010(x) cabinet						
G050	Lockable side panel for G000(x) and G002(x) cabinets						
G051	Lockable side panel for G001(x) cabinet						
G056	Lockable side panel for G010(x) cabinet						

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	MODEL EDGECAB
GROUP	DESCRIPTION
	STICK OPTIONS (REPLACEBLE AND FIXED)
G200	1U, GP Rectifier slots (3), GED Controller slot,
	BME80BATT48A(y) Battery Module slots (3), Replaceable
G201	1U, GP Rectifier slots (5), GED Controller slot,
	BME80BATT48A(y) Battery Module slots (2), Replaceable
G202	2U, GP Rectifier slots (6), GED Controller slot, Battery
	Module slots (6), Fixed, Left side
G203	2U, GP Rectifier slots (6), GED Controller slot, Battery
	Module slots (6), Fixed, Right side
G204	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (4), Fixed, Left side
G205	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (4), Fixed, Right side
G210	2U, GP Rectifier slots (8), GED Controller slot, Battery
	Module slots (4), Fixed, Left side
G211	2U, GP Rectifier slots (8), GED Controller slot, Battery
	Module slots (4), Fixed, Right side
G212	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (2), Fixed, Left side
G213	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (2), Fixed, Right side
G214	2U, GP Rectifier slots (14), GED Controller slot, Fixed,
	Left side
G215	2U, GP Rectifier slots (14), GED Controller slot, Fixed,
	Right side

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	MODEL EDGECAB
GROUP	DESCRIPTION
STI	ICK OPTIONS USED WITH FRAMES OPTIONS, G007 AND G008 ONLY
G233L	2U, GP Rectifier slots (6), GED Controller slot, Battery
	Module slots (6), Fixed, Left side (G008L only)
G233R	2U, GP Rectifier slots (6), GED Controller slot, Battery
	Module slots (6), Fixed, Right side (G008R only)
G242L	2U, GP Rectifier slots (8), GED Controller slot, Battery
	Module slots (4), Fixed, Left side (G007L only)
G242R	2U, GP Rectifier slots (8), GED Controller slot, Battery
	Module slots (4), Fixed, Right side (G007R only)
G251L	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (2), Fixed, Left side (G007L only)
G251R	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (2), Fixed, Right side (G007R only)
G252L	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (4), Fixed, Left side (G008L only)
G252R	2U, GP Rectifier slots (10), GED Controller slot, Battery
	Module slots (4), Fixed, Right side (G008R only)
	STICK OPTIONS USED WITH FRAMES OPTIONS,
	GOUINS, GUUI(L/R)NS, GUUZNS, AND GUUZ(L/R)NS ONLY
G223LNS	20, GP Rectifier slots (4), GED Controller slot, Battery
COORDING	Module Slots (6), Fixed, Left Side (GOULLAS Only)
GZZSRNS	Modulo glota (6) Fixed Dight gide (COOlDNS only)
C2221 NG	Same as G2331 except for some bracket dbanges (G0021NS only)
G233DNG	Same as G233P except for some bracket changes (G002ENS only)
G2421.NS	Same as G242L except for some bracket changes (G001LNS only)
G242BNS	Same as G242B except for some bracket changes (G001BNS only)
G251LNS	Same as G251L except for some bracket changes (G001LNS only)
G251RNS	Same as G251R except for some bracket changes (G001RNS only)
G252LNS	Same as G252L except for some bracket changes (G002LNS only)
G252RNS	Same as G252R except for some bracket changes (G002RNS only)

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	AC INDUT OPTIONS
G301	Two 3-pole 50A twist-lock industrial male connectors with steel
0501	casing and 4-wire (non-NEWA) grounding. For use with Hubble Bryant
	3764 mating connector or equivalent. Molex-connector interface with
	replaceable or fixed sticks.
G303	Two 3-pole 50A twist-lock industrial male connectors with steel
	casing and 4-wire (non-NEMA) grounding. For use with Hubble Bryant
	3764 mating connector or equivalent. Terminal block interface with
	fixed sticks.
G304	480V Field-wiring Terminal Block Input, 2 Feeds
G305	208V Field-wiring Terminal Block Input, 2 Feeds
G306	208V Field-wiring Terminal Block Input, 4 Feeds
	DC DISTRIBUTION PANEL OPTIONS
G450	DC Distribution Model, ED83368-30 G3
GRO	DUND BUS AND CABLE OPTIONS (x=blank, L, R, NS, LNS, or RNS)
G500	Standard Vertical Ground Bus for G000(x) and G010(x) cabinets
G501	Standard Vertical Ground Bus for G001(x) cabinets
G502	Standard Vertical Ground Bus for G002(x) cabinets
G507	Standard Vertical Ground Bus for G007 and G008 cabinets
G790	Single Bulk Grounding Cable Set
G890	DC Bus Jumper used to make the separate sticks' buses into a single
	system bus
	BATTERY TRAY OPTIONS
G700	Horizontal Battery Tray for BME80BATT48A(y), BME2500/480NIMH48, or
	BBU0042-CDAB01 connection to system through EDGECABG4xx (xx = 00,
	01, 10, 11, 20, or 21), A bus (Red cable set)
G701	Horizontal Battery Tray for BME80BATT48A(y), BME2500/480NIMH48, or
	BBU0042-CDAB01 connection to system through EDGECABG4xx (xx = 00,
GT0 0	01, 11, 12, 20, or 22), B bus (Blue cable set)
G702	Indicates a single line item in ordering guide where both, the G/00
0710	and G/01, are purchased as a set
GIIO	ACTIVITIES ACCEPT AND A CONTRACT AND
	01 10 11 20 or 21 A bus (Ped cable set)
C711	Unrigontal Pattery Tray for $PME2500/120VPLA/8(x)$ $PME2500/480NTMU/8$
G/11	or BRU0042-CDAB01 connection to system through EDGECABG4xx ($xx = 01$
	01 BB00042 CDAD01 Connection to system through BD0ECAD04XX (XX = 01, 02 11 12 20 or 22) B bus (Blue cable set)
G712	Indicates a single line item in ordering guide where both, the G710
0,12	and G711, are purchased as a set
	CONTROLLER OPTIONS
G801	GED series Pulsar Edge Controller without Display
G802	GED series Pulsar Edge Controller with Display
G803	Same as G802, except without the top mounting tab

	MODEL EDGECABG4(xx)
(xx)	DESCRIPTION
00	10-position pluggable DC Distribution Panel (PDU), using a
	single Vo(+)/Vo(-) bus configuration, with each position
	rated for a 100Amax circuit breaker or 125Amax fused pullout
	switch.
01	10-position pluggable DC Distribution Panel (PDU), using a
	single Vo(+) bus/split A/B Vo(-) bus configuration, with each
	position rated for a 100Amax circuit breaker or 125Amax fused
	pullout switch. Five positions per split bus.
10	Same as G411, except used only with the G890 option and
	having red labels, "A1" and "A2."
11	2-position pluggable DC Distribution Panel (PDU), using a
	single Vo(+) bus/split A/B Vo(-) bus configuration, with each
	position rated for a 250Amax circuit breaker.
12	Same as G411, except used only with the G890 option and
	having blue labels, "B1" and "B2."
20	10-position pluggable DC Battery Bus Panel (BBU), using a
	single Vo(+) bus/split A/B Vo(-) bus configuration, providing
	power connections from horizontally-mounted battery shelves
	to the system's A and B DC buses. Five positions per split
	bus.
21	Same as G420 except providing power connections from
	horizontally-mounted battery shelves to the system's A DC bus
	and having red labels.
22	Same as G420 except providing power connections from
	horizontally-mounted battery shelves to the system's B DC bus
	and having blue labels.

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ELECTRICAL RATING:

Model	3-phase de	lta Input		Output	
	Volts	Current	Volts	Current	Power
		EDGE CAB	SINET (#)		
(+) EDGECAB G000L or G000R, with G200-2 and G301	2 x 480 V 3W+PE 50/60Hz or 50-60Hz	24 A / feed	42-58 Vdc	750 Amax total with G890 / 375 Amax/bus (less Battery Charge)	36 kWmax total with G890/ 18 kWmax/ bus
(+) EDGECAB G010L or G010R, with G301	2 x 480 V 3W+PE 50/60Hz or 50-60Hz	24 A / feed	42-58 Vdc	750 Amax total with G890 / 375 Amax/bus (less Battery Charge)	36 kWmax total with G890/ 18 kWmax/ bus
(+) EDGECAB G002L with G202 or G002R with G203, and G303	2 x 480 V 3W+PE 50/60Hz or 50-60Hz	24 A / feed	42-58 Vdc	750 Amax total with G890 / 375 Amax/bus (less Battery Charge)	36 kWmax total with G890/ 18 kWmax/ bus
(+) EDGECAB G002 with G202 and G203, and G303	4 x 480 V 3W+PE 50/60Hz or 50-60Hz	24 A / feed	2 x 42-58 Vdc	2 x 750 Amax total with G890 / 375 Amax/bus (less Battery Charge)	2 x 36 kWmax total with G890/ 18 kWmax/ bus
(+) EDGECAB G001L with G210 or G001R with G211, and G303	2 x 480 V 3W+PE 50/60Hz or 50-60Hz	32 A / feed	42-58 Vdc	1000 Amax total with G890 / 500 Amax/bus (less Battery Charge)	48 kWmax total with G890/ 24 kWmax/ bus
(+) EDGECAB G001 with G210 and G211, and G303	4 x 480 V 3W+PE 50/60Hz or 50-60Hz	32 A / feed	2 x 42-58 Vdc	2 x 1000 Amax total with G890 / 500 Amax/bus (less Battery Charge)	2 x 48 kWmax total with G890/ 24 kWmax/ bus

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		and Report		Revised:	2023-06-20

Model	3-phase de	lta Input		Output	
	Volts	Current	Volts	Current	Power
		EDGE CAB	INET (#)		
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax
G001L with G212	3W+PE	feed		total	total
or G001R with	50/60Hz or			with G890/	with G890/
G213, and G303	50-60Hz			625 Amax/bus	30 kWmax/
				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	40 A /	2 x 42-58	2 x 1250 Amax	2 x 60
G001 with G212	3W+PE	feed	Vdc	total	kWmax
and G213, and	50/60Hz or			with G890/	total
G303	50-60Hz			625 Amax/bus	with G890/
				(less Battery	30 kWmax/
				Charge)	bus
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax
G002L with G204	3W+PE	feed		total	total
or G002R with	50/60Hz or			with G890/	with G890/
G205, and G303	50-60Hz			625 Amax/bus	30 kWmax/
				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	40 A /	2 x 42-58	2 x 1250 Amax	2 x 60
G002 with G204	3W+PE	feed	Vdc	total	kWmax
and G205, and	50/60Hz or			with G890/	total
G303	50-60HZ			625 Amax/bus	with G890/
				(less Battery	30 KWMax/
	0 400 57	20 x /		(llarge)	Dus 4.0 laterate
(+) EDGECAB	2 X 480 V	32 A /	42-58 Vac	1000 Amax	48 KWIIIAX
G_{2421} or G_{242P}	SW+PE	reed		LOLAI	LOLAL
and C_{303} or	50-60Hz OI			500 Amay/bug	24 kWmax/
C304	50 00112			(legg Battery	bug
9204				(less bactery Charge)	Dus
(+) FDGFCAB	4 v 480 v	32 Δ /	$2 \times 42 - 58$	$2 \times 1000 \text{ Amax}$	2 - 48
G007 with	3W+PE	feed	Vdc	total	kWmax
$G242I_{\rm c}$ and	50/60Hz or	reeu	Vac	with G890/	total
G242R, and $G303$	50-60Hz			500 Amax/bus	with G890/
or G304				(less Battery	24 kWmax/
				Charge)	bus
(+) EDGECAB	2 x 480 V	24 A /	42-58 Vdc	750 Amax	36 kWmax
G008(L/R), with	3W+PE	feed		total	total
G233L or G233R,	50/60Hz or			with G890/	with G890/
and G303 or	50-60Hz			375 Amax/bus	18 kWmax/
G304				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	24 A /	2 x 42-58	2 x 750 Amax	2 x 36
G008, with	3W+PE	feed	Vdc	total	kWmax
G233L and	50/60Hz or			with G890/	total
G233R, and G303	50-60Hz			375 Amax/bus	with G890/
or G304				(less Battery	18 kWmax/
				Charge)	bus

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Model	3-phase de	3-phase delta Input		Output	
	Volts	Current	Volts	Current	Power
		EDGE CAB	INET (#)		
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax
G007(L/R), with	3W+PE	feed		total	total
G251L or G251R,	50/60Hz or			with G890/	with G890/
and G303 or	50-60Hz			625 Amax/bus	30 kWmax/
G304				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	40 A /	2 x 42-58	2 x 1250 Amax	2 x 60
G007, with	3W+PE	feed	Vdc	total	kWmax
G251L and	50/60Hz or			with G890/	total
G251R, and G303	50-60Hz			625 Amax/bus	with G890/
or G304				(less Battery	30 kWmax/
				Charge)	bus
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax
G008(L/R), with	3W+PE	feed		total	total
G252L or G252R,	50/60Hz or			with G890/	with G890/
and G303 or	50-60Hz			625 Amax/bus	30 kWmax/
G304				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	40 A /	2 x 42-58	2 x 1250 Amax	2 x 60
G008, with	3W+PE	feed	Vdc	total	kWmax
G252L and	50/60Hz or			with G890/	total
G252R, and G303	50-60Hz			625 Amax/bus	with G890/
or G304				(less Battery	30 kWmax/
				Charge)	bus

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Model	3-phase delta Input			Output	
	Volts	Current	Volts	Current	Power
		EDGE CAB	SINET (#)		
(+) EDGECAB G008(L/R), with G233L or G233R, and G305	2 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	42-58 Vdc	460 Amax (less Battery Charge)	24 kWmax
(+) EDGECAB G008, with G233L and G233R, and G305	4 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	2 x 42-58 Vdc	2 x 460 Amax (less Battery Charge)	2 x 24 kWmax
(+) EDGECAB G008(L/R), with G233L or G233R, and G306	3 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	2 x 42-58 Vdc	690 Amax (less Battery Charge)	36 kWmax
(+) EDGECAB G008, with G233L and G233R, and G306	6 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	2 x 42-58 Vdc	2 x 690 Amax (less Battery Charge)	2 x 36 kWmax
(+) EDGECAB G007(L/R), with G242L or G242R, and G305	2 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	42-58 Vdc	460 Amax (less Battery Charge)	24 kWmax
(+) EDGECAB G007, with G242L and G242R, and G305	4 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	2 x 42-58 Vdc	2 x 460 Amax (less Battery Charge)	2 x 24 kWmax
(+) EDGECAB G007(L/R), with G242L or G242R, and G306	4 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 A / feed	2 x 42-58 Vdc	1000 Amax (less Battery Charge)	48 kWmax
(+) EDGECAB G007, with G242L and G242R, and G306	8 x 200- 240 V 3W+PE 50/60Hz or 50-60Hz	38 Ā / feed	2 x 42-58 Vdc	2 x 1000 Amax (less Battery Charge)	2 x 48 kWmax

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Model	3-phase de	lta Input		Output		
	Volts	Current	Volts	Current	Power	
		EDGE CAB	INET (#)			
(+) EDGECAB	2 x 480 V	16 A /	42-58 Vdc	500 Amax 24 kWmax		
G001LNS or	3W+PE	feed		total with	total	
G001RNS, with	50/60Hz or			G890 / 250	with G890/	
G223(L/R)NS,	50-60Hz			Amax/bus	12 kWmax/	
and G303 or				(less Battery	bus	
G304				Charge)		
(+) EDGECAB	4 x 480 V	16 A /	42-58 Vdc	2 x 500 Amax	2 x 24	
G001NS, with	3W+PE	feed		total with	kWmax total	
G223LNS and	50/60Hz or			G890 / 250	with G890/	
G223RNS, and	50-60Hz			Amax/bus	12 kWmax/	
G303 or G304				(less Battery	bus	
				Charge)		
(+) EDGECAB	2 x 480 V	32 A /	42-58 Vdc	1000 Amax	48 kWmax	
G001LNS or	3W+PE	feed		total with	total	
G001RNS, with	50/60Hz or			G890 / 500	with G890/	
G242(L/R)NS,	50-60Hz			Amax/bus	24 kWmax/	
and G303 or				(less Battery	bus	
G304				Charge)		
(+) EDGECAB	4 x 480 V	32 A /	42-58 Vdc	2 x 1000 Amax	2 x 48	
G001NS, with	3W+PE	feed		total with	kWmax total	
G242LNS and	50/60Hz or			G890 / 500	with G890/	
G242RNS, and	50-60Hz			Amax/bus	24 kWmax/	
G303 or G304				(less Battery	bus	
				Charge)		
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax	
G001LNS or	3W+PE	feed		total	total	
G001RNS, with	50/60Hz or			with G890/	with G890/	
G251(L/R)NS,	50-60Hz			625 Amax/bus	30 kWmax/	
and G303 or				(less Battery	bus	
G304				Charge)		
(+) EDGECAB	4 x 480 V	40 A /	42-58 Vdc	2 x 1250 Amax	2 x 60	
G001NS, with	3W+PE	feed		total	kWmax	
G251LNS and	50/60Hz or			with G890/	total	
G251RNS, and	50-60Hz			625 Amax/bus	with G890/	
G303 or G304				(less Battery	30 kWmax/	
				Charge)	bus	

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Model	3-phase de	3-phase delta Input		Output	
	Volts	Current	Volts	Current	Power
		EDGE CAB	INET (#)		
(+) EDGECAB	2 x 480 V	24 A /	42-58 Vdc	750 Amax	36 kWmax
G002LNS or	3W+PE	feed		total with	total
G002RNS, with	50/60Hz or			G890 / 375	with G890/
G233(L/R)NS and	50-60Hz			Amax/bus	18 kWmax/
G303 or G304				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	24 A /	42-58 Vdc	2 x 750 Amax	2 x 36
G002NS, with	3W+PE	feed		total with	kWmax
G233LNS and	50/60Hz or			G890 / 375	total
G233RNS, and	50-60Hz			Amax/bus	with G890/
G303 or G304				(less Battery	18 kWmax/
				Charge)	bus
(+) EDGECAB	2 x 480 V	40 A /	42-58 Vdc	1250 Amax	60 kWmax
G002LNS or	3W+PE	feed		total	total
G002RNS, with	50/60Hz or			with G890/	with G890/
G252(L/R)NS and	50-60Hz			625 Amax/bus	30 kWmax/
G303 or G304				(less Battery	bus
				Charge)	
(+) EDGECAB	4 x 480 V	40 A /	42-58 Vdc	2 x 1250 Amax	2 x 60
G002NS, with	3W+PE	feed		total	kWmax
G252LNS and	50/60Hz or			with G890/	total
G252RNS, and	50-60Hz			625 Amax/bus	with G890/
G303 or G304				(less Battery	30 kWmax/
				Charge)	bus

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Model	3-phase de	lta Input		Output			
	Volts	Current	Volts	Current	Power		
		EDGE CAB	ABINET (#)				
(+) EDGECAB	2 x 200-	38 A /	42-58 Vdc	460 Amax	24 kWmax		
G001LNS or	240 V	feed		(less Battery			
G001RNS, with	3W+PE			Charge)			
G223(L/R)NS and	50/60Hz or						
G303 or G305	50-60Hz						
(+) EDGECAB	4 x 200-	38 A /	2 x 42-58	2 x 460 Amax	2 x 24		
G001NS, with	240 V	feed	Vdc	(less Battery	kWmax		
G223LNS and	3W+PE			Charge)			
G223RNS, and	50/60Hz or						
G303 or G305	50-60Hz						
(+) EDGECAB	4 x 200-	38 A /	2 x 42-58	1000 Amax	48 kWmax		
G001LNS or	240 V	feed	Vdc	(less Battery			
G001RNS, with	3W+PE			Charge)			
G242(L/R)NS,	50/60Hz or						
and G306	50-60Hz						
(+) EDGECAB	8 x 200-	38 A /	2 x 42-58	2 x 1000 Amax	2 x 48		
G001NS, with	240 V	feed	Vdc	(less Battery	kWmax		
G242LNS and	3W+PE			Charge)			
G242RNS, and	50/60Hz or						
G306	50-60Hz						
(+) EDGECAB	2 x 200-	38 A /	42-58 Vdc	460 Amax	24 kWmax		
G002LNS or	240 V	feed		(less Battery			
G002RNS, with	3W+PE			Charge)			
G233(L/R)NS and	50/60Hz or						
G305	50-60Hz						
(+) EDGECAB	4 x 200-	38 A /	2 x 42-58	2 x 460 Amax	2 x 24		
G002NS, with	240 V	feed	Vdc	(less Battery	kWmax		
G233LNS and	3W+PE			Charge)			
G233RNS, and	50/60Hz or						
G306	50-60Hz						

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ACCESSORIES (##)						
Model	DC Input DC Output		DC Output			
	Volts	Current	Volts	Current		
DC Distribution/	Battery Bus Pan	el				
EDGECABG400,	42-58 Vdc	400A	42-58 Vdc	100Amax/		
EDGECABG401				channel,		
(DC				400Amax total		
Distribution						
Unit)	40.50.50	40.05	40.50.51	0.0.0.5		
EDGECABG410,	42-58 Vdc	400A	42-58 Vdc	200Amax/		
EDGECABG411,				channel,		
EDGECABG412				400Amax total		
(DC)						
	26-58 Vdc	600 Amar	36-58 Vda	1007max/		
EDGECABG420,	dharge	000 Allax	30-38 Vuc	channel		
EDGECABG421,	condition			Channer		
(DC Battery Bus						
Unit.)	36-58 Vdc,	100A/	36-58 Vdc	600Amax		
01120)	discharge	channel,				
	condition	600Amax				
		total,				
		continuous	-			
		200A/		1000Amax,		
		channel,		for 5 min.		
		1000Amax		or less		
		total,				
		for 5 min.				
		or less				
Battery Module		0.4.7		100 7	0 11	
BME80BATT48A(y)	36-58 Vdc	2.4 Amax	36-58 Vdc	120 Amax	8 Ah	
		charge		discharge		
		current		rate	0.71	
BME2500/120VRLA	36-58 Vdc	2.4 Amax	36-58 Vdc	120 Amax	8 Ah	
48(Y)		charge		discharge		
Agoggory Dever	 Distribution Un			rale		
T2010001 T001			2	21 Amax/		
	42-58 Vdc	200 A/		24 Allax/		
())	72-J0 VUC	reeu	270 vac, 00HZ	JULLEL	1	

- (+) "G000L", "G000R", "G001", "G001NS", "G001L", "G001LNS", "G001R", "G001RNS", "G002", "G002NS", "G002L", "G002LNS", "G002R", "G002RNS", "G007", "G008", "G010L", and "G010R" model names may be followed by Group G03x, G04x, and/or G05x, designating non-safety affecting door and panel options, G50x, designating ground bus option, G90x, designating packaging options, and/or G80x, designating controller option.
- (#) The actual marked output ratings of the EDGE CABINET models shall be less than or equal to the specified limits in the "ELECTRICAL RATING" table, depending upon the number of sticks and the number of rectifier slots/stick in the system.
- (##) Accessories evaluated to be used with EDGE CABINETS only
- (y) Optional alpha numeric suffixes representing non-safety affecting options may be provided.

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GENERAL CHARACTER:

The products covered by this Report are Component Power Distribution Centers (PDC), EDGE CABINET models, and Component Accessories to the PDC, the DC Distribution/Battery Bus Panels, EDGECABG4(xx) series, the Power Distribution Unit, J2019001 L001(y), and the Battery Modules, BME80BATT48A(y) and BME2500/120VRLA48(y) series. All products are intended for use in controlled and restricted access environments.

 USR/CNR indicates the subject equipment has been investigated to the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, Part 1: General Requirements, ANSI/UL60950-1-2019, Second Edition, dated May 09, 2019, and CAN/CSA C22.2 No. 60950-1-07, Second Edition+A2:2014 (MOD), dated October 14, 2014.

USR/CNR indicates investigation to the US and Canadian (Bi-National) Standard for Audio/video, information and communication technology equipment - Part 1: Safety requirements, CAN/CSA C22.2 No. 62368-1-14, Second Edition, ANSI/UL 62368-1-2014, revised, December 1, 2014.

The EDGECAB models with the G301 or G303 suffix are considered as Pluggable Type B equipment. The EDGECAB models with the G304, G305, or G306 suffix are considered as field-wiring equipment.

- 3. The EDGECAB may contain one 2U or two 1U "sticks" that are either connected to a common DC bus or to separate parallel DC buses, designated as "A" side and "B" side. Each stick is considered equivalent and independent of each other, with respect to their inputs, outputs, and having their own controller slots. However, for any system model, where the outputs of the sticks are connected as a common DC bus, using the G890 bus strap, one controller can be used for both sticks.
- 4. The controller(s), that may be mounted in the system, comes with two options, with or without the display.
- 5. Whether fixed or removable, each stick is provided with its own AC input(s). Each AC feed to the system uses either a pluggable Type B (non-NEMA) 3-pole, twist-lock male connector with steel casing that is grounded, or a 3W field wiring terminal block configuration, with protective earthing connect directly to the chassis with PEM studs.

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Each DC Distribution or Battery Bus panel, EDGECABG4(xx), uses a three-6. bus connection to the system DC bus, with a maximum of six to eight panels attached to a system, depending upon system's height. Individual loads are attached to the output channels of an EDGECABG400 or EDGECABG401 panel, using pluggable connections that are protected by their corresponding Listed DC-rated breakers. The EDGECABG420 Battery Bus Panel uses the same pluggable connections as the EDGECABG400 or EDGECABG401 panels, but without the DC breaker protection. Unlike the other panels, the bulk DC loads use bolted connections to the EDGECABG410, EDGECABG411, and EDGECABG412 that are protected by Listed DC-rated breakers. The three-bus connection allows for a single Vo(+) bus/split A/B Vo(-) bus configuration of the EDGECABG401, EDGECABG411, and EDGECABG420 without the G890 bus strap, a single Vo(+)/Vo(-) bus configuration of the EDGECABG401, EDGECABG410, EDGECABG411, and EDGECABG412 with the G890 bus strap, or a single Vo(+)/Vo(-) bus configuration of the EDGECABG400.

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7. For system models using one GED841 series Pulsar Edge controller for internal monitoring and regulating, a single monitoring, regulating, and alarm interface to external control devices is provided. For system models using multiple GED841 series Pulsar Edge controllers, the system provides each stick with its own monitoring, regulating, and alarm interface to external control devices. See the following table for each external controller interface's details:

Connector	Connection	Comments
Designation	Туре	
LAN	LAN/Ethernet	LAN Connection
TB21	1-Wire Bus	Provided for 1-Wire Temperature probe
TB17-TB20, TB25, TB26	Alarm Inputs	Contact closure provided via relay; low voltage, limited-energy circuit provided for external relay; external connection must
TB11-TB16	Alarm Outputs	limit the input to 0.5A at 60Vdc. Alarm relay outputs are isolated from hazardous voltage and hazardous energy
P15/P16	Data	Remote rectifier access

- 8. Battery Module models, BME80BATT48A(y) and BME2500/120VRLA48(y), have the same ratings and use the same circuit design, which includes low-voltage battery-disconnect (LVBD) control circuitry and relay, and internal fusing, to protect the eight internal VLRA batteries from adverse or abnormal operating conditions. Each installed battery module is designed to provide backup power for at most 30 seconds at a load of 3800W. The constructional differences between the two models are the larger chassis size of the BME2500/120VRLA48(y) and the single PWB of the BME80BATT48A(y) being divided between two smaller PWB's of the BME2500/120VRLA48(y), while maintaining the same functionalities.
- * *9. The EDGECABG002(x) and EDGECABG000(x) models are similar in design and height. There are two main differences between two models. One difference is that the EDGECABG000(x) model uses up to two replaceable 1U sticks, and the EDGECABG002(x) models use a single 2U fixed stick. However, both models have the same rectifier and battery module capacities, based upon stick versions being used within the model. The second difference between the two models is the AC input option. The EDGECABG000(x) model uses only the G301 option, but like the EDGECABG001(x) models, the EDGECABG002(x) model can use both the G303, G304, G305, or G306 options.
- * 10. The EDGECABG001(x) and EDGECABG002(x) models are similar in design, but differ in height, with the EDGECABG001(x) being a 7-foot model and EDGECABG002(x) model being an 8-foot model. The fixed stick versions used in each model are similar but have component changes to accommodate the height differences of the models.
- 11. The J2019001 L001(y) model is connected to the system's 48VDC bus through an EDGECABG411 DC Distribution Panel and provides 240Vac/24Amax through each of its two convenience outlets.

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- 12. The EDGECABG007(x) and EDGECABG008(x) models are similar in design, but differ in height, with the EDGECABG007(x) being a 7-foot model and EDGECABG008(x) model being an 8-foot model but different from the other frames. What makes these frames different from the existing frames are how they were redesigned to streamline their construction and remove unnecessary features, using rails made of lighter material that are welded to the cross beams rather than bolted together. The 2U fixedstick versions, used in these new frame models, are similar to the existing 2U stick designs in capacity and construction except for metal interface changes to match the new frames' redesign.
- 13. The LISTED (BBFX) battery modules, BBU0042-CDAB01, made by Natron, and Blue Tray 4000 (BME2500/480NIMH48), made by FDK, have their own firmware and internal circuitry to control their functionality, as well as provide protection to their internal battery strings. The EDGECAB controller(s), when mounted in the system, only monitors and reports their performance.
- 14. The stick models, with the "NS" suffix added to their group number, can only be used with frames versions with the "NS" suffix added to their group numbers. The "NS" suffix denotes that the group's design has been slightly altered for cost reduction purposes, i.e. common brackets vs. unique brackets between groups, while keeping the same ratings and using the same safety critical components. Therefore, the constructional changes are considered as non-safety affecting.

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ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Special Considerations - The following items are considerations that were used when evaluating this product.

- The subject products were submitted and tested for a maximum manufacturer's recommended ambient (Tmra) of 40°C at the maximum output power ratings listed in the ratings table.
- The cabinet is: Class I (earthed), Hazardous energy, SELV/ES1 output, field wired by qualified service personnel, intended for use on a TN-S power system.
- 3. Disconnect Device The following part is considered the equipment disconnect device:

Pluggable Type B appliance coupler for systems with G301 or G303 suffix one for each stick. External 50A max branch circuit breaker protection/feed for systems with G304, G305, or G306 suffix. Internal DC/Battery Disconnect circuit breaker(s).

 The maximum battery voltage (float or boost) will not exceed the maximum factory default limit of 58Vdc, which is set by the system controller(s).

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Conditions of Acceptability - The following considerations shall be a part of end-use applications:

- The subject products, described within this report, have been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, Part 1: General Requirements, ANSI/UL60950-1-2014, Second Edition, dated October 14, 2014, and CAN/CSA C22.2 No. 60950-1-07, Second Edition +A2:2014 (MOD) dated October 14, 2014, which are based on IEC60950-1, Second Edition, Sub. Clause 2.10. Minimum spacings between live parts of opposite polarity and between live and dead-metal parts shall be as indicated in Tables 2J, 2K, 2L, and 2N in UL 60950-1.
- 1a. These components have been judged on the basis of the required spacings in the Standard for Audio/video, information and communication technology equipment - Part 1: Safety requirements, CAN/CSA C22.2 No. 62368-1-14, Second Edition, ANSI/UL 62368-1-2014, revised, December 1, 2014, which would cover the component itself, if submitted for Listing.
- The subject products shall be installed in compliance with the enclosure, mounting, spacing, casualty and segregation requirements of the end-use application.
- 3. The subject products have been evaluated for use in a Pollution Degree 2 environment.
- 4. The system's, power supplies', and battery modules' interface connections have been evaluated for hot-swapping for 50 cycles.
- 5. The subject products are intended to be installed by trained service personnel in a controlled and restricted access environment (dedicated equipment rooms, equipment closets, or the like) in accordance with the U.S. National Electric Code (NEC), NFPA 70, and pursuant to applicable local codes.
- *6. The subject products have been evaluated for use with a maximum 30A branch circuit/feed where up to three GP100 rectifiers/feed are powered at 480V, a maximum 40A branch circuit/feed where up to four GP100 rectifiers/feed are powered at 480V, and a maximum 50A branch circuit/feed where up to five GP100 rectifiers/feed are powered at 480V.
- 7. Models with the G301 or G303 in the nomenclature are supplied with two Pluggable Type B (non-NEMA) 3-pole, 50A-rated, twist-lock male connections with steel housing and grounding found within a single AC housing for each side with sticks. Models with the G304, G305, or G306 in the nomenclature are supplied with terminal blocks, three per feed, for field wiring connections, with the protective earthing attached directly to the chassis using PEM studs.

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- 8. The maximum calculated leakage current per stick, at 530V, 60 Hz, is 50mA, per UL 62368-1, or 78mA, per UL60950-1, for the subject cabinet, based upon a maximum ten R/C GP100H3 rectifiers, at 70.7mApk or 7.8mArms each or 28.2mA per stick or 56.4mA for a cabinet with a maximum eight R/C GP100L3 rectifiers, at 275V, 60 Hz and 7.04mA per rectifier. A high leakage current warning label is provided on the AC cover, since the maximum measured leakage current exceeds the ES2 limit of 7.07mApk. Consideration shall be taken in the equipment installation to ensure that the protective earthing requirements of s.c. 5.7.5 are met.
- 9. The BME80BATT48A(y) battery module was tested for forced charge at 58Vdc maximum. Testing was representative for the BME2500/120VRLA48(y) battery module, which uses the model and same number of VRLA batteries as the BME80BATT48A(y) module. Installation instructions and/or marking states that the maximum battery voltage (float or boost) shall be 58Vdc.
- 9a. Annex M testing was not conducted for the Natron Energy model Blue Tray 4000 battery module based on functional safety evaluation and the relative ratings of the battery, protection circuit, and rectifier output.

The max charge voltage is 59.9V, protection operates at 59.7V, and power supply outputs up to 58 Vdc. Consideration should be given to this in the end product evaluation.

9b. Annex M testing was not conducted for the FDK Corp. model BBU0042-CDAB01 battery module based on functional safety evaluation and the relative ratings of the battery, protection circuit, rectifier output, and user instructions.

The max charge voltage is 56V, protection operates at 61.2V, power supply outputs up to 58 Vdc, and the user manual contains instructions to configure the system voltage to 56V or less. Consideration should be given to this in the end product evaluation.

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- *10. The subject cabinet has been evaluated with R/C (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) power supplies, GP100H3R48TEZ Series, R/C (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) power supplies, GP100L3R48TEZ Series, R/C (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) battery modules, BME80BATT48A series, representing the BME2500/120VRLA48(y) model, R/C (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) Battery Bus panels and EDGECABG4(xx), R/C (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) DC Distribution panel, all manufactured by ABB. The suitability of using other power supplies or components shall be determined in the end-use application.
- 11. The isolation between the AC input(s) (Primary ES3 circuits) and the DC output(s) (SELV/ES1 voltage circuits) of the subject cabinet has been investigated as Reinforced insulation. The isolation between the primary circuit and ground has been investigated as Basic insulation. The output of the cabinet is considered SELV/ES1 when used with UL Recognized (QQGQ2/QQGQ8 and QQJQ2/QQJQ8) power supplies with SELV/ES1 outputs.
- 12. The external controller interfaces of each stick are standard communication protocols (such as Ethernet/RS232) that shall meet limited power requirements in the end-product or have alarm contact closures that are not power sources. Alarm contacts provided with the controller interfaces are not fused within the equipment. Current-limiting protection for these contacts shall be provided by external circuits and limit the input to a maximum of 0.5A at 60Vdc.
- 13. The output circuits of the EDGECABG4(xx) DC distribution panel and from EDGE CABINET is ES1/SELV, which exceeds 240VA. Consideration should be taken at the end-use application to restrict the hazardous energy of the outputs from operator access.
- 14. The EDGECABG400 and EDGECABG401 DC distribution panels were evaluated for 80Amax/channel, using 100A DC circuit breakers and 100Amax/channel, using 125A DC fused pullout switches, with a maximum 400A loading allowed per panel. The circuit breaker model used in the evaluation was a Listed DIVQ(7) DD-Frame series, manufactured by CBI, that was loaded to 80% of its current rating. The DC fused pullout switch model used in the evaluation was a R/C QPQY2(8) TFD-101-01 series, manufactured by Canadian Shunt, containing a Littelfuse TLS 125A fuse that was loaded to 80% of its current rating. Using other DIVQ(7) circuit breakers, with less than or equal to the 100A rating or DC fuses less than or equal to 125A, shall be determined in the end-use application and loaded to not more than 80% of its current rating or up to 80Amax/breaker or 100Amax/fused switch.
- 15. The maximum load support rating of the equipment's frame has not been evaluated. Consideration should be taken at the end-use application to determine if the frame loading meets regulatory limitations.
- 16. The subject products have been evaluated to the clearance requirements of 2000m altitude application in accordance with IEC60664-1.

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- 17. The subject products have been evaluated for 40°C at 100% loading. A G001L system, using a G212 stick that holds ten GP100H3R48TEZ Series rectifiers, was evaluated at its maximum rated output of 1250A, 60kW and considered representative the other EDGE cabinet models with the same or less input and output ratings, per stick. Please note that this system configuration uses two pluggable Type 2 appliance couplers. A G007 EDGECAB system was used to evaluate the field-wiring terminal blocks for 480 and 200-240 applications and the usage of the GP100L3R48TEZ Series rectifiers at its maximum rated output of 1000A, 48kW and considered representative the other EDGE cabinet models with the same or less input and output ratings, per stick.
- 18. Additional testing will need to be considered in the end-product, for example heating, abnormal heating, UL 62368-1 2nd ed CL 5.5.2.2 Safeguards against capacitor discharge after disconnection of a connector, Touch current testing, bonding and stability, with the end-use load.
- 19. Transient voltage shall be limited to 2.5kV to all circuits in the power supply in the end product.
- 20. The EDGECABG411 DC distribution panel was evaluated for 200Amax/channel, using 250A DC circuit breakers, with a maximum 400A loading allowed per panel. The circuit breaker model used in the evaluation was a Listed DIVQ(7) CMLHPB111 series, manufactured by Sensata/Airpax, which was loaded to 80% of its current rating.
- 21. Additional testing was performed on a subject G001L system with a single G210 stick, with the system loaded to its maximum output capacity of 1000A, 48 kW or 500A, using eight GP100 rectifiers, to evaluate operations at 40°C. The evaluation of this system was representative of other EDGE cabinet models, with the same input and output ratings.
- 22. The Accessory Power Distribution Unit, J2019001 L001(y), was evaluated for a maximum ambient of 40°C, using as subassemblies, two R/C (YEDU2) TSI-BRAVO-EPC-48V-120VAC-Op. shelves, that were combined into a single modular design. Additionally, eight R/C (YEDU2) TSI-EPC-48V-120VAC-BRAVO inverter modules and one T2S series controller module were used in the evaluation of the distribution unit. The distribution unit, inverters, and controller are all manufactured by CE+T America. The suitability of using other inverters or controllers within the distribution unit shall be determined in the end-use application.
- 23. Connections to A.C. receptacles of the J2019001 L001 panel are restricted to equipment that has been installed within EGDECAB system.
- 24. EDGECAB G001 and G002 models without "L," "LNS," "R, "or "RNS" suffixes are cabinets with 2U fixed sticks mounted on both sides, rather than only one stick mounted to one side or the other. For models with the sticks mounted to both side, the input and output ratings for these cabinets are therefore, doubled with four individual AC feeds and two separate DC buses. Additionally, like models with only one stick, reliable protective grounding to the cabinet must be provided for both sticks because the touch current is now twice the level of the single stick models, which were already determined exceeded ES2 levels.