INTERMATIC®
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Surge Protection

Power Disturbances

Lightning and fluctuations in utility power (caused by grid switching, for example) are often assumed to be the main sources of power disturbances. However, the overwhelming cause is actually equipment, such as motors and appliances, turning on and off. Even simply switching lights on and off will cause electrical surges. In fact, it is estimated that 65% of all transient voltage surges are generated from inside sources, while only 35% come from outside.

As of September 30, 2009 ANSI/UL 1449 3rd Edition replaced UL1449 2.5. Surge Protection Devices (SPDs) manufactured after September 30, 2009 need to meet ANSI/ UL 1449 3rd Edition 3.0. Any products manufactured before this date may still be sold as a UL 1449 2.5 compliant product. Due to increased use of electrical devices in residential, commercial and industrial markets, ANSI/UL 1449 3rd Edition was adopted. Electrical components in devices such as computers, security systems, home theater systems and factory equipment are susceptible to transient over voltage and can create significant downtime, equipment replacement and costly repairs. As a result, "Surge Protectors" will now be known as "Surge Protection Devices" (SPD) and are reclassified into Type 1, Type 2 and Type 3 SPDs.

Key Causes of Transients

- Variable Frequency Drives
- Utility Accidents
- AC Chillers
- Utility Switching
- Pumps & Motors
- Lightning

Applications

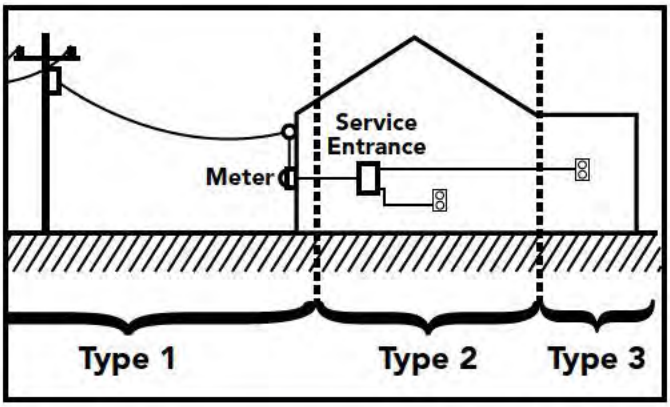
- Manufacturing
- Education/ University
- Utility
- Residential
- Financial Institutions
- Restaurants
- Retail

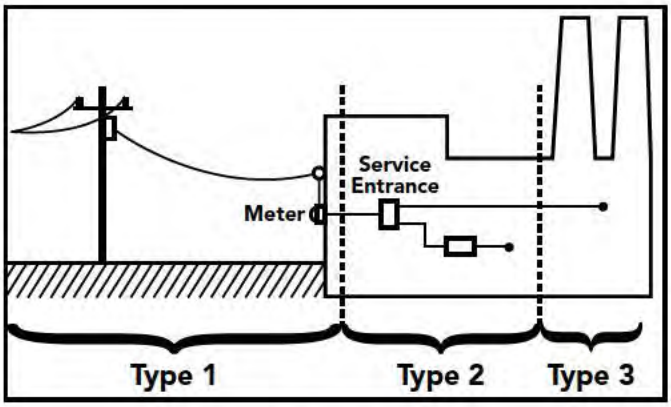
Protection For

- HVAC/R Controls
- Security Systems
- Lighting Ballasts
- Computer / Peripherals
- Pumps & Motors
- Network Servers / Routers / Modems
- Fire Alarms Systems

Location Variables That Increase the Risk of External Transients

- At the end of a utility line
- On a transmission line downstream of industrial facilities
- At a higher elevation than surrounding structures
- An open rural location
- High lightning activity





TYPE 1:
Permanently connected SPD which is intended to be installed between the secondary transformer and the line side of the service equipment.

TYPE 2:
Permanently connected SPD which is intended to be installed on the load side of the service equipment overcurrent device.

TYPE 3:
Cord connected SPD which is intended to be installed at the point of use.

Surge Protection Devices-
Panel Guard®

Features

- Hardwired models provide greater capacity to handle surge energy (based on their close location to the service ground) compared to standard plug-in strips
- Designed for 120/240 volt single or split-phase panels
- Green LED indicator provides surge protection status
  - ON: Energized and providing protection
  - OFF: May still be energized but protection has been diminished and the unit should be replaced
- 6 Modes of Surge Protection (L1-N, L2-N, L1-G, L2-G, N-G, L1-L2)

IG1300-2T-1C3

- Provides protection for 2 Telephone Lines (Analog Phone Line, Modem, or DSL) and 1 Coax Line (Cable TV, Cable Internet or Satellite TV)
- CSA Listed to ANSI/UL 1449 3rd Edition
- Type 2 applications
- NEMA 3R Outdoor Raintight Enclosure for indoor or outdoor installations (9.38"H x 5.25"W x 4.0"D)
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG1300-4T-2C3

- Provides protection for 4 Telephone Lines (Analog Phone Line, Modem, or DSL) and 2 Coax Lines (Cable TV, Cable Internet or Satellite TV)
- CSA Listed to ANSI/UL 1449 3rd Edition
- Type 2 applications
- Type 3R Outdoor Raintight Enclosure for indoor or outdoor installations (9.38"H x 5.25"W x 4.0"D)
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG1240RC3

- NEMA 3R Outdoor Raintight Enclosure for indoor or outdoor applications
- Plastic housing (5.65"H x 4.18"W x 3.33"D)
- 5 year product warranty
- CSA Listed to ANSI/UL 1449 3rd Edition
- Type 1 or 2 applications
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG3240RC3

- NEMA 3R Outdoor Raintight Enclosure for indoor or outdoor applications
- Metal housing (6.28"H x 4.4"W x 3.25"D)
- CSA Listed to ANSI/UL 1449 3rd Edition
- Type 1 or 2 applications
- 10 year warranty
- Connected Equipment coverage $25,000 for 5 years

IG3240FMP3

- Includes faceplate, screws and mounting bracket for IG3240RC
- 4" x 30" 12-guage color coded leads for the IG1240RC3 or IG3240RC3
- 4" x 24" 12-guage color coded leads for the IG1300-2T-1C3 or IG1300-4R-2C3

IG1240FMP3

- Includes faceplate, screws and mounting bracket for IG1240RC3

Surge Protection Devices-Arrester Guard®

Features:

- Designed for outdoor installations on service entrances and utility meter cabinets
- Approved for outdoor applications such as irrigation equipment, pumps, lighting fixtures, traffic signaling devices, farm equipment, HVAC controls and motors
- Parallel metal oxide varistors (MOV) from each line to grounded neutral provide increased product capability
- Molded polycarbonate housing with 1/2" x 20 threaded nipple is weatherproof and UV resistant
- Epoxy encapsulation protects components from moisture, dirt and corrosion
- Color coded 18" leads; AG6503L3 – 36" leads
- 1 year product warranty

Wye Configuration:

AG2401C3, AG24013

- 120/240 single phase, 2 pole 3 wire device
- 18" 12 gauge leads

AG48013

- 277/480 VAC single phase, 2 pole 3 wire device
- 18" 10 gauge leads
- 18" 6 gauge green ground lead
- 18" 12 gauge leads

AG2083C3

- 120/208 VAC, 3 pole 4 wire device
- 18" 12 gauge leads

AG4803C3

- 277/480 VAC or 480 VAC, 3 pole 4 wire device
- 18" 12 gauge leads

AG6503C3, AG6503L3, AG65033

- Up to 600 V three phase, 3 pole 4 wire device
- 18" 12 gauge leads (**AG65033, AG6503C3**)
- 36" 10 gauge leads (**AG6503L3**)

Delta Configuration:

AG2403D3

- 240 VAC, three phase, 3 pole 3 wire device

AG4803D3

- 277/480 VAC, three phase, 3 pole 3 wire device

High-Leg Delta Configuration:

AG2403C3

- 240 VAC, 3 pole 4 wire device
- 18" 12 gauge leads

AG1BRKT
Mounting Bracket

CSA Listed to ANSI/UL 1449 3rd Edition

Type 3 Surge Protection Devices

Features

- Type 3 SPD (Surge Protection Device)
- Designed for heavy industrial use
- 14 gauge SJT power cord with molded plug
- 3-mode Surge Protection (L-N, L-G, N-G)
- Protection monitoring circuitry with LED light indicator
- CSA Listed to ANSI/UL1449 3rd Edition
- 15 amp resettable breaker
- Ivory metal housing (except 1G112663BLK10)

IG112663

- Lighted On/Off switch
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG112663BLK10

- Black metal housing
- Lighted On/Off switch
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG112463

- Lighted On/Off switch
- 5 year warranty
- Connected Equipment coverage $10,000 for 5 years

IG20663 & IG206153

- 6 specification-grade outlets
- EMI/RFI noise filtration
- Master On/Off switch
- 5 year warranty
- Connected Equipment coverage $25,000 for 5 years

IG20B123 & IG2012B153

- 6 specification-grade outlets
- Master On/Off switch
- EMI/RFI noise filtration
- 5 year warranty
- Connected Equipment coverage $5,000 for 5 years

IG20863

- 8 specification-grade outlets
- Master On/Off switch
- EMI/RFI noise filtration
- 5 year warranty
- Connected Equipment coverage $25,000 for 5 years

Mounting Bracket Plate 24EG5133

- Secures mounting bracket for all IG strips

NOTE: Cord Lengths can be modified up to 25 feet. Consult Sales Representatives for pricing and availability.

CSA Listed to ANSI/UL 1449 3rd Edition

Surge Protection Devices

Stand Alone Telephone / Modem / DSL Internet Lines

IG2TM

- Provides protection for 2 lines
- Tip to Ground, Tip to Ring and Ring to Ground Modes
- 40 kA surge protection per line
- Gas Tube Protection 350 Volt DC Breakdown
- UL497A
- NEMA 1 Enclosure

IG4TM

- Protection same as IG2TM
- Protects 4 Lines

IG2T3R

- Protection same as IG2TM
- Provides protection for 2 lines (expandable to 12 Lines)
- NEMA 3R Enclosure

Stand Alone Local Antenna/Cable - Satellite/Cable Internet Protection

IG1CM

- Provides Protection for 1 Line (Expandable to 2 Lines)
- 10 kA surge protection per line
- Gas Tube Protection 90 Volt DC Breakdown

IG1C3R

- Protection same as IG1CM
- Provides Protection for 1 Line (Expandable to up to 6 Coax Lines)
- NEMA 3R Enclosure

Cable TV / Internet / Satellite				
Model #	Lines	Thread Type	DC Breakdown	Location
IG1CM	1	F	90 VDC	Indoor
IG1C3R	1 Standard (up to 6)	F	90 VDC	Indoor / Outdoor

IG2T

- Spare Telephone / Modem / DSL Internet Protection Module
- 2 Lines
- For use in ÎG2TM, IG1CM, IG2T3R, IG1C3G, IG1300-2T-1C

IG1C

- Spare Coax Cable Protection Module
- 1 line
- For use in IG1CM, IG1C3R, IG2TM, IG4TM, IG2T3R

IG Flush Mount Kit

- Flush mount kit for IG2TM, IG4TM, and IG1CM

CSA Listed to ANSI/UL 1449 3rd Edition

SCCR = Short Circuit Current Rating
VPR = Volage Protection Rating

Surge Protection Devices-Panel Guard®

Old Model #	New Model #	Service Voltage	Phase	Leads#/ Length	Gauge	Wire Config.	(SCCR)	Voltage Protection Rating (VPR) L-N | L-L | L-G | N-G	Prod. Warr. (yrs)	Connected Equipment Coverage
	Type 2									
IG1300-2T-1C	IG1300-2T-1C3	120/240	2	4/24	14	L1, L2, N, GND	20 kA	700 1200 1200 700	5	$ 10,000 for 5 yrs
IG1300-4T-2C	IG1300-4T-2C3	120/240	2	4/24	14	L1, L2, N, GND	20 kA	700 1200 1200 700	5	$ 10,000 for 5 yrs
	Type 1 or 2									
IG1240RC	IG1240RC3	120/240	2	4/30	14	L1, L2, N, GND	20 kA	700 1200 1200 700	5	$ 10,000 for 5 yrs
IG3240RC	IG3240RC3	120/240	2	4/30	14	L1, L2, N, GND	60 kA	700 1200 1200 700	10	$ 25,000 for 5 yrs

Surge Protection Devices-Arrester Guard®

Old Model #	New Model #	Service Voltage	Poles	Wire Configuration	Voltage Protection Ratings (VPR)	
					L-N/G	L-L
	Type 1 US Type 2 Canada					
AG2401C	AG2401C3	120/240V	1 or 2	L1, L2, GND/N	700	1200
AG2083C	AG2083C3	208V	3	L1, L2, L3, GND/N	700	1200
AG4801	AG48013	277V or 480V	1 or 2	L1, L2, GND	1200	2000
AG4803C	AG4803C3	480V	3	L1, L2, L3, GND/N	1200	2000
AG6503C	AG6503C3	Up to 600V	3	L1, L2, L3, GND/N	1500	2500
AG6503L	AG6503L3	Up to 600V	3	L1, L2, L3, GND/N	1500	2500

Old Model #	New Model #	Service Voltage	Poles	Wire Configuration	Voltage Protection Ratings (VRP)			
					L1 or L14 to N/G	L2 to N/G	L1 to L3	L1/L3 to L2
AG2403C	AG2403C3	240V	3	L1, L2, L3, GND/N	700	1000	1200	1500

Type 3 Surge Protection Devices

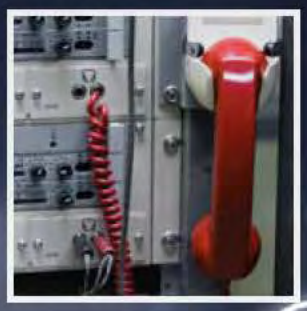
Old Model #	New Model #	Number of Outlets	Cord Length	Electrical Rating	Max Joule. Rating	Max. Surge Amperage	VPR L-N/L-G/N-G	Prod. Warr. (yrs)	Connected Equipment $ Coverage
IG11246	IG112463	4	6	120 V/15 A	480	24kA	400/400/400	5	$10,000
IG11266	IG112663	6	6	120 V/15 A	480	24kA	400/400/400	5	$10,000
IG11266BLK10	IG112663BLK10	6	10	120 V/15 A	480	24kA	400/400/400	5	$10,000
IG2066	IG20663	6	6	120 V/15 A	960	24kA	330/330/330	5	$25,000
IG20615	IG206153	6	15	120 V/15 A	960	24kA	330/330/330	5	$25,000
IG20B12	IG20B123	6	6	120 V/15 A	480	24kA	400/400/400	5	$5,000
IG2012B15	IG2012B153	6	15	120 V/15 A	480	24kA	400/400/400	5	$5,000
IG2086	IG20863	8	6	120 V/15 A	960	24kA	330/330/330	5	$25,000

NOTE: Cord Lengths can me modified up to 25 feet. Consult Sales Representatives for pricing and availability.

Surge Protection Devices

Phone / Modem /DSL

Model #	Lines	Gauge	Wire	DC Breakdown Voltage	Location
IG2TM	up to 2	#24 – #16 AWG	4 wire	350 VDC	Indoor
IG4TM	up to 4	#24 – #16 AWG	8 wire	350 VDC	Indoor
IG2T3R	2 standard up to 12	#24 – #16 AWG	4 wire (up to 24 wire)	350 VDC	Indoor / Outdoor



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