TECHNICAL DATA

7004T/7010T

Product overview: 7004T/7010T

Simple means of importing traceability

While Fluke's Nanoscan Volt Maintenance Systems are designed to sit permanently in your standards lab, the Model 7004T Transref provides a simple means of importing traceability from higher order standards laboratories. It can equally be used to export your 10-Volt traceability to other labs.

Safely transportable

Safely stowed in its ruggedized transit case, the Model 7004T allows up to four Model 7000 reference modules to travel, without fear of mechanical damage or undetected exposure to temperature extremes.

During transportation, each reference module remains powered either from its internal battery pack or from a 12-Volt DC supply (e.g. vehicle cigar lighter socket).

The Transref isn't solely reliant on its batteries or an external DC supply. Even if the batteries become exhausted and the unit is subjected to temperatures down to -5°C, a patented zener reference conditioning technique ensures that each reference will typically return to within ±0.2 ppm of its previous values when the Transref unit is re-powered. A temperature monitor in the transit case alerts you to the maximum and minimum temperatures experienced during shipment

Low-noise low-drift output

The 10-Volt Average output on the Transref provides a low-noise low-drift output that can be used for importing/exporting traceability or as a means of checking the unit's stability on its return to your standards lab.

Interface directly to the Nanoscan unit

However, if you're importing or exporting traceability to or from a Fluke Nanoscan system, the Transref can be interfaced directly to the Nanoscan unit so that its reference modules are included in Nanoscan scan measurement sequence. This allows the associated 7050 Volt Maintenance Software to maintain as comprehensive a history on the Transref as it does on your Nanoscan system.

Permanent extension chassis for Nanoscan system

The Model 7004T Transref, or its ten reference equivalent the Model 7010T, can also be used as a permanent extension chassis for a Nanoscan system, increasing the maximum number of internal reference modules it can accommodate to 20.

Specifications: 7004T/7010T

10V Output	
Stability	7004T: 90 days: 0.8ppm 1 year: 1.2ppm 7010T: 90 days: 0.7ppm 1 year: 1.0ppm
Predictability	7004T: ±0.2 ppm/year typicalAfter 5 points, 3 mo. apart 7010T: ±0.1 ppm/year typical After 5 points, 3 months apart
Temperature Coefficient (15 - 35°C)	7004T: < 0.03 ppm/° 7010T: < 0.02 ppm/°
Noise (rms)	7004T: 0.05 to 10Hz: < 0.05 ppm RMS Standard deviation of 90 day regression: < 0.06 ppm 7010T: 0.01 to 10Hz: < 0.03 ppm RMS Standard deviation of 90 day regression: < 0.04 ppm
Hysteresis recovery	7004T: < 0.1 ppm (after conditioning cycle and baery discharge) 7010T: < 0.07 ppm (after baery discharge)
Output Resistance	7004N/7010N: 500/n Ohm Where n = number of modules fied

Baery	
Type	NiMH
Backup Period	16 hrs from fully charged
Recharge time (typical)	2 hours
Half Life	5 yrs

Environment	
Temperature	Operating: +15°C to 35°C Transit: -18°C to 45°C Warm-up period: 0 min to ±0.2 ppm 2 hours to final value

General Specifications	
Power, baery life	7004T: < 6W 7010T: < 12W
12V DC Connection	Yes

Dimensions	7004T: 133 x 449 x 355 mm (5.24 x 17.68 x 13.19 inch) 7010T: 265 x 449 x 355 mm (10.43 x 17.68 x 13.19 inch)
Weight	7004T: 9.6kg (21.2Ibs) 7010T: 20kg (44.1Ibs)
Safety	UL3111, CE marked EN61010-1-1:1993/A2:1995 CETL

Ordering information

7004T
4-Reference 'Transref' Volt Maintenance System with 12V DC Power Supply

7010T
10-Reference 'Transref' Volt Maintenance System with 12V DC Power Supply

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Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Europe/M-East/Africa
+31 (0)40 267 5100
In Canada (800)-36-FLUKE
From other countries +1 (425) 446-5500
www.fluke.com/en-th

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