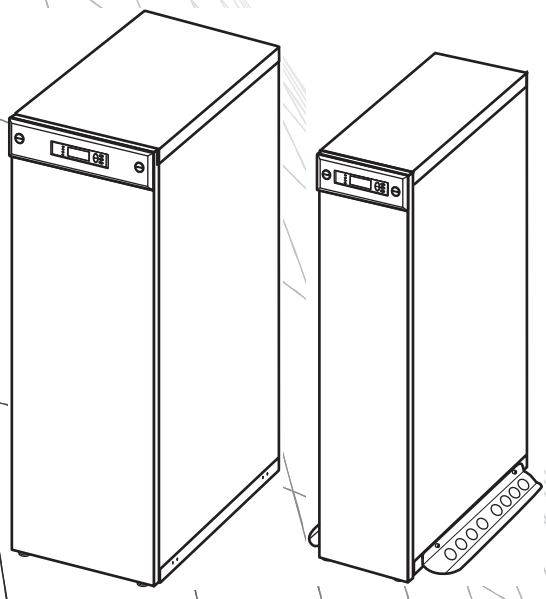
APC by Schneider Electric

Quick Reference

MGE™ Galaxy™ 3500 Series

10-40 kVA 380/400/415 V 3:3
15-40 kVA 380/400/415 V 3:1



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Product Overview

The MGE Galaxy 3500 UPS is available in the following models:

UPS for up to 2 battery modules

- MGE Galaxy 3500 10 kVA 400 V
- MGE Galaxy 3500 15 kVA 400 V
- MGE Galaxy 3500 15 kVA 400 V 3:1
- MGE Galaxy 3500 20 kVA 400 V
- MGE Galaxy 3500 20 kVA 400 V 3:1

UPS for up to 4 battery modules

- MGE Galaxy 3500 10 kVA 400 V
- MGE Galaxy 3500 15 kVA 400 V
- MGE Galaxy 3500 15 kVA 400 V 3:1
- MGE Galaxy 3500 20 kVA 400 V
- MGE Galaxy 3500 20 kVA 400 V 3:1
- MGE Galaxy 3500 30 kVA 400 V
- MGE Galaxy 3500 30 kVA 400 V 3:1
- MGE Galaxy 3500 40 kVA 400 V
- MGE Galaxy 3500 40 kVA 400 V 3:1

Features

Availability

- Dual mains input: Increases availability by allowing the UPS to be connected to two separate power sources
- Scalable runtime: Allows additional runtime to be quickly added as needed
- Hot-swappable batteries: Ensure clean, uninterrupted power to protected equipment while batteries are being replaced
- Generator compatible: Ensure clean, uninterrupted power to protected equipment when generator power is used
- Automatic internal static bypass: Supplies utility power to the connected loads in the event of a UPS overload condition or fault
- Battery modules connected in parallel: Delivers higher availability through redundant batteries

Serviceability

- Batteries that can be replaced by qualified personnel: Increases availability by allowing qualified personnel to perform upgrades and replacement of the batteries reducing the Mean Time To Repair (MTTR)
- Automatic self-test: Periodic battery self-test ensures early detection of a battery that needs to be replaced
- Shippable with modules installed: Enables pre-installation UPS staging and testing and faster installation
- Modular design: Provides fast serviceability and reduced maintenance requirements via self-diagnosing, field-replaceable modules

Manageability

- Network manageable: Provides remote management of the UPS over the network
- InfraStruXure Central Compatible: Enables centralized management via InfraStruXure Central
- LCD: Alphanumeric display which displays system parameters and alarms
- Audible alarms: Provides notification of changing utility power and UPS conditions
- Programmable frequency: Ensures compatibility with different input frequencies
- LED status indicators: Quickly understand unit and power status with visual indicators
- SmartSlot: Customize UPS capabilities with managements cards

Total Cost of Ownership

- Input power factor correction: Minimizes installation costs by enabling the use of smaller generators and cabling
- Temperature-compensated battery charging: Prolongs battery life by regulating the charge voltage according to battery temperature
- Manual maintenance bypass: Reduces installation costs by eliminating the need for an external mechanical bypass
- Intelligent battery management: Maximizes battery performance, life, and reliability through intelligent, precision charging

Protection

- Frequency and voltage regulation: Gives higher application availability by correcting poor frequency and voltage conditions without using the battery
- Safety-agency approved: Ensures the product has been tested and approved to work safely with the connected service provider equipment and within the specified environment. UL, FCC, CE, C-Tick approvals
- Cold-start capable: Provides temporary battery power when the utility power is out

Default Settings

System settings (only updated when in load disconnect)	Default setting
Nominal output voltage (ph-ph)	380/400/415 V
Frequency	50 Hz
Frequency self-detect mode	Auto
Frequency range	±10 Hz
Frequency slew rate	1 Hz/s
Generator charge percentage	100%
Cyclic charge mode enabled	Off
Auto start	On
Parallel UPS number	1
No. of parallel UPSs	1
MBP present	No
Shutdown mode (can only be set from service port)	Never
Shutdown setting	
Low battery duration	2 minutes
Shutdown delay	20 seconds
Turn on delay	0 seconds
Return of battery capacity	0%
Alarm settings	
Load alarm threshold	System power rating
Runtime alarm threshold	0 (disabled)
Parallel redundancy alarm threshold	n+0 (disabled)
Other settings	
Battery self test	Off
External battery capacity	0 Ah
Display settings	
Display language	English
Display contrast	0
Display beeper state	PwerFail+30
Display beeper volume	Low
Display key click	Off

AC Input

Specifications

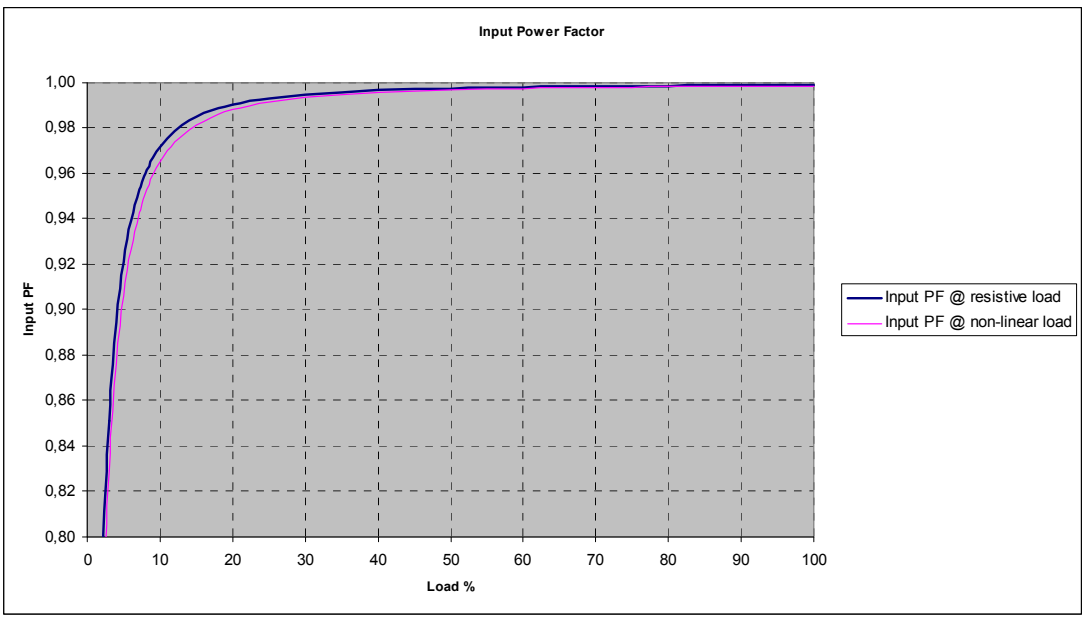
380 V, 400 V, and 415 V

	10 kVA			15 kVA			20 kVA			30 kVA			40 kVA		
	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V
Connection type	5-wire (3PH + N + PE)														
Input frequency (Hz)	40-70														
I thd	< 5% at full load														
Nom input current (A)	13.0	12.3	11.9	19.4	18.5	17.8	26.0	24.7	23.8	38.6	36.7	35.3	51.7	49.1	47.3
Max input current (A)	14.3	13.5	13.1	21.4	20.3	19.6	28.6	27.2	26.2	42.5	40.3	38.9	56.8	54.0	52.1
Input current limitation (A)	16.8	16.8	16.8	25.2	25.2	25.2	33.8	33.8	33.8	50.1	50.1	50.1	66.9	66.9	66.9
Input power factor correction	> 0.98 at load > 50%														

380 V, 400 V, and 415 V 3:1

	15 kVA			20 kVA			30 kVA			40 kVA		
	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V
Connection type	5-wire (3PH + N + PE)											
Input frequency (Hz)	40-70											
I thd	< 5% at full load											
Nom input current (A)	19.4	18.5	17.8	26.0	24.7	23.8	38.6	36.7	35.3	51.7	49.1	47.3
Max input current (A)	21.4	20.3	19.6	28.6	27.2	26.2	42.5	40.3	38.9	56.8	54.0	52.1
Input current limitation (A)	25.2	25.2	25.2	33.8	33.8	33.8	50.1	50.1	50.1	66.9	66.9	66.9
Input power factor correction	> 0.98 at load > 50%											

Input Power Factor



AC Output

Specifications

380 V, 400 V, and 415 V

	10 kVA			15 kVA			20 kVA			30 kVA			40 kVA		
	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V
Connection type	5-wire (3PH + N + PE)														
Output capacity	150% for 1 minute (normal operation) 125% for 10 minutes (normal operation) 150% for 1 minute (battery operation) 125% for 10 minutes (battery operation) 110% continuous (bypass operation) 800% for 500 ms (bypass operation)														
Voltage tolerance	+/- 20% (304-477 V) at full load														
Nom output current (A)	15.2	14.4	13.9	22.8	21.7	20.9	30.4	28.9	27.8	45.6	43.3	41.7	60.8	57.7	55.6
Output frequency (sync to mains)	47-53 Hz for 50 Hz nominal														
Slew rate (Hz/Sec)	0.25-1														
Total Harmonic Distortion (THD)	< 1.5% linear < 3.5% non-linear														
Output power factor	0.8														
Dynamic load response	+/- 5%														
Output voltage regulation	+/- 1%														

380 V, 400 V, and 415 V 3:1

	15 kVA			20 kVA			30 kVA			40 kVA		
	220 V	230 V	240 V	220 V	230 V	240 V	220 V	230 V	240 V	220 V	230 V	240 V
Connection type	3-wire (1PH + N + G)											
Output capacity	150% for 1 minute (normal operation) 125% for 10 minutes (normal operation) 150% for 1 minute (battery operation) 125% for 10 minutes (battery operation) 110% continuous (bypass operation) 800% for 500 ms (bypass operation)											
Voltage tolerance	+/- 20% (304-477 V) at full load											
Nom output current (A)	68.4	65.0	62.6	91.2	86.6	83.5	136.7	129.9	125.2	182.3	173.2	166.9
Output frequency (sync to mains)	47-53 Hz for 50 Hz nominal											
Slew rate (Hz/Sec)	0.25-1											
Total Harmonic Distortion (THD)	< 1.5% linear < 3.5% non-linear											
Output power factor	0.8											
Dynamic load response	+/- 5%											
Output voltage regulation	+/- 1%											

Efficiency

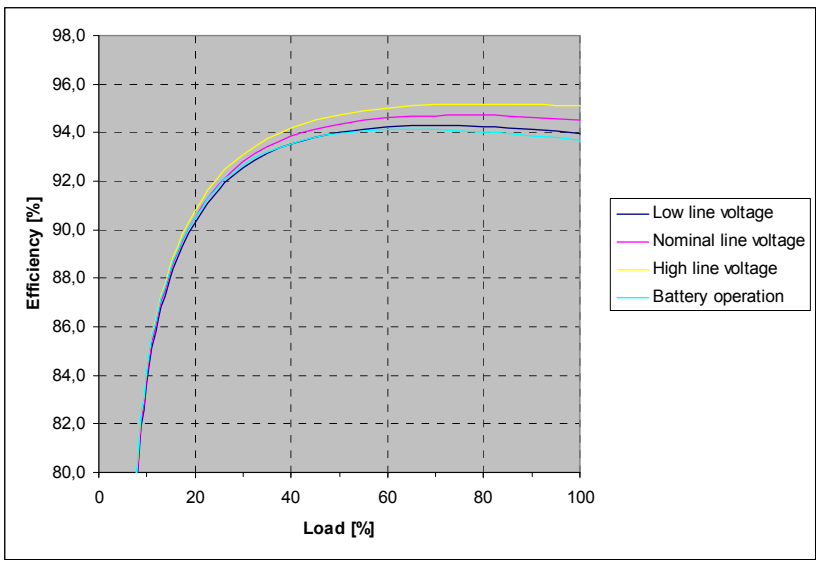
Note: The below figures are for the 3:3 version only.

System	25% load	50% load	75% load	100% load
10 kVA 400 V	91.9	94.4	94.7	94.5
15 kVA 400 V	93.2	95.4	95.7	95.7
20 kVA 400 V	94.4	95.7	95.7	95.6
30 kVA 400 V	94	95.6	95.8	95.8
40 kVA 400 V	94.9	95.8	95.8	95.6

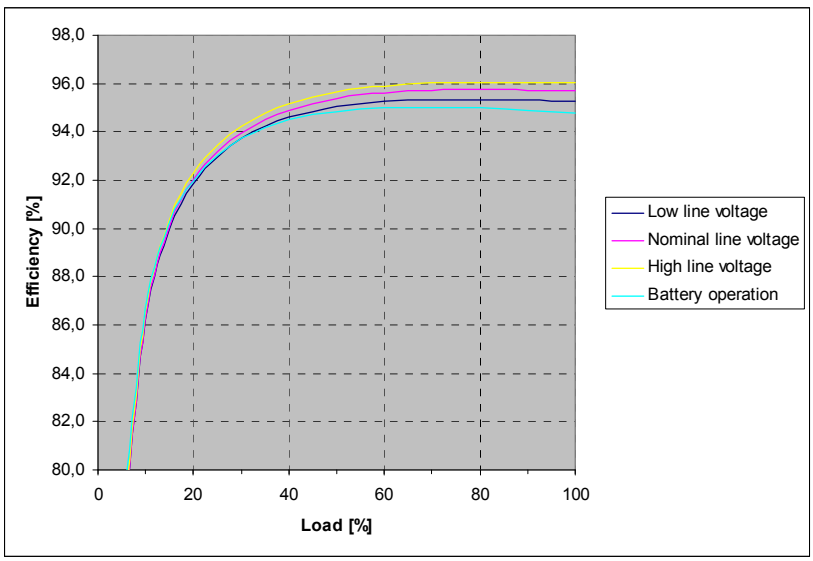
Note: Low line is 348 V and high line is 452 V (+/- 13%).

Efficiency Curves

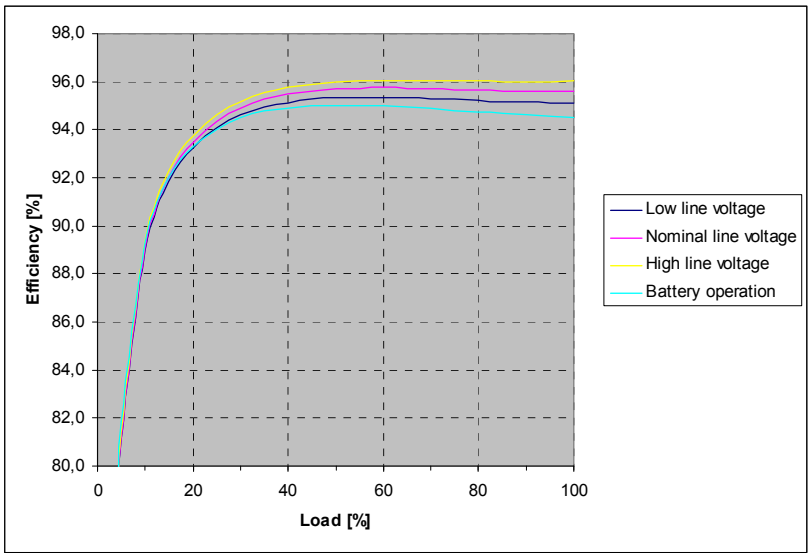
10 kVA 400 V



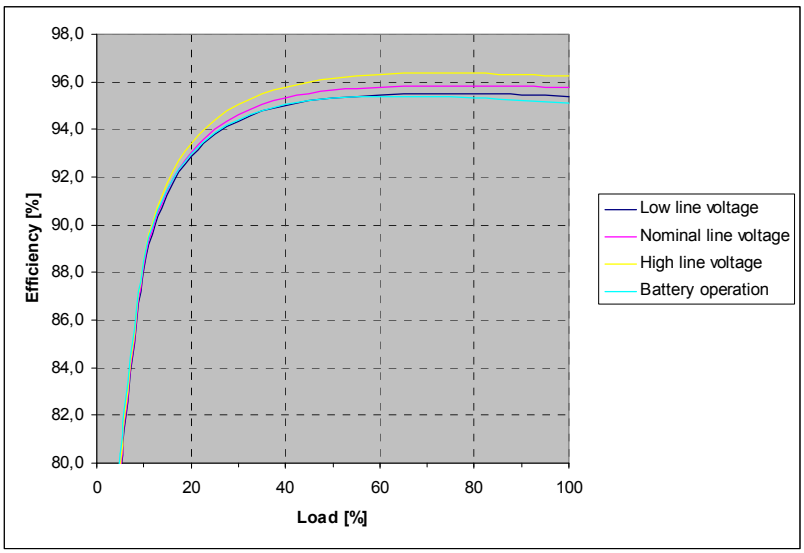
15 kVA 400 V



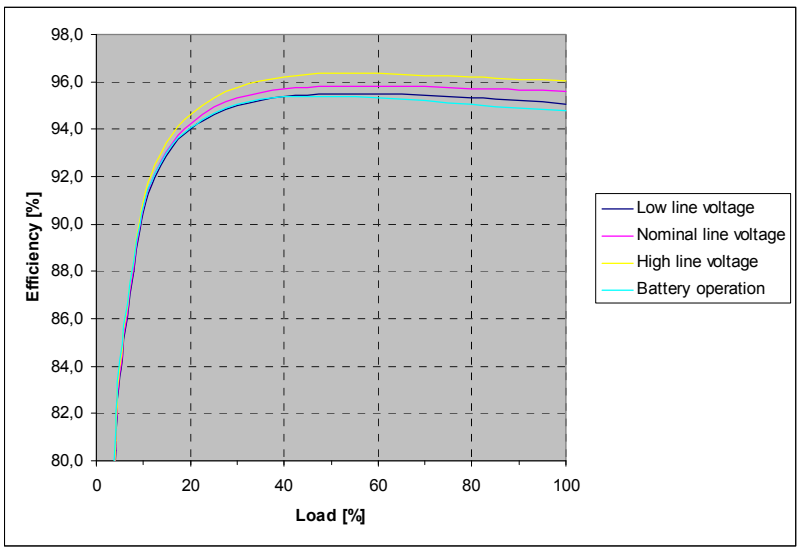
20 kVA 400 V



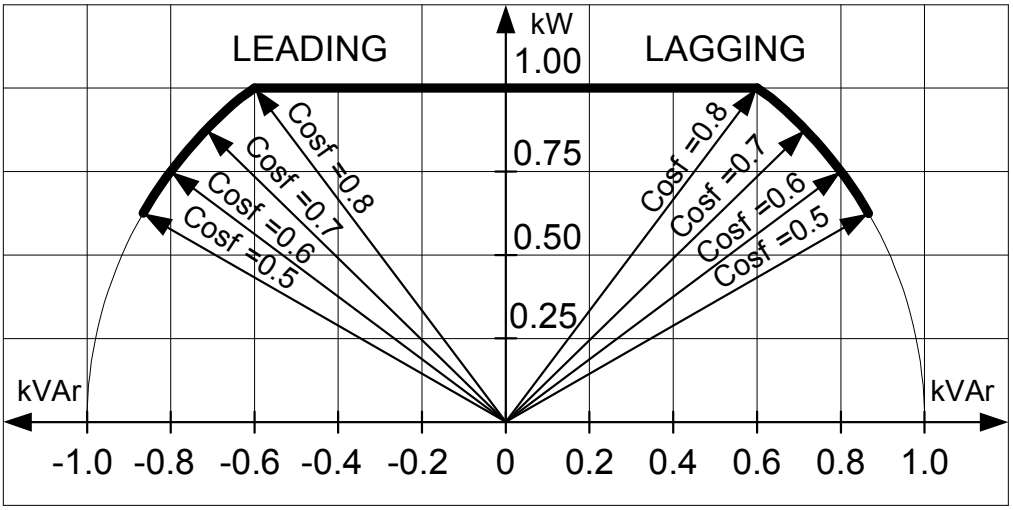
30 kVA 400 V



40 kVA 400 V



Derating due to Load Power Factor



Environmental

General	
Temperature	
• Operating	0-40º C
• Storage with batteries	-15-45º C
• Storage without batteries	-30-70º C
Humidity	
• Operating	0-95%, non-condensing
• Storage	0-95%, non-condensing
Elevation	
• Operating	0-1000 m: 100% load 1000-1500 m: 95% load 1500-2000 m: 91% load 2000-2500 m: 86% load 2500-3000 m: 82% load
• Storage	0-15000 m
Audible noise	
• At 70% load	
10-15 kVA 208/220 V	42.3 dBA
20-30 kVA 208/220 V	46.2 dBA
10-20 kVA 380/400/415 V	42.3 dBA
30-40 kVA 380/400/415 V	46.2 dBA
• At 100% load	
10-15 kVA 208/220 V	51.3 dBA
20-30 kVA 208/220 V	55.0 dBA
10-20 kVA 380/400/415 V	51.3 dBA
30-40 kVA 380/400/415 V	55.0 dBA
Protection class	Up to IP51
Colour	Dark grey

Heat Dissipation

380 V, 400 V, and 415 V

	10 kVA		15 kVA		20 kVA		30 kVA		40 kVA	
	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging
Heat dissipation kw (BTU/hr)	0.46 (1583)	0.54 (1856)	0.54 (1842)	0.66 (2252)	0.77 (2620)	0.93 (3166)	1.08 (3685)	1.32 (4504)	1.50 (5132)	1.82 (6223)

380 V, 400 V, and 415 V 3:1

	15 kVA		20 kVA		30 kVA		40 kVA	
	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging	Batteries fully charged	Batteries charging
Heat dissipation kw (BTU/hr)	0.58 (1965)	0.70 (2375)	0.80 (2730)	0.96 (3276)	1.15 (3931)	1.39 (4750)	1.57 (5350)	1.89 (6442)

Batteries

Specifications

	10-40 kVA 380/400/415 V
Type	VRLA
Nominal voltage (VDC)	+/- 192
Float voltage (VDC)	+/- 219
End of discharge voltage (VDC)	+/- 154
Battery current (at full load)	87.9 A at ± 192 V
Max. current (at end of discharge)	110.1 A at + 154 V
Max. charging power	10 kVA: 800 15 kVA: 1200 20 kVA: 1600 30 kVA: 2400 40 kVA: 3200
Typical re-charge time	5 hours
End voltage	1.6-1.75 V/cell (automatic, depending on load)

Efficiency DC to AC

380 V, 400 V, and 415 V

	10 kVA			**15 kVA**			**20 kVA**			**30 kVA**			**40 kVA**		
	380 V	**400 V**	**415 V**	**380 V**	**400 V**	**415 V**	**380 V**	**400 V**	**415 V**	**380 V**	**400 V**	**415 V**	**380 V**	**400 V**	**415 V**
Efficiency at nominal batt. voltage (%)	94.0	94.1	94.2	95.0	95.1	95.2	94.7	94.9	95.1	95.1	95.2	95.3	94.9	95.0	95.1

380 V, 400 V, and 415 V 3:1

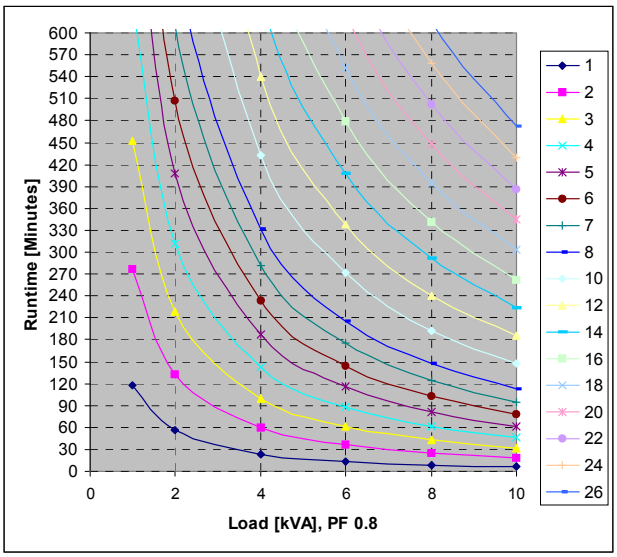
	15 kVA			**20 kVA**			**30 kVA**			**40 kVA**		
	220 V	**230 V**	**240 V**	**220 V**	**230 V**	**240 V**	**220 V**	**230 V**	**240 V**	**220 V**	**230 V**	**240 V**
Efficiency at nominal batt. voltage (%)	94.9	95.0	95.1	94.7	94.8	94.9	94.9	95.0	95.1	94.8	94.9	95.0

Battery Run-Times (Minutes) - APC Battery Solution

Note: "# of battery shelves" indicates the total number of populated battery shelves in the UPS and Battery Enclosure.

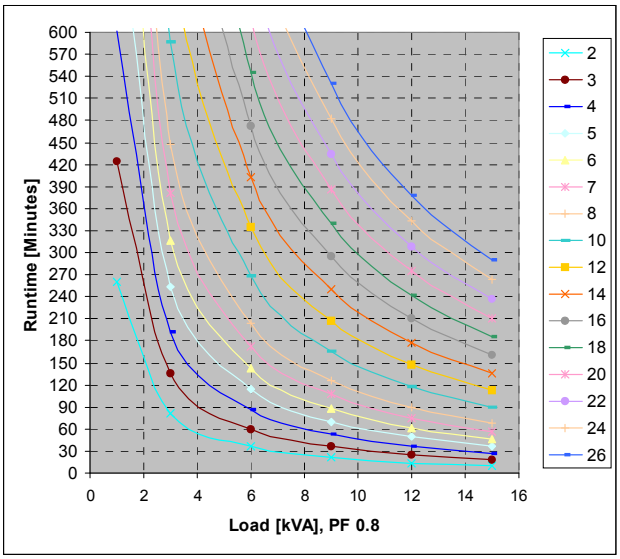
10 kVA 400 V typical performances

# of battery shelves	Load kVA					
	1	2	4	6	8	10
1	118	56	24	14	9	6
2	276	133	60	36	25	18
3	452	219	99	61	43	32
4	639	311	142	88	62	47
5	837	407	187	116	82	62
6	1043	508	233	145	103	78
7	1255	611	281	175	124	95
8	1474	718	331	206	147	112
9	1698	828	382	238	170	130
10	1928	940	433	271	193	148
11	2162	1054	486	304	217	166
12	2400	1171	540	338	241	185
13	2642	1289	595	372	266	204
14	2888	1409	651	407	291	223
15	3138	1531	707	443	316	243
16	3391	1655	765	479	342	262
17	3647	1780	823	515	368	282
18	3906	1907	881	552	394	303
19	4168	2035	941	589	421	323
20	4433	2164	1001	627	448	344
21	4701	2295	1061	665	475	365
22	4971	2427	1122	704	503	386
23	5243	2560	1184	742	530	408
24	5518	2694	1246	781	558	429
25	5795	2830	1309	821	586	451
26	6075	2966	1372	861	615	473



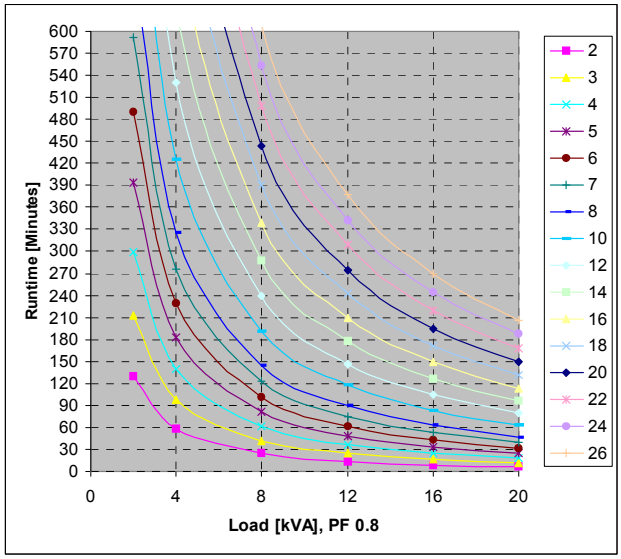
15 kVA 400 V typical performances

# of battery shelves	Load kVA					
	1	3	6	9	12	15
1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	260	82	36	21	14	10
3	425	136	60	36	25	18
4	602	193	87	53	37	27
5	788	253	114	70	49	37
6	982	316	143	88	62	47
7	1182	381	173	107	75	57
8	1388	448	204	126	89	68
9	1600	517	235	146	103	79
10	1816	587	268	166	118	90
11	2036	659	300	187	132	101
12	2261	731	334	208	147	113
13	2489	806	368	229	163	124
14	2721	881	403	251	178	136
15	2956	957	438	273	194	148
16	3194	1035	473	295	210	161
17	3435	1113	509	317	226	173
18	3680	1192	546	340	242	185
19	3926	1272	582	363	259	198
20	4176	1353	620	387	275	211
21	4428	1435	657	410	292	224
22	4682	1518	695	434	309	237
23	4939	1601	733	458	326	250
24	5198	1685	772	482	343	263
25	5459	1770	811	506	361	277
26	5723	1856	850	531	378	290



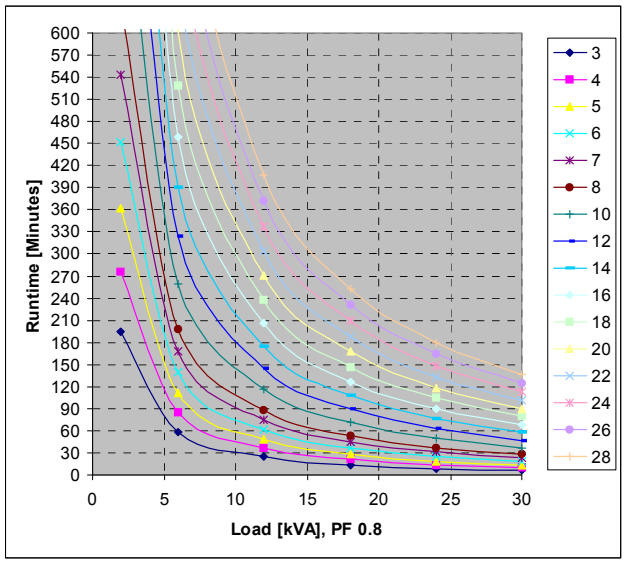
20 kVA 400 V typical performances

	Load kVA					
# of battery shelves	**2**	**4**	**8**	**12**	**16**	**20**
1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	129	59	25	14	9	6
3	212	98	42	25	17	12
4	300	139	61	37	25	18
5	394	183	81	49	34	25
6	491	229	102	62	43	32
7	591	276	123	75	53	40
8	695	325	145	89	63	47
9	801	375	168	103	73	55
10	909	426	191	118	83	63
11	1020	478	215	132	93	71
12	1132	531	239	147	104	79
13	1247	585	263	163	115	87
14	1363	639	288	178	126	96
15	1481	695	313	194	137	105
16	1601	751	339	210	149	113
17	1722	808	364	226	160	122
18	1844	866	391	242	172	131
19	1968	924	417	259	183	140
20	2093	983	444	275	195	149
21	2220	1043	471	292	207	158
22	2347	1103	498	309	219	168
23	2476	1163	525	326	232	177
24	2606	1224	553	343	244	187
25	2737	1286	581	361	256	196
26	2869	1348	609	378	269	206



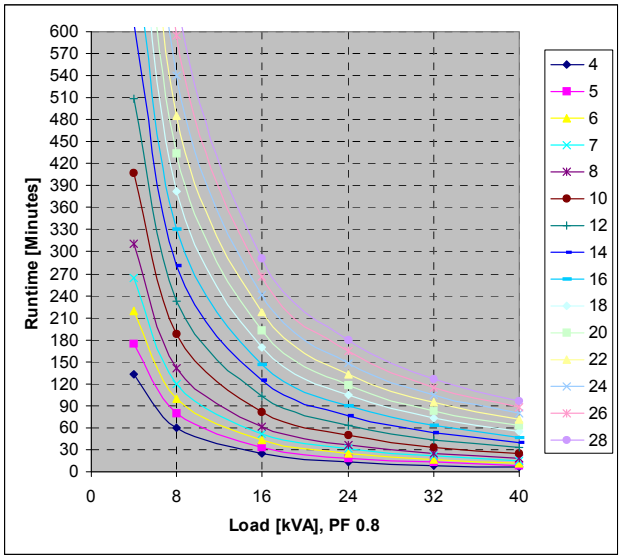
30 kVA 400 V typical performances

# of battery shelves	Load kVA					
	2	6	12	18	24	30
1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	195	58	25	14	9	6
4	276	84	36	21	14	10
5	362	111	48	29	19	14
6	452	139	61	37	25	18
7	544	168	74	45	31	23
8	639	198	88	53	37	28
9	737	228	102	62	43	32
10	837	259	116	71	50	37
11	939	291	130	80	56	42
12	1043	324	145	89	63	47
13	1148	357	160	98	69	52
14	1255	390	175	108	76	58
15	1364	424	191	118	83	63
16	1474	459	206	127	90	68
17	1585	494	222	137	97	74
18	1698	529	238	147	104	79
19	1812	565	255	157	111	85
20	1928	601	271	168	118	90
21	2044	637	287	178	126	96
22	2162	674	304	188	133	102
23	2280	711	321	199	141	107
24	2400	749	338	209	148	113
25	2521	786	355	220	156	119
26	2642	824	372	231	164	125
27	2765	863	390	242	171	131
28	2888	901	407	253	179	137



40 kVA 400 V typical performances

	Load kVA					
# of battery shelves	**4**	**8**	**16**	**24**	**32**	**40**
1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	133	60	25	14	9	6
5	175	79	34	19	13	9
6	219	99	43	25	17	12
7	264	120	52	31	21	15
8	311	142	62	37	25	19
9	358	164	72	43	30	22
10	407	187	82	50	34	25
11	457	210	92	56	39	29
12	508	233	103	63	43	33
13	559	257	114	69	48	36
14	611	281	124	76	53	40
15	664	306	135	83	58	44
16	718	331	147	90	63	47
17	773	356	158	97	68	51
18	828	382	170	104	73	55
19	884	407	181	111	78	59
20	940	433	193	118	83	63
21	997	460	205	126	89	67
22	1054	486	217	133	94	71
23	1112	513	229	141	99	75
24	1171	540	241	148	105	79
25	1230	568	253	156	110	84
26	1289	595	266	164	115	88
27	1349	623	278	171	121	92
28	1409	651	291	179	127	96

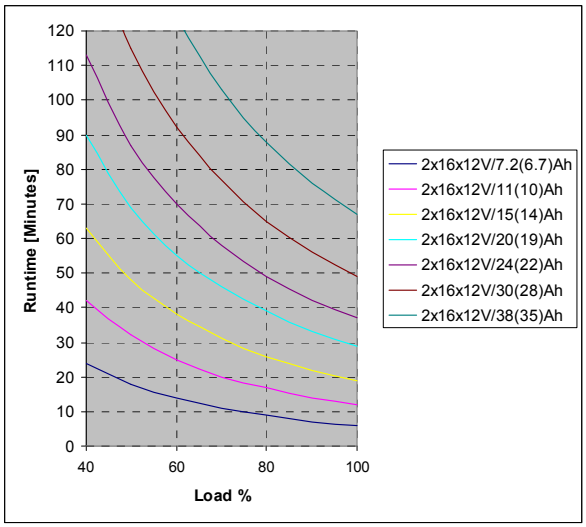


Battery Run-Times - Non-Modular Batteries

- The below battery run-times are based on high quality batteries from approved manufacturers
- The run-times are based on high rate batteries designed for UPS systems
- The run-times are intended as a guide only, and APC disclaim the responsibility for these run-times

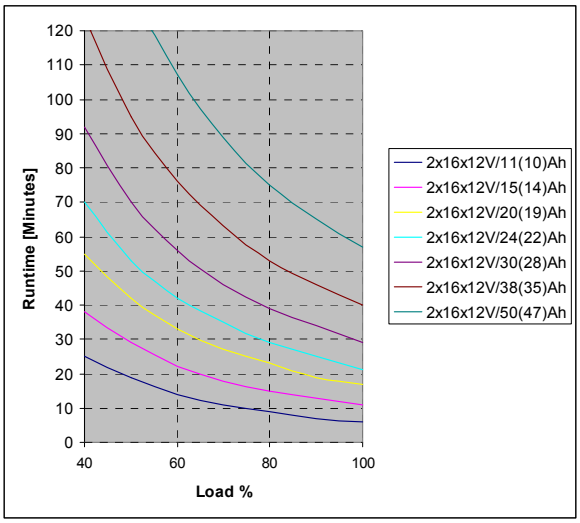
10 kVA

Battery Ah		Load %						
20 hr rate Ah	**Approx. equivalent 10 hr rate Ah**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
7.2	6.7	24	18	14	11	9	7	6
11	10	42	32	25	20	17	14	12
15	14	63	48	38	31	26	22	19
20	19	90	69	55	46	39	33	29
24	22	113	87	70	58	49	42	37
30	28	149	115	92	77	65	56	49
38	35	199	154	124	103	88	76	67



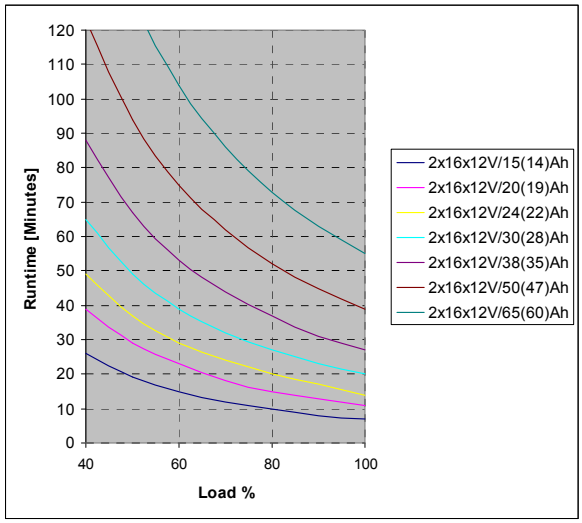
15 kVA

Battery Ah		Load %						
20 hr rate Ah	**Approx. equivalent 10 hr rate Ah**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
11	10	25	19	14	11	9	7	6
15	14	38	29	22	18	15	13	11
20	19	55	42	33	27	23	19	17
24	22	70	53	42	35	29	25	21
30	28	92	70	56	46	39	34	29
38	35	124	95	76	63	53	46	40
50	47	174	133	107	89	75	65	57



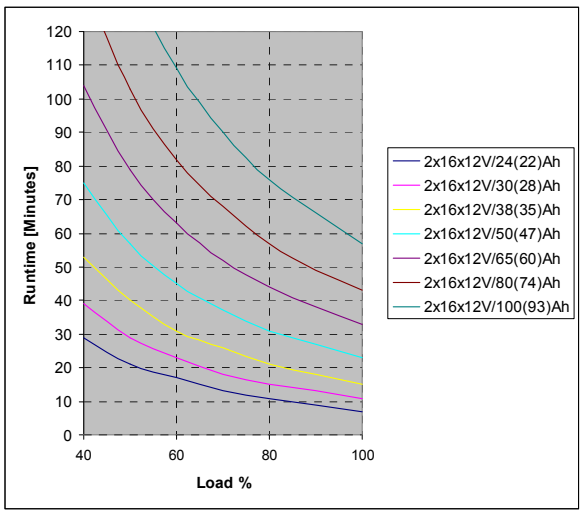
20 kVA

Battery Ah		Load %						
20 hr rate Ah	**Approx. equivalent 10 hr rate Ah**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
15	14	26	19	15	12	10	8	7
20	19	39	29	23	18	15	13	11
24	22	49	37	29	24	20	17	14
30	28	65	49	39	32	27	23	20
38	35	88	67	53	44	37	31	27
50	47	123	94	75	62	52	45	39
65	60	170	130	104	86	73	63	55



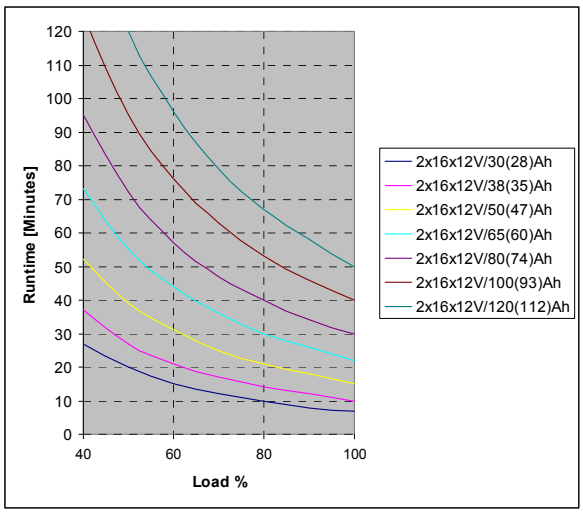
30 kVA

Battery Ah		Load %						
20 hr rate Ah	**Approx. equivalent 10 hr rate Ah**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
24	22	29	21	17	13	11	9	7
30	28	39	29	23	18	15	13	11
38	35	53	40	31	26	21	18	15
50	47	75	57	45	37	31	27	23
65	60	104	79	63	52	44	38	33
80	74	135	103	82	68	57	49	43
100	93	178	136	109	90	76	66	57



40 kVA

Battery Ah		Load %						
20 hr rate Ah	**Approx. equivalent 10 hr rate Ah**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
30	28	27	20	15	12	10	8	7
38	35	37	27	21	17	14	12	10
50	47	52	39	31	25	21	18	15
65	60	73	55	44	36	30	26	22
80	74	95	72	57	47	40	34	30
100	93	125	95	76	63	53	46	40
120	112	157	120	96	79	67	58	50

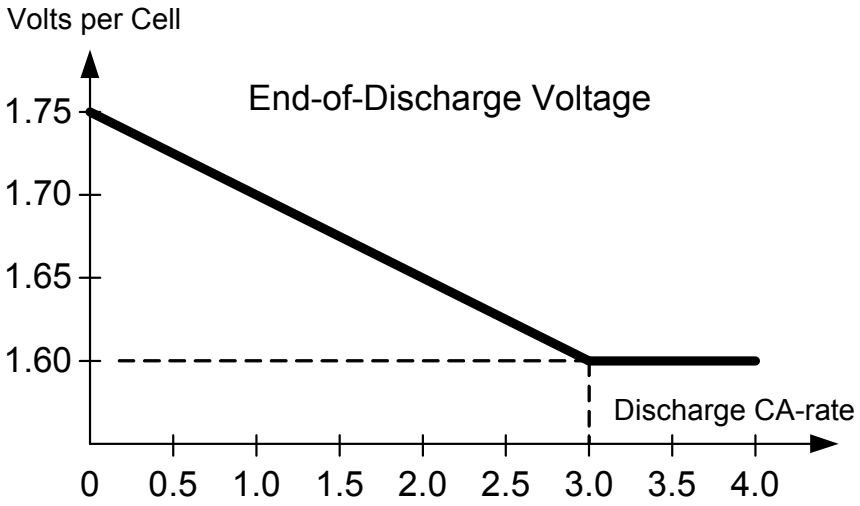


Battery Discharge Current

380 V, 400 V, and 415 V

	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA
I bat @ Vbat nominal, 100% load	22	33	44	66	88
I bat @ Vbat min, 100% load	28	41	55	83	110
I bat @ Vbat min, 150% load	40	62	83	125	166

End of Discharge Voltage



AC Bypass

Specifications

380 V, 400 V, and 415 V

	10 kVA			15 kVA			20 kVA			30 kVA			40 kVA		
	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V	380 V	400 V	415 V
Connection type	5-wire (3PH + N + PE)														
Input frequency (Hz)	40-70														
Nom input current (A)	15.2	14.4	13.9	22.8	21.7	20.9	30.4	28.9	27.8	45.6	43.3	41.7	60.8	57.7	55.6

380 V, 400 V, and 415 V 3:1

	15 kVA			20 kVA			30 kVA			40 kVA		
	220 V	230 V	240 V	220 V	230 V	240 V	220 V	230 V	240 V	220 V	230 V	240 V
Connection type	3-wire (1PH + N + PE)											
Input frequency (Hz)	40-70											
Nom input current (A)	68.4	65.0	62.6	91.2	86.6	83.5	136.7	129.9	125.2	182.3	173.2	166.9

Physical

Dimensions

Enclosure net dimensions	mm (in)
Height	1499 (59)
Depth - exclusive of the conduit box - inclusive of the conduit box	 838 (33) 925 (36)
Width - narrow - wide	 356 (14) 523 (21)

Weights

380 V, 400 V, and 415 V

380/400/415 V	kg		380/400/415 V	kg
G35T10KH1B2S	245		G35T10KH2B2S	336
G35T10KH1B4S	382		G35T10KH2B4S	474
G35T10KH3B4S	566		G35T10KH4B4S	657
G35T15KH2B2S	433		G35T15KH2B4S	474
G35T15KH3B4S	566		G35T15KH4B4S	657
G35T20KH2B2S	433		G35T20KH2B4S	474
G35T20KH3B4S	566		G35T20KH4B4S	657
G35T30KH3B4S	601		G35T30KH4B4S	692
G35T40KH4B4S	692			

380 V, 400 V, and 415 V 3:1

220/230/240 V	kg	lbs		220/230/240 V	kg	lbs
G35T15K3I2B2S	428	944		G35T15K3I2B4S	505	1113
G35T15K3I3B4S	566	1248		G35T15K3I4B4S	686	1512
G35T20K3I2B2S	428	944		G35T20K3I2B4S	505	1113
G35T20K3I3B4S	566	1248		G35T20K3I4B4S	686	1512
G35T30K3I3B4S	566	1248		G35T30K3I4B4S	686	1512
G35T40K3I4B4S	686	1512				

XR battery enclosure weights

Part Nos.	kg	lbs		Part Nos.	kg	lbs
G35TXR2B6	418	922		G35TXR6B6*	807	1779
G35TBXR2B6	418	922		G35TBXR6B6*	807	1779

* The total weight of the XR battery enclosure including the separate battery package.

Cables

Recommended Cable Sizes

Note: Refer to IEC 60364-5-52 for installation methods. The recommended cable sizes are for installation method B2 and based on an environment with an ambient temperature of 30° C.

Note: Temperature ratings of conductors: 70°C. Use only copper conductors and PVC isolated cables.

380 V, 400 V, and 415 V

	10 kVA	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**
Utility/mains input	2.5 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2
Static bypass input	2.5 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2
DC input	50 mm^2	50 mm^2	50 mm^2	50 mm^2	50 mm^2
Output	2.5 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2

380 V, 400 V, and 415 V 3:1

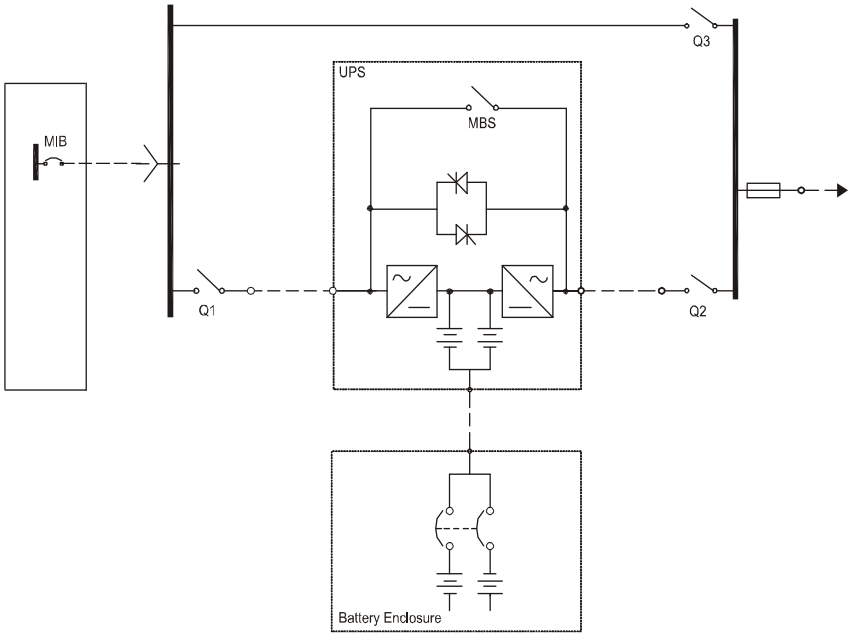
	15 kVA	**20 kVA**	**30 kVA**	**40 kVA**
Utility/mains input	6 mm^2	10 mm^2	16 mm^2	25 mm^2
Static bypass input	25 mm^2	35 mm^2	70 mm^2	95 mm^2
DC input	50 mm^2	50 mm^2	50 mm^2	50 mm^2
Output	25 mm^2	35 mm^2	70 mm^2	95 mm^2

Torque Specifications

The power wiring should be torqued to 7 Nm.

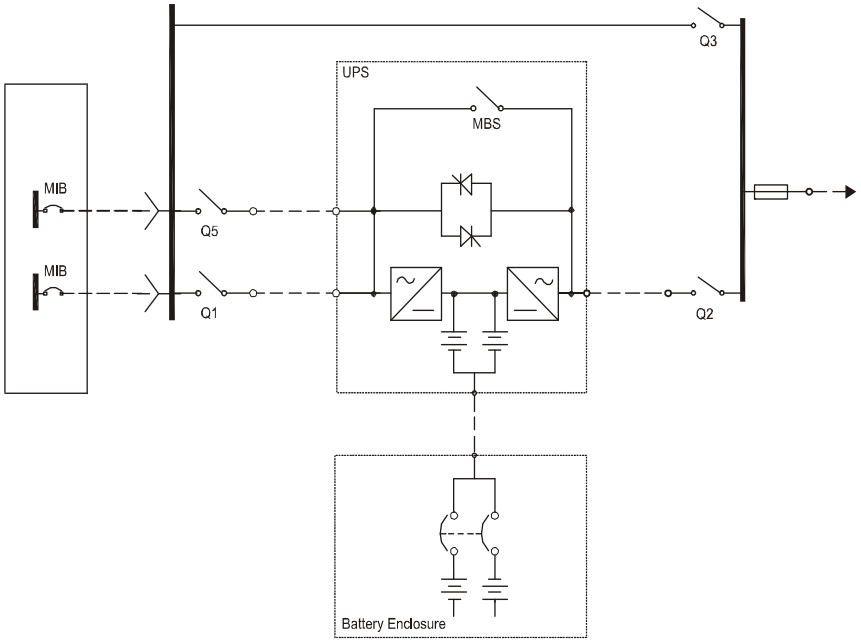
Fuses and Breakers

Single utility/mains system



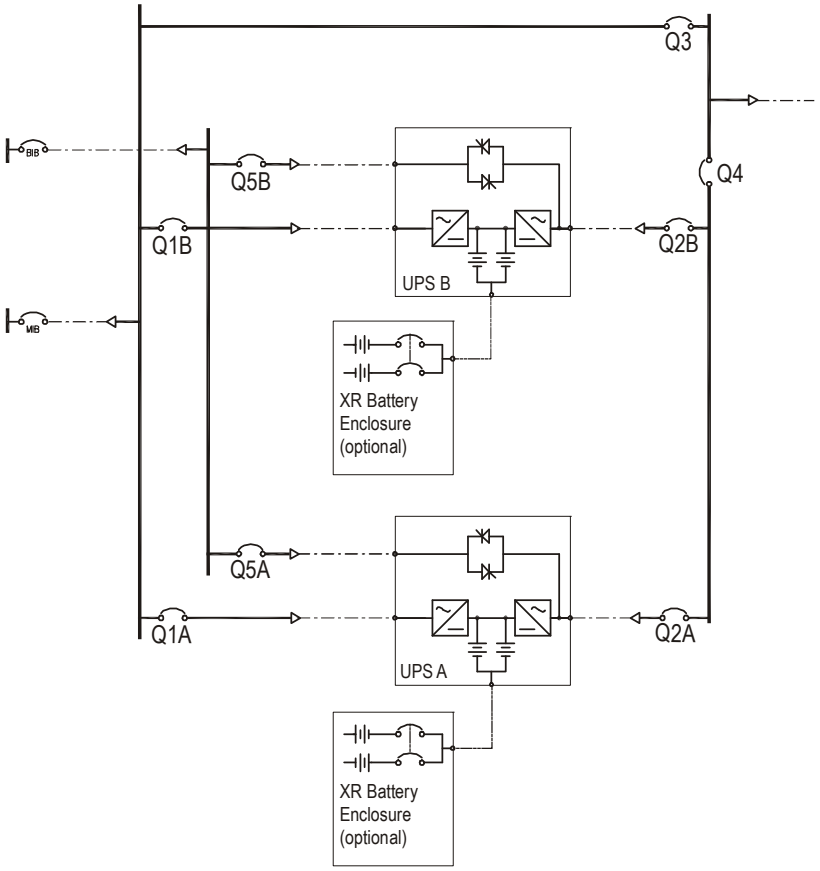
Q1: Utility input	Q3: Manual Bypass
Q2: UPS output	MBS: Mechanical bypass switch

Dual utility/mains system



Q1: UPS input	Q5: Static bypass input
Q2: UPS output	
Q3: Manual bypass	MBS: Mechanical bypass switch

Parallel System



Q1: Utility input	Q4: System output
Q2: UPS output	Q5: Static bypass input
Q3: Manual bypass	

Fuse and Breaker Sizes

380 V, 400 V, and 415 V

	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA
Mains input Q1 (A)[1]	16	25	35	50	63
Bypass input Q5 (A)	16	25	35	50	63
Output Q2 (A)	16	25	35	50	63
1 Required upstream current protection: gL type fuse.					

380 V, 400 V, and 415 V 3:1

	15 kVA	20 kVA	30 kVA	40 kVA
Mains input Q1 (A)[1]	25	35	50	63
Bypass input Q5 (A) [1]	75	100	150	200
Output Q2 (A)	75	100	150	200
1 Required upstream current protection: gL type fuse				

380 V, 400 V, and 415 V Parallel system with up to three UPS units

Note: It is not possible to run the 3:1 version in parallel.

Q3 and Q4 in capacity systems.

Units in parallel	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA
2	35 A	50 A	63 A	100 A	125 A
3	50 A	80 A	100 A	160 A	200 A
4	63 A	100 A	200 A	200 A	250 A

Q3 and Q4 in redundant systems (n+1).

Units in parallel	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA
2	16 A	25 A	35 A	50 A	63 A
3	35 A	50 A	63 A	100 A	125 A
4	50 A	80 A	100 A	160 A	200 A

Minimum Breaker Settings

380 V, 400 V, and 415 V

Duration		800% overload bypass operation	150% overload normal/battery operation	125% overload normal/battery operation	Continuously
		500 ms	60 s	10 min.	∞
10 kVA	Mains input	-[1]	-	-	16.4 A
	Bypass input	121.5 A	-	-	16.7 A
	Output	121.5 A	22.8 A	19 A	16.7 A
15 kVA	Mains input	-[1]	-	-	24.6 A
	Bypass input	182 A	-	-	25.1 A
	Output	182 A	34.2 A	25.4 A	25.1 A
20 kVA	Mains input	-[1]	-	-	32.5 A
	Bypass input	244 A	-	-	33.4 A
	Output	244 A	45.6 A	38 A	33.4 A
30 kVA	Mains input	-[1]	-	-	49.1 A
	Bypass input	364 A	-	-	50.1 A
	Output	364 A	68.4 A	57 A	50.1 A
40 kVA	Mains input	-[1]	-	-	65.6 A
	Bypass input	487 A	-	-	66.9 A
	Output	487 A	91.2 A	76 A	66.9 A
Note:1 For single mains systems, use the higher value of mains and bypass.					

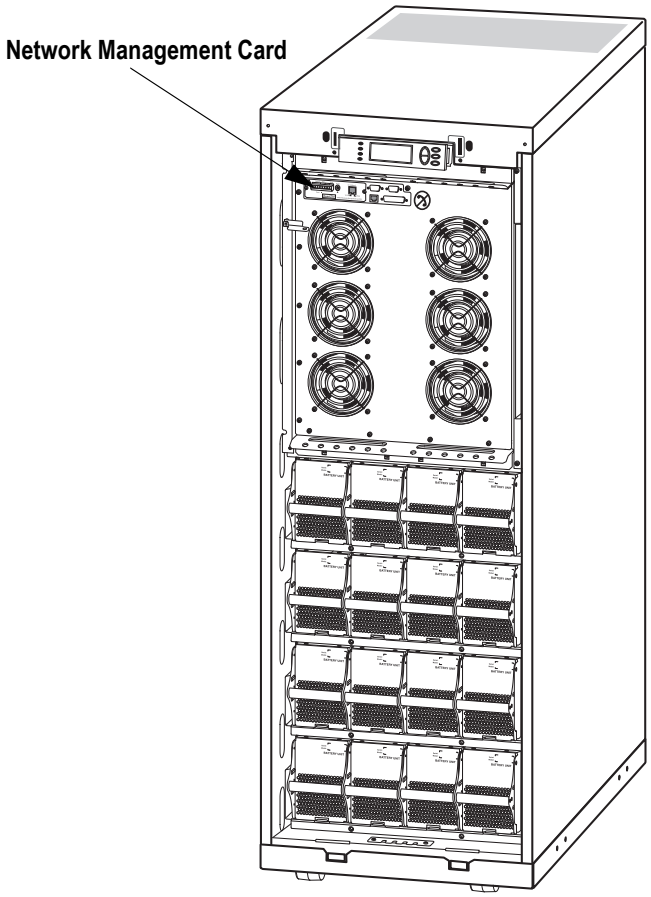
380 V, 400 V, and 415 V 3:1

Duration		800% overload bypass operation	150% overload normal/battery operation	125% overload normal/battery operation	Continuously
		500 ms	60 s	10 min.	∞
15 kVA	Mains input	-	-	-	24.6 A
	Bypass input	547 A	-	-	75 A
	Output	547 A	103 A	86 A	75 A
20 kVA	Mains input	-	-	-	32.5 A
	Bypass input	730 A	-	-	100 A
	Output	730 A	137 A	114 A	100 A
30 kVA	Mains input	-	-	-	49.1 A
	Bypass input	1094 A	-	-	150 A
	Output	1094 A	205 A	171 A	150 A
40 kVA	Mains input	-	-	-	65.6 A
	Bypass input	1459 A	-	-	200 A
	Output	1459 A	274 A	228 A	200 A

Communication and Management

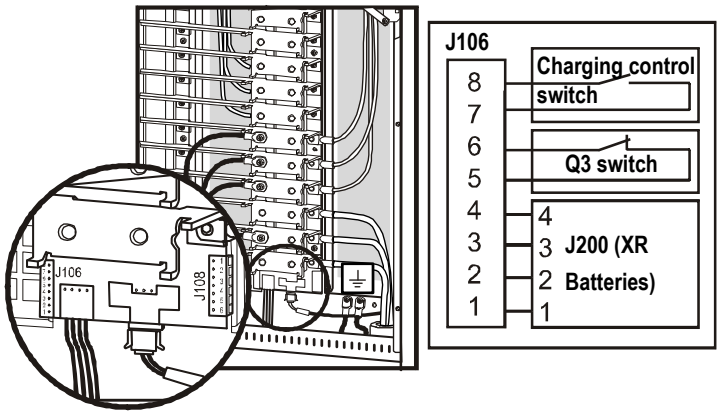
Network Management Card

The system is equipped with one network management card for remote monitoring and control of an individual UPS by connecting it directly to the network.



Input and Output Contacts

Pin connections J106 (UPS)



Pins 7 and 8 are for external charge control. When 7 and 8 are closed, the UPS charges batteries with a pre-defined percentage (0-25-50-75-100%) of the maximum charging power. To be used in generator applications, or if special codes require control of charging.
When Q3 is closed, signals are fed back to the UPS controller.

Pins 5 and 6 are for external maintenance bypass Q3 (auxiliary switch N/C type).
When Q3 is closed, signals are fed back to the UPS controller (see Q3 drawing).

Pins 1 to 4 are for battery measurement (only applicable to MGE Galaxy 3500 XR Battery Enclosures - see J200 drawing).

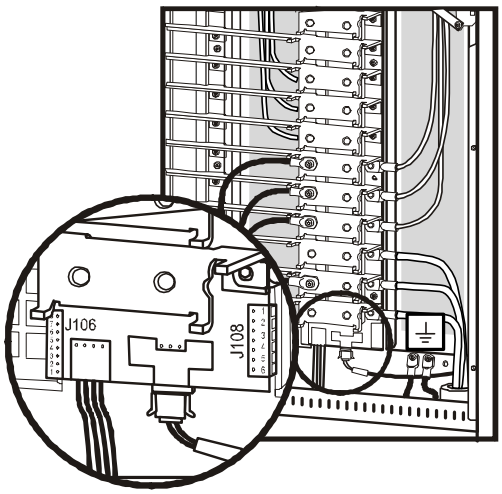
Pin connections J106 (UPS)

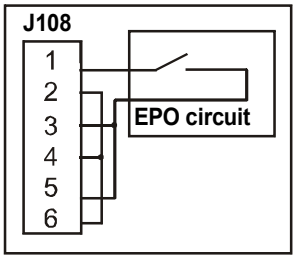
8) Exernal charging control return
7) External control of charging
6) Q3 active return
5) Q3 active
4) Battery measurement supply*
3) Battery unit quantity*
2) Max. battery temperature*
1) Battery measurement return*

*** Should be used with MGE Galaxy 3500 XR Enclosures**

EPO

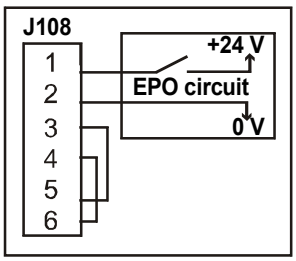
Pin connections J108





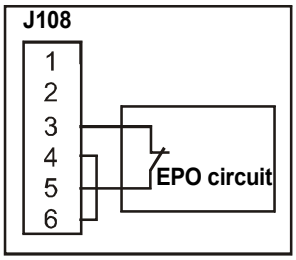
1: Dry Contacts Normally Open

EPO is activated when pin 1 is connected to pins 3 and 5.
Connections: 2-4-6, 3-5 and 1 (—✓•—)



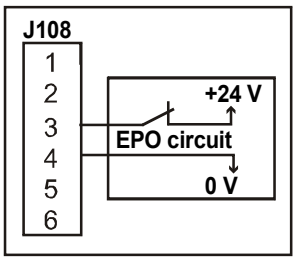
2: +24 V Normally Open

EPO is activated when an isolated SELV 24 VDC voltage is supplied on pin 1 with reference to pin 2.
Connections: 3-5 and 4-6.



3: Dry Contacts Normally Closed

EPO is activated when a connection from pin 3 to pin 5 is opened.
Connections: 4-6.



4: +24 V Normally Closed

EPO is activated when a SELV 24 VDC voltage is removed from pin 3 with reference to pin 4.

Pin connections J108

1) Normally open EPO
2) Normally open EPO return
3) Normally closed EPO
4) Normally closed EPO return
5) +24 V SELV supply
6) SELV ground

Compliance

Regulatory Approvals	
Directives for CE marking	89/336/EDC 73/237/EEC
Safety	EN/IEC62040-1-1 UL1778
EMC	EN50091-2/IEC62040-2 FCC15A
Performance	EN/IEC62040-3
Electromagnetic compatibility (EMC)	EN/IEC 61000-4-2 level 3, performance criteria A EN/IEC 61000-4-3 level 2, performance criteria A EN/IEC 61000-4-4 level 2, performance criteria A EN/IEC 61000-4-5 level 3, performance criteria A

Options

Parallel MBP - wall-mount

- For a line-up-and-match solution with up to three UPS units in parallel
- Two versions for 10-20 kVA and 30-40 kVA UPS units
- Two ratings: 60 kVA and 120 kVA
- Top or bottom cable entry
- Including three communication boards
- With lamps for status indication

Empty Cabinet for batteries - floor-mount

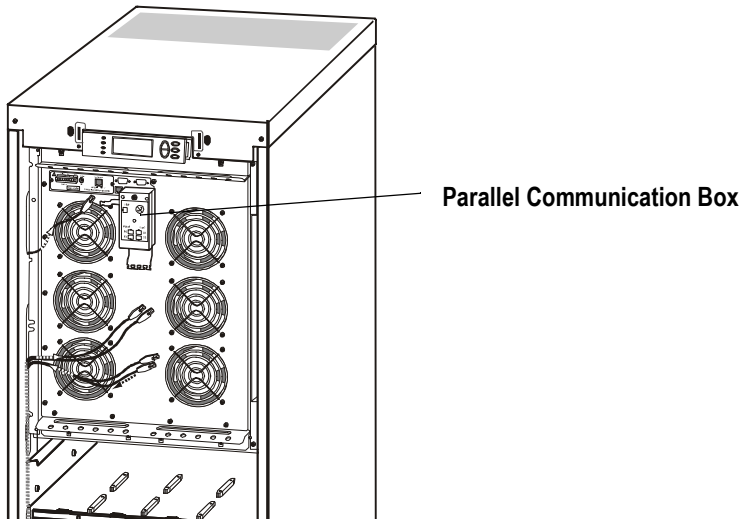
- For a line-up-and-match solution for 3rd party batteries
- Up to eight trays for 32 customer-supplied batteries (16 on + bus and 16 and - bus). Maximum size of battery 197 x 165 x 175 mm.
- Including battery breaker
- Top or bottom cable entry

Empty Cabinet for Transformer - floor-mount

- For a line-up-and-match solution for 3rd party transformers
- Including mounting rails for transformer
- Top or bottom cable entry

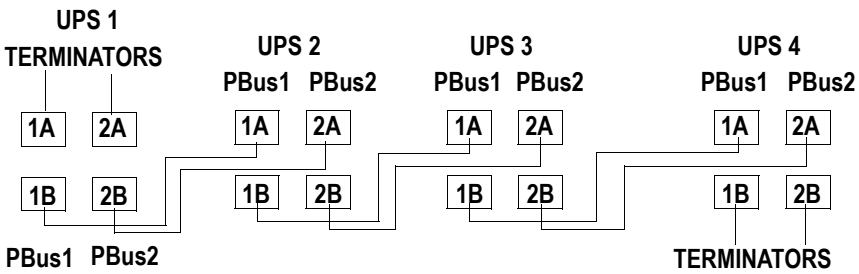
Parallel Capabilities

Up to four UPS units can be connected in parallel via the Parallel Communication Kit.



Communication cables

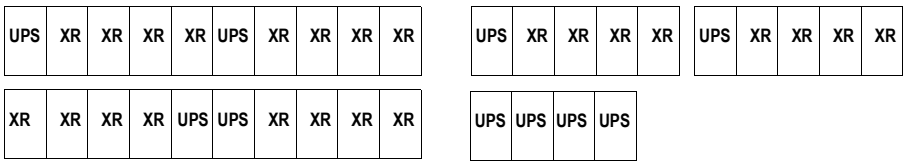
Schematic of the PBus cables layout



Note: If the configuration consists of only two UPSs, the terminators must be installed in UPS 2. With three UPSs the terminators must be installed in UPS 3.

System arrangements

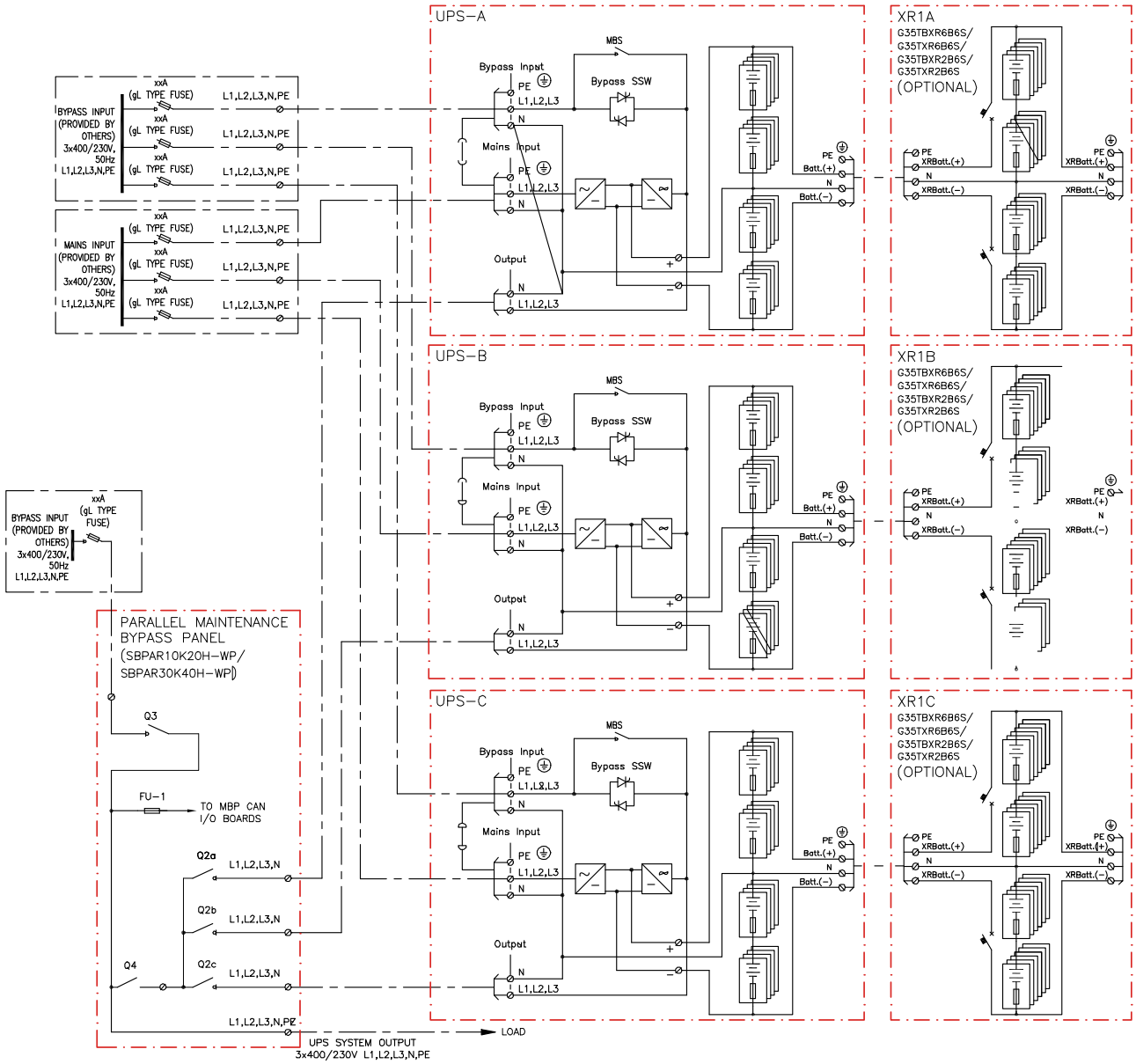
Examples with two parallel systems using interconnection plates/baying kits



Note: UPS units and their respective XR Battery Enclosure can be bayed together. XR Battery Enclosures must never be shared in a parallel UPS system.

Overview of Power Connections

The below diagrams shows a parallel system with three UPS units and XR Battery Enclosures.



APC Worldwide Customer Support

Customer support for this or any other APC product is available at no charge in any of the following ways:

- Visit the APC Web site to access documents in the APC Knowledge Base and to submit customer support requests.
  - **www.apc.com** (Corporate Headquarters)
    Connect to localized APC Web sites for specific countries, each of which provides customer support information.
  - **www.apc.com/support/**
    Global support searching APC Knowledge Base and using e-support.
- Contact the APC Customer Support Center by telephone or e-mail.
  - Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

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