

## 4 Tips to Prevent Mini-Split Failure BEFORE It Happens



There are many potential sources of mini-split failure. It could be a clogged drain line, a refrigerant leak, or even an environmental issue. Many of these issues are often impossible to predict, or even prevent, until it is too late. The good news is, the most common cause of mini-split failure is entirely preventable.



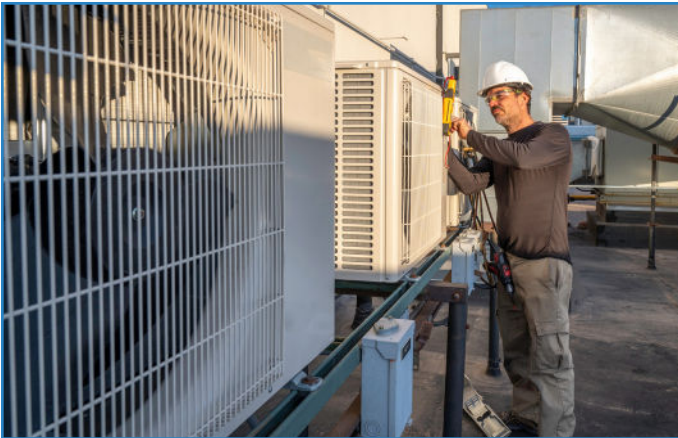
Mini-split failures occur primarily due to voltage fluctuations and power surges, resulting in the eventual or sudden breakdown of the system's electrical control

board. When customers discover this failure, they are quick to blame the installer. Follow these tips to protect your customers' HVAC investment and prevent mini-split failure caused by damaging power events.

**1. Protect the Home's Power** – A power surge can occur at the electrical substation, at the pole, or even the service entrance. What's more, they can be caused by direct and indirect lightning strikes, utility power switching, and internal power draws. Therefore, protecting a home from damaging electrical events requires a layered approach that will help combat power surges originating from both internal and external sources. Adding appropriate surge protective devices (SPDs) at the electrical service entrance is the first step to protect any residence from external sources of electrical surges and spikes. Type 1 and Type 2 SPDs are designed for this purpose and should be recommended to any homeowner looking to protect their electrical devices – including mini-splits.

**2. Apply Surge Protection at the Device Level** – One damaging power surge has the potential to render a mini-split system useless within seconds, resulting in either whole or partial system repair. In the worst-case scenario, surge damage requires entire system replacement, making simple power disruptions an expensive risk. Applying surge protection directly to the mini-split prevents damage to the system's electrical control board caused by transient surges and spikes. HVAC installers offering surge protection solutions to their customers also position themselves as a trusted partner within the industry and should be a part of any comprehensive HVAC system proposal.





**3. Ensure Proper Voltage** – Power surges are not the only power-related risk to mini-splits. Harmful under-voltage and over-voltage events can also damage the sensitive electronic components found within inverter mini-splits and HVAC equipment. Intelligent voltage monitoring solutions are designed to protect against such events by effectively monitoring both legs of power to ensure the system functions under proper voltage conditions. Think of these

solutions as a safety switch that keeps power from reaching the mini-split unless it is within the specified voltage range. When installed directly between the safety disconnect or circuit-breaker and the mini-split itself, intelligent voltage monitoring solutions effectively protect against damaging under-voltage and over-voltage events.

**4. Consider a Secured Backup Power Generator** – When mini-split failure is caused by the loss of utility power, a backup generator can keep the system and other electrical devices operating during an unexpected power outage. However, like a mini-split, backup generators are made up of complex components that similarly require surge protection to ensure proper function. For example, an automatic transfer switch (ATS) automatically engages the backup when an outage is detected. If an ATS suffers damage from a power surge in any given direction, the ATS may be unable to perform its power transfer functions, causing the connected mini-split or HVAC system to experience downtime if not manually rectified. An SPD is therefore the ideal solution for protecting an ATS from damage caused by power surges and spikes.

The tips and best practices outlined above are a great place to start when it comes to preventing mini-split failure and associated downtime while building customer confidence. For the ultimate mini-split protection solution, look no further than the [DITEK DTK-KG2](#) Intelligent Voltage Monitoring solution with built-in surge protection. This all-in-one combines intelligent voltage monitoring and surge protection to prevent against mini-split failure before it happens, ensuring your customers' mini-split systems stay up and running when they need it most.

To learn more about DITEK's DTK-KG2 and their range of whole-home and commercial surge protection solutions, please visit [www.diteksurgeprotection.com](http://www.diteksurgeprotection.com).

