TAFT

Mobile measuring set for testing thermal imagers

Fig. 1. Photo of the TAFT measuring set

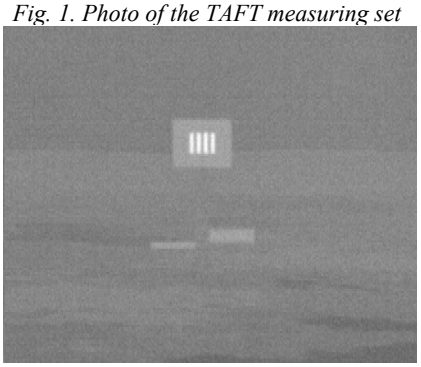

Fig. 2. Image of the TAFT set generated by the tested imager during MRTD measurements

BASIC INFORMATION:

The TAFT measuring set is a mobile variable distance measuring system that project images of the target directly to the tested thermal camera. The tested imager generates copies of the projected images. Quality of the images generated by the imager is evaluated and its important characteristics are measured.

The TAFT test set does not use collimator for image projection and the distance target-imager must be longer than the minimal focusing distance of the tested imager. Different patterns can be projected into the direction of the tested imager. All important parameters of thermal imagers can be measured.

The TAFT test system are targeted for testing thermal imagers at field conditions or at laboratory/depot conditions when a long corridor as a test place can be used. Design of variable distance measuring system to be used for testing MRTD of thermal imagers at field/depot conditions is a technical challenge due to significant temporal variations of ambient temperature typically met at field/depot conditions that generates high radiometric offset effect and finally lead to high measurement errors. Infraemet has solved this problem and accuracy of measurements with TAFT test systems is at the same level as accuracy of measurements with laboratory class DT series test systems assuming proper measurement conditions.

FEATURES:

- Versatile measuring tool that can be used in both field and laboratory applications
- No limitations on optical aperture of tested thermal imagers
- Can be packed in a large suitcase and easily transported to any location
- Possible to test thermal imagers from some distance (no necessity to remove imager from a helicopter to test it)
- A few thermal imagers can be tested at the same time
- Minimal distance between the TAFT measuring set and the tested imager must be higher that than the minimal focusing distance of the tested imager
- Enable measurement of MRTD

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SPECIFICATIONS

Parameter	Value
Modules	TCB-6D blackbody/controller, multi-pattern target, SB-3 shield box, transport box/tripod, laptop, TCB Control program,
Target emitting aperture	220×220 mm
Blackbody active aperture	150×150 mm
Differential temperature range	-20°C to +80°C (in comparison to ambient temperature)
Set point and resolution	0.001°C
Response time	10°C step - < 50 sec
Uniformity	< 0.01°C or 0,5% |T-Tamb|
Blackbody emissivity	0.98±0.01
Temporal stability	±0.003°C for ΔT<10°C
Target emissivity	0.97±0.01
Operating temperature range	5°C to 45°C (no direct wind, sun or rain)
Storage temperature range	5°C to 55°C
Humidity	Up to 90% (non-condensing)
Power	230 V (option 12V)
Accessories	DC 12V/AC 220V converter
Mass	20 kg plus weight of typical laptop (about 3 kg)
Dimensions	600x310x370 mm (blackbody, target, shield) and dimensions of typical laptop (340x250x40)

*specifications are subject to change without prior notice

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