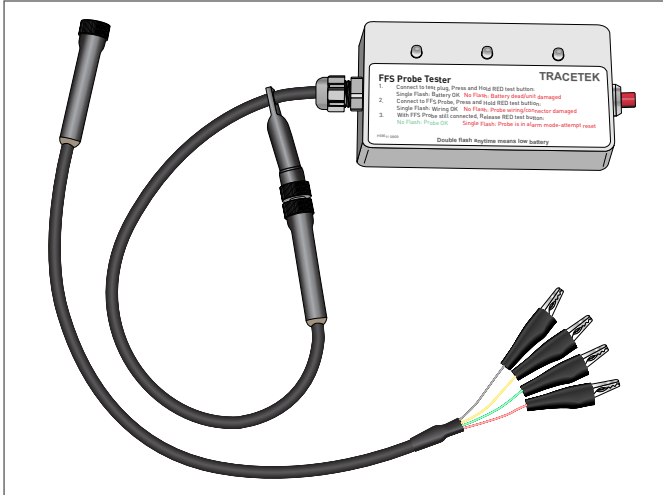


TRACETEK TEST DEVICE FOR TT-FFS PROBE

OPERATING INSTRUCTIONS



GENERAL INFORMATION

Please read these instructions and keep them in a safe place. These instructions must be followed carefully to ensure proper operation.

The TT-FFS Probe Tester is a battery powered device that provides the capability of testing a TT-FFS Probe to determine whether it is functioning properly. Designed for use in ordinary areas, the TT-FFS Probe Tester is a hand held device used to evaluate the operational state of a TT-FFS Probe. It produces flashing signals with bright red LEDs that identify different operational conditions of the TT-FFS Probe.

The TT-FFS Probe Tester also monitors its battery voltage and produces a special DOUBLE Flash signal when the batteries need replacing.

The TT-FFS Probe Tester utilizes the same cable connection hardware as the TT-FFS Probe. When the TT-FFS Probe Tester is properly connected to a TT-FFS Probe, the TT-FFS Probe Tester may produce a SINGLE Flash signal, or a NO Flash signal, to indicate the operational state of the TT-FFS Probe. Follow the specific steps described in these Operating Instructions to determine the operational state of the TT-FFS Probe.

STORAGE

Keep the TT-FFS Probe Tester in a dry place that provides temperature stability in between uses. Avoid impacts that might damage the device.


PRODUCT CHARACTERISTICS

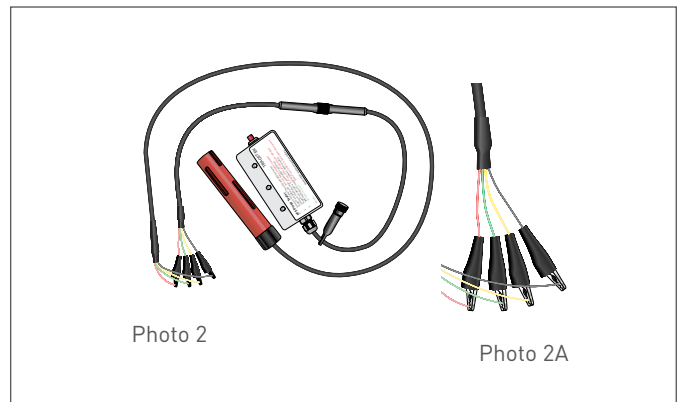
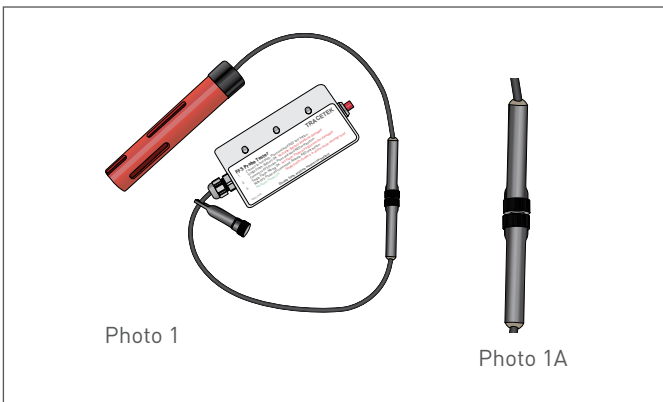
Weight	0.3 kg (0.7 lb) nominal
Light source	3 high intensity, high efficiency red LEDs
Battery information	2 "AA" Alkaline Long Life
Projected battery life	1 year – nominal
Recommended battery replacement interval	1 year or whenever low battery signal is detected
Duration of low battery signal	Minimum 30 days at 20°C (68°F)
Maximum ambient temperature	40°C (104°F)
Minimum ambient temperature	-20°C (-4°F)

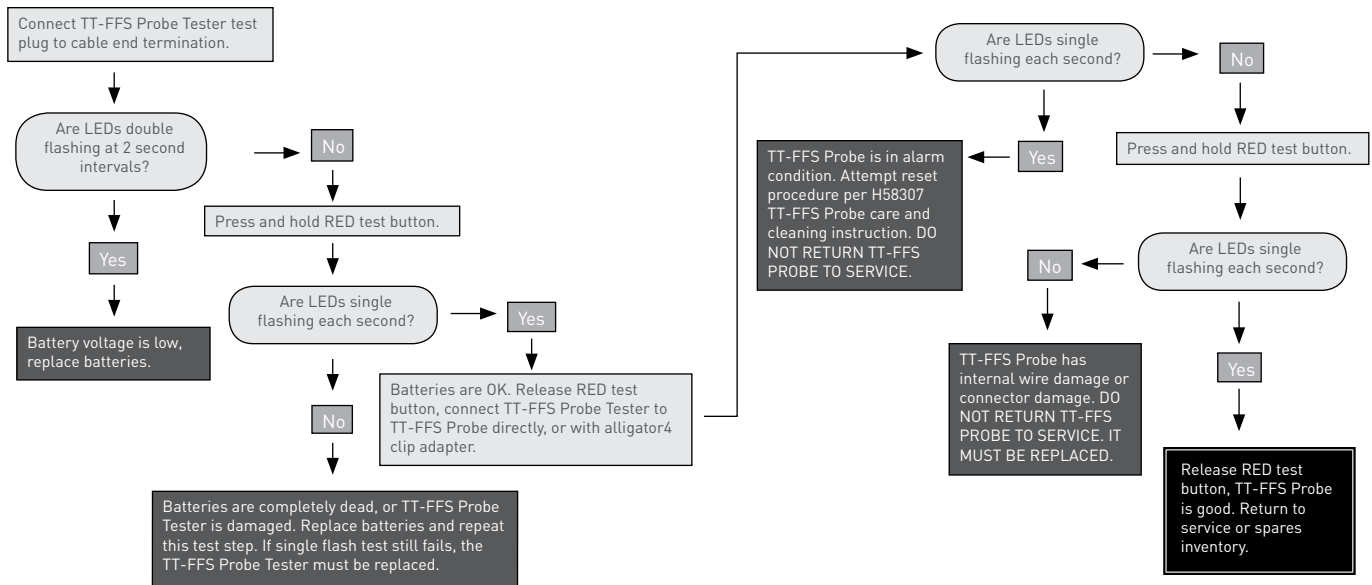
Operating Instructions

Follow the guidelines discussed in the flow chart sequence on page 2 to evaluate the operational state of any TT-FFS Probe.

 **Note:** A TT-FFS Probe with MC series metal connector can be connected directly to the TT-FFS Probe Tester as shown in Photos 1 and 1A.

 **Note:** A TT-FFS Probe without metal connector (L series) can be connected with the TT-FFS-ALLIGATOR4CLIP-MC cable end adaptor as shown in Photos 2 and 2A. The 4 colored alligator clip wires should be connected to the corresponding colored wires of the TT-FFS Probe.





Maintenance and Troubleshooting

Battery Powered Device

The TT-FFS Probe Tester is powered by two "AA" Alkaline Long Life batteries.

Under normal conditions, when the test plug is connected to the cable end termination, the TT-FFS Probe Tester will not be flashing.

If the batteries reach a low voltage condition, the TT-FFS Probe Tester will DOUBLE Flash at 2 second interval continuously, and maintain the DOUBLE Flash signal for about 1 month before the battery voltage drops to an unusable level. It does not matter if the test plug is connected to the cable end termination, or to a TT-FFS Probe, the DOUBLE Flash signal will still be produced as long as the battery voltage is low.

Note: If the batteries are completely dead, the TT-FFS Probe Tester will stop its DOUBLE Flash. The TT-FFS Probe Tester will not be able to signal the low battery condition, or properly evaluate the condition of a TT-FFS Probe.

Battery Lifetime

Two "AA" Alkaline Long Life batteries can be expected to provide service for nominally one year. However, under extreme high and low temperature conditions, battery service life may be reduced relative to nominal conditions.

Battery lifetime also depends on how much flashing is required as part of the TT-FFS Probe evaluation testing.

Battery Replacement

- The battery replacement for the TT-FFS Probe Tester should be performed in a work shop or other nonhazardous location.
- Place a soft towel on the work surface.
- Position the TT-FFS Probe Tester face down, with the LEDs resting on the soft towel.
- Loosen the four screws securing the back cover of the TT-FFS Probe Tester, being careful not to put excessive force on the unit, which might result in damage to the LEDs.
- Remove the back cover taking care to not lose any of the four screws. Now the black battery cover is visible in the interior of the TT-FFS Probe Tester.
- Loosen the small screw on the battery cover, then remove the battery cover.
- Remove the old batteries, replace with fresh batteries and verify batteries are installed correctly.
- Reposition the battery cover and tighten the small battery cover screw.
- Replace the back cover of the TT-FFS Probe Tester, and tighten the four screws evenly.



- Dispose of the old batteries properly. Do not throw away the old batteries in a garbage receptacle; take them to your locally approved collection center for recycling.



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