Section 6

Surge Protective Devices (SPDs) and Easy UPS 3S

Square D™ QO / HOM PoN SPDs

HEPD Series

Surgelogic™ Type IMA

Surgelogic™ Type EMA

Surgelogic™ Type EMB

Surgelogic™ Type SDSA


HEPD25


HEPD50


HEPD80

Whole Home Surge Protection

HEPD Whole House devices are designed to deliver superior AC surge protection for the entire AC power system in a home. HEPDs are compact in size and are designed to protect AC wires in the home from surges that could affect home electronics and appliances not connected to surge strips.

cULus Listed to the latest UL 1449 standard, UL Type 1 SPD, CSA C22.2 No.-M1986, C233.1-87. Meets NEC2023 Section 215, 225, and 230 requirements.

- 120/240 Vac
- Max surge current ratings available: 25, 50, and 80 kA
- NEMA 4X rate for indoor or outdoor applications
- LED status indicators
- Compatible with all brands of load centers
- Flush Mount Kit sold separately - see table below
- UL Nominal Discharge Current rating of 10kA or higher

Table 6.1: HEPD Whole House Surge Protective Devices

Description	Surge Current Rating	Cat. No.
25 kA Home Electronic Protective Device	25 kA	HEPD25
Flush Mount Kit for HEPD25	—	HEPD25MKF
50 kA Home Electronic Protective Device	50 kA	HEPD50
80 kA Home Electronic Protective Device	80 kA	HEPD80
Flush Mount Kit for HEPD50 / HEPD80	—	HEPD58MKF

Plug-on Neutral QO and Homeline Load Center Surge Protective Devices

The industry's first exclusive Plug on Neutral (PoN) Surge Protective Device (SPD). Square D load center PoN SPDs are a simple and quick installation. It's as easy as snap, click, done. PoN SPDs are easier to install than a standard circuit breaker. No wires are needed for installation. The PoN SPD simply plugs on to the bus and neutral bar. The surge suppressors use two-pole spaces in a QO or Homeline load center.

US and Canadian UL Listed as Type 1 SPD to the UL 1449 standard. Complies with requirements of NEC Article 285 (2017), CSA C233.1-87, and CSA C22.2 No. 8-M1986 as appropriate. Meets NEC2023 Section 215, 225 and 230 requirements.


QO250PSPD


HOM250PSPD

- Industry First: No wires or tools required for installation
- Installation Flexibility: Works on Plug-on Neutral design QO or HOM load centers
- Requires two pole spaces
- LED indicates operational status
- 50 kA per phase surge current rating
- UL Nominal Discharge Current rating of 20 kA

Table 6.2: QO, NQ, and Homeline Load Center Surge Protective Device

Description	Cat. No.
Plug on Neutral QO Surgebreaker	QO250PSPD
Plug on Neutral Homeline Surgebreaker	HOM250PSPD

For warranty information, see Schneider Home System Warranty Data Bulletin, 0102DB2301.

QO, NQ, and Homeline Load Center Surge Protective Devices

Square D load center surge protective devices are easy to install plug-in units that install as quickly as a standard circuit breaker. The surge suppressors use two pole spaces in a QO or Homeline load center, or NQ panelboard.

US and Canadian UL Listed as Type 1 SPD to the UL 1449 standard. Complies with requirements of NEC Article 285 (2017), CSA C233.1-87, and CSA C22.2 No. 8-M1986 as appropriate. Meets NEC2023 Section 215, 225 and 230 requirements.


QO217SB


HOM2175SB

- QO2175SB for QO load centers, combination devices, and NQ panelboards
- HOM2175SB for Homeline load centers and combination devices
- Requires two pole spaces
- LED indicates operational status
- Whole House Protection: 25 kA surge current capacity per phase
- UL Nominal Discharge Current rating of 10 kA

Table 6.3: QO, NQ, and Homeline Load Center Surge Protective Devices

Description	Cat. No.
QO Surgebreaker for QO and NQ	QO2175SB
Homeline Surgebreaker	HOM2175SB

Internally Mounted Surge Protective Devices

Surgelogic Type IMA

Internally mounted surge protective devices are installed integrally to systems for service entrance and branch panel surge suppression. Internally mounted SPDs installed next to the supply bus provide maximum performance inside Square D systems. Built-in performance is the way to achieve cost effective power quality and continuous operation (especially important for critical power facilities).

US and Canadian UL Recognized as a Type 2 (or 1 with optional suffix in catalog number) SPD Component Assembly to UL 1449 and UL 1283 standards. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 8-M1986 as appropriate. Complies with UL 96A Master Label requirements for Lightning Protection Systems.

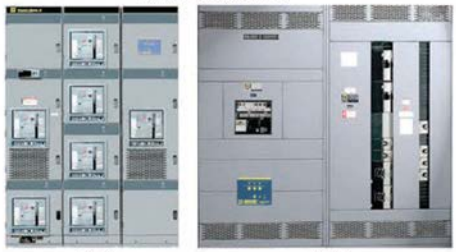
Internally Mounted—New Construction / Factory Assembled

Factory installed integral/internal Surgelogic SPD products make adding surge suppression to new construction projects easy. Refer to the sections listed below to identify the correct product for your application or contact Surgelogic TAG at 1-800-577-7353 for assistance.

Panelboards
Refer to Section 9

NF NQ

Switchboards and Switchgear
Refer to Section 11



PZ4 QED

Integrated Power and Control Centers
Refer to Section 10

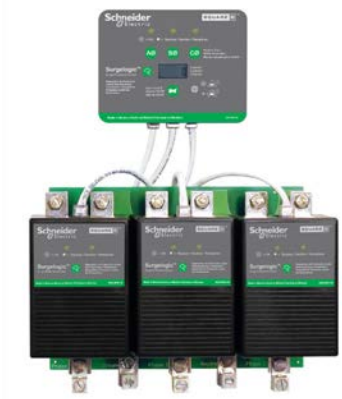
IPAC2

OEM/Assembler Kits

Surgelogic OEM/assembler kits allow manufacturers to add industry-leading surge suppression directly to customized equipment. Manufacturers benefit from shorter wire lengths that optimize the clamping voltage of the SPD. Products come with a backplane-mounted SPD, mounting hardware and diagnostic display with 36-inch cables. Audible alarm, silence switch, remote monitoring contacts, and surge counter are standard. Available as UL 1449 Type 1 with fused UL 1283 components.

US and Canadian UL Recognized to UL 1449. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 8-M1986, as appropriate. Complies with UL 96A Master Label requirements for Lightning Protection Systems.

Single Module OEM Kit



Multi-Module OEM Kit

Table 6.4: OEM/Assembler Kits

Service Voltage	Peak Surge Current Rating per Phase (kA)	Cat. No.
120/240 V, 1-phase, 3-wire + ground	200 kA Multi-Module	IMA12
	300 kA Single Module	IMB13 IMB13F
208Y/120 V, 3-phase, 4-wire + ground *[1] [2]* Wye	200 kA Multi-Module	IMA22
	300 kA Single Module	IMB23 IMB23F
240/120 V, 3-phase, 4-wire + ground High-leg Delta	200 kA Multi-Module	IMA32
	300 kA Single Module	IMB33
240 V, 3-phase, 3-wire + ground *[1] [3]* Delta	200 kA Multi-Module	IMA62
	300 kA Single Module	IMB63
480Y/277 V, 3-phase, 4-wire + ground *[1] [3]* Wye	200 kA Multi-Module	IMA42
	300 kA Single Module	IMB43 IMB43F
480 V, 3-phase, 3-wire + ground *[4]* Delta	200 kA Multi-Module	IMA52
	300 kA Single Module	IMB53
600Y/347 V, 3-phase, 4-wire + ground *[1]* Wye	200 kA Multi-Module	IMA82
	300 kA Single Module	IMB83F
600 V, 3-phase, 3-wire + ground *[5]* Delta	200 kA Multi-Module	IMA92
	300 kA Single Module	IMB93

[1] Can be used on 4-wire or 3-wire grounded wye systems with or without neutral.
[2] 208Y/120 series also applies to the following voltage 220Y/127.
[3] 480Y/277 series applies to the following voltages 380Y/220, 400Y/230, and 415Y/240.
[4] 480 V Delta series also applies to the following voltage: 480Y/277V HRG.
[5] 600 V Delta series also applies to the following voltage: 600Y/347V HRG.

I-Line™ Surgelogic SPD Unit

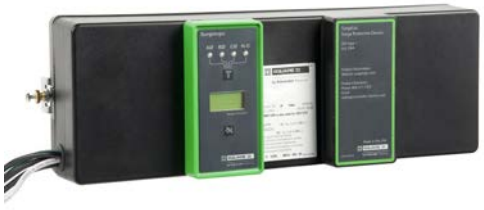
Internally Mounted—Field Installable

For high-performance surge suppression at critical power locations, a variety of Surgelogic products have been designed specifically for retrofitting into commonly used Square D systems. The I-Line plug-on units and the SurgeLoc for the NQ panelboards come ready to install. Retrofitting SPD units into I-Line, and NQ Panelboard applications is simple.

- Audible alarm with enable/disable switch, dry contacts and surge counter standard
- 200 kA SCCR withstand
- Indicator LEDs
- EMI/RFI filtering
- Catalog numbers with a "1" suffix are UL Type 1 devices, and without the "1" suffix are UL Type 2 devices

Table 6.5: Internally Mounted—Retrofit / Ready To Install

Voltage	Surge Current Rating	I-Line Branch Units *[6]*	
		Cat. No.	Cat. No.
208Y/120 V, 3-phase, 4-wire + ground *[7] [8]* Wye	120 kA	HL2IMA12C HL2IMA12C1	—
	160 kA	HL2IMA16C HL2IMA16C1	—
	240 kA	HL2IMA24C HL2IMA24C1	HR2IMA24C
240 V, 3-phase, 3-wire + ground, Delta	240 kA	HL6IMA24C	—
480Y/277 V, 3-phase, 4-wire + ground *[7] [9]* Wye	120 kA	HL4IMA12C HL4IMA12C1	HR4IMA12C
	160 kA	HL4IMA16C HL4IMA16C1	—
	240 kA	HL4IMA24C HL4IMA24C1	HR4IMA24C
480 V, 3-phase, 3-wire + ground, Delta *[10]*	240 kA	HL5IMA24C HL5IMA24C1	HR5IMA24C
600Y/347 V, 3-phase, 4-wire + ground *[7]* Wye	160 kA	—	HR8IMA16C HR8IMA16C1
	240 kA	—	HR8IMA24C HR8IMA24C1



Surgelogic SurgeLoc

Surgelogic SurgeLoc for NQ Panelboards

Surgelogic SurgeLoc is the industry's first field installed internally mounted SPD in NQ panelboards - fully installed in approximately 2 minutes. Surgelogic SurgeLoc can be ordered as factory assembled in NQ Panelboards or can be ordered from your local Schneider Electric distributor for retrofit opportunities for NQ panelboards.

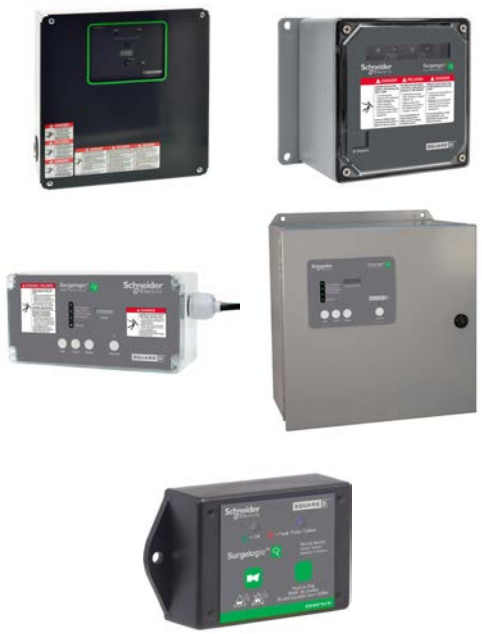
US and Canadian UL Recognized to UL 1449 and UL 1283 standards. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 8-M1986 as appropriate. Complies with UL 96A Master Label requirements for Lightning Protection Systems.

- Retrofit into existing NQ Panelboards
- Ten modes of protection
- 200 kA SCCR withstand
- Audible alarm with enable/disable switch, dry contacts and surge counter standard
- Indicator LEDs; normal (green) and fault condition (red) for each phase

Table 6.6: Internally Mounted—Retrofit / Ready to Install

Voltage	Surge Current Rating	NQ Panelboard Units—SurgLoc *[11]*
		Cat. No.
120/240 V, 1-phase, 3-wire + ground	100 kA	SSP01SBA10D
	200 kA	SSP01SBA20D
	240 kA	SSP01SBA24D
208Y/120 V, 3-phase, 4-wire + ground *[12] [8]* Wye	100 kA	SSP02SBA10D
	200 kA	SSP02SBA20D
	240 kA	SSP02SBA24D
240Y/120 V, 3-phase, 4-wire + ground High-leg Delta	240 kA	SSP03SBA24D

[6] Requires 13.5-inch mounting height. HL circuit breakers are 125kAIC SCCR (240 V and below), 100kAIC SCCR (480 V), 50kAIC SCCR (600 V)
[7] Can be used on 4-wire or 3-wire grounded wye systems with or without neutral.
[8] 208Y/120 series also applies to the following voltage 220Y/127.
[9] 480Y/277 series applies to the following voltages 380Y/220, 400Y/230, and 415Y/240. HR circuit breakers are 200kAIC SCCR (480 V and below), 100kAIC SCCR (600 V)
[10] 480 V Delta series also applies to the following voltage: 480Y/277V HRG.
[11] Requires 12 circuit positions (6 adjacent mounting spaces per side).
[12] Can be used on 4-wire or 3-wire grounded neutral system.



New!

External Mount SPDs

Surgelogic surge protective devices feature a compact design that allow surge suppression to be externally installed adjacent to electrical distribution equipment. Surgelogic systems are designed to provide high-quality surge suppression for a wide variety of commercial, industrial or institutional applications.

US and Canadian UL Listed to the UL 1449 standard. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 269.1 and 269.2, as appropriate. Complies with UL 96A Master Label requirements for Lightning Protection Systems.

Features of Surgelogic surge protective devices:

- LED light indicates operation status, audible alarm, dry contacts
- 200 kA SCCR withstand
- Surgelogic HWA UL Type 2 surge protective devices are designed and listed for indoor or outdoor installation and surge suppression for single-phase and three-phase electrical services up to 600 Vac.
- EMA units are UL Type 1, indoor rated and comes with a surge counter and fused UL 1283 components
- EMB units are UL Type 1, suitable for indoor and outdoor applications (UL / NEMA Type 4X rated) UL Type 2 with UL 1283 dual listing available with some configurations with "F" suffix indicated below
- HWC units are UL Type 2, suitable for indoor and outdoor applications (UL / NEMA Type 4X rated), includes a surge counter and are UL 1283 listed
- EMD units are UL Type 1, suitable for indoor and outdoor applications (UL / NEMA 4 rated) and come with a disconnect switch, surge counter UL Type 2 with UL 1283 dual listing available with some configurations with "F" suffix indicated below
- HWL and EML units are UL Type 1 and feature 10 discrete modes of protection
- Optional flush mount kits:
  - HWA = HWAFM
  - HWB = HWBFM
  - EMA = EMAFM
  - EMB = EMBFM
  - HWC = HWCFM
- Remote Monitor = TVS12RMU

Table 6.7: Enclosed SPDs

Service Voltage	Indoor / Outdoor		Indoor Only Surge Counter		Indoor / Outdoor	Indoor / Outdoor Surge Counter	Indoor / Outdoor Surge Counter, Disconnect Switch	
	HWA (UL Type 2, UL 1283)	HWB (UL Type 1)	EMA 100 kA	EMA 200 kA	EMB 200 kA	HWC 300 kA	EMD 300 kA	EMD 500 kA
120 / 240 V, one-phase, three-wire + ground [2]	HWA11	HWB11	EMA11	EMA12	EMB12 EMB12F	HWC13	EMD13 EMD13F	—
208Y / 120 V, three-phase, four-wire + ground [3] [4] [2] Wye	HWA21	HWB21	EMA21	EMA22	EMB22 EMB22F	HWC23	EMD23 EMD23F	EMD25
240 / 120 V, three-phase, four-wire + ground [2] High-leg Delta	HWA31	HWB31	EMA31	EMA32	EMB32	HWC33	EMD33	—
480Y / 277 V, three-phase, four-wire + ground [4] [5] [2] Wye	HWA41	HWB41	EMA41	EMA42	EMB42 EMB42F	HWC43	EMD43 EMD43F	EMD45
480 V, three-phase, three-wire + ground [6] Delta	HWA51	HWB51	EMA51	EMA52	EMB52	HWC53	EMD53	EMD55
240 V, three-phase, three-wire + ground Delta	HWA61	HWB61	EMA61	EMA62	EMB62	HWC63	EMD63	—
600Y / 347 V, three-phase, four-wire + ground, [2] [4] WYE	HWA81	HWB81	EMA81	EMA82	EMB82F	HWC83	EMD83F	—
600 V, three-phase, three-wire + ground [7]	HWA91	HWB91	EMA91	EMA92	—	—	EMD93F	—

Table 6.8: Enclosed 10 Discrete Mode SPDs

Service Voltage	Indoor / Outdoor Surge Counter	Indoor / Outdoor Surge Counter, Disconnect Switch
	HWL 300 kA	EML 300 kA
120 / 240 V, one-phase, three-wire + ground	HWL13	—
208Y / 120 V, three-phase, four-wire + ground Wye	HWL23	EML23
480Y / 277 V, three-phase, four-wire + ground Wye	HWL43	EML43

SDSA1175

SDSA Three-Phase

SPDE

New!

SDSA1175, SDSA Three-Phase, and SPDE Surge Protective Devices

Surgelogic SDSA1175 surge protective devices are designed and listed for indoor or outdoor installation and surge suppression for single-phase three-wire 120/240 Vac or two-wire 120 Vac 60 Hz electrical services. This product is ideal for panel builders as well as manufacturers and integrators of instrumentation cabinets for industrial and commercial applications for single-phase power systems.

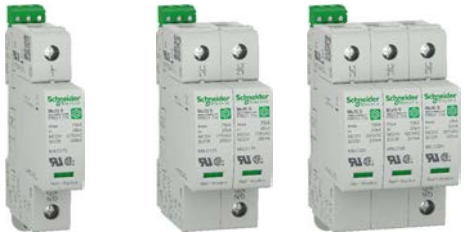
Surgelogic SDSA three-phase surge protective devices are designed and listed for indoor or outdoor installation and surge suppression for three-phase electrical services up to 600 Vac. The SDSA three-phase series is used extensively in service entrance panels to provide an efficient and economical means of surge suppression and also ideal for point of use applications for that added level of protection.

Surgelogic SPDE surge protective devices add neutral to ground (N-G) protection and optional dry contacts (DC) and audible alarm (AA). The SPDE can also be mounted on a DIN Rail with the included mounting bracket.

US and Canadian UL Listed as Type 1 SPD to the UL 1449 standard. Complies with requirements of NEC Article 285 (2017), CSA C233.1–87, and CSA C22.2 No. 8–M1986 as appropriate.

Table 6.9: SDSA1175 and SDSA Three-Phase Surge Protective Devices

System Voltage	Surge Current Rating per Phase (kA)	L-N Only Cat. No.	L-N & N-G Cat. No.	L-N & N-G) with DC & AA Cat. No.
120 V, one-phase, two-wire	36	SDSA1175T	—	—
	50	—	SPDE0	SPDE0A
120 / 240 V, one-phase, three-wire	36	SDSA1175	—	—
	50	—	SPDE1	SPDE1A
208Y / 120 V three-phase, four-wire	50	SDSA2040	SPDE2	SPDE2A
240 V Delta, three-phase, three-wire	50	SDSA2040D	—	SPDE6A
480Y / 277 V, three-phase, four–wire	50	SDSA4040	SPDE4	SPDE4A
480 V Delta, three-phase, three-wire	50	SDSA4040D	—	SPDE5A
600Y / 347 V, three-phase, four-wire	50	SDSA3650	—	SPDE8A
600 V Delta, three-phase, three-wire	50	SDSA3650D	—	SPDE9A



IESE Series Filter

Multi 9 DIN Rail Mounted SPD

Surgelogic Multi 9 surge protective devices are 75 kA per mode devices provide compact surge protection for OEM installations. These units feature a tab to indicate device status and have dry contact lugs for remote indication. The Multi 9 SPD is UL Type 1 recognized. There are 1, 2, 3 and 4 pole options to meet application specific requirements.

US and Canadian UL recognized to UL 1449 Type 1. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 8-M1986 as appropriate. Complies with UL 96 A Master Label requirements for Lightning Protection Systems.

Voltage	Poles	Cat. No.
120 V Single Phase	1	M9L11120
240 V, 277 V Single Phase	1	M9L31277
120 / 240 V Split phase	2	M9L12240
208Y / 120 V Wye, 240 V Delta	3	M9L23240
480 V Delta 3W + Ground	3	M9L53480
480Y / 277 V 480 V Delta, Wye, 4W	3	M9L33480
208Y / 120 V Wye, 4W + Ground	4	M9L17208
480Y / 277 V Wye, 4W + Ground	4	M9L37480

IESE Series Filter

Surgelogic Type IESE with ActiveTracking™ Filter technology offers high frequency noise filter capabilities with surge protection for loads up to 5 or 20 A of continuous current. These are DIN mounted devices for 120 V or 240 V applications.

US and Canadian UL Recognized to UL 1449 Type 2 / UL 1283. Complies with requirements of NEC Article 285 (2017) and CSA C22.2 No. 8-13, CSA Electrical Notice 516.

Description	Cat. No.
120 V 5 A Series Filter	HFNF120IESE005
120 V 20 A Series Filter	HFNF120IESE020
240 V 5 A Series Filter	HFNF240IESE005
240 V 20 A Series Filter	HFNF240IESE020

UPS

Battery String

Modular Battery Cabinet

Square D Easy UPS 3S (UL 208 V)

The **Square D Easy UPS 3S** is an easy-to-install, easy-to-use and easy-to-service **10-40 kVA** 3-phase 208 V UPS ideal for non-IT applications. Easy UPS 3S combines power stability with robust electrical specifications and long-lasting performance to ensure your business continuity.

- **US listed to the UL 1778 standard**
- **Complies with the requirements of CSA C22.2 No. 107.3-14 + GI1**
- **IP20 rated**
- **Optimize efficiency**
  - Double Conversion Mode (up to 94%)
  - ECO Mode (98% efficiency)
- **1.0 power factor kVA = kW**
- **Parallel up to 4 units for 10-30 kVA. Parallel 3 units for 40 kVA.**
- **Robustness against harsh environment**
  - Conformal coating on PCBA
  - Replaceable dust filter
  - 60s @ 150% overload, 10 min. @ 125% overload.
  - Operating temperature: 32 - 104°F
- **Flexibility for wider application**
  - Modular battery cabinet for longer runtime
  - SNMP / Modbus TCP/IP / dry contact for connectivity
  - 5 years lifespan battery module
- **Connectivity**
  - Startup service included with every UPS
  - EcoStruxture™ ready
  - Network management card to remotely monitor and control

Please Note: Batteries are not included with the UPS. Use the selection tables below to determine number of batteries.

Using the selection table, choose what percentage of the total kVA will be backed up. Then, choose the runtime.

Example: A 20 kVA UPS backing up 75% of its kVA for a runtime of 1 hour will require (1) **E3SUPS20KFBS**, (1**) E3SXR7, and** (12) **E3SFBTH2**. Then, choose accessories if needed.

The maximum number of battery strings that can be installed in a modular battery cabinet (E3SXR7) is 12.

SE Advantage
POWERING PERFORMANCE

Square D Easy UPS 3S is configurable in SE Advantage. Access via the **SE Advantage** home page. www.se.com/us/en/partners/local/channels/pem-program/se-advantage/

Table 6.10: Selection Table for 10 kVA UPS

Part Number	Measurement	% Load			Battery Strings E3SBSK02
		50%	75%	100%	
E3SUPS10KFBS + (#) of battery strings needed E3SFBTH2	KW	5	7.5	10	—
	kVA	5	7.5	10	—
	Runtime (Minutes)	10.5	5.8	—	1
		26.5	15.5	10.5	2
		44.5	26.5	18	3
E3SUPS10KFBS + 1 modular battery cabinet E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	5	7.5	10	—
	kVA	5	7.5	10	—
	Runtime (Minutes)	63.5	38.5	26.5	4
		83.5	51	35	5
		100	63.5	44	6
		125	77	53.5	7
		145	90.5	63	8
		170	100	73	9
		190	115	83	10
		215	130	93	11
		240	145	100	12
		265	160	110	13
		285	175	120	14
		300	190	135	15

Table 6.11: Selection Table for 15 kVA UPS

Part Number	Measurement	% Load			Battery Strings E3SFBTH2
		50%	75%	100%	
E3SUPS15KFBS + (#) of battery strings needed E3SFBTH2	KW	7.5	11.25	15	—
	kVA	7.5	11.25	15	—
	Runtime (Minutes)	5.8		—	1
		15.5	8.9	5.7	2
		26.5	15.5	10.5	3
E3SUPS15KFBS + 1 modular battery cabinet E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	7.5	11.25	15	—
	kVA	7.5	11.25	15	—
	Runtime (Minutes)	38.5	23	15.5	4
		51	30.5	21	5
		63.5	38.5	26.5	6
		77	46.5	32.5	7
		90.5	55	38	8
		100	63.5	44.5	9
		115	72	50.5	10
		130	81	57	11
		145	90	63.5	12
		160	99.5	70	13
		175	105	76.5	14
		190	115	83	15
E3SUPS15KFBS + 2 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	7.5	11.25	15	—
	kVA	7.5	11.25	15	—
	Runtime (Minutes)	205	125	90	16
		225	135	97	17
		240	145	100	18
		255	155	110	19
		270	165	115	20
		285	175	125	21
		300	185	130	22
		300	195	135	23
		300	205	145	24
		300	215	150	25
		300	225	160	26
		300	235	165	27

Table 6.12: Selection Table for 20 kVA UPS

Part Number	Measure-ment	% Load			Battery Strings E3SFBTH2
		50%	75%	100%	
E3SUPS20KFBS + (#) of battery strings needed E3SFBTH2	KW	10	15	20	—
	kVA	10	15	20	—
	Runtime (Minutes)			—	1
		10.5	5.8	—	2
		18.5	10.5	6.9	3
E3SUPS20KFBS + 1 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	10	15	20	—
	kVA	10	15	20	—
	Runtime (Minutes)	27	15.5	10.5	4
		36	21	14	5
		45	26.5	18	6
		54.5	32.5	22.5	7
		64.5	38.5	26.5	8
		74.5	44.5	31	9
		84.5	51	35.5	10
		95	57.5	40	11
		105	63.5	44.5	12
		115	70.5	49	13
		125	77	53.5	14
		135	83.5	58.5	15
E3SUPS20KFBS + 2 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	10	15	20	—
	kVA	10	15	20	—
	Runtime (Minutes)	145	90.5	63.5	16
		160	97.5	68.5	17
		170	100	73	18
		180	110	78	19
		195	115	83.5	20
		205	125	88.5	21
		215	130	93.5	22
		230	140	98.5	23
		240	145	100	24
		255	155	105	25
		265	160	110	26
		280	170	120	27

Table 6.13: Selection Table for 30 kVA UPS

Part Number	Measurement	% Load			Battery Strings E3SFBTH2
		50%	75%	100%	
E3SUPS30KFBS + (#) of battery strings needed E3SFBTH2	KW	15	22.5	30	—
	kVA	15	22.5	30	—
	Runtime (Minutes)	—	—	—	1
		5.9	—	—	2
		10.5	5.9	—	3
		16	9.1	5.8	4
		21.5	12.5	8.2	5
		27.5	16	10.5	6
E3SUPS30KFBS + 1 of E3SXR7 + (#) of E3SFBTH2 below	KW	15	22.5	30	—
	kVA	15	22.5	30	—
	Runtime (Minutes)	33.5	19.5	13	7
		39.5	23.5	16	8
		45.5	27	18.5	9
		52	31	21	10
		58.5	35	24	11
		65	39	27	12
		72	43	30	13
		79	47.5	33	14
		85.5	51.5	36	15
		92.5	56	39	16
		100	60.5	42	17
		105	64.5	45	18
E3SUPS30KFBS + 2 of E3SXR7 + (#) of E3SFBTH2 below	KW	15	22.5	30	—
	kVA	15	22.5	30	—
	Runtime (Minutes)	110	69	48	19
		120	73.5	51.5	20
		125	78	54.5	21
		135	82.5	57.5	22
		140	87.5	61	23
		150	92	64	24
		155	96.5	67.5	25
		165	100	71	26
		170	105	74	27
		180	110	77.5	28
		190	115	81	29
		195	120	84.5	30
E3SUPS30KFBS + 3 of E3SXR7 + (#) of E3SFBTH2 below	KW	15	22.5	30	—
	kVA	15	22.5	30	—
	Runtime (Minutes)	205	125	88	31
		210	130	91.5	32
		220	135	95	33
		230	140	98.5	34
		235	145	100	35
		245	150	105	36
		250	155	105	37
		260	160	110	38
		270	165	115	39
		275	170	115	40
		285	175	120	41
		295	180	125	42

Table 6.14: Selection Table for 40 kVA UPS

Part Number	Measurement	% Load			Battery Strings E3SFBTH2
		50%	75%	100%	
E3SUPS40KFBS + (#) of battery strings needed E3SFBTH2	KW	20	30	40	—
	kVA	20	30	40	—
	Runtime (Minutes)	—	—	—	1
		—	—	—	2
		7.2	—	—	3
		11	5.9	—	4
		15	8.4	5.3	5
		19	10.5	7.1	6
E3SUPS40KFBS + 1 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	20	30	40	—
	kVA	20	30	40	—
	Runtime (Minutes)	23	13.5	8.9	7
		27.5	16	10.5	8
		32	19	12.5	9
		36.5	21.5	14.5	10
		41	24.5	16.5	11
		46	27.5	18.5	12
		51	30.5	20.5	13
		55.5	33.5	23	14
		60.5	36.5	25	15
		65.5	39.5	27	16
		70.5	42.5	29.5	17
		76	45.5	31.5	18
E3SUPS40KFBS + 2 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	20	30	40	—
	kVA	20	30	40	—
	Runtime (Minutes)	81	49	34	19
		86	52	36	20
		91.5	55.5	38.5	21
		97	58.5	40.5	22
		100	62	43	23
		105	65	45.5	24
		110	68.5	48	25
		115	72	50	26
		120	75.5	52.5	27
		125	79	55	28
		135	82	57.5	29
		140	85.5	60	30

Maint Bypass Panel

Modular Battery Cabinet

Battery String

Table 6.14 Selection Table for 40 kVA UPS (cont'd.)

Part Number	Measure-ment	% Load			Battery Strings E3SFBTH2
		50%	75%	100%	
E3SUPS40KFBS + 3 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	20	30	40	—
	kVA	20	30	40	—
	Runtime (Minutes)	145	89	62.5	31
		150	92.5	65	32
		155	96	67.5	33
		160	100	70	34
		165	100	72.5	35
		175	105	75	36
		180	110	77.5	37
		185	110	80	38
		190	115	82.5	39
		195	120	85	40
		205	125	88	41
		210	125	90.5	42
E3SUPS40KFBS + 4 of E3SXR7 + (#) of battery strings needed E3SFBTH2	KW	20	30	40	—
	kVA	20	30	40	—
	Runtime (Minutes)	215	130	93	43
		220	135	95.5	44
		225	140	98.5	45
		235	140	100	46
		240	145	100	47
		245	150	105	48
		250	155	105	49
		260	155	110	50
		265	160	110	51
		270	165	115	52
		275	170	120	53
		285	170	120	54

Table 6.15: Accessories for Easy UPS 3S

Part Number	Description
E3SUPS10KFBS	10 kVA 208V 3:3 UPS for internal batteries, Start-up 5x8
E3SUPS15KFBS	15 kVA 208V 3:3 UPS for internal batteries, Start-up 5x8
E3SUPS20KFBS	20 kVA 208V 3:3 UPS for internal batteries, Start-up 5x8
E3SUPS30KFBS	30 kVA 208V 3:3 UPS for internal batteries, Start-up 5x8
E3SUPS40KFBS	40 kVA 208V 3:3 UPS for internal batteries, Start-up 5x8
E3SBPSU10K20F	Maintenance Bypass Panel, single unit, 10–20kVA 208 V
E3SBPSU30K40F	Maintenance Bypass Panel, single unit, 30-40kVA 208 V
E3SBPAR10K40F	Parallel Maintenance Bypass Panel for 3 UPSs, 10-40kVA 208 V
E3SXR7	Modular Battery Cabinet 208 V
E3SFBTH2	High Capacity Battery String 208 V
E3SOPT010	Dry Contact Card
E3SOPT014	Cold Start Kit 15-40 kVA 208 V
E3SOPT015	Kirk Key Kit
E3SOPT001	Series Network Card
E3SOPT002	Parallel Kit

Dry Contact Card

Cold Start Kit

Kirk Key Kit

Series Network Card

Parallel Kit