

ABB surge protective devices



What is a surge protective device?

- A surge protector acts as a shield to deflect harmful surges to ground, away from critical equipment.

Why is surge protection needed?

- Prevents catastrophic damage that can cause long term downtime.
- Filters out “mini-surges” that shorten equipment life.

Determining if surge protection is needed:

1. Do you get frequent lightning storms?
2. Does your power flicker during thunderstorms?
3. Does equipment in your facility wear out prematurely?
4. Do you have vital equipment that could take days to repair if damaged by an electrical surge?

Common misconceptions

1. “We have not had damage from a surge”.
 - It’s not **IF**, it’s **WHEN**.
 - Surge protection is insurance against a future threat.
2. “Our equipment is plugged into surge strips”.
 - Surge strips are designed for neither large events nor long term operation.
3. “It’s expensive”.
 - How much would the repair expense of critical equipment cost?
 - How long would it take to repair and what would that downtime cost you?

Where is surge protection installed?

1. Service entrance — The point of entry for utility power. A unit installed here protects the facility from a large external event, such as lightning or grid switching.
2. Mid-level distribution — Closer to the critical piece of equipment. A unit installed here protects from internally generated surges and isolates the critical equipment from faults.
3. Panel board distribution — Installing surge protection on this equipment will extend its longevity by cleaning up mini surges that reduce equipment life.

What is the typical equipment?

1. Service entrance
 - Typical voltage is 480/277 V AC
 - Recommended model
 - OVRHSP 400 kA–240 kA
2. Mid-level distribution
 - Typical voltage is 208/120 V AC
 - Recommended models
 - OVRHSP 240 kA–120 kA
3. Panel board distribution
 - Voltage varies
 - Recommended models
 - OVRHSP 120 kA–60 kA
 - OVRHTE 80 kA–25 kA

How is it installed?

An electrician can easily hard wire surge protection to the appropriate switchgear. The installation takes between 1–2 hours.

Warranty

- 3–10 years (model-dependent) warranty
- Replacement even if unit sacrifices itself because of a surge event

Industry codes and specifications

ABB surge protection devices meet or exceed applicable industry specifications or codes which are detailed in the appropriate ABB product literature.



Quick reference guide to product features

| | OVRHSP | OVRHTE | OVRHS3U OVRHT3B OVRHT3C | OVRHLD | DIN Rail |
|----------------------------|---|--|---|--|---|
| SPD Type | Type 1 | Type 2 | Model dependent | Type 1 | Type 4 for Type 2 locations |
| Regulatory | <ul style="list-style-type: none"> • ETL – 60, 80, 100 kA models only • UL – 120, 160, 200, 240, 300, 400 kA models only • CE – All units | <ul style="list-style-type: none"> • UL | <ul style="list-style-type: none"> • UL | <ul style="list-style-type: none"> • ETL | <ul style="list-style-type: none"> • UL • CE |
| Warranty | <ul style="list-style-type: none"> • 10 years (optional 15 years) | <ul style="list-style-type: none"> • 5 years | <ul style="list-style-type: none"> • 3 years | <ul style="list-style-type: none"> • 3 years | <ul style="list-style-type: none"> • Model dependent |
| Budget | \$\$\$ | \$\$ | \$ | \$ | \$ |
| Features | <ul style="list-style-type: none"> • Overcurrent fusing • EMI filter • Surge counter • LED(s) • Dry relay contacts • RoHS • Audible alarm with alarm silence • NEMA 4 | <ul style="list-style-type: none"> • EMI filter • LED(s) • Dry relay contacts – model dependent • RoHS • NEMA 4 | <ul style="list-style-type: none"> • Thermal fusing • Overcurrent fusing • LED(s) • Dry relay contacts – OVRHS3U only • RoHS | <ul style="list-style-type: none"> • Thermal fusing • Overcurrent fusing • LED(s) • RoHS | <ul style="list-style-type: none"> • Modular design • Dry relay contacts – model dependent • Failure indicator • RoHS |
| Typical application | <ul style="list-style-type: none"> • Service entrance • Mid-level distribution • Panelboard distribution | <ul style="list-style-type: none"> • Mid-level distribution • Panelboard distribution | <ul style="list-style-type: none"> • Mid-level distribution • Panelboard distribution | <ul style="list-style-type: none"> • Panelboard distribution • Internally mounted solution | <ul style="list-style-type: none"> • Panelboard distribution • Internally mounted solution |



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