

# CAPRIS<sup>®</sup> CMS2

Contrast Measurement System for off line Quality Assurance of wire markings



# marking

# CAPRIS CMS2

## Contrast measurement system

Designed specifically for off line contrast measurement of laser and ink marks on electrical wiring or fibre optic cabling

The CAPRIS CMS2 Contrast Measurement System provides a convenient Quality Assurance tool which can be used simply and quickly to monitor and measure the contrast of end user applied and manufacturers' markings on wires and cables for aerospace and other applications.

The CMS2 is an area measurement system. It uses a video system and frame grabber to image the mark and make a determination of contrast from a single measurement over a large sampling area. This is much faster and more accurate than making manual multiple individual point measurements.

The unit is designed for simplicity of use. Samples are loaded into a precision mount which is positioned in the measuring recess. The operator adjusts the position of the sample while observing the image on screen. The system uses PC Windows based custom software, enabling the contrast of a sample to be accurately measured and calculated in a single measurement. At the click of the mouse, the unit measures and calculates the average contrast of the mark. Data from multiple measurements can be stored to provide an overall average contrast value. The operator has the option to store the contrast result, the sample information and the image on file.

The CMS2 has been developed to meet the needs of the modern aerospace industry for accurate contrast measurements. It is recognised and qualified under Boeing's key BAC 5152 process specification. It also complies with the requirements of the latest test methods such as EN 3475-Part 705, Contrast Measurement, which has been developed to support the needs of industry.

The system is able to measure contrast repeatedly and efficiently, independent of time or the operator, and provide a record of the measurements for quality tracking purposes.

The latest aerospace wiring standards such as SAE AS22759/80-92 specify mark contrast requirements and the CMS2 can monitor and verify that the wire marking process complies with relevant standards.

## Summary specification

CMS2 comprising:	Contrast measurement module (CMM), PC with frame grabber and preloaded with custom CMS software, 3 precision wire mounts and calibration tile assembly
Contrast range:	Suitable for measurements in the range 35 to 100% (for white and light coloured wires only)
Accuracy:	+/-2%
Warm up time:	5 minutes
Measurement:	Area measurement system with frame grabber enables contrast values to be measured and calculated from a single image within ~15 seconds - including set up
Results:	Displayed on PC monitor with option to store the result and image on file
Wire size range:	26 AWG (0.9 mm/0.03 inch OD) to 6 AWG (6.3 mm/0.13 inch OD)
Calibration:	Black, white and grey tiles provided, traceable to National Standards. "Quick check" facility enables operator to confirm calibration status in 10 seconds.
Observation area:	~ 3.4 mm x 2.5 mm (0.13 x 0.10 inches)
Illumination:	Single lamp with two fibre optics at 45°
Colour temperature:	3100 K
Lamp replacement:	Every 6 months to maintain colour temperature
Photopic response:	A photopic filter is included in the detection system to ensure that the CMS2 simulates the response of the human eye.
Dimensions (CMM):	18 cm x 23 cm x 39 cm (7 x 9 x 15 inches) (W x D x H)
Weight (CMM):	8.4 kg (18.5 lbs)
Power requirements:	Single phase: 110V, 2A, 60 Hz or 230V, 1A, 50 Hz
Warranty:	One year full warranty on parts and labour
CE Conformity:	In compliance with EC directives



CAPRIS is a Registered Trademark of Spectrum Technologies PLC.  
This product is covered by: European Patent No: 0925549, US Patent No. 6826307  
COPYRIGHT 2006 SPECTRUM TECHNOLOGIES PLC  
All rights reserved. Above specifications are subject to change without prior notice to provide for continuous product improvement



[sales@spectrumtech.com](mailto:sales@spectrumtech.com)  
[www.spectrumtech.com](http://www.spectrumtech.com)

### Europe: Spectrum Technologies Plc

Western Avenue, Bridgend,  
CF31 3RT, United Kingdom

tel: (+44) (0) 1656 655437  
fax: (+44) (0) 1656 655920

### North America: Spectrum Technologies USA Inc.

Metro Business Park III, 2320 West Peoria Avenue,  
Suite C118, Phoenix, AZ 85029, USA

tel: (602) 493 9343  
fax: (602) 493 8003