



THE ULTIMATE POWER QUALITY PROGRAM

WHAT IS TPD?

The mission of Transient Protection Design is to ensure that the best power protection devices are in place to stop or limit the effects of imperfect power.

Each design drawing in this catalog helps to explain where surge protection and voltage regulation devices are needed in a wide variety of sample applications.

The drawings in this catalog can be used as a starting block to many power solutions. In this guide, if there is a product you would like to learn more about, simply click on the product image and it will open a link to that product page on the TPD website.

If you have any questions, please reach out to us at:

(888) 281-7856

info@tpdsurge.com

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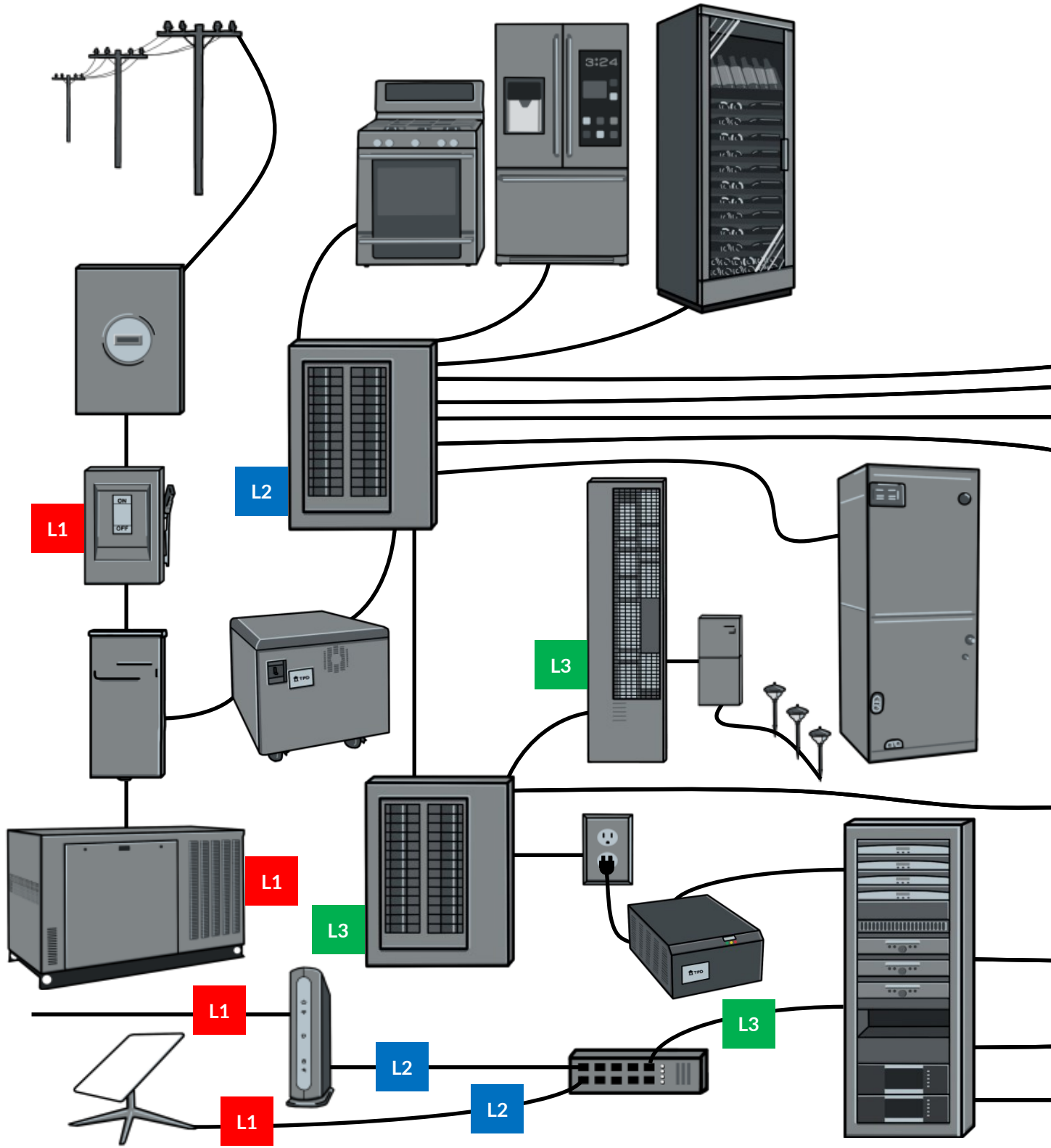
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Register as a Dealer



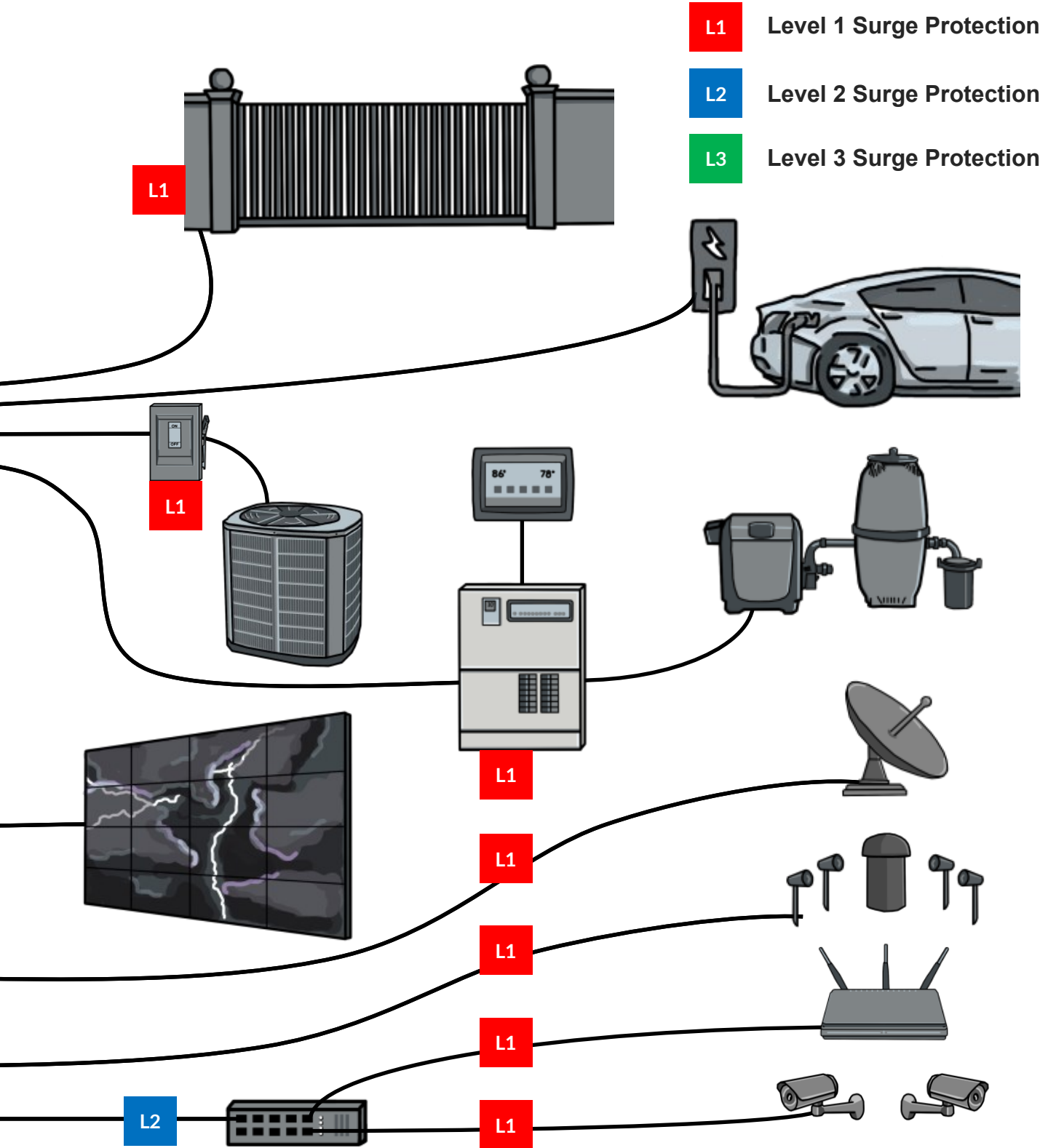
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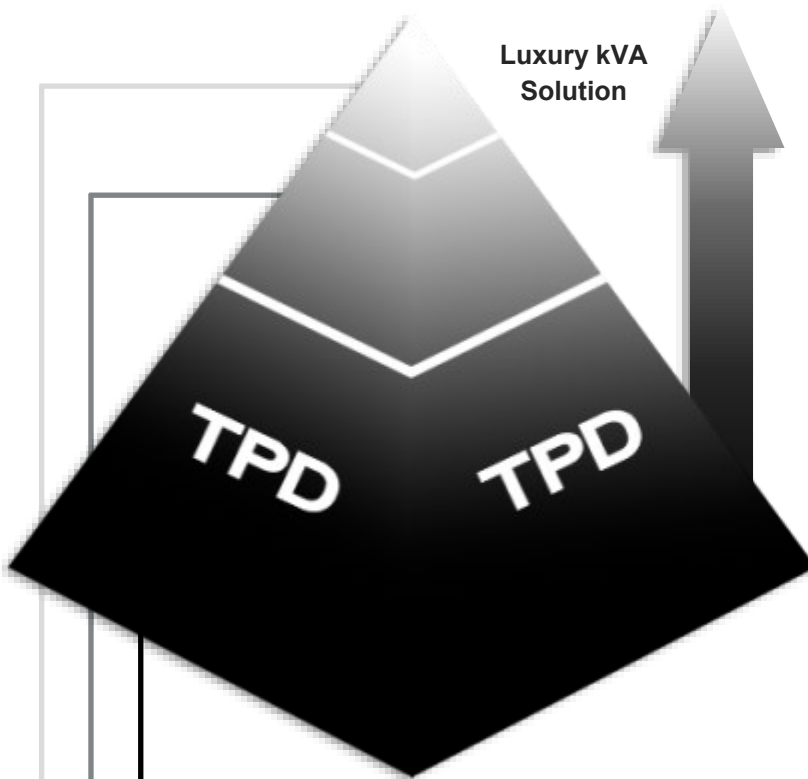
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The TPD Whole Home Power Quality Program



Do You Have a Power Quality Program?



The TPD Power Quality Program:

Ensuring that the best power protection devices are in place to stop or limit the effects of imperfect power.

Loss Prevention/Risk Mitigation

TPD offers affordable solutions that eliminate transients, surges, and voltage fluctuations, accounting for 85% to 95% of all power issues!

● **Foundation: TPD Surge Protection**

Proper bonding and grounding systems, combined with surge protection with power filtering, form the essential first line of defense against electrical disturbances.

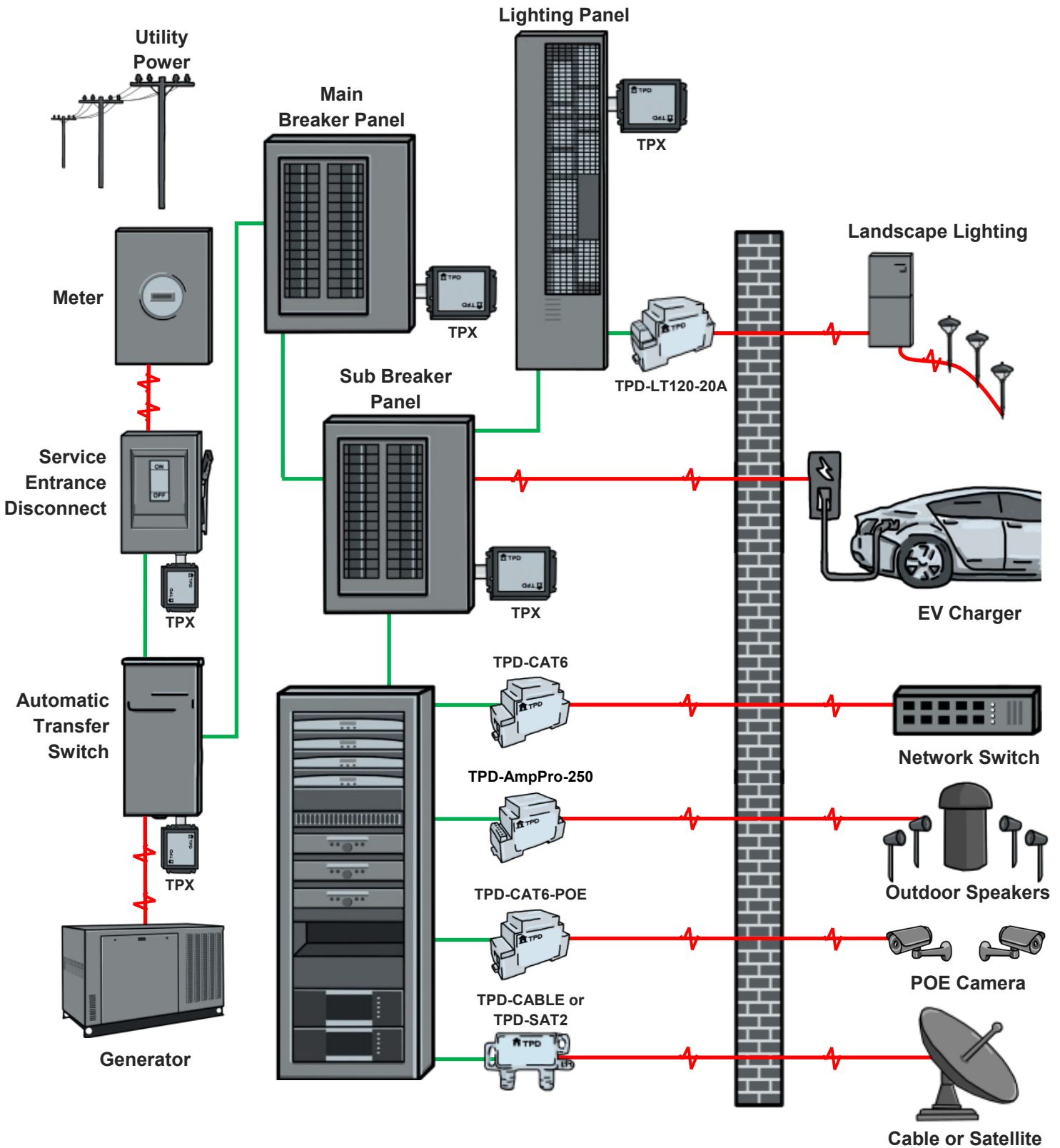
● **Advanced Protection: TPD Voltage Regulation**

The next level addresses voltage fluctuations, such as sags, swells and brownouts, by implementing voltage regulation solutions to protect sensitive electronics and maintain constant voltage.

● **Power Outage Protection: Backup Solutions**

Backup power solutions like generators, battery storage or UPS systems are essential for maintaining power during extended outages, ensuring continued operation.

Surge Protect Sample Home



Power Panels and Disconnects

TK-TTLP-1S240-FL



Service Entrance

TPX-1S240-F-100



Breaker Panels

TPX-1S240-CN



Disconnects

Transfer Switches

TPX-1S240-F



Sub Panels

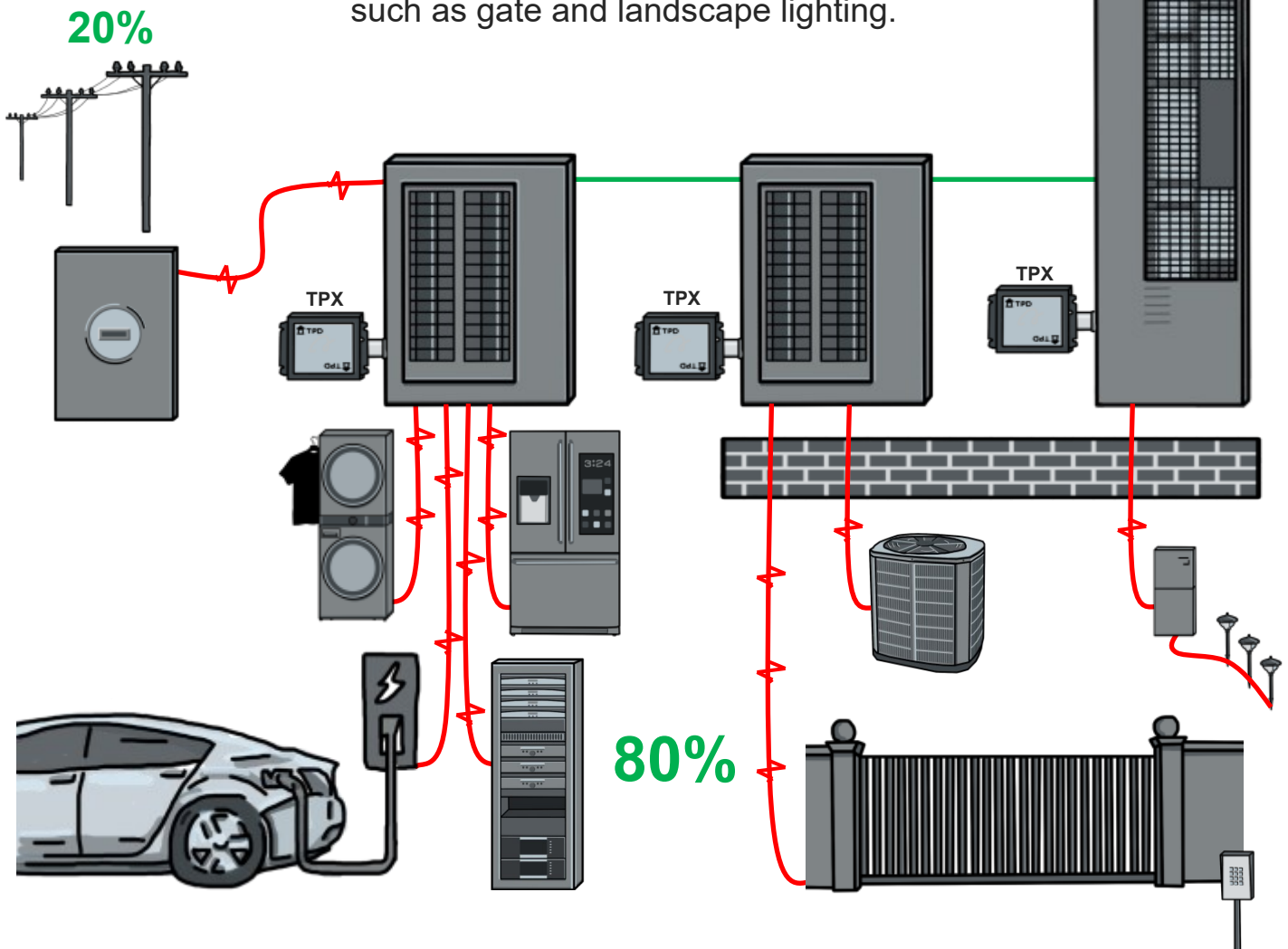
Lighting Panels

Surge Protect All Power Panels

Surge protect all power panels and lighting panels from externally and internally generated surges.

20% of damaging surges come from the utility.

80% of transient surges are generated by the electronic loads **within** the home such as appliances, heating/cooling systems, and even car chargers. Lightning can travel to breaker panels via external loads such as gate and landscape lighting.



Cable, Satellite, and Starlink

TPD-CABLE



Cable Lines

TPD-CAT6-POE



Internet Lines

TPD-SAT2

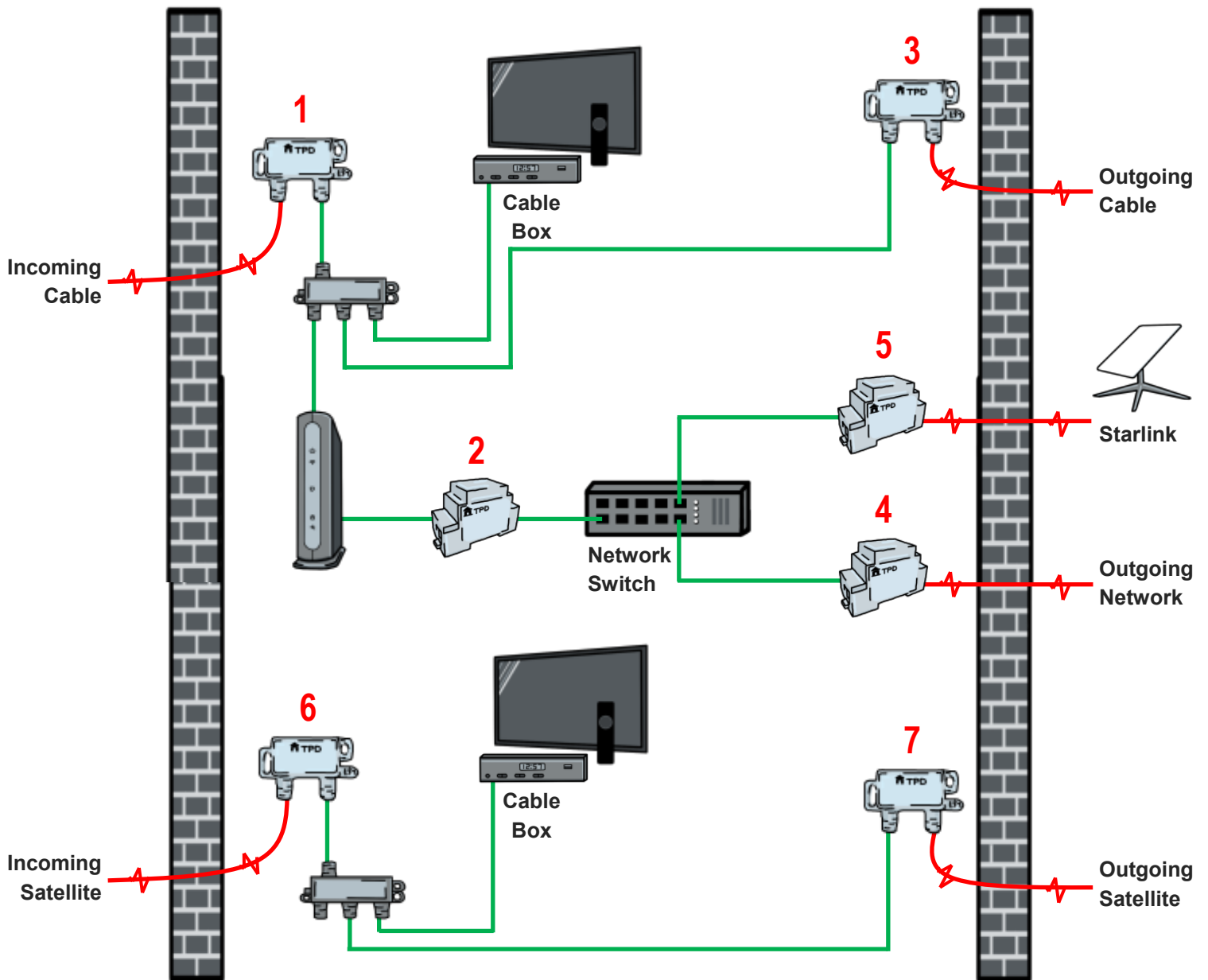


Satellite Lines

Surge Protect Cable, Satellite, and Starlink

Surge Protect:

1. Incoming Cable [TPD-CABLE](#)
2. After Cable Modem [TPD-CAT6](#)
3. Outgoing Cable [TPD-CABLE](#)
4. Outgoing Network [TPD-CAT6](#)
5. Incoming Starlink [TPD-CAT6-POE](#)
6. Incoming Satellite [TPD-SAT2](#)
7. Outgoing Satellite [TPD-SAT2](#)



Outdoor Cameras and WAPs

TPD-CAT6-POE



POE Cameras
WAP

TPD-CAM-BNC



BNC Cameras
NVR

TPD-LIT Series

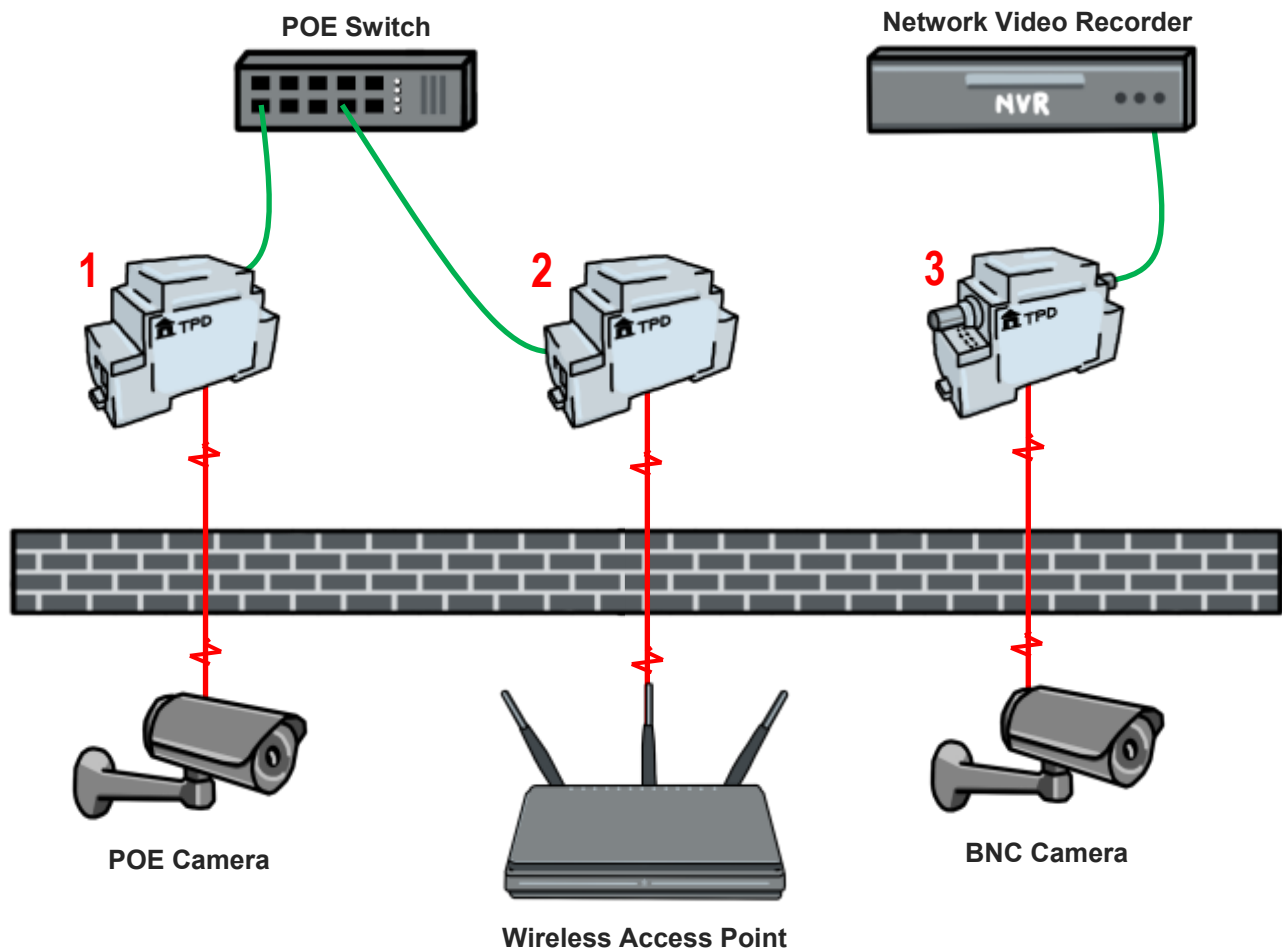


Power Supplies

Surge Protect Outdoor Cameras and Wireless Access Points

Surge Protect:

1. Outdoor POE Cameras [TPD-CAT6-POE](#)
2. Wireless Access Points [TPD-CAT6-POE](#)
3. Outdoor Cameras with BNC Connections [TPD-CAM-BNC](#)



Note: For analog cameras with F connections use [TPD-CAM-BNC-F](#)

For additional notes on grounding the surge protection, see installations instructions.
Whenever possible, isolate outdoor equipment from metal/current carrying objects.

Outdoor Speaker Pathways

TPD-AmpPro-250



250 Watt
Pathways

TPD-AmpPro-1000



1000 Watt
Pathways

TPD-AmpPro-4000

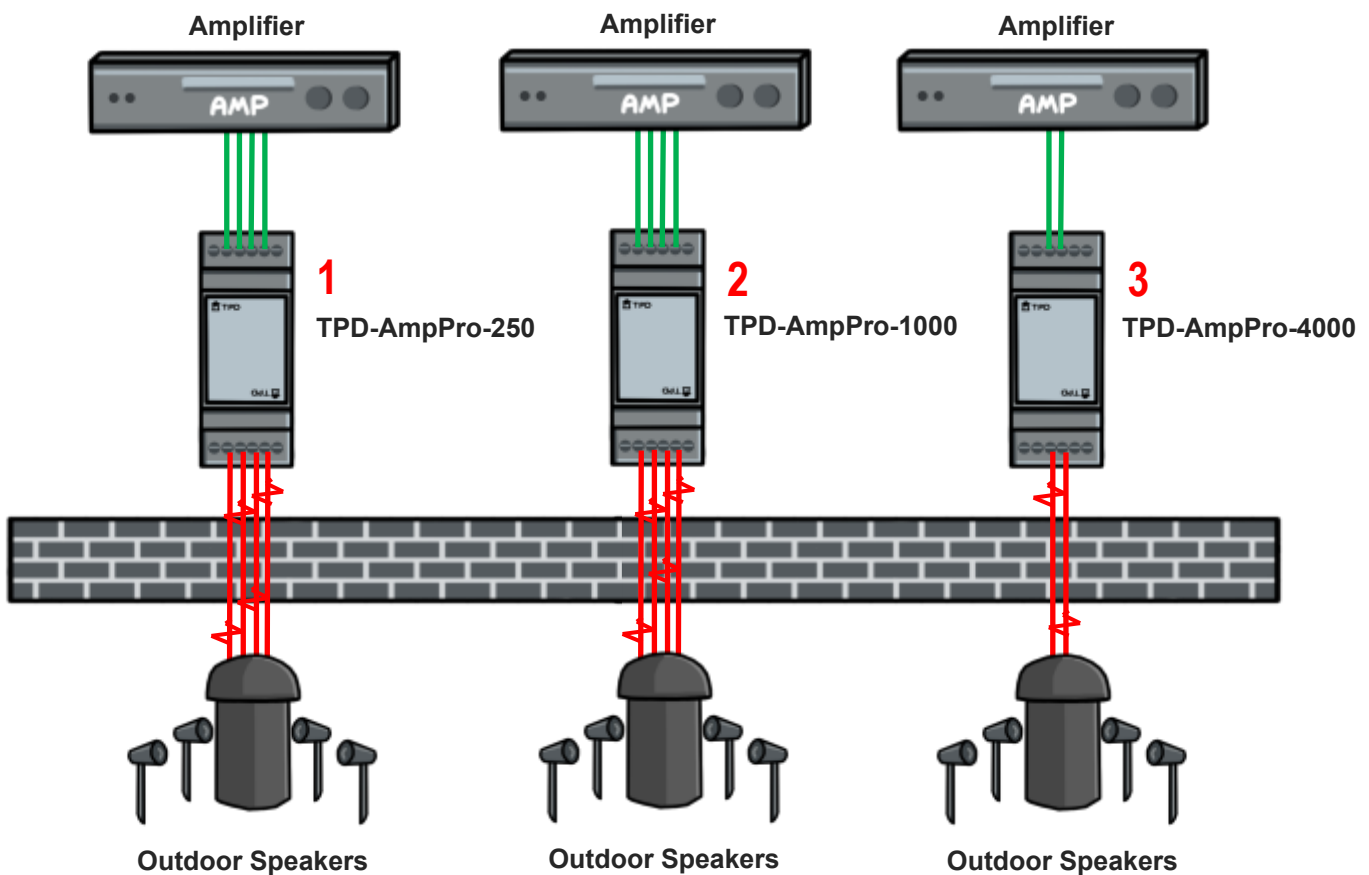


4000 Watt
Pathways

Surge Protect Outdoor Speaker Pathways

Surge Protect:

1. Outdoor Speakers 250 Watt [TPD-AmpPro-250](#)
2. Outdoor Speakers 1000 Watt [TPD-AmpPro-1000](#)
3. Outdoor Speakers 4000 Watt [TPD-AmpPro-4000](#)



For additional notes on grounding surge protection, see installation instructions.
Whenever possible, isolate outdoor equipment from metal/current carrying objects.

Lighting Systems

TPX-1S240-F-100



Lighting Panels

TPD-LT120-20A



Landscape Lighting Pathways

TPD-LIT Series



Programmable Links

TPD-CAT6

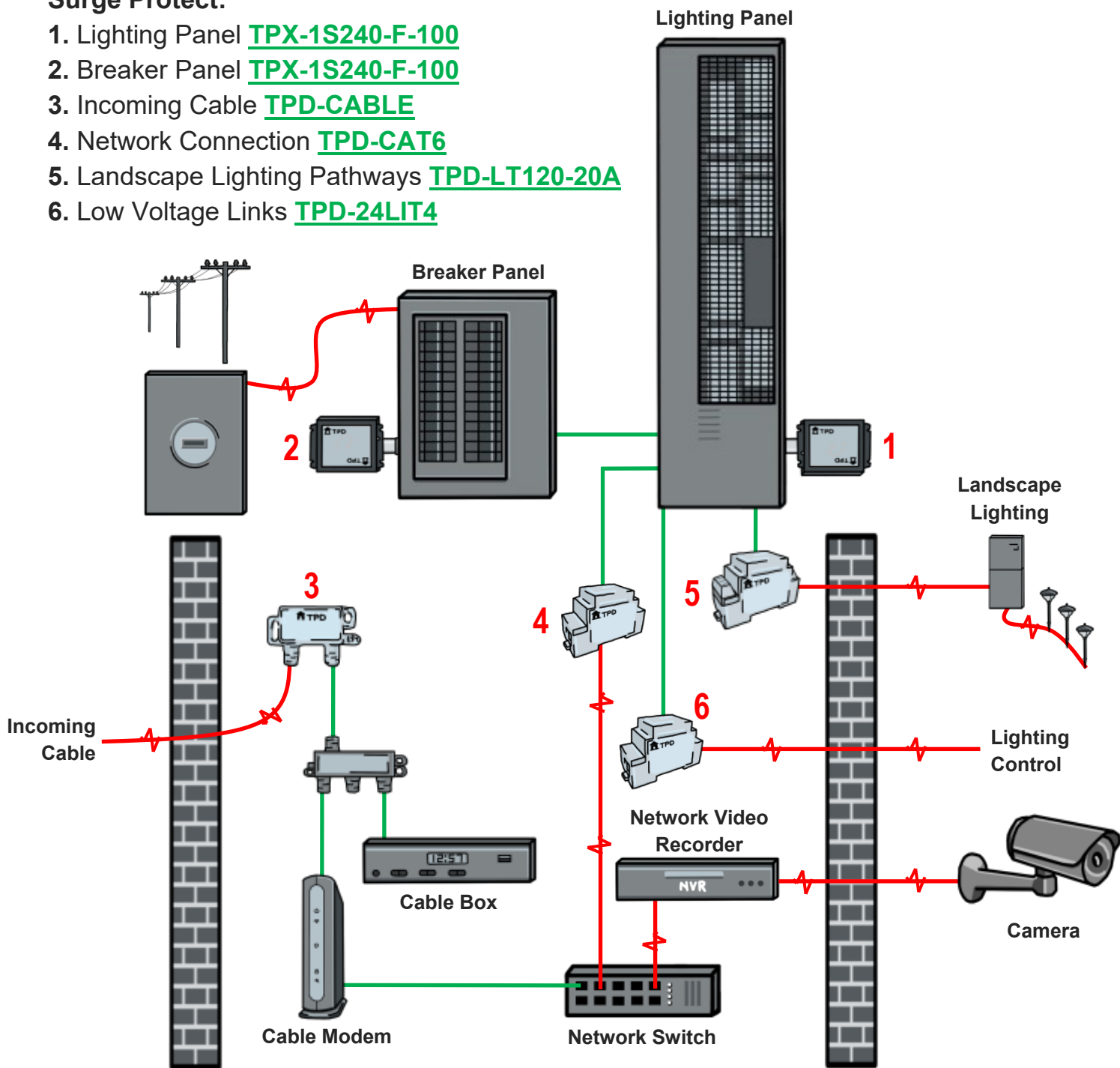


Network Connection

Surge Protect Lighting Systems

Surge Protect:

1. Lighting Panel [TPX-1S240-F-100](#)
2. Breaker Panel [TPX-1S240-F-100](#)
3. Incoming Cable [TPD-CABLE](#)
4. Network Connection [TPD-CAT6](#)
5. Landscape Lighting Pathways [TPD-LT120-20A](#)
6. Low Voltage Links [TPD-24LIT4](#)



Note: Do not depend on other trades to protect your lighting system!
Protection for your lighting systems starts at the lighting system.

Pool and Irrigation Equipment

TPX-1S240-F



Power Panels
Disconnects

TPD-SLP Series



Pool and Irrigation
Communication

TPX-CAT6-POE



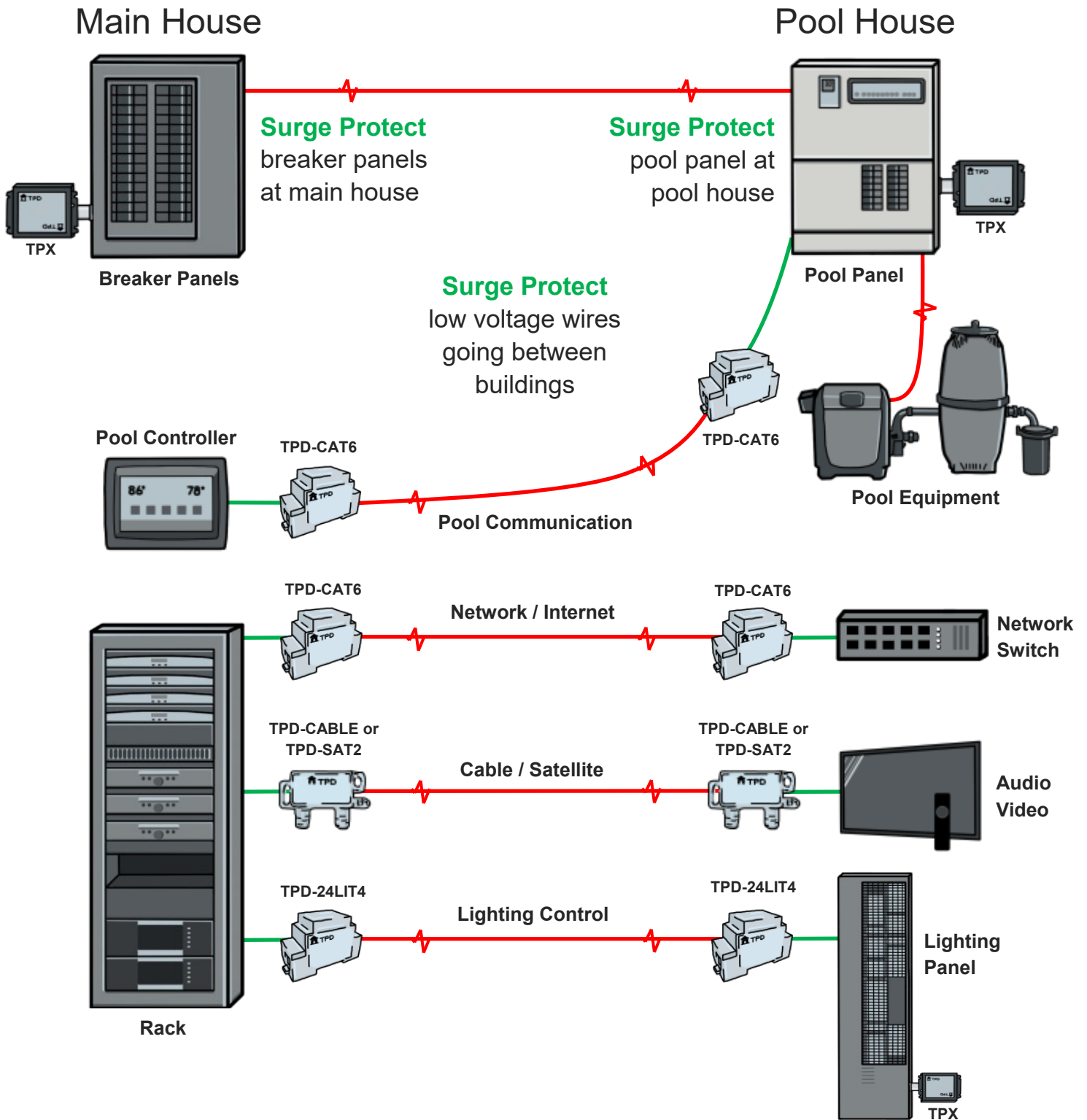
POE Camera
Pathways

TPD-DB9



DB9 Pool Controls

Surge Protect Pool House Equipment



Gate Electronics

TPX-1S240-F-100



Power Panels
Disconnects

TPD-LT120-20A



120V Circuit
20A Max

TPD-CAT6-POE



POE Camera
Pathways

TPD-CAT6



Network
Communication

TPD-SLP Series

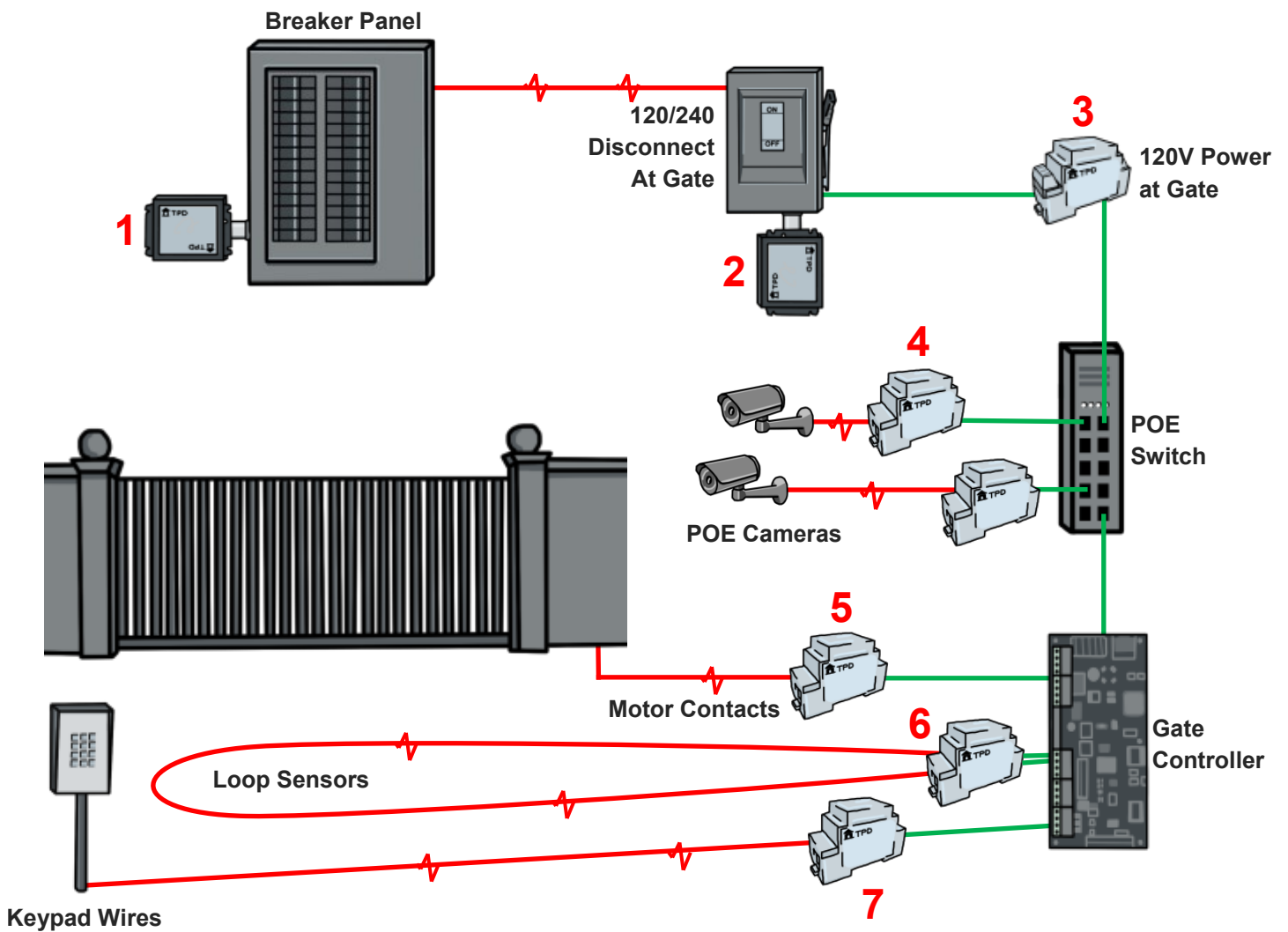


Loop Sensors
Keypad Wires
Motor Contacts

Surge Protect Gate Electronics

Surge Protect:

1. Breaker Panel [TPX-1S240-F-100](#)
2. Disconnect At Gate [TPX-1S240-F-100](#)
3. 120V Power At Gate [TPD-LT120-20A](#)
4. Outdoor POE Cameras [TPD-10SLP6](#)
5. Motor Contacts [TPD-10SLP6](#)
6. Loop Sensors [TPD-10SLP6](#)
7. Keypad Wires [TPD-10SLP6](#)



Generators and Automatic Transfer Switches

TK-TTLP-1S240-FL



Service Entrance

TPX-1S240-F-100



Breaker Panels

TPX-1S240-CN



Disconnects
Transfer Switches

TPX-1S240-F

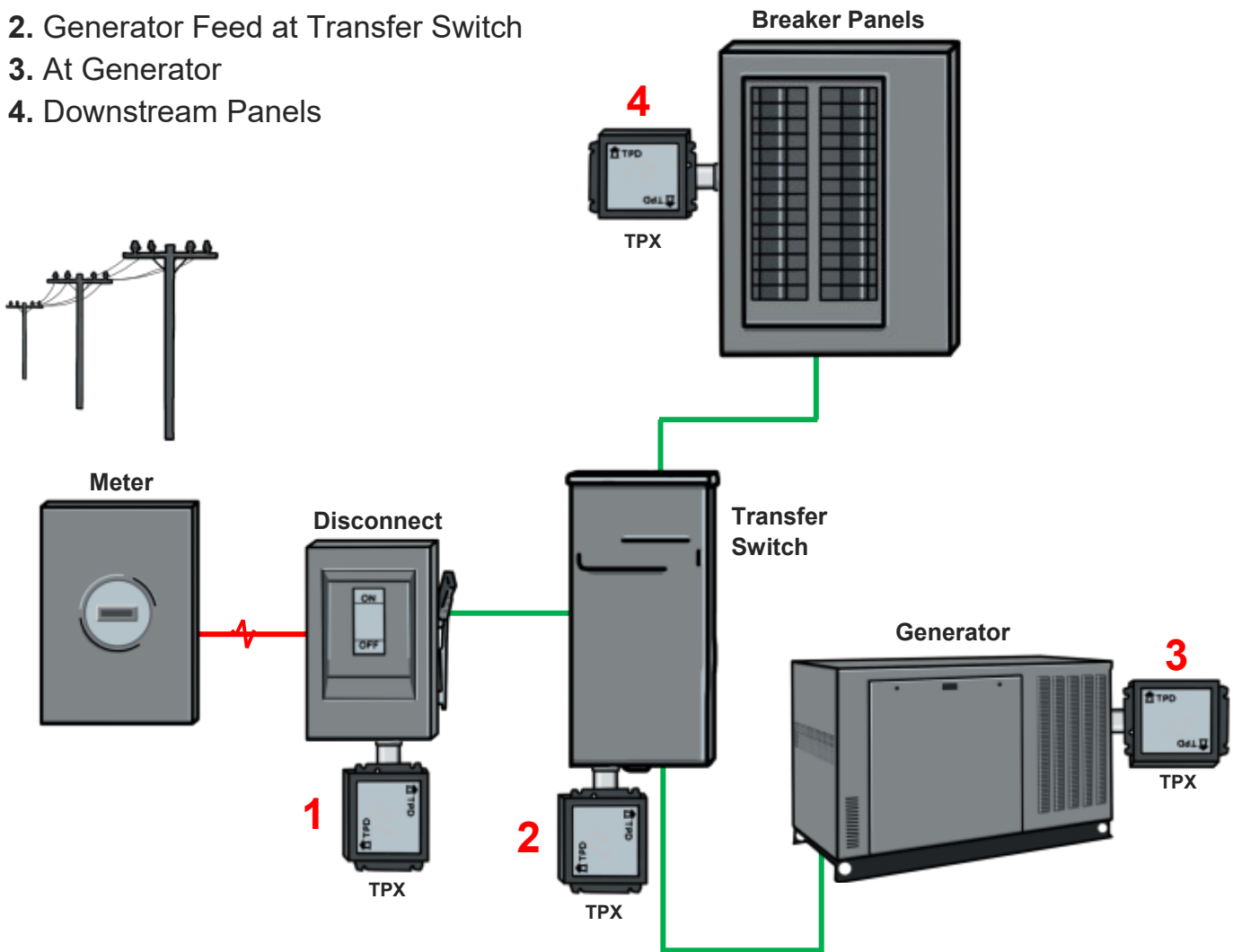


Sub Panels
Lighting Panels

Surge Protect Generators and Transfer Switches

Use the **TPX Series** to Surge Protect:

1. Service Entrance Disconnect
2. Generator Feed at Transfer Switch
3. At Generator
4. Downstream Panels



Note: Additional surge protection can be placed on the output of the transfer switch. This is done when the transfer switch is placed outside and is at risk of surges from lightning.

HVAC Systems

TPD-SLP Series



Low Voltage
Communication

TPX-1S240-F-100



Breaker Panels

TPX-1S240-CN

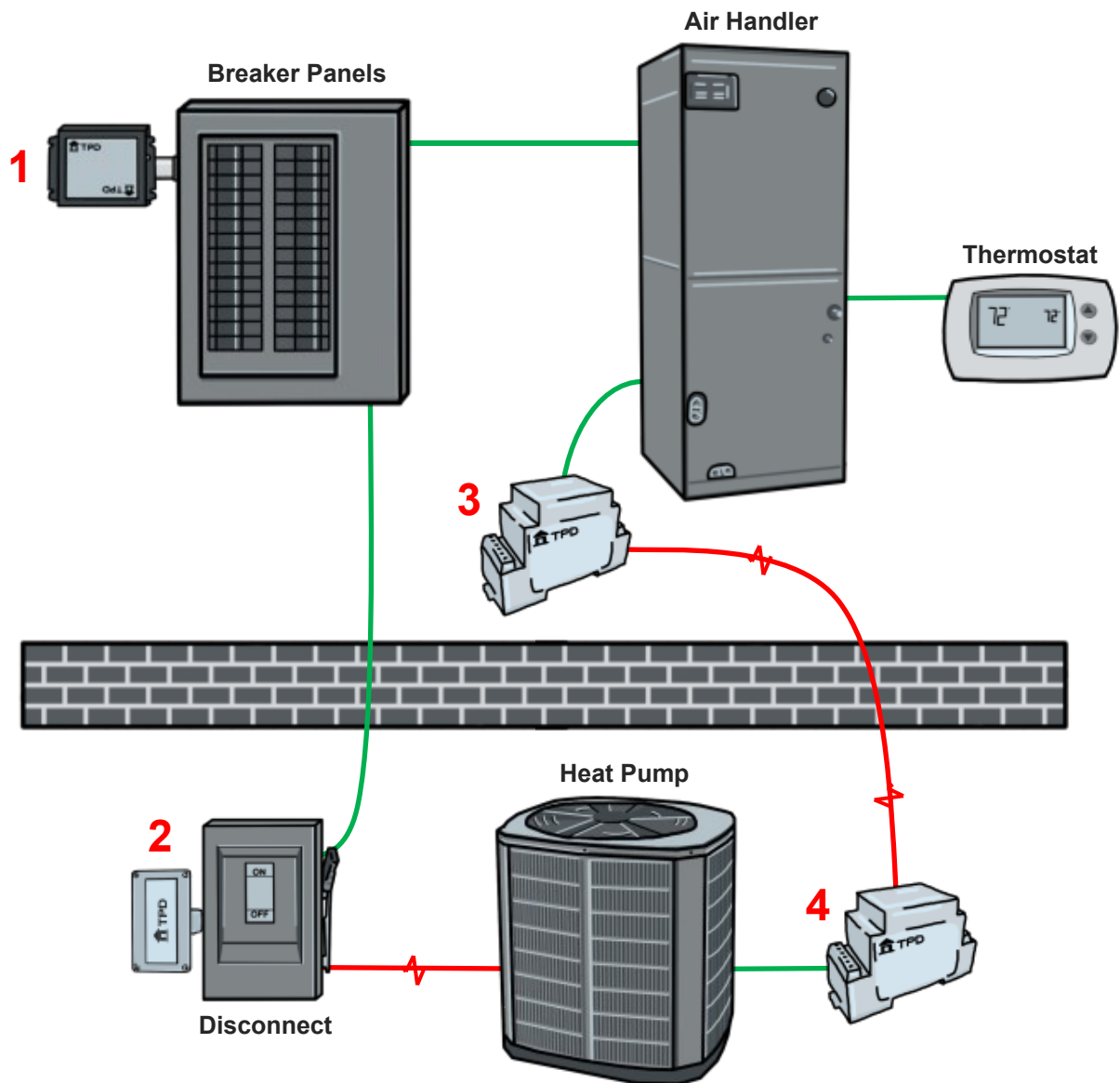


Disconnects

Surge Protect HVAC Systems

Surge Protect:

1. Breaker Panels Powering HVAC Equipment [TPX-1S240-F-100](#)
2. Disconnect Powering Outside Heat Pump [TPX-1S240-CN](#)
3. Low Voltage Communication at Air Handler [TPD-24SLP6](#)
4. Low Voltage Communication at Heat Pump [TPD-24SLP6](#)



Note: Surge protect low voltage communication coming from outdoor heat pump at or before the air handler. This will protect thermostat and home automation systems from surge traveling in on low voltage lines.

Access Control Systems

TPX-1S240-F



Power Panels
Disconnects

TPD-LT120-20A



120V Circuit
20A Max

TPD-CAT6-POE



POE Camera
Pathways

TPD-CAT6



Network
Communication

TPD-SLP Series

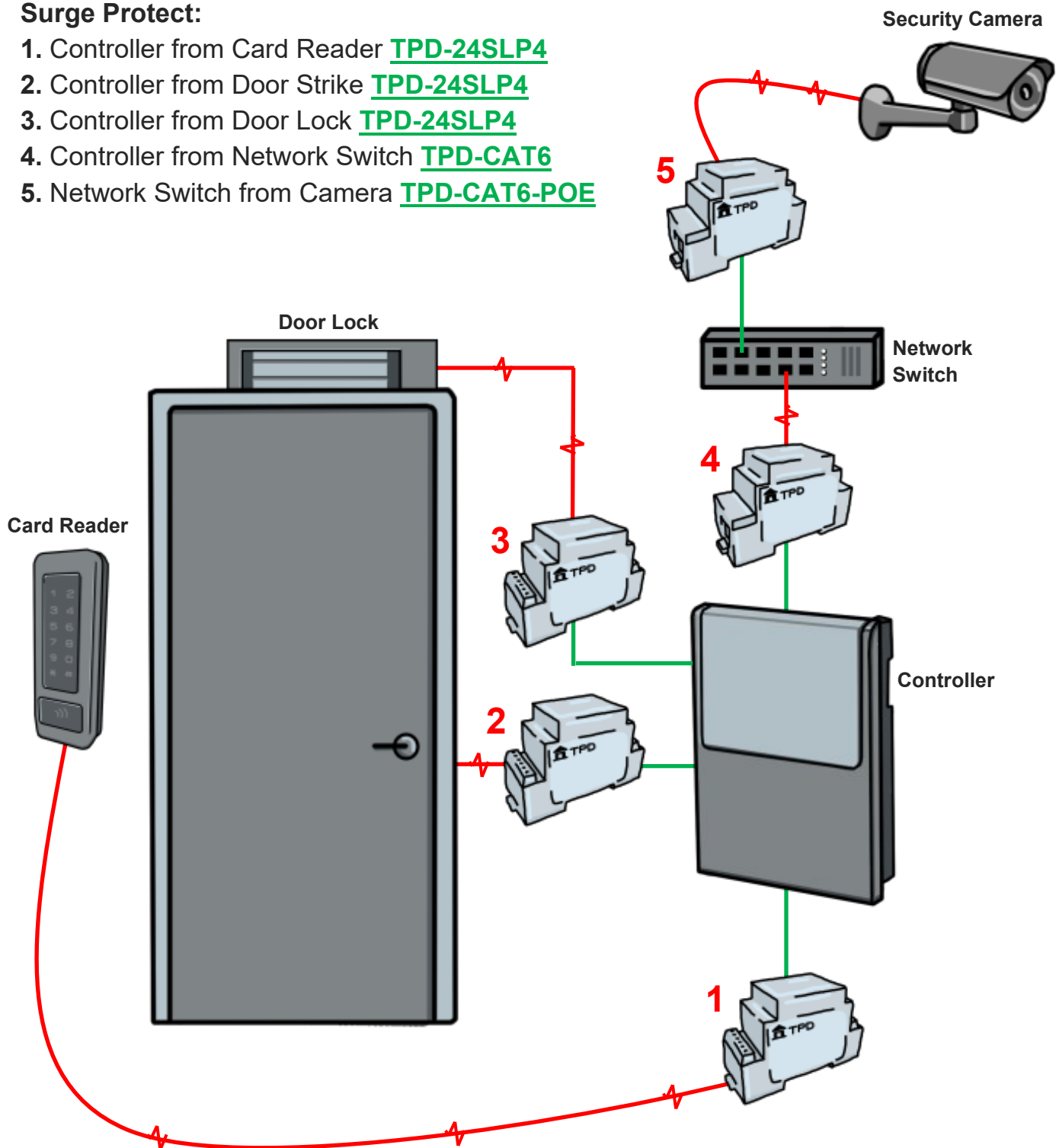


Loop Sensors
Keypad Wires
Motor Contacts

Surge Protect Access Control Systems

Surge Protect:

1. Controller from Card Reader [TPD-24SLP4](#)
2. Controller from Door Strike [TPD-24SLP4](#)
3. Controller from Door Lock [TPD-24SLP4](#)
4. Controller from Network Switch [TPD-CAT6](#)
5. Network Switch from Camera [TPD-CAT6-POE](#)



Modems, Routers, and Switches

TPD-CAT6-POE



WAP Pathways

TPD-CAT6



Network Protection

TPD-CABLE

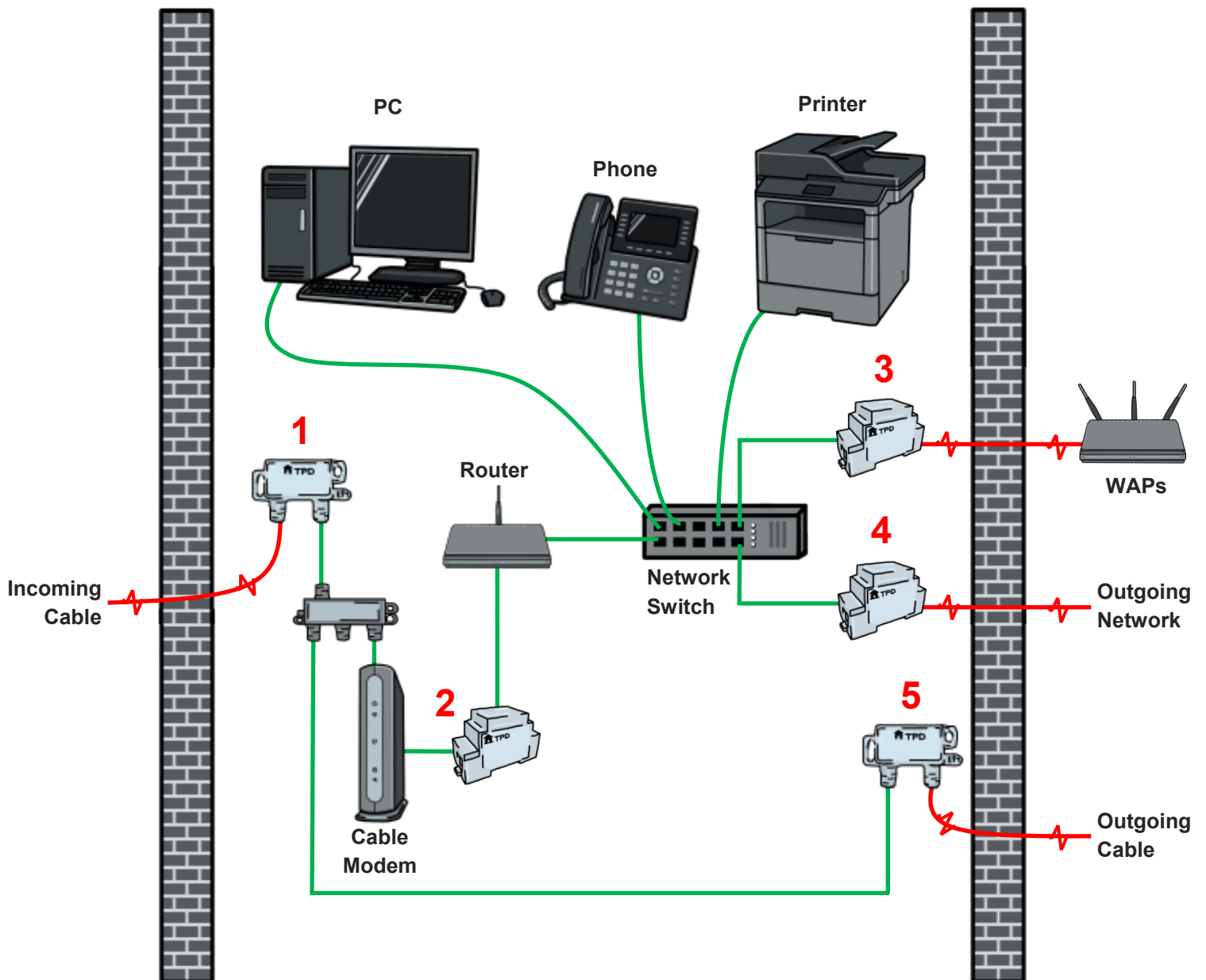


Cable Protection

Surge Protect Modems, Routers, and Switches

Surge Protect:

1. Incoming Cable [TPD-CABLE](#)
2. After Cable Modem [TPD-CAT6](#)
3. Outgoing WAP [TPD-CAT6-POE](#)
4. Outgoing Network [TPD-CAT6](#)
5. Outgoing Cable [TPD-CABLE](#)



Voltage Regulation and Power Conditioning

TPD-AVR-120



120V, 15, 20, 30,
50, and 80 Amp
Options

TPD-AVR-240



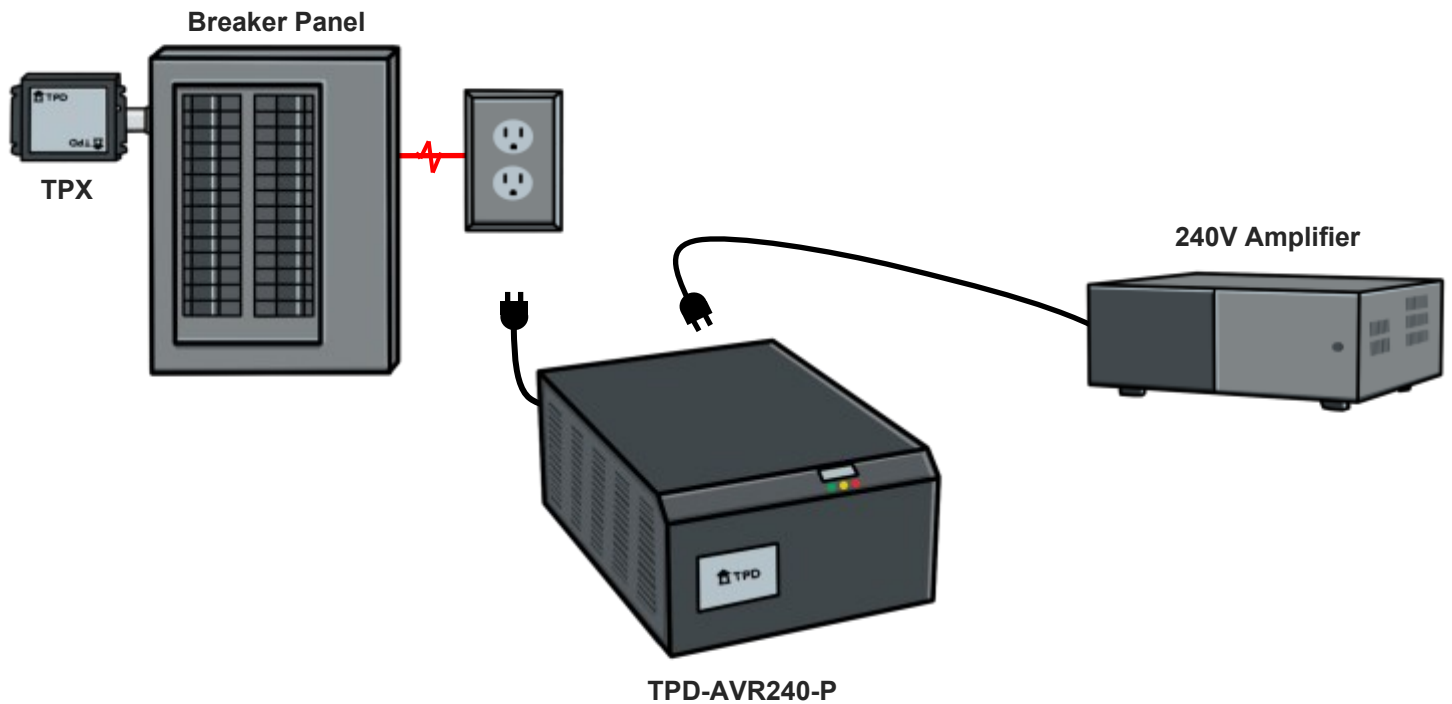
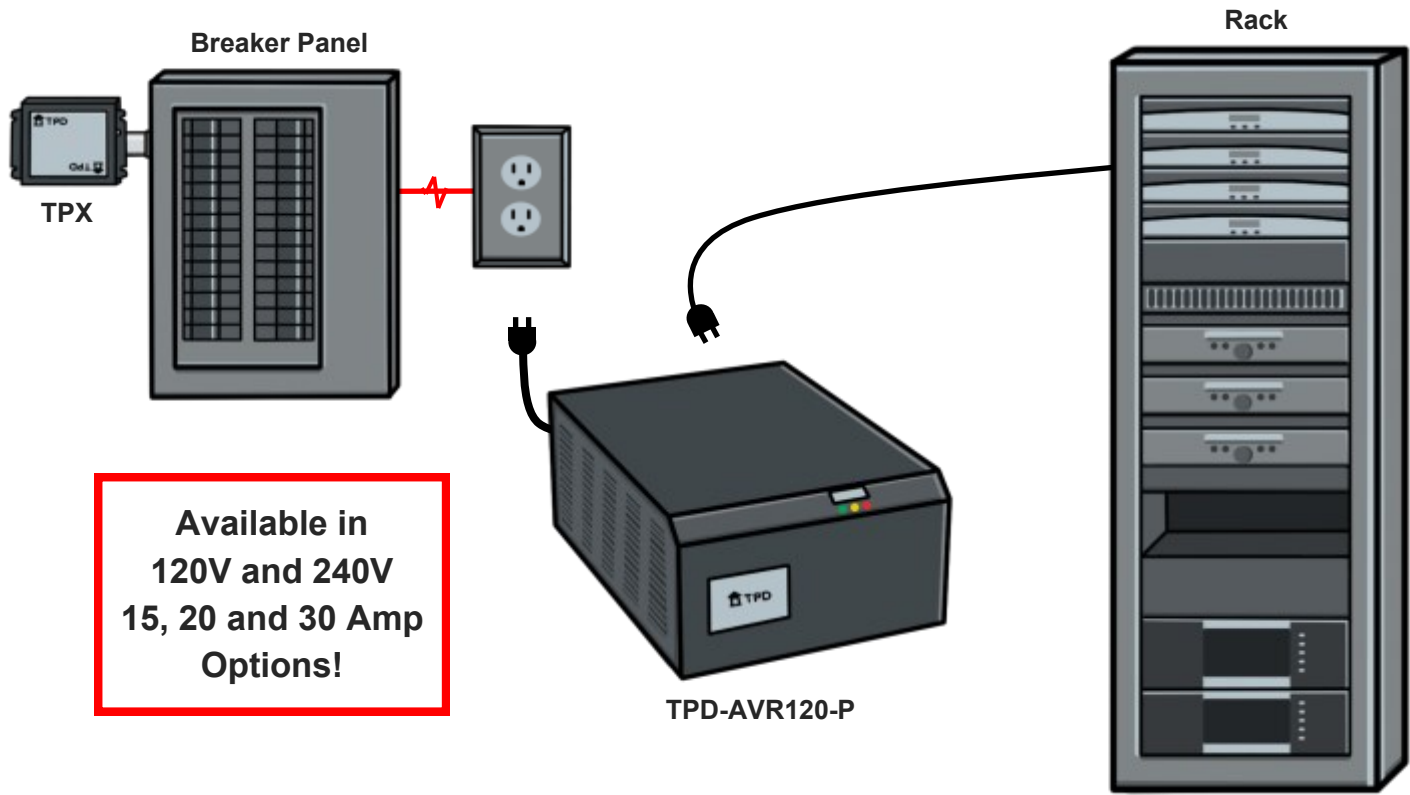
240V, 15, 20, 30,
50, and 100 Amp
Options

TPD-AVR-1S240

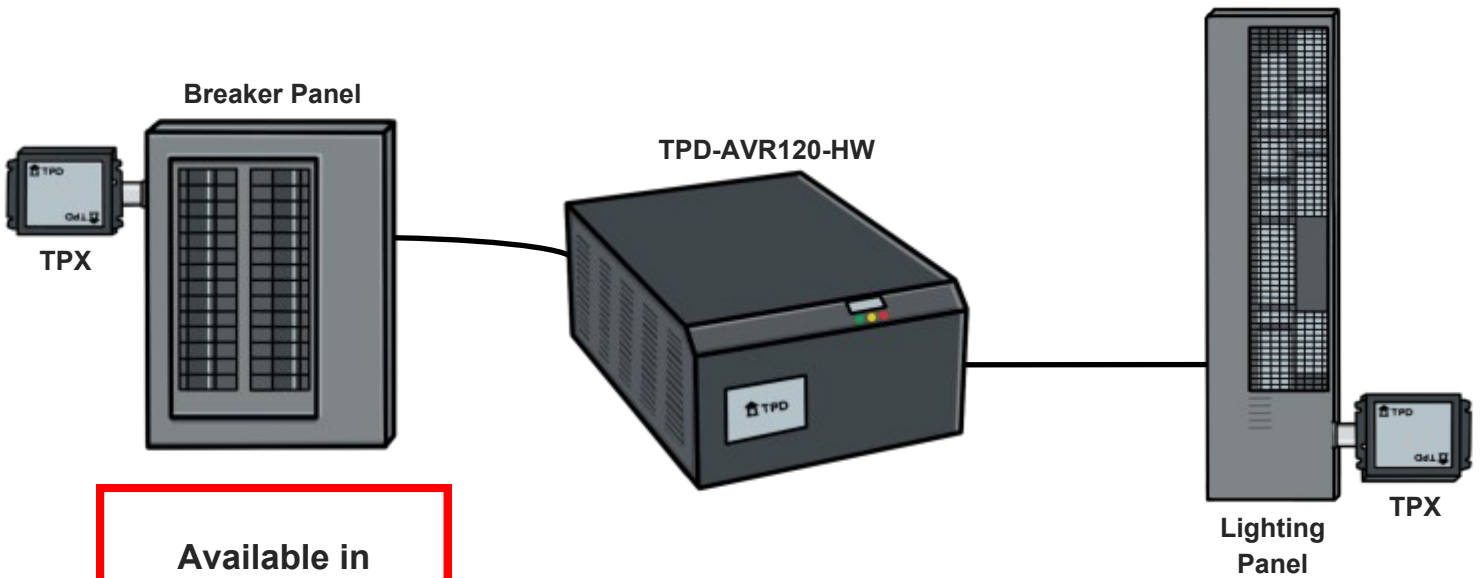


120/240V, 80,
100, 150, 200
Amp Options

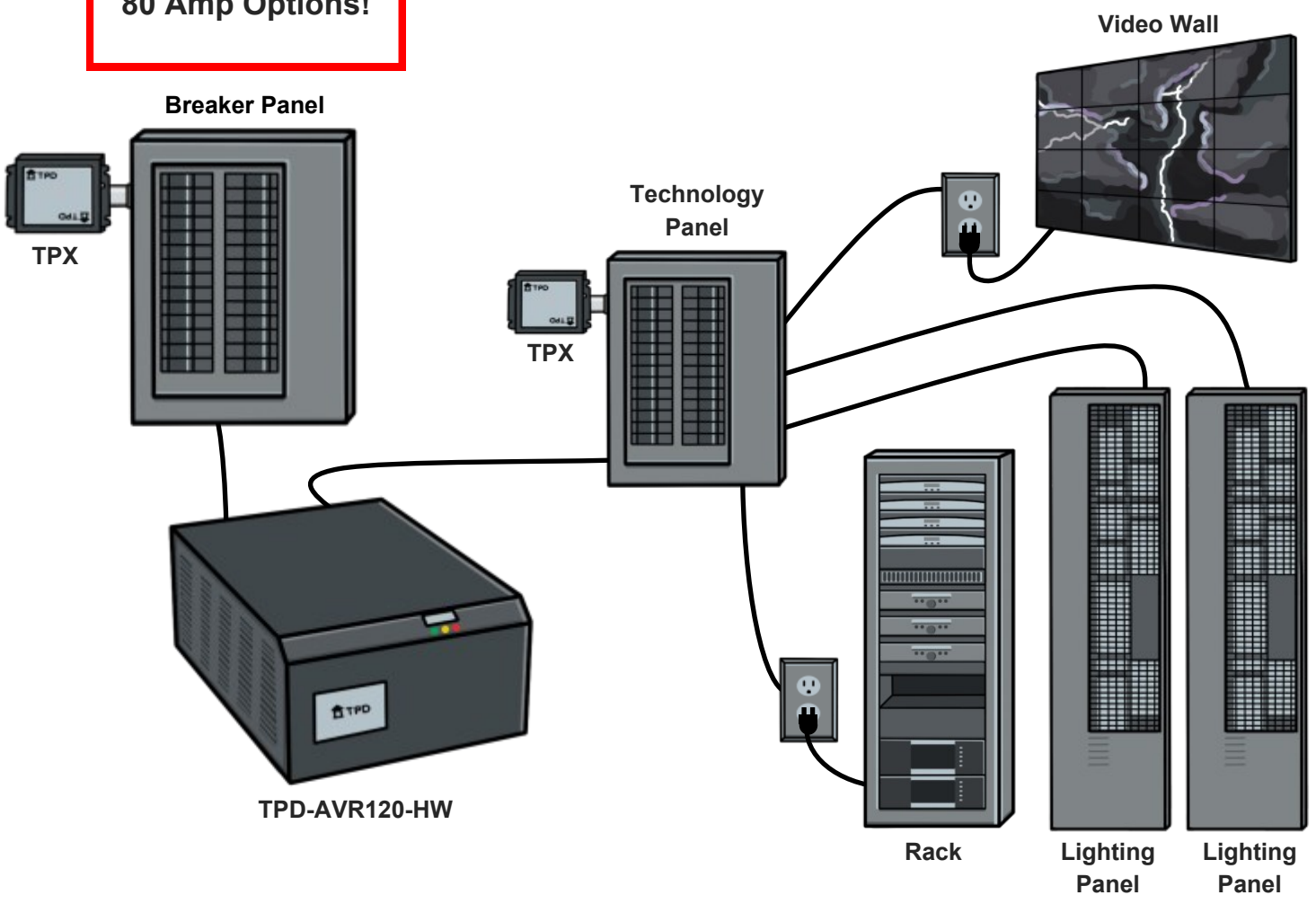
Plug In Voltage Regulation



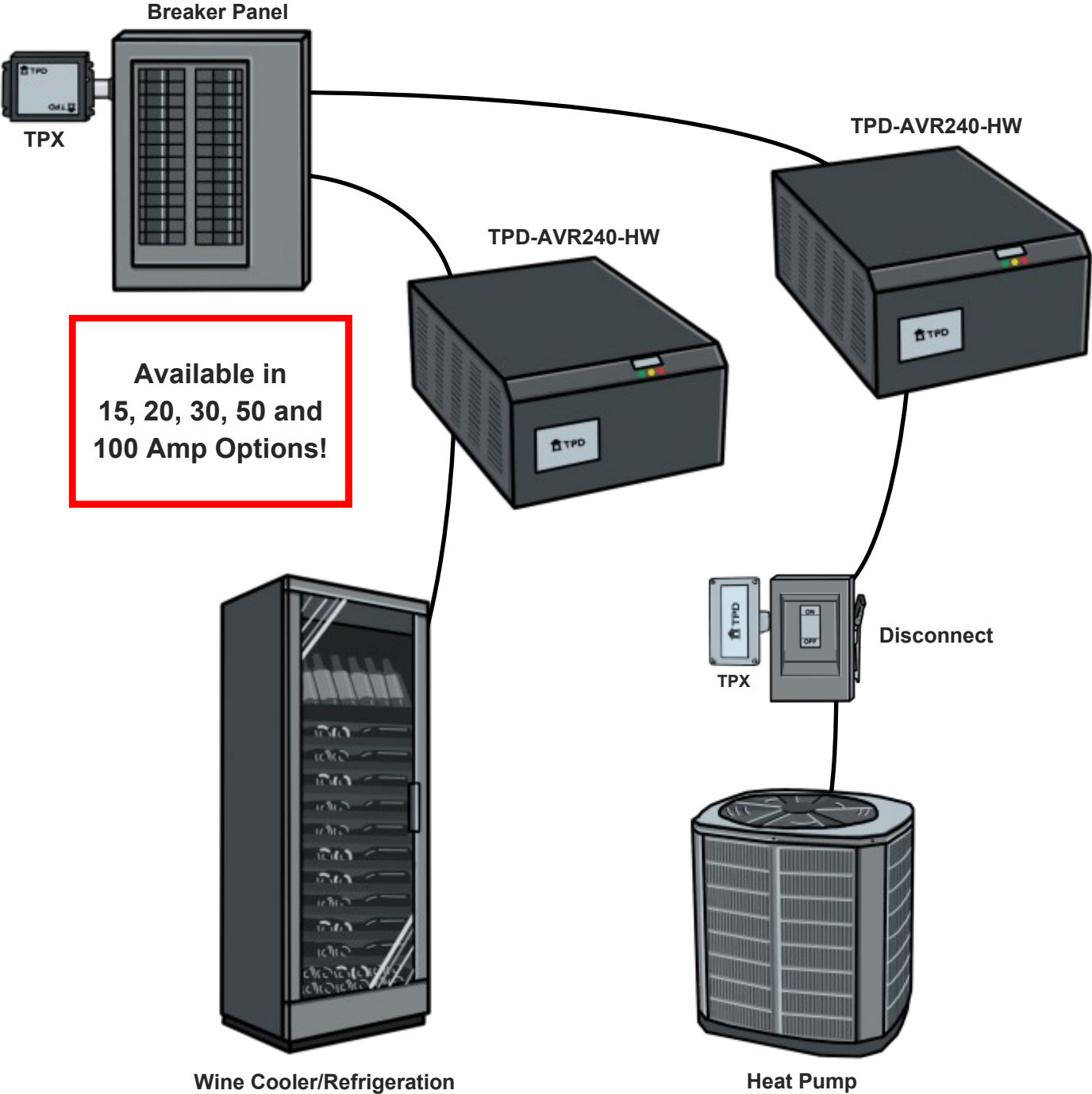
120V Hardwired Voltage Regulation



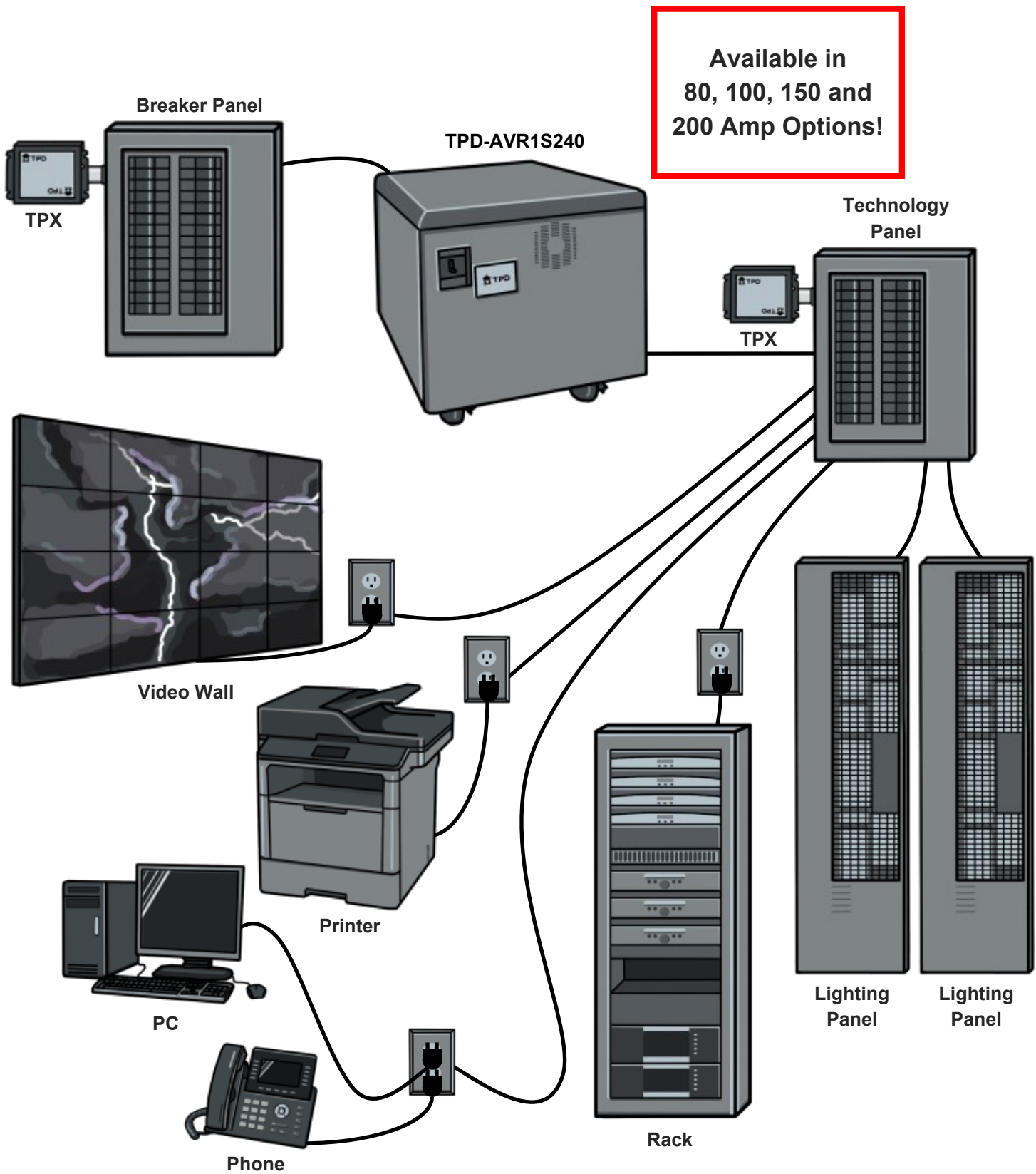
Available in
15, 20, 30, 50 and
80 Amp Options!



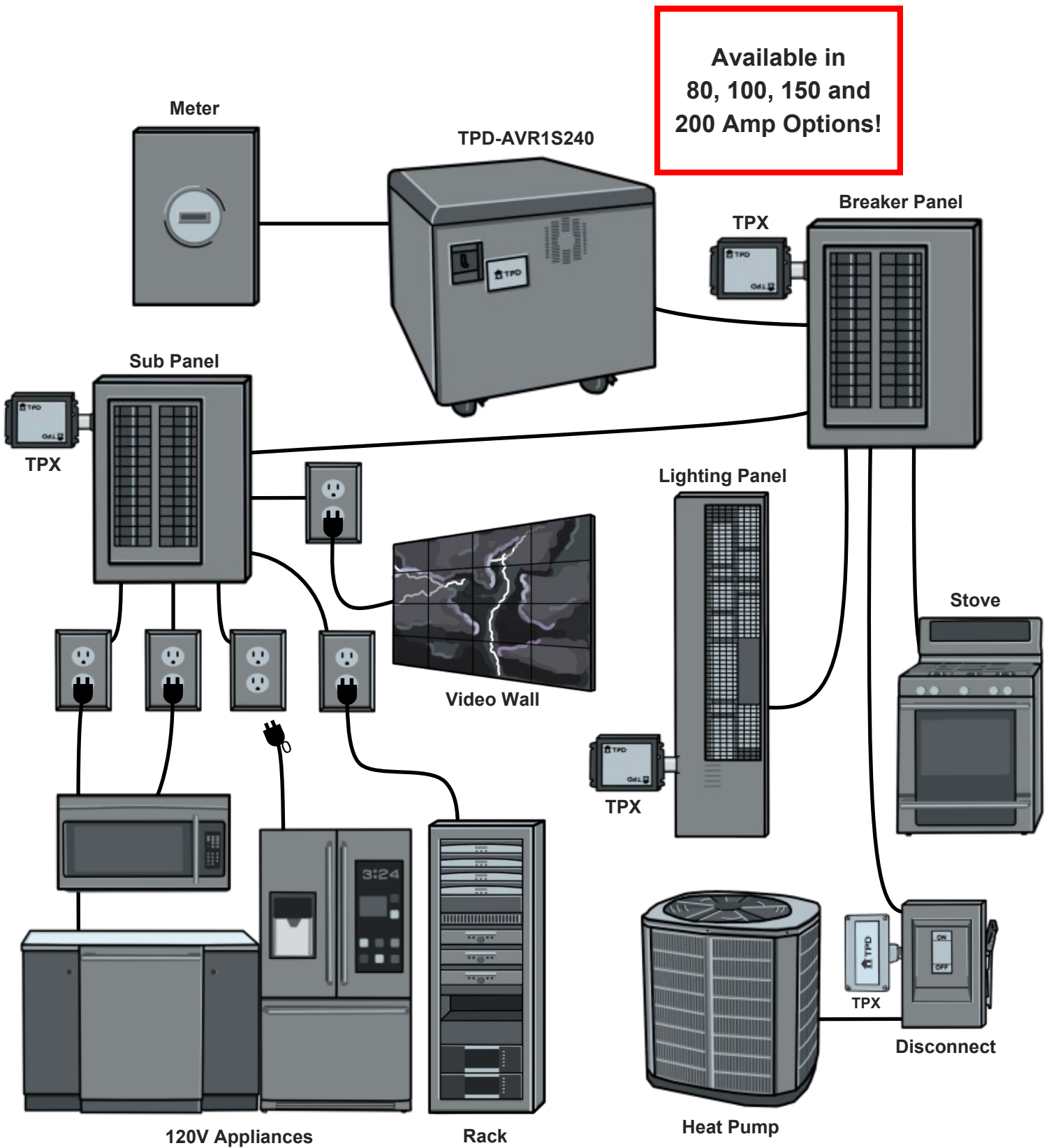
240V Hardwired Voltage Regulation



120/240V Voltage Regulation



120/240V Whole Home Voltage Regulation



Available in
80, 100, 150 and
200 Amp Options!

TPD STARTING LINEUP

Breaker Panels
[TK-TTLP-1S240-FL](#)

Lighting Panels
[TPX-1S240-F-100](#)

Generator & ATS
[TPX-1S240-F](#)

Disconnects
[TPX-1S240-CN](#)

Landscape Lighting
[TPD-LT120-20A](#)

Cable TV/Internet
[TPD-CABLE](#)

Satellite Cable
[TPD-SAT2](#)

Network
[TPD-CAT6](#)

Outdoor POE Cameras
[TPD-CAT6-POE](#)

Outdoor Speakers
[TPD-AmpPro](#)

THE RESERVES

Starlink
[TPD-CAT6-POE](#)

Lighting Controls
[TPD-24LIT4](#)

Pool Controls
[TPD-24SLP4](#)

Gate Motor Contacts
[TPD-10SLP6](#)

Gate Loop Sensors
[TPD-10SLP6](#)

Gate Keypad Wires
[TPD-10SLP6](#)

Thermostat Wires
[TPD-24SLP6](#)

Outdoor BNC Cameras
[TPD-CAM-BNC](#)



Call Technical Support at 717-436-2856 or email info@tpdsurge.com
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