

Product

GUIDES

**Surge Protection for Commercial, Industrial
and Residential Applications**



“Made in America” - a commitment to excellence

DITEK is the gold standard in quality surge protection, UPS solutions and networking hardware for the commercial, industrial and residential market. A pioneer in the industry, for over 30 years we have designed and manufactured reliable, durable products in the USA, all backed by a comprehensive warranty. By utilizing lean manufacturing methodologies, we have the ability to maintain a higher level of detail-oriented focus, helping to streamline manufacturing processes and reduce cost. We continually strive to meet customer requirements while maintaining the effectiveness of our quality management system. Our primary objective is to keep vital business systems functioning and communicating at all times, while preventing the escalation of problems that come with an equipment malfunction caused by a surge, spike or loss of power.



Visit our Website

Choose your product category and our interactive product selector will assist you in choosing the right surge protection devices for your specific application. www.diteksurgeprotection.com



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Things You Should Know:

What are power surges and spikes?

Surges and spikes are temporary and instantaneous events that increase “normal” electrical line voltage, and can cause serious damage to sensitive equipment.

Conventional fuses and breakers do NOT guard against power surges and spikes.

What causes surges and spikes?

Lightning: A direct hit is usually catastrophic.

Proximity Strikes: Lightning strikes several miles away, causing large voltage spikes along transmission lines.

Brownouts / Blackouts: Under-voltage or sag, that is immediately followed by an unusually high voltage transient. If your lights flicker or dim, it's usually an indication that a brownout occurred.

Utility Grid Switching: Utility companies switching transmission lines from one supply system to another.

Inductive Loads: The switching on and off of electric motors inside or outside a facility. For example, HVAC systems or heavy machinery.

What are the effects of surges and spikes? The 3 D's

Degradation: Gradual deterioration of internal circuitry from repeated power surges and spikes that slowly degrade electrical components, shortening their lifespan and making them less reliable.

Destruction: Resulting in expensive equipment repair or replacement costs.

Downtime: The most costly effect, can result in the loss of data, productivity and customers.

The Payback for investing in quality surge protection:

- Reduced downtime
- Extended equipment life
- Increased customer satisfaction

What equipment should be protected?

Power surges, spikes and electrical outages can damage any type of unprotected electrical cabling, including utility power lines, data network and communication lines, and CCTV/CATV cable feeds. Therefore, surge protection should be installed on all critical electronic systems and the electrical paths between them.

UL 1449 - Surge Protective Devices



UL 1449 5th Edition Product Markings:

Surge Protective Device (SPD) Types:

- **Type 1** - Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service equipment overcurrent device, as well as the load side, and intended to be installed without an external overcurrent protective device.
- **Type 2** - Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device.
- **Type 3** - Point of utilization SPDs, installed at a minimum conductor length of 10 meters (30 feet) from the electrical service panel to the point of utilization. For example, cord connected, direct plug-in, receptacle type and SPDs installed where the equipment is located.

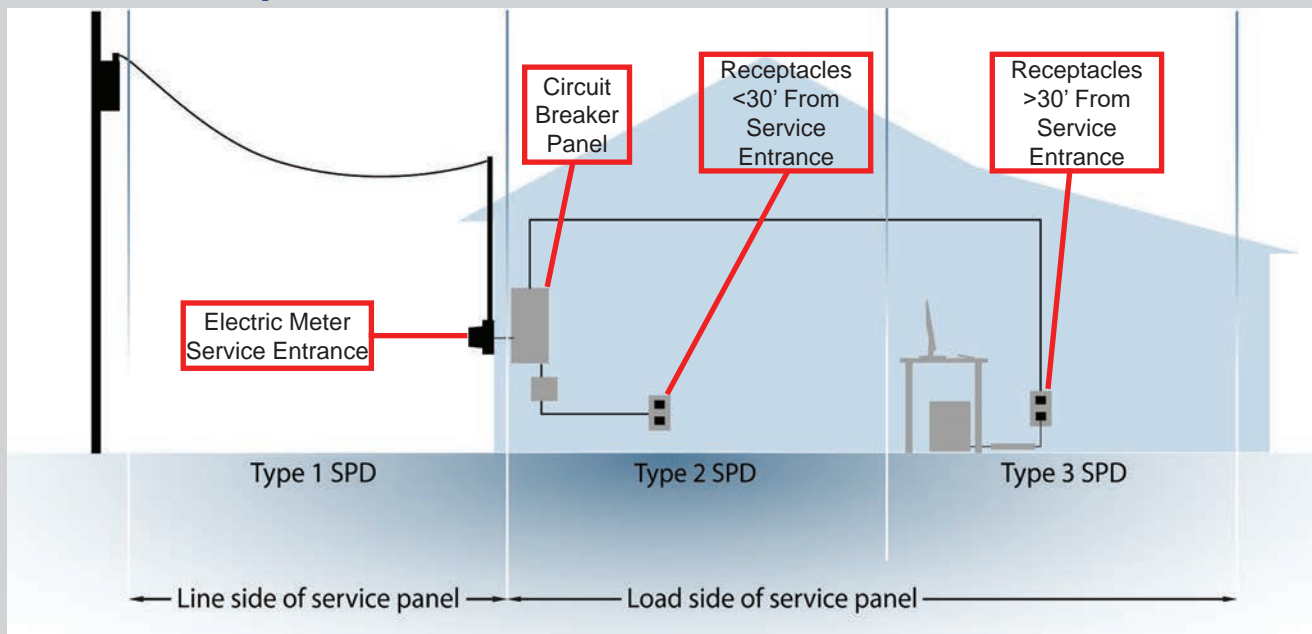
Maximum Continuous Operating Voltage (MCOV): The maximum voltage a device can withstand continuously before clamping begins.

Nominal Discharge Current (In) Rating: UL 1449 test encompassing 15 surge impulses at a selected level of 3kA, 5kA, 10kA or 20kA. The unit must be fully operational after completion of the test.

Voltage Protection Rating (VPR): UL 1449 clamping voltage test performed with a 6kV, 3kA, 8x20 μ s combination waveform.

Short Circuit Current Rating: The level at which an SPD is suitable for use on an AC power circuit that is capable of delivering not more than a declared root-mean-square symmetrical current at a delayed voltage during a short-circuit condition.

SPD Location Requirements:



Residential Surge Protection

NEC 2020, Article 230.67 stipulates that all electrical services to dwellings must have surge protective devices installed at or near the service entrance, and that SPDs “shall be an integral part of the service equipment or shall be located immediately adjacent thereto”



DTK-120/240HD2: Main Panel or Meter

- UL 1449 Type 1 SPD
- 120/240VAC split phase (3W + G)
- 100,000A / phase, 50,000A / mode
- NEMA 4X enclosure
- 1/2" NPT non-metallic conduit
- 5 year, \$25,000 connected equipment warranty



DTK-120/240CM+: HVAC and Pool Controls

- UL 1449 Type 1 SPD
- 120/240VAC split phase (2W + G)
- 50,000A total surge capacity
- NEMA 4X enclosure
- 3/4" NPT fitting
- 3 year, \$7,500 connected equipment warranty



DTK-120/240HD: Main Panel or Meter

- UL 1449 Type 1 SPD
- 120/240VAC split phase (3W + G)
- 50,000A / phase, 25,000A / mode
- NEMA 4X enclosure
- 1/2" NPT non-metallic conduit
- 5 year, \$10,000 connected equipment warranty



DTK-VSPA: Incoming CATV

- CATV & broadband cable surge protector
- Small footprint makes installation easy
- Tightest clamping available - 90VDC
- Nickel plated brass housing
- F type female in/out connections



DTK-120/240XD: Main Panel or Meter

- UL 1449 Type 1 SPD
- 120/240VAC split phase (3W + G)
- 50,000A / phase, 25,000A / mode
- NEMA 4X enclosure
- 3/4" NPT fitting
- 5 year, \$10,000 connected equipment warranty



DTK-7VS: Plug-In Surge Strip

- UL 1449 Type 3 SPD
- Power strip with load sensing technology
- 120VAC, 15A
- 7 outlets with 4' cord
- Illuminated load-status indicator



Commercial & Industrial SPDs - Modular



DITEK's ZEUS series modular Surge Protective Devices (SPDs) are designed to provide professional-grade transient voltage surge protection for electrical systems in the most demanding environments. Each model incorporates the latest in surge protection technology for maximum performance and protection, and includes service assurance features that help alert building management of their current protection status so that managers can take action to maintain continued protection. All models are UL96A Lightning Protection Compliant, and are available in a wide range of voltage configurations, making these products an excellent choice for protecting your industrial electrical systems.

D200M Series Features & Specs

- UL 1449 Type 1 SPD
- 200,000A / phase, 100,000A / mode
- NEMA 4 enclosure
- Field-replaceable surge protection module
- 8 AWG - 2 AWG mechanical lug connections
- Recommended circuit breaker size: 40A



D200MT Series Features & Specs

- UL 1449 Type 1 SPD
- 200,000A / phase, 100,000A / mode
- NEMA 4 enclosure
- Field-replaceable surge protection module
- 8 AWG - 2 AWG mechanical lug connections
- UL98 integral disconnect switch included
- Recommended circuit breaker size: 40A



D300M Series Features & Specs

- UL 1449 Type 1 SPD
- 300,000A / phase, 150,000A / mode
- Field-replaceable surge protection module
- NEMA 4 enclosure
- 8 AWG - 2 AWG mechanical lug connections
- Recommended circuit breaker size: 40A



D300MT Series Features & Specs

- UL 1449 Type 1 SPD
- 300,000A / phase, 150,000A / mode
- Field-replaceable surge protection module
- NEMA 4 enclosure
- 8 AWG - 2 AWG mechanical lug connections
- UL98 integral disconnect switch included
- Recommended circuit breaker size: 40A



SPD Selection Guide

Model#	Voltage	Wiring	Surge Capacity	I(n)	SCCR	NEMA	Integral Disconnect
D200M Modular Series							
D200M-120/2401	120/240V Split	3W + G	200kA/phase	20kA	200kA	4	No
D200M/120/2401T	120/240V Split	3W + G	200kA/phase	20kA	200kA	4	Yes
D200M-120/2083Y	120/208V Wye	4W + G	200kA/phase	20kA	200kA	4	No
D200M-120/2083YT	120/208V Wye	4W + G	200kA/phase	20kA	200kA	4	Yes
D200M-277/4803Y	277/480V Wye	4W + G	200kA/phase	20kA	200kA	4	No
D200M-277/4803YT	277/480V Wye	4W + G	200kA/phase	20kA	200kA	4	Yes
D200M-2403D	240V Delta	3W + G	200kA/phase	20kA	200kA	4	No
D200M-2403DT	240V Delta	3W + G	200kA/phase	20kA	200kA	4	Yes
D200M-4803D	480V Delta	3W + G	200kA/phase	20kA	200kA	4	No
D200M-4803DT	480V Delta	3W + G	200kA/phase	20kA	200kA	4	Yes
D300M Modular Series							
D300M-120/2401	120/240V Split	3W + G	300kA/phase	20kA	200kA	4	No
D300M/120/2401T	120/240V Split	3W + G	300kA/phase	20kA	200kA	4	Yes
D300M-120/2083Y	120/208V Wye	4W + G	300kA/phase	20kA	200kA	4	No
D300M-120/2083YT	120/208V Wye	4W + G	300kA/phase	20kA	200kA	4	Yes
D300M-277/4803Y	277/480V Wye	4W + G	300kA/phase	20kA	200kA	4	No
D300M-277/4803YT	277/480V Wye	4W + G	300kA/phase	20kA	200kA	4	Yes
D300M-2403D	240V Delta	3W + G	300kA/phase	20kA	200kA	4	No
D300M-2403DT	240V Delta	3W + G	300kA/phase	20kA	200kA	4	Yes
D300M-4803D	480V Delta	3W + G	300kA/phase	20kA	200kA	4	No
D300M-4803DT	480V Delta	3W + G	300kA/phase	20kA	200kA	4	Yes

Standard Product Features

- Audible alarm with disable feature
- Form C dry contacts for remote monitoring
- Visual LED end of life indicator
- Surge counter with reset button
- EMI / RFI filtering
- Phase loss indicator

Commercial & Industrial SPDs - Non-Modular



DITEK's ZEUS series non-modular Surge Protective Devices (SPDs) are designed to provide transient voltage surge protection for AC power systems in the most demanding environments. Each model incorporates individually fused components to maximize performance and protection, and the diagnostic LED provides positive indication of system power and SPD function. Many models are UL96A Lightning Protection Compliant, and are available in a wide range of voltage configurations, making these products an excellent choice for electrical panel protection.

ZEUS D200 Series Features & Specs

- UL 1449 Type 1 SPD
- 200,000A / phase, 100,000A / mode
- NEMA 4X enclosure
- 10 AWG, 30" wire leads
- 3/4" male NPT non-metallic fitting
- Recommended circuit breaker: 30A
- Flush mount kit, p/n D200-FMK



ZEUS D100 Series Features & Specs

- UL 1449 Type 1 SPD
- 100,000A / phase, 50,000A / mode
- NEMA 4X enclosure
- 10 AWG, 30" wire leads
- 1/2" male NPT non-metallic fitting
- Recommended circuit breaker: 30A
- Flush mount kit, p/n DTK-FMKHD2



ZEUS D50 Series Features & Specs

- UL 1449 Type 1 SPD
- 50,000A / phase, 25,000A / mode
- NEMA 4X enclosure
- 12 AWG, 30" wire leads
- 3/4" male NPT fitting
- Recommended circuit breaker: 20A
- Flush mount option, add "FM" to end of part no



DTK-CMXPLUS Series Features & Specs

- UL 1449 Type 1 SPD
- 25,000A / phase
- NEMA 4X enclosure
- 12 AWG, 18" wire leads
- 3/4" male NPT fitting
- Recommended circuit breaker: 20A



SPD Selection Guide

Model#	Voltage	Wiring	Surge Capacity	I(n)	SCCR	NEMA	LED	Audible Alarm	Dry Contacts
CMXPLUS Series									
DTK-240/480CM+	240/480 Split	2W + G	25kA/phase	10kA	100kA	4X	Yes	No	No
DTK-2403CMXPLUS	240V Delta or Wye	3W + G	25kA/phase	10kA	100kA	4X	Yes	No	No
DTK-4803CMXPLUS	480V Delta or Wye	3W + G	25kA/phase	10kA	100kA	4X	Yes	No	No
DTK-6003CMXPLUS	600V Delta or Wye	3W + G	25kA/phase	10kA	100kA	4X	Yes	No	No
ZEUS D50 Series									
D50-120/2401	120/240V Split	3W + G	50kA/phase	20kA	100kA	4X	Yes	No	No
D50-120/2083Y	120/208V Wye	4W + G	50kA/phase	20kA	100kA	4X	Yes	No	No
D50-120/240HL	120/240V Delta HL	4W + G	50kA/phase	10kA	100kA	4X	Yes	No	No
D50-277/4803Y	277/480V Wye	4W + G	50kA/phase	10kA	100kA	4X	Yes	No	No
D50-2403D	240V Delta	3W + G	50kA/phase	10kA	100kA	4X	Yes	No	No
D50-4803D	480V Delta	3W + G	50kA/phase	10kA	100kA	4X	Yes	No	No
D50-347/6003Y	347/600V Wye	4W + G	50kA/phase	10kA	100kA	4X	Yes	No	No
ZEUS D100 Series									
D100-120/2401	120/240V Split	3W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-120/2083Y	120/208V Wye	4W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-120/240HL	120/240V Delta HL	4W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-277/4803Y	277/480V Wye	4W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-2403D	240V Delta	3W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-4803D	480V Delta	3W + G	100kA/phase	20kA	100kA	4X	Yes	No	No
D100-6003D	600V Delta	3W + G	100kA/phase	10kA	100kA	4X	Yes	No	No
ZEUS D200 Series									
D200-120/2401	120/240V Split	3W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes
D200-120/2083Y	120/208V Wye	4W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes
D200-120/240HL	120/240V Delta HL	4W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes
D200-277/4803Y	277/480V Wye	4W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes
D200-2403D	240V Delta	3W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes
D200-4803D	480V Delta	3W + G	200kA/phase	20kA	100kA	4X	Yes	Yes	Yes

DIN Rail Surge Protective Devices



DTK-DR Series Features & Specs

The DTK-DR series of DIN Rail surge protective devices (SPDs) are designed to provide point-of-use AC power protection for industrial control panels and similar applications in commercial and industrial environments. Voltage configurations available from 120VAC - 690VAC. See data sheet for details.

- UL 1449 Type 1CA
- 75,000A surge capacity
- Field-replaceable protection module
- 35mm DIN Rail mounting configuration
- Visual & remote end of life indicators
- Models with "N" suffix include N-G protection module



DTK-DRB Series Features & Specs

The DTK-DRB series of DIN Rail surge protectors provide robust surge protection in a compact package. This series offers high performance surge protection for critical low voltage applications. The DTK-DRB series shorts to ground when compromised. Voltage configurations available from 5VDC - 130VDC. See data sheet for details.

- UL 497B listed
- 20,000A surge capacity
- Field-replaceable protection module
- Protects (2) circuit pairs
- 35mm DIN Rail mounting configuration
- Suitable for use on both AC & DC circuits



DTK-DRF Series Features & Specs

The DTK-DRF series of DIN Rail surge protectors provide robust surge protection in a compact package. This series offers high performance surge protection for critical low voltage applications. The DTK-DRF series opens the circuit when compromised. Voltage configurations available from 5VDC - 130VDC. See data sheet for details.

- UL 497B listed
- 20,000A surge capacity
- Field-replaceable protection module
- Protects (2) circuit pairs
- 35mm DIN Rail mounting configuration
- Suitable for use on both AC & DC circuits



Branch Circuit Surge Protection



DTK-DF120S12 Features & Specs

The DTK-DF120S12 was specifically designed to protect convenience stores and multi-pump fueling stations from unnecessary damage caused by electrical surge events..

- Protects up to (12) 120VAC single phase critical loads
- Audible alarm sounds when protection is compromised
- Form C dry contacts for remote notification & Rapid-Replacement Modules



DTK-120SLR Features & Specs

The DTK-120SLR surge protector guards 120VAC power circuits that feed fire alarm control panels, gate motors and other critical equipment. The load removal feature disconnects power to the equipment if compromised.

- UL 1449 Type 2 SPD with UL 1283 noise filtering
- 120VAC single phase, up to 20 Amps
- Series-connected design for fast response time & maximum protection



DTK-HW Series Features & Specs

DITEK's HW Series delivers compact, parallel mount surge protection for electrical panels and dedicated branch circuit loads. NEMA 4X enclosures allow for use in harsh environments.

- UL 1449 Type 1 SPD, approved for 20A circuit breakers
 - **DTK-120HW:** 120VAC single phase
 - **DTK-240HW:** 240VAC single phase
 - **DTK-120/240HW:** 120/240VAC split phase



HVAC Intelligent Voltage Monitoring

Technical Specifications

Voltage Configuration:	120/240VAC Split Φ 120/208VAC Split Φ
Operating Frequency:	50/60Hz
Max. Continuous Current:	40 Amps
Undervoltage Protection Level:	104VAC (L-G)
Overvoltage Protection Level:	130VAC (L-G)
Short Cycle Delay:	3 Minutes (Default) 30 Seconds (Selectable)
Surge Current Rating:	50,000A

Mechanical Specifications

Connection Method:	Series-wired, 1/2" or 3/4" NPT Conduit Hardwired lugs: 8 AWG Max
Housing:	UL Type 4X Enclosure
Dimensions:	6.29" L x 6.29" W x 2.36" H (160 mm x 160 mm x 60mm)
Weight:	3 lb (1.36 kg)

Quality, Standards & Approvals

Certifications:	UL 60947-1 Listed UL 60947-5-1 Listed
Warranty:	10 Year Limited Warranty

	Condition Normal / On	
	Line 1 Over or Under / Off	
	Line 2 Over or Under / Off	
	Recovering from Line 1 Over or Under / Delayed	
	Recovering from Line 2 Over or Under / Delayed	
	Service Required / On	
B = Blinking		A = Alternating

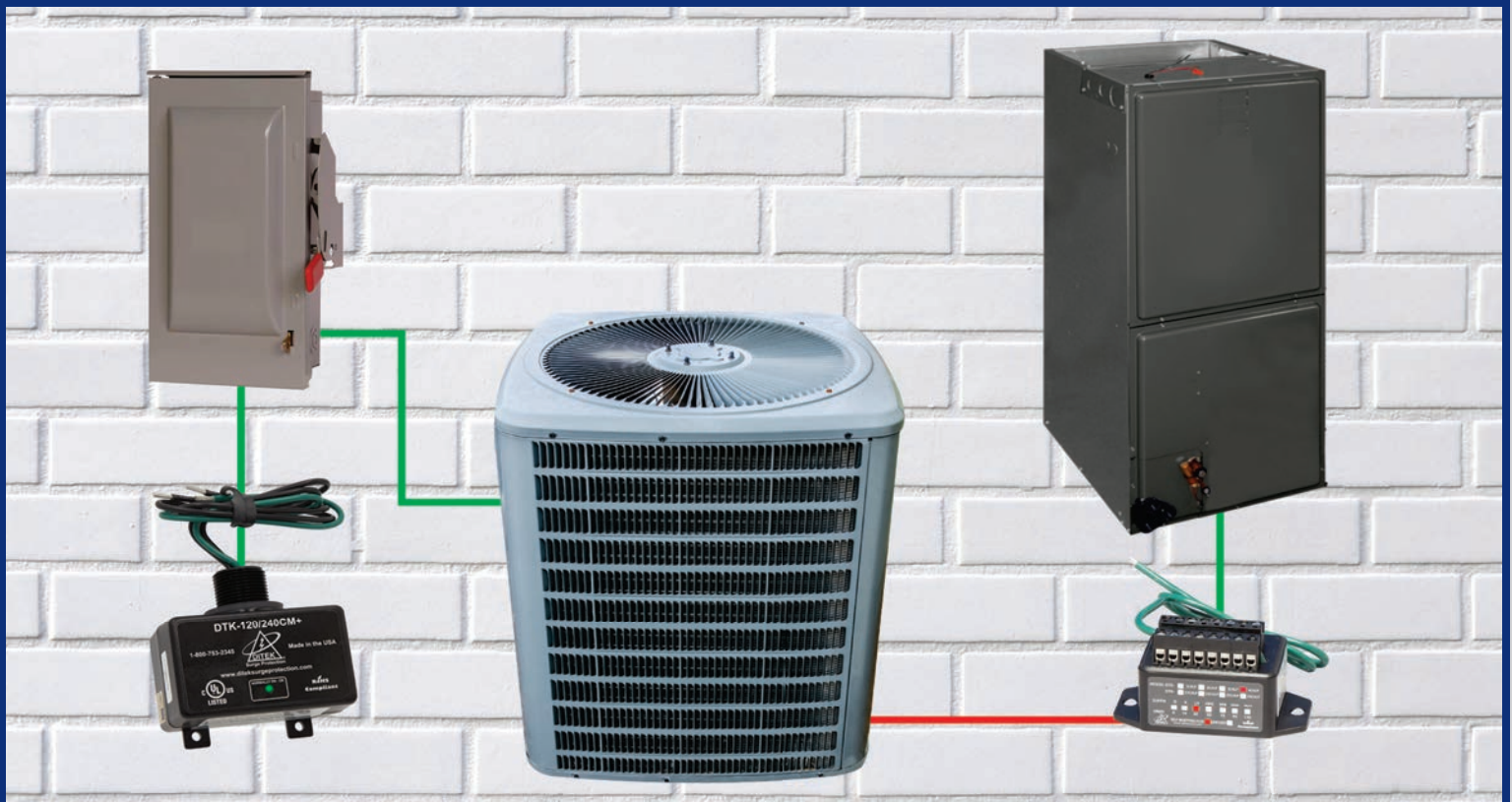


DTK-KG2 Features & Specs

The DTK-KG2 is part of the Kool Guard series of intelligent voltage monitoring solutions and is specifically designed to monitor the input power supplying the equipment. If the voltage fluctuates outside of the preprogrammed under-and-over-voltage limits, it safely disconnects power to the equipment until voltage returns within the normal range. The DTK-KG2 also incorporates state-of-the-art surge protection to shield equipment from damaging surges and spikes; and the standard UL Type 4X polycarbonate enclosure allows for easy installation in harsh outdoor environments.

- Protection for under-voltage & over-voltage events
- Ideal for mini-splits, inverter driven compressor systems & ECM motors
- Safely disconnects power to the system for 3 minutes, allowing input voltage to return to normal range
- Diagnostic red & green LEDs indicate exactly what voltage condition is present
- Surge protection components included to divert transient voltages away from equipment
- UL 60947-1 & 60947-5-1 listed

HVAC System Surge Protection



The average home or business can experience hundreds of potentially damaging power surges and spikes each year, and today's HVAC equipment is becoming more and more vulnerable to these unavoidable events. While a single event may show no obvious signs of damage, repeated surges cause gradual deterioration of the systems internal circuitry; resulting in destruction of expensive HVAC equipment without warning. Take action today, and make sure your heating and cooling system is protected against these damaging electrical events.

DTK-120/240CM+ Features & Specs

- 120/240V UL 1449 Type 1 SPD
- Installs on load side of disconnect
- NEMA 4X weatherproof enclosure
- Diagnostic LED
- 3 year, \$7,500 connected equipment warranty



DTK-4LVPLV Features & Specs

- 4-pair, 8-wire 24V surge protector
- Install in series with thermostat control wires at air handler
- Series connection & oversized ground wire for maximum protection



DTK-120HW Features & Specs

- 120V UL 1449 Type 1 SPD
- Ideal for 120V furnace applications
- NEMA 4X weatherproof enclosure
- Diagnostic LED

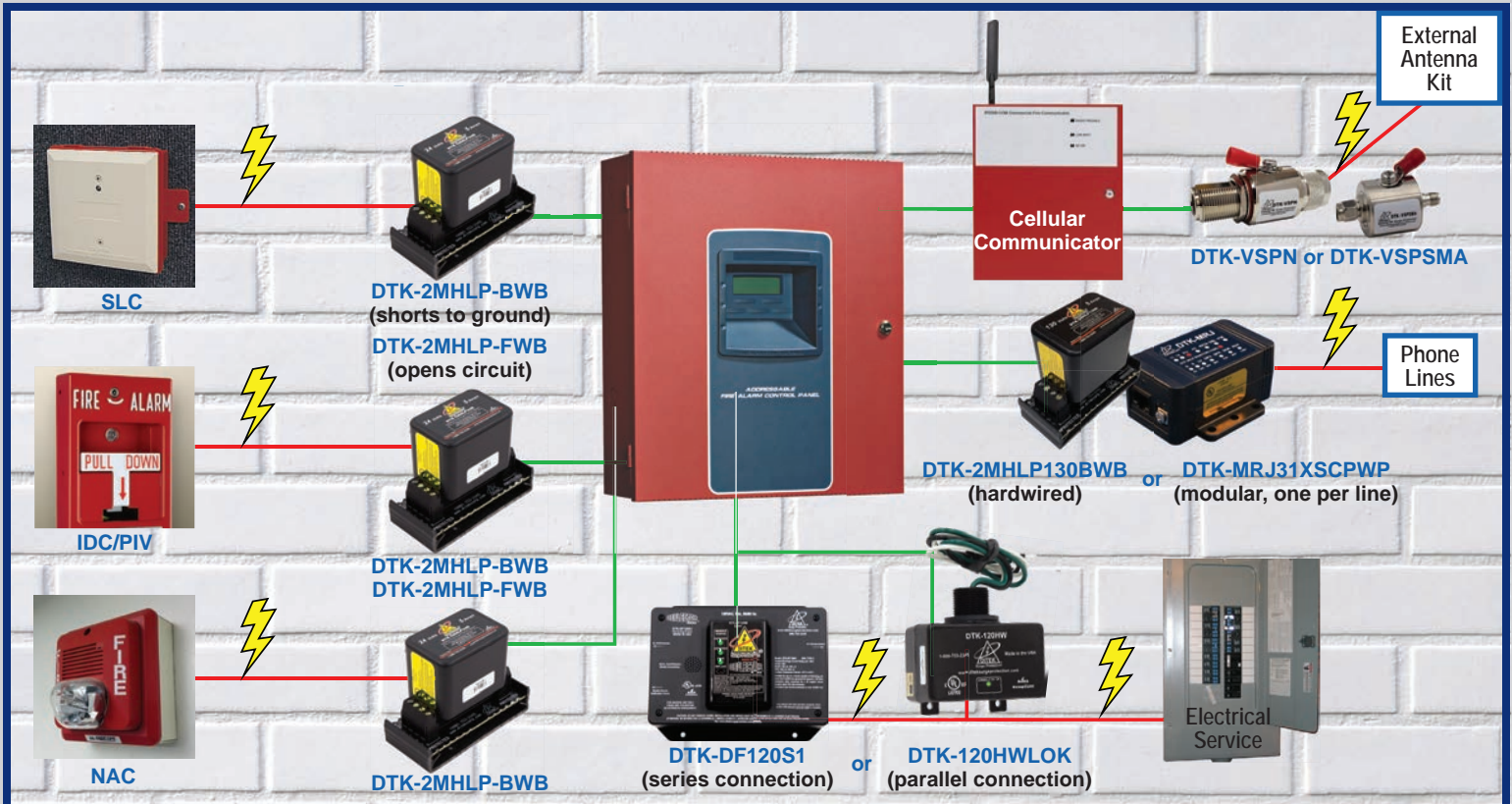


DTK-CMXPLUS Series Features & Specs

- UL 1449 Type 1 SPD
- NEMA 4X weatherproof enclosure
- Diagnostic LED
- **DTK-2403CMXPLUS:**
208/240V 3 phase (3W + G)
- **DTK-4803CMXPLUS:**
480V 3 phase (3W + G)



Fire Alarm Surge Protection



Fire alarm and life safety systems are essential for protecting people, property and assets in virtually every school, hotel, hospital, office complex and public facility across the country. Facilities cannot afford to be without surge protection to protect these mission critical systems from damaging power surges and spikes. These surges can enter from power supply lines, signaling line circuits, initiating device circuits, outdoor antenna connections, and notification device circuits – in fact, any electrical path has the potential to find its way into the FACP. Surge protection is an extremely cost-effective first line of defense against common power issues, and increases overall safety while reducing liabilities.

DTK-DF120S1 Features & Specs

- 120V / 20A series-wired SPD
- Rapid-replacement module
- Audible alarm & status indicators
- Dry contacts for remote monitoring
- UL 1449 listed
- UL 1283 EMI/RFI filtering



DTK-2MHLP Series Features & Specs

- 2-pair, modular loop circuit surge protectors
- 20kA surge current rating, 5-130V configurations
- B series shorts to ground
- F series removes load and opens circuit
- Screw terminal connections



DTK-120HW Features & Specs

- 120V parallel-wired SPD
- 50,000A max surge current rating
- Compact design with NEMA 4X enclosure
- DTK-120HWLOK includes lockout kit



DTK-MRJ31XSCPWP Features & Specs

- Single pair dialer protector with RJ31X connection
- Automatic reset handles multiple surges



Total Surge Solutions

120VAC power surge protection with audible alarm and Form C dry contacts for remote monitoring

6-position mounting base for 2MHL modules to protect up to (12) SLC, NAC, IDC/PIV, network or dialer circuit pairs

Audible alarm can be silenced via included time delay switch (24 hours)

Low voltage module cover ships blank to allow for application of installation company logo sticker



DTK-120X12



Visual, audible, smart. DITEK's DTK-120X12 sets a new standard for 120VAC power and low voltage surge protection. It will protect your system power and up to twelve (12) pairs of SLC, IDC/PIV, NAC, network or dialer circuits. This combo unit comes equipped with a DTK-DF120M, 120VAC, replaceable surge protection module and a 6-position mounting base for replaceable, low voltage surge modules. Adding DTK-2MHL modules (modules must be ordered separately) for data/signal and dialer circuit protection provides a complete solution for your fire alarm system.

DTK-TSS1 Features & Specs

- 120V alarm panel protection with 5-position base
- Low voltage module sold separately to protect up to (10) pairs of SLC, NAC, IDC or NAC circuits
- Dry contacts for remote monitoring



DTK-TSS3 Features & Specs

- 2-position base for SLC loop protection modules
- Protects up to (4) pairs of building-to-building cable runs
- NEMA 4X enclosure for harsh environments



DTK-TSS2 / TSS2NM Features & Specs

- **DTK-TSS2:** Protects 120V system power & up to (4) pairs of loop circuits - NEMA 4X enclosure
- **DTK-TSS2NM:** Protects 120V system power with space for monitor module - NEMA 4X enclosure

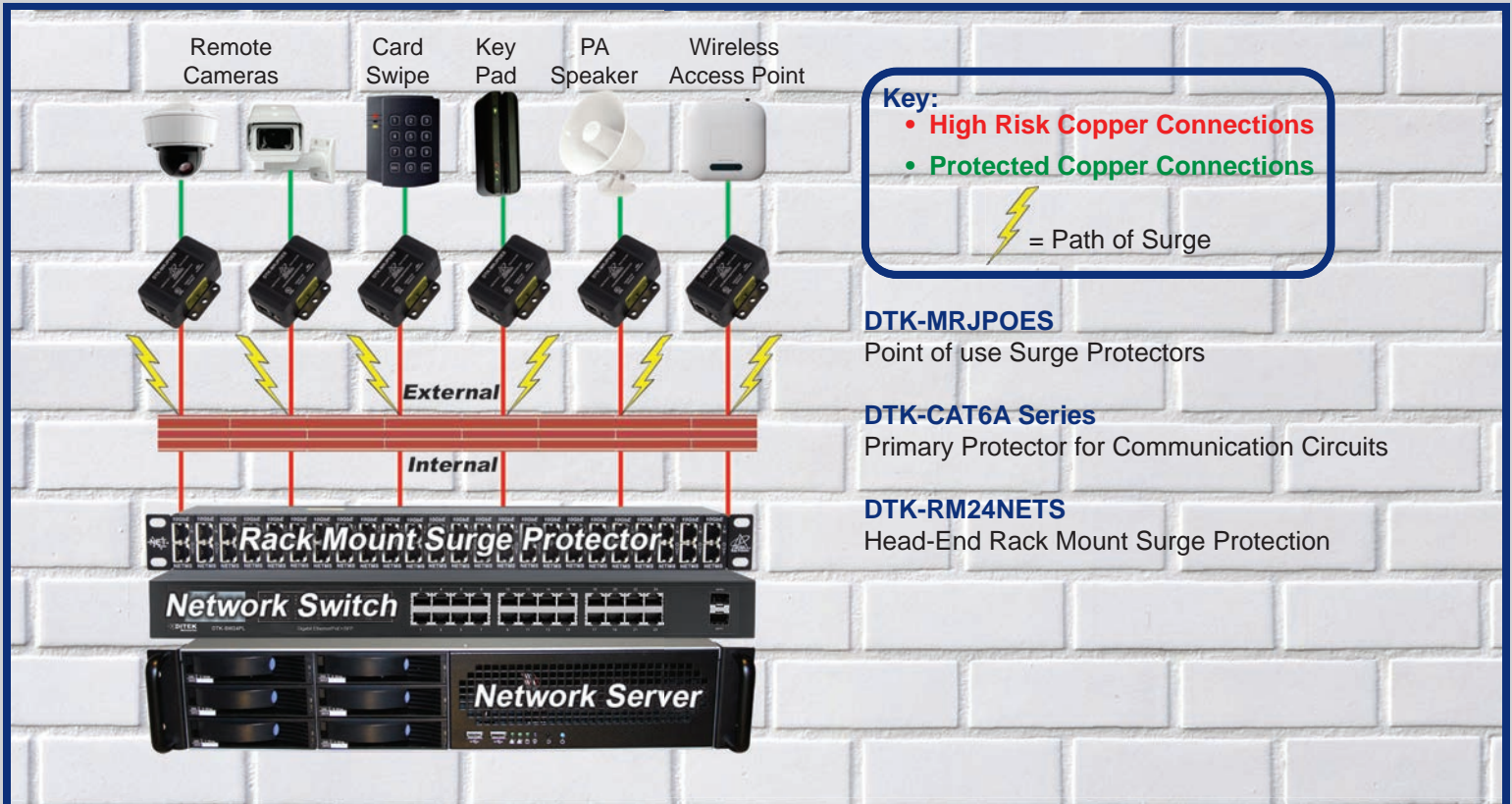


DTK-TSS4D Features & Specs

- Protects 120V system power
- Dry contacts for remote monitoring
- NEMA 4X enclosure for harsh environments



Network Surge Protection Basics



Fire, security, communication and data information networks, along with all the connected electronic devices and equipment, are essential to the operation of organizations today; whether they are businesses, schools, governmental agencies or non-profits. If these devices are damaged or inoperable for any reason, normal operation instantly becomes difficult, and in some cases, impossible. Downtime on a security system for example, could result in missing video surveillance data with corresponding increased risk for loss, damage and liability. In a data center, downtime could risk the loss of critical customer or operational information. When a fire alarm panel goes down you could be required to vacate the building indefinitely, or implement costly fire watch personnel until the equipment is restored.

It only makes sense to protect this equipment and support it with an infrastructure that is suitable for longevity and peak performance. Implementing electrical surge protection is the simplest and most cost-effective way to protect these vital systems from potential damage due to power surges and spikes - especially when you consider downtime. It is also recommended to install an uninterruptible power supply (UPS). A UPS provides consistent backup power during inconsistent power quality issues. Not only will it protect your hardware investment, it prevents data loss.

Contact us for a free evaluation of your current surge protection needs.

Online Uninterruptible Power Supplies (UPS)

DITEK's DTK-UPS+ series is designed with the latest online double conversion UPS technology to enable your equipment to survive even the harshest power quality issues. From surges and spikes to brownouts and complete power loss, the DTK-UPS+ series will keep your equipment up and running when it matters most.

- Models available in 1kVA, 1.5kVA, 2kVA & 3kVA
- Compliant to U.S. DOE Energy Conservation standard efficiency requirements
- Invisible transitioning between AC & battery
- USB & Ethernet interfaces available on all models
- Intuitive LCD display



Network Surge Protection



DITEK's "NETS" series sets a new standard in surge protection for Ethernet, PoE and PoE extender circuits. Each model supports data speeds up to 10GbE without signal degradation, and carries a robust 20kA per pair surge current rating, the highest in the industry. Available in both rack mount and wall mount enclosures.

- Ideal for installations where multiple cabling feeds require protection before entering network switches
- Rapid-replacement modules can be swapped from front of device without removing it from rack
- Hybrid design utilizing SAD & GDT technologies for optimal protection
- Complies with all IEEE Power over Ethernet standards

Ethernet & PoE Surge Protectors

- **DTK-RM24NETS:** 24-channel, 1U rack mount
- **DTK-RM16NETS:** 16-channel, 1U rack mount
- **DTK-RM12NETS:** 12-channel, 1U rack mount
- **DTK-WM8NETS:** 8-channel, wall mount
- **DTK-WM4NETS:** 4-channel wall mount



Rapid-Replacement Modules

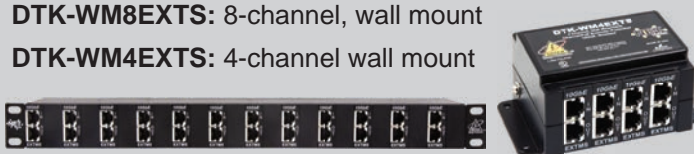
Mix & match replacement modules to protect Ethernet, PoE & PoE extender circuits within the same housing.

- **DTK-NETMS:** For Ethernet & PoE circuits
- **DTK-EXTMS:** For PoE Extender circuits



PoE Extender Surge Protectors

- **DTK-RM24EXTS:** 24-channel, 1U rack mount
- **DTK-RM16EXTS:** 16-channel, 1U rack mount
- **DTK-RM12EXTS:** 12-channel, 1U rack mount
- **DTK-WM8EXTS:** 8-channel, wall mount
- **DTK-WM4EXTS:** 4-channel wall mount



DTK-CAT6A Series

- 10 Gigabit Ethernet surge protector
- UL497 primary protector for communication circuits
- Available in 110 punch down in/out or 110 in/shielded RJ45 female out
- Protects all four pairs



Versa-Module 2 Series Surge Protection System



The Versa-Module 2 series is a unique, modular solution for protecting various combinations of signaling, data and low voltage power circuits. Enclosures and modules are sold separately, allowing you to “build your own” protection solution that accommodates various circuit types. With the option of 4, 8 and 24 channel enclosures, the VM2 series offers a vast array of customizable solutions for every application. Its rapid-replacement modules, available in both RJ45 and screw terminal configurations, and single point grounding makes installation and service replacement a breeze.

VM2 Series Features & Specs

- Rapid-replacement modular surge protection system with single point ground
- Hybrid design utilizing SAD & GDT technologies
- Mix & match modules to protect 5V to 130V, with RJ45 & screw terminal configurations
- Applications include 24V PoE systems, fueling equipment, point-of-sale devices, low voltage power circuits, RS485 data circuits & 70V audio amplifiers

Rack & Wall Mount Enclosures

DTK-VM2 Series enclosures also accept the DTK-NETMS and DTK-EXTMS protection modules for added versatility.

- **DTK-VM2R24:** 24-channel, 1U rack mount
- **DTK-VM2W4:** 4-channel, wall mount
- **DTK-VM2W8:** 8-channel, wall mount



RJ45 Protection Modules

- **DTK-VM2M5:** 5V, RJ45 in/out
- **DTK-VM2M12:** 12V, RJ45 in/out
- **DTK-VM2M24:** 24V, RJ45 in/out
- **DTK-VM2M36:** 36V, RJ45 in/out
- **DTK-VM2M48:** 48V, RJ45 in/out
- **DTK-VM2M75:** 75V, RJ45 in/out
- **DTK-VM2M130:** 130V, RJ45 in/out

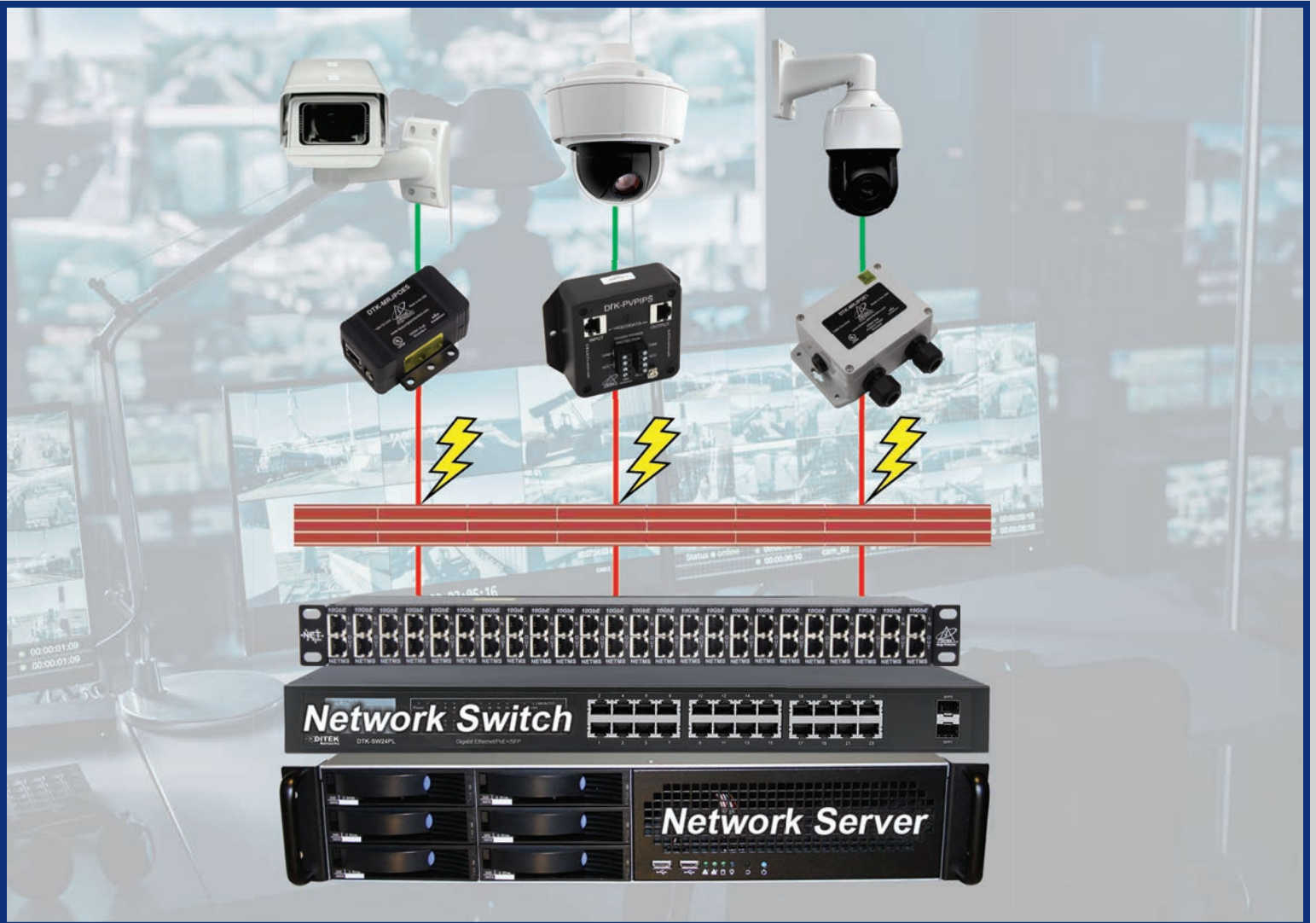


Screw Terminal Protection Modules

- **DTK-VM2TM5:** 5V, 2 pair in/out, 14AWG
- **DTK-VM2TM12:** 12V, 2 pair in/out, 14AWG
- **DTK-VM2TM24:** 24V, 2 pair in/out, 14AWG
- **DTK-VM2TM36:** 36V, 2 pair in/out, 14AWG
- **DTK-VM2TM48:** 48V, 2 pair in/out, 14AWG
- **DTK-VM2TM75:** 75V, 2 pair in/out, 14AWG
- **DTK-VM2TM130:** 130V, 2 pair in/out, 14AWG



IP Video Surge Protection



DTK-RM24NETS Features & Specs

- 24-channel, 1U rack mount surge protector
- Hybrid design utilizing SAD & GDT technologies
- Robust 20kA per pair surge current rating
- Rapid-replacement modular design
- UL497B Listed



DTK-MRJPOE Series Features & Specs

- Protects Power over Ethernet cameras & devices
- Hybrid design utilizing SAD & GDT technologies
- Ethernet data speeds up to 10GbE
- UL497B Listed
 - **DTK-MRJPOE:** Unshielded RJ45 in/out
 - **DTK-MRJPOES:** Shielded RJ45 in/out



DTK-MRJPOEX Features & Specs

- Protects externally mounted PoE devices
- NEMA 4X enclosure, liquid-tight cordgrips
- Data speeds up to 10GbE without signal degradation
- PoE+, HiPoE ready for high wattage
- UL497B Listed



DTK-PVP Series Features & Specs

- All-in-one surge protection for Ethernet/PoE & auxiliary power circuits
- Ethernet data speeds up to 10GbE
- Shielded RJ45 in/out connections
- UL497B Listed
 - **DTK-PVPIPS:** 2 pairs of 12/24V power
 - **DTK-PVP56V:** 2 pairs of 56V power



HD Analog Video Surge Protection



DTK-RM16NM Features & Specs

- Rack mount surge protector for up to (16) video feeds
- SAD technology compatible with HD-TVI, HD-CVI & AHD signals
- Ultra-low 2.8V clamping level



DTK-DP4P Series Features & Specs

- Protects PTZ analog camera 12V or 24V power, 5V RS-485 data pairs, & video conductors - all in one compact design
- Multi-stage protection technology, single point ground
 - **DTK-DP4P:** BNC coax connection
 - **DTK-DP4PTPV:** Twisted pair connection



DTK-IBNC Series Features & Specs

- Designed to protect externally mounted analog cameras where AC power is already protected & a dedicated ground connection is unavailable
 - **DTK-IBNC2.8:** Fixed & PTZ cameras
 - **DTK-IBNCHD:** HD-SDI applications



DTK-PVP27B Series Features & Specs

- Protects PTZ analog camera 12V or 24V power, 5V RS-485 data pairs, & video conductors - all in one compact design
- Multi-stage protection technology, single point ground
 - **DTK-PVP27B:** BNC coax connection
 - **DTK-PVP27BTPV:** Twisted pair connection
 - **DTK-PVP27BP:** Passive balun connection



Commercial A/V Surge Protection



DTK-VM2 Series Features & Specs

- Ideal for lighting control systems & 70V audio systems
- Mix & match protection modules allow complete customization
- RJ45 & screw terminal configurations available from 5V - 130V



DTK-LC2 Features & Specs

- UL1283 EMI/RFI noise filtering ensures clean power to connected equipment
- Incorporates (2) protected 120VAC NEMA 5-15R outlets
- LED health status indicator & audible alarm sounds if protection is compromised
- Includes surge protection for Ethernet or PoE circuit



DTK-HDMI Series Features & Specs

- Surge protection for HDMI cable connections
- HDMI 2.0a & HDCP 2.2 compatible
- Supports up to 4K UHD
- Includes mounting bracket
 - **DTK-HDMI1:** Single channel
 - **DTK-HDMI2:** Dual channel

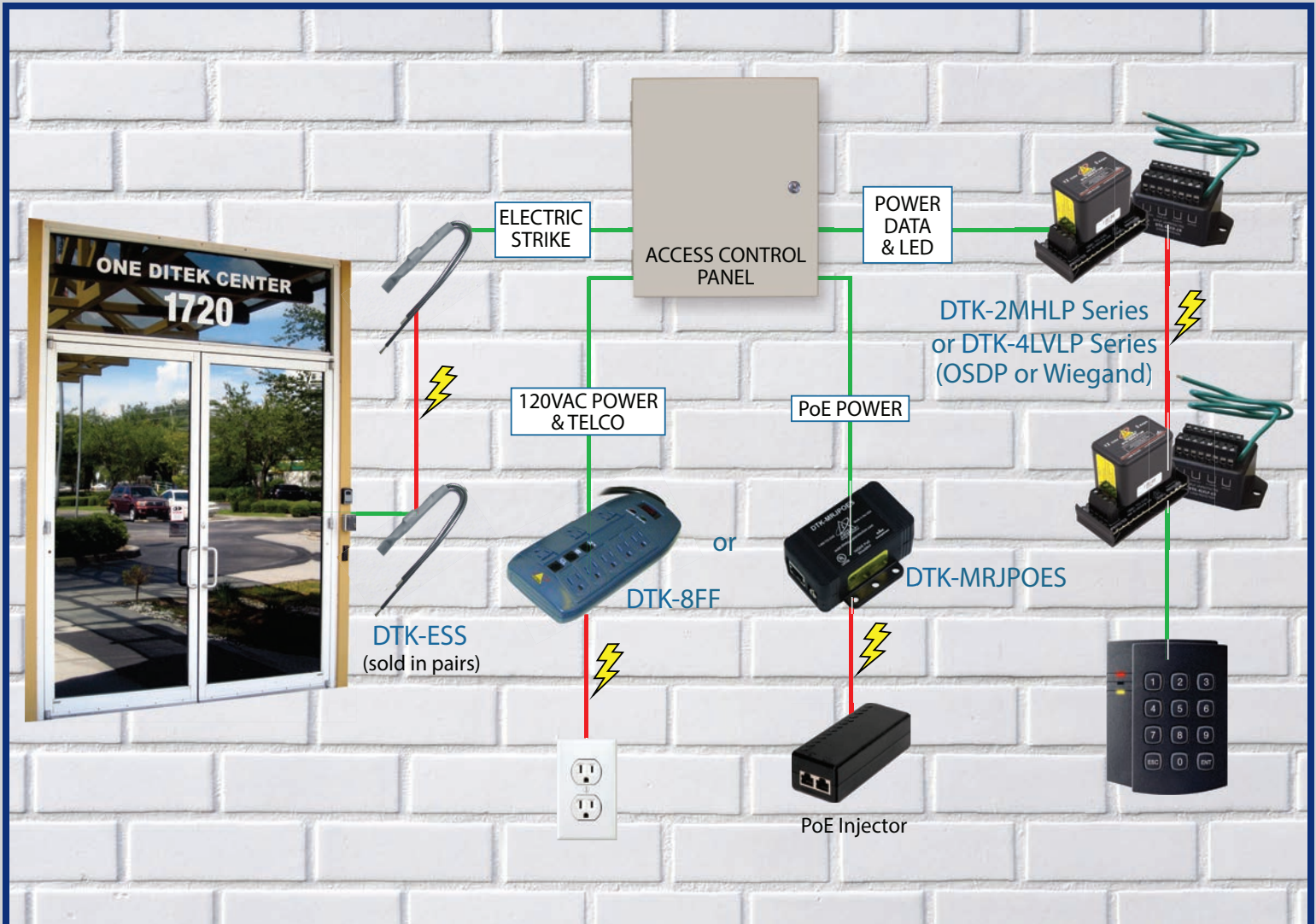


DTK-2MHLP75BWB Features & Specs

- 2-pair, 70V surge protector with hardwired base
- Protects speakers & audio equipment
- Hybrid design utilizing SAD & GDT technologies
- Field-replaceable protection module
- 20kA surge current rating



Access Control Surge Protection



DTK-2MHL Series Features & Specs

- Hybrid design utilizing SAD & GDT technologies
- Compatible with Open Supervised Device Protocol (OSDP)
- Field-replaceable module
 - **DTK-2MHL12BWB:** Protects 2- or 4-wire OSDP readers (12V power)
 - **DTK-2MHL24BWB:** Protects 2- or 4-wire OSDP readers (24V power)



DTK-4LVLP Series Features & Specs

- MOV surge protection technology
- Compatible with Open Supervised Device Protocol (OSDP) & Wiegand
- Small form factor
 - **DTK-4LVLPCR:** Protects 12V or 24V power, 5V data & LED connections
 - **DTK-4LVLPX:** Protects up to (4) pairs of 0-12V power & data connections



DTK-MRJPOES Features & Specs

- Protects Ethernet & PoE connections
- Hybrid design utilizing SAD & GDT technologies
- Ethernet data speeds up to 10GbE
- Shielded RJ45 connections



DTK-8FF Features & Specs

- Protects 8 AC outlets, up to 6 transformers, with EMI/RFI noise filtering to provide extra protection for sensitive electronics

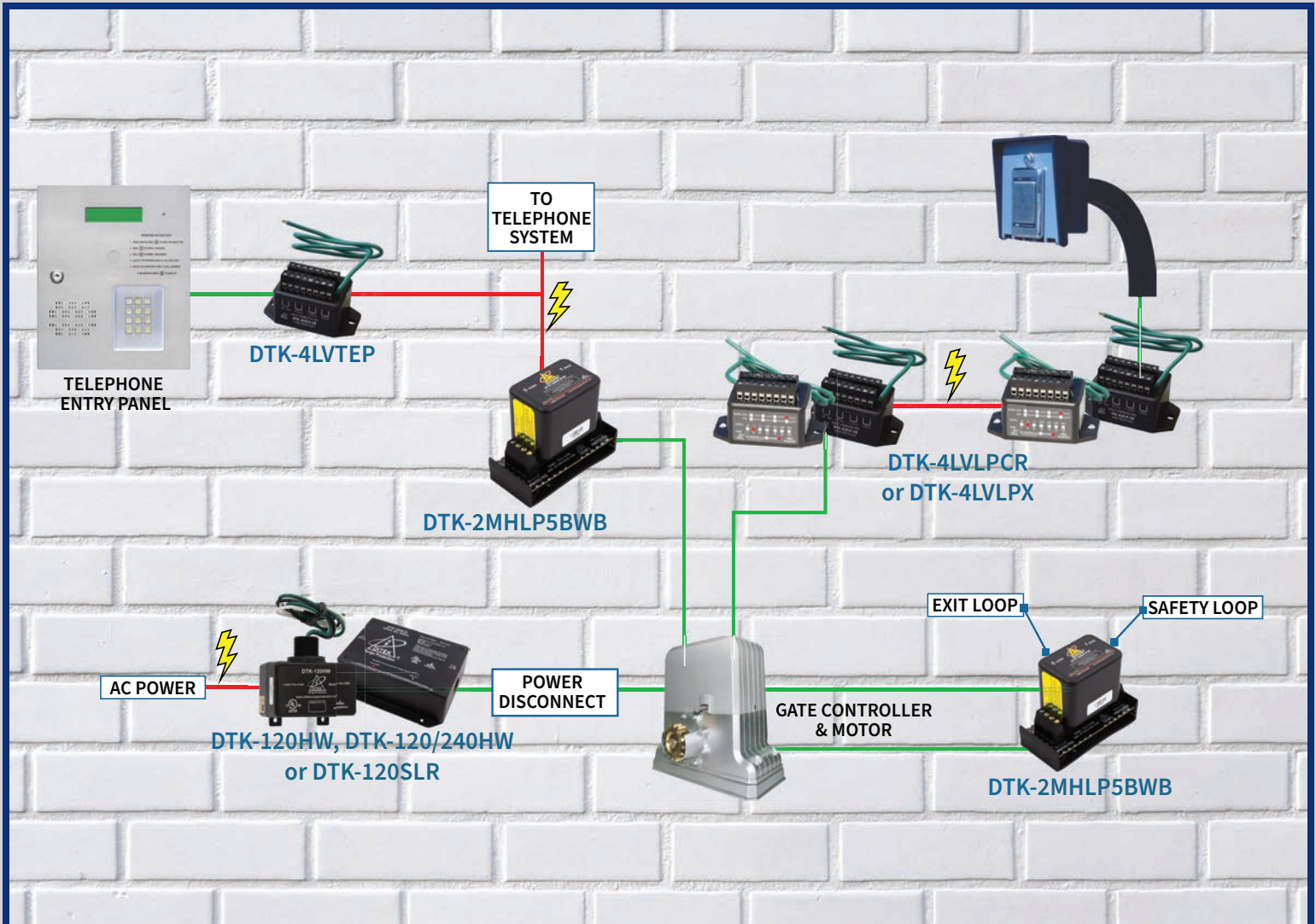


DTK-ESS Features & Specs

- Protects low voltage mag-lock & control panel
- Two per package to protect both end of the circuit



Gate Access Surge Protection



DTK-120SLR Features & Specs

- Protects 120VAC single phase circuits up to 20 Amps
- Series-connected design for fast response time & maximum protection
- Load removal feature disconnects power to equipment if compromised
- UL 1449 Type 2 SPD with UL 1283 noise filtering



DTK-4LV Series Features & Specs

- **DTK-4LVLPKR:** Protects 12V or 24V power, 5V data & LED connections
- **DTK-4LVLPX:** Protects up to (4) pairs of 0-12V power & data connections
- **DTK-4LVTEP:** Protects entry system power, telco & door release circuits



DTK-HW Series Features & Specs

- UL 1449 Type 1 SPD, CSA C22.2 No. 269.1-17
- Approved for 20A circuit breakers
- NEMA 4X enclosure for harsh environments
- Diagnostic LED
 - **DTK-120HW:** 120VAC single phase (2W + G)
 - **DTK-120/240HW:** 120/240VAC split phase (3W + G)



DTK-2MHL5BWB Features & Specs

- 2-pair, 5V exit & safety loop circuit surge protector with hardwired base
- Hybrid design utilizing SAD & GDT technologies
- Field-replaceable protection modules
- 20kA surge current rating

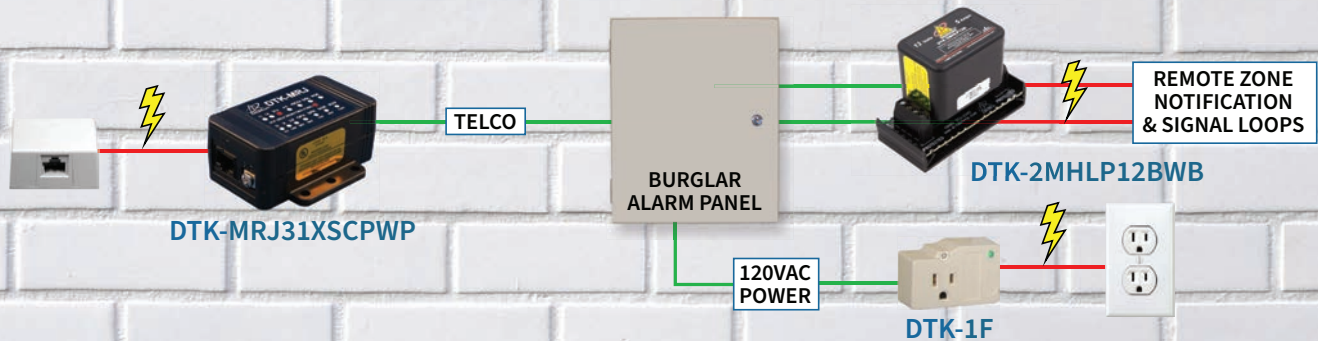


Intrusion Surge Protection

OPTION 1



OPTION 2



DTK-2MHLP12BWB Features & Specs

- 2-pair, 12V notification & signaling loop circuit surge protector with hardwired base
- Hybrid design utilizing SAD & GDT technologies
- Field-replaceable protection modules
- 20kA surge current rating



Plug-Ins Features & Specs

- 120VAC single outlet plug in surge protector
- Center screw secures to outlet & can also secure a transformer to prevent accidental disconnections
 - DTK-1F: 120VAC protection only
 - DTK-1FF: 120VAC & telco protection



DTK-MRJ31XSCPWP Features & Specs

- Single pair RJ31X alarm dialer circuit protection
- RJ45 connection with external grounding screw
- Sneak current protection - 150mA self-resetting fuse protects against repeated surges
- Patch cord included



DTK-8FF Features & Specs

- 8 AC outlets protected, up to 6 transformers
- EMI/RFI noise filtering provides extra protection for sensitive electronics
- Automatic shutdown feature turns off power in case of suppressor overload
- 1 in / 2 out RJ11 telco protection

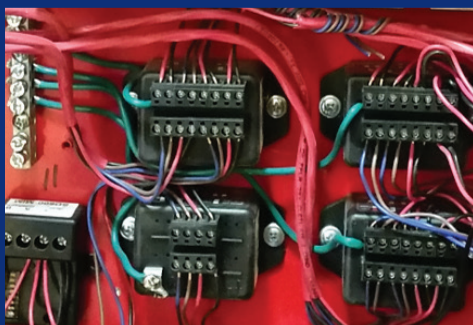


Best Practices for Installation & Grounding



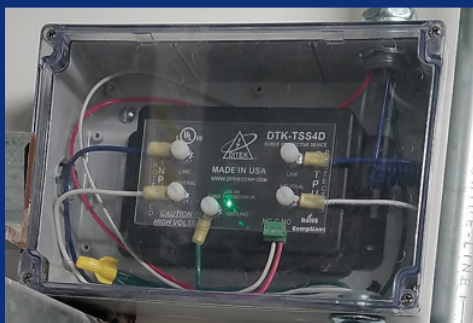
The conductor length between the SPD and the equipment being protected should be a minimum of 3 feet in length to allow enough time for the SPD to react. The conductors can be greater than 3 feet as long as they are isolated and are not subjected or directly exposed to internally- or externally-generated transient voltage spikes and/or surges.

The use of a grounding bus bar is strongly recommended as a means of terminating SPD ground wires to existing electrical grounding leads. This will ensure a solid mechanical connection of all grounding wires. The use of twist-on wire connectors ("wire nuts") is not recommended for termination of SPD ground wires to existing electrical grounding leads. Twist-on wire connectors can increase ground resistance, may become loose and/or corroded over time, and can also unnecessarily extend the length of the grounding conductor. This would degrade the performance of the SPD due to the lack of a short, low impedance ground path.



When installing multiple SPD's and terminating to a common electrical ground, a dedicated ground wire running from each individual SPD to a common grounding bus bar is strongly recommended. "Daisy-chaining" multiple SPD ground wires together via the SPD grounding terminals, or by using twist-on wire connectors, is not recommended as this increases the resistance and extends the length of the ground path.

Always make sure that the field wiring (unprotected wires) and the protected wiring occupy separate conduit feeds. When unprotected and protected wires occupy the same conduit, surge energy can be induced on to the protected wiring and completely bypass the surge protective device.



Whenever possible, Surge Protective Devices should be installed in a dedicated enclosure outside of the equipment being protected. This will prevent physical damage to the electronic circuit board, power supply and/or wiring inside of the equipment panel due to a potential catastrophic failure of the SPD.

Contact Us

For assistance in selecting the right surge protection devices for your specific application, please visit our website at www.diteksurgeprotection.com

Technical Support Staff: 888-472-6100



Uninterruptible Power Supplies



DITEK's DTK-UPS series of online double conversion and line interactive uninterruptible power supplies enable your equipment to survive even the harshest power quality issues. From surges and spikes to brownouts and complete power loss, the DTK-UPS series will keep your equipment up and running when it matters most. DITEK's industry proven UPS products provide cost-effective and reliable performance for network servers, video surveillance systems, back office computers and similar mission critical applications. All DTK-UPS models are compliant to U.S. DOE Energy Conservation Standard efficiency requirements.

Online UPS+ Features & Specs

- Online double conversion technology provides superior equipment protection
- Intuitive LCD display & software for remote monitoring
- Invisible transitioning between AC & battery
 - **DTK-UPS1000R+**: 1kVA, (8) 15A outlets
 - **DTK-UPS1500R+**: 1.5kVA, (8) 15A outlets
 - **DTK-UPS2000R+**: 2kVA, (8) 20A outlets
 - **DTK-UPS3000R+**: 3kVA, (1) 30A & (6) 20A outlets

UPS Accessories

- **DTK-UETH1**: SNMP web card allows you to monitor & manage UPS's in a networked environment
- **DTK-URK1**: Rack mounting rails (included with 1.5kVA, 2kVA & 3kVA models)



Line Interactive UPS Features & Specs

- Line interactive UPS with built in AVR for voltage stabilization
- Embedded microprocessor control guarantees exceptional reliability
- Touch screen LCD to display information circularly
- Auto restart while AC is recovering
 - **DTK-UPS600**: 600VA, 6 outlets, RJ45 protection
 - **DTK-UPS800**: 800VA, 6 outlets, RJ45 protection
 - **DTK-UPS1000**: 1000VA, 8 outlets, RJ45 protection



DITEK Networks



Save on installation time and money with DITEK's PoE Switches, Injectors and Extenders by delivering data and power over existing network cables. Our switches incorporate green Ethernet power-saving technology that deactivates unused ports and adjusts power levels based on the cable length. DITEK's Injectors and Extenders eliminate the need to run AC power lines for your wireless access point, network camera or IP phone. Simply connect the PoE Injector to the LAN switch port, and use the existing infrastructure cabling to deliver DC power as well as transfer data. Increase an existing PoE connection beyond the 100 m (328 ft.) limit by installing one of our PoE Extenders. DITEK's networking products offer flexible and simplistic power management with fewer points of failure.

PoE+ Injectors Features & Specs

DITEK's PoE Injectors let you connect IEEE 802.3af/at-compliant products to non-PoE LAN switch ports. Applications include sensors and building automations, wireless access points, and point of sale devices

- **DTK-INJ30:** 30 Watt Gigabit PoE+ injector
- **DTK-INJ60:** 60 Watt Gigabit Ultra PoE+ injector



Gigabit PoE+ Switches Features & Specs

- **DTK-SW8PL:** 8-port, rack mount, RJ45 uplink ports
- **DTK-SW16PL:** 16-port, rack mount, 2 SFP ports
- **DTK-SW24PL:** 24-port, rack mount, 2 SFP ports
- **DTK-SW8P:** 8-port, desktop, private VLAN
- **DTK-SW5PT:** 5-port, desktop





DITEK is your single source for quality surge protection, networking hardware and UPS systems for the commercial, industrial and residential market. We provide solutions for video surveillance, fire, networking and communications, intrusion detection, access control and AC power systems. We have led the industry in the design and manufacturing of surge protection and networking solutions for over 30 years, providing quality products built to order and delivered on time, with unparalleled factory support and competitive pricing.

At DITEK's ISO 9001:2015 certified manufacturing facility in Largo, FL, a highly-trained and culturally diverse workforce utilizes state-of-the-art equipment and lean manufacturing methodologies. DITEK's technical support team is available to answer application and installation questions by phone or live internet chat. Live and web-based training, CEU courses and collateral materials are readily available through DITEK's Marketing Group.



DITEK Surge Protection
1720 Starkey Road
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www.diteksurgeprotection.com
Technical Support: 888-472-6100
Sales Support: 800-753-2345