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Installation Manual

Surge Arrestors

TT-RF-SA-01x

The **Tejtronics RF Surge Arrestor** is designed to protect RF equipment from transient overvoltage events such as lightning-induced surges and static buildup. The broadband coaxial surge protection device engineered for high-frequency RF systems requiring reliable transient suppression and electromagnetic surge immunity. The unit is designed for inline coaxial integration, providing low insertion loss, stable impedance characteristics, and effective transient voltage diversion to ground. It is optimized for amateur radio installations, RF laboratories, communication infrastructure, and sensitive RF front-end protection in both fixed and portable systems.

A critical performance parameter of the surge arrestor is to keep the system parameters such as impedance and the tune of the antenna system unchanged. The selection of the surge arrestor must be done keeping in mind the maximum RF power that can be handled by the radio. Selecting a surge arrestor with lower protection voltage will cause the GDT to trigger during transmissions, selecting a surge arrestor with higher protection voltage will cause the voltage spike greater than what the RF front can handle.

Customers can select the surge arrestor that meets their requirement from the 4 available models;

Model Selection Guide

Model Number	Max Power
TT-RF-SA-015	40 W
TT-RF-SA-016	100 W
TT-RF-SA-017	400 W
TT-RF-SA-018	1000 W

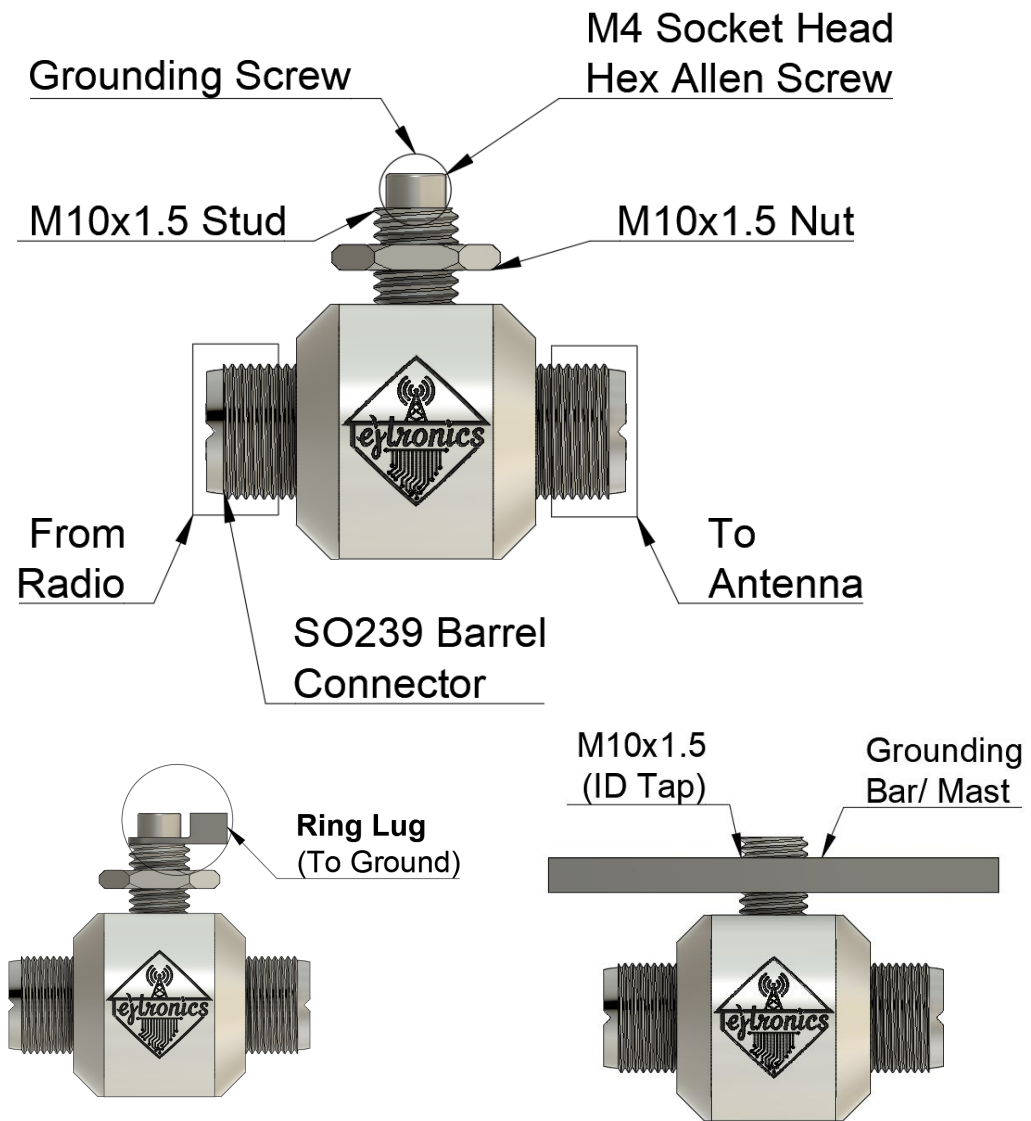


Figure 1: Surge arrestor with mounting options and connector ports labeled

Installation requirement

- Before installation, ensure:
- Proper station grounding system (earth pit or ground bus)
- Short, low-impedance grounding conductor
- 50 Ω coaxial cables

Troubleshooting Guide

Issue	Possible Cause	Solution
High SWR	Loose connector	Tighten connections
No protection	Poor grounding	Improve ground path
Signal loss	Damaged arrestor	Replace unit
Intermittent issues	Moisture ingress	Re-seal connectors

Safety Instructions

WARNING

- This device does not protect against direct lightning strikes
- Always install a proper grounding system
- Disconnect equipment during severe lightning conditions

CAUTION

- Improper grounding will render the arrestor ineffective
- Do not install without a low-impedance ground path
- Ensure connectors are properly tightened

Important Notes

- Ensure all connections are made using 50 Ω RF cables.
- Avoid incorrect port connections to prevent damage or performance degradation.
- Do not exceed specified power and frequency limits.
- Verify connections before powering the system.