020-3154-00 PA1000 Replaceable Fuse Kit

Kit description

This kit contains spare user-replaceable fuses for the 1 A current input circuit on the PA1000 Power Analyzer. During normal operation it will not be necessary to replace the fuse, which protects the PA1000 from abnormal use such as continuous operation above its 1 A input rating.

If the 1 A rating is exceeded, or if there is a very high inrush current, the fuse may blow. The fuse can then be replaced using one of the fuses in this kit.

WARNING. *This kit is for PA1000 Power Analyzers marked* ***T1AH, 440V*** *on the rear panel only. If your PA1000 is marked* ***F1AH, 600V****, do not use the fuses in this kit; use only a F1AH, 600 V fuse.*

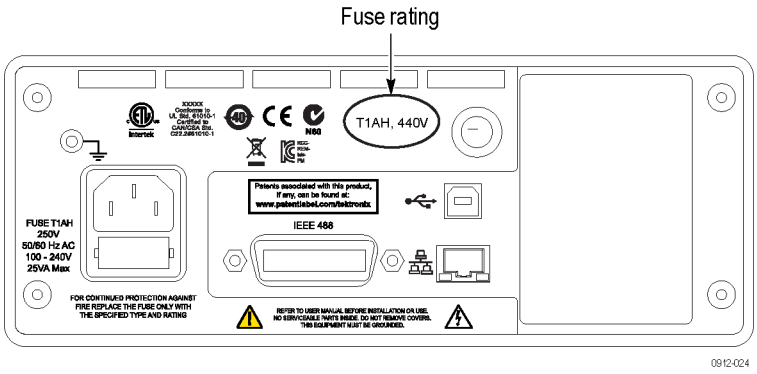

Figure 1: Input fuse rating

WARNING. *The fuses in this kit are for use as replacements for the current measurement input fuse only. If you replace the mains power input fuse, observe the markings on the product for the proper replacement fuse. For further safety information about this product refer to the user manual that was provided with your product.*

CAUTION. *Fuse replacement must be performed by qualified personnel only.*

Beginning November 2014, the PA1000 Power Analyzer may be upgraded to support higher inrush currents at a Tektronix service center. To contact Tektronix for this upgrade, please see www.tek.com/service.

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How do I know if the fuse has blown?

The best way to check is to remove the fuse and check it with a continuity meter. Alternatively, if the PA1000 reads zero current when connected to a load, check that the 1 A input is connected and that the 1 A input is selected on the **Shunts** menu item of the PA1000 before replacing the fuse.

Which fuse should I use?

This kit contains 3 each of the fuses listed below. Use Type 1, the standard 1.0 AT fuse, whenever possible. This fuse provides the best possible protection against continuous overload.

Type 1: 1.0 AT

1.0 AT Littelfuse part number 35611000029, 20 A_{pk}, 10 A_{rms} for 10 ms. Safety protection is provided by an additional 10 A, 600 V internal fuse that is not user replaceable.

If the 1.0 AT fuse fails during power-on of the device under test, or during another current surge, then use the Type 2 6.3 AT fuse described below.

Type 2: 6.3 AT

For inrush measurements up to 150 A_{pk} (I^2t of 120 A (I^2t) with the 1 A input, use a 6.3 AT fuse, Littelfuse part number 35616300029. This fuse does not protect the 1 A input from continuous overload, and care must be taken not to exceed 1 A_{rms} continuously.

This fuse will tolerate up to 150 A_{pk} current for a short duration.

WARNING. *The 6.3 A fuse is provided only for high inrush current applications. Sustained currents greater than 1 A will damage the instrument.*

Table 1: Fuse applications

Use case	Peak inrush rating, 10 ms	Fuse type	Part number
Standard fuse for normal operation	10 A_{rms}, 20 A_{pk}	Type 1 1.0 AT	Littelfuse 35611000029
High inrush measurements	100 A_{rms}, 150 A_{pk}	Type 2 6.3 AT	Littelfuse 35616300029

Fuse replacement procedure

WARNING. *If the PA1000 is marked on the rear panel with the fuse rating F1AH 600 V, only the specified fuse (Schurter A12FA) may be used.*

CAUTION. *Fuse replacement must be performed by qualified personnel only.*

1. Disconnect the power cord and all connections to the input terminals.
2. Using a flat-bladed screwdriver, turn the fuse cover 1/4 turn counter-clockwise.

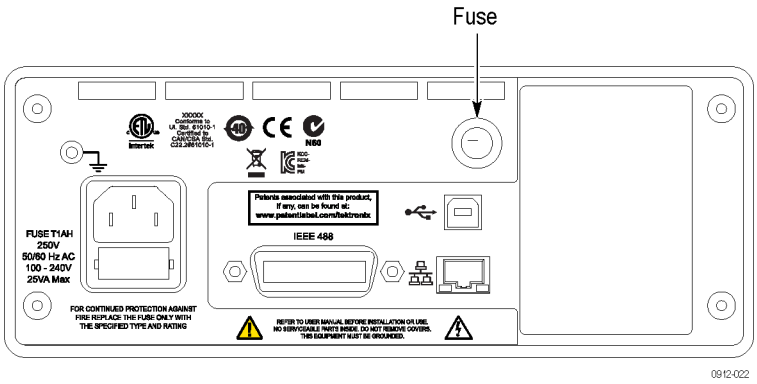

Figure 2: Input fuse location

3. Retract the fuse cover and fuse from the instrument.
4. Remove the fuse from the fuse cover and replace it with one of the fuses included in the kit.

WARNING. *For maximum protection of the instrument, it is recommended that the 1 A fuse be used. The 6.3 A fuse is provided specifically for applications with high inrush currents.*

5. Insert the fuse and fuse cover into the instrument, and use the screwdriver to turn the fuse cover 1/4 turn clockwise.
6. Connect the power cord to the instrument.

   The instrument is now ready for use.