## NOYES

CKSM-2 Contractor Series MM/SM Test Kit with Set Reference


## Features

- Palm-sized, rugged, lightweight
- CW and modulated Tone
- 270, 330, 1000, and 2000 Hz Tone
- Power measurements in dBm or $\mu \mathrm{W}$; insertion loss in dB
- Reference power level storage
- Large LCD with backlight
- Automatic power-off function
- Battery gauge
- Long battery life with AA alkaline
- Free $50 \mu \mathrm{~m}$ and $62.5 \mu \mathrm{~m}$ mandrels
- Cost-effective, easy to use
- N.I.S.T traceable


## Applications

- Certify multimode and single-mode fiber links per TIA/EIA standards
- Fiber identification prior to splicing

Combining the CSM1-2 optical power meter, CSS1-MM Dual LED light source, and CSS1-SM Dual LASER source, the CKSM-2 is a cost-effective test kit designed for performing insertion loss measurements on multimode as well as single-mode fiber optic links. Weighing only 0.4 lb each, units are compact and convenient for field use.

The CSS1-MM and CSS1-SM sources feature Dual output, 850/1300 nm LED or 1310/1550 nm LASER respectively, from a single output port. Both CSS1 models offer 2 modes of operation, continuous wave (CW) and user selectable modulated Tone. The CSS1-MM LED and CSS1-SM LASER output ports are stabilized to ensure accurate test results per current TIA/EIA requirements.A large LCD display with backlight shows emitted wavelengths [nm], tone frequency [Hz], and indicates a low battery condition. The CSS1-MM model output port is equipped with a fixed SC connector while the CSS1-SM output port is equipped with Universal Connector Interface (UCI) base and SC adapter.

The CSM1-2 optical power meter operates at 850/1300/1310/1550 nm and features multiple test Tone detection for fiber identification. The CSM1-2 stores optical references for each calibrated wavelength. A large LCD display with backlight shows measured power [dBm or $\mu \mathrm{W}$ ] or insertion loss [dB], calibrated wavelengths [nm], tone frequency [Hz], and indicates a low battery condition. The CSM1 optical input port accepts a variety of Noyes thread-on style adapter caps (ordered separately) to meet a wide range of testing requirements. One adapter cap, 2.5 mm Universal, is included.

The CSS1-MM, CSS1-SM, and CSM1-2 are fully N.I.S.T. traceable.

## Ordering Information

| INCLUDES | AFL NO. |
| :--- | :--- |
| CSS1-MM Dual LED source, CSS1-SM Dual Laser souce, CSM1-2 optical power meter, AA | CKSM-2 |
| batteries, 2.5mm universal adapter cap, UCI-SC connector, 50 and $62.5 \mu \mathrm{~m}$ mandrels, user's |  |
| guide, and carry case. |  |

Test jumpers and connector adapters are required for operation (purchased separately). Test jumpers with a variety of connector styles and fiber types and adapter caps for most common connectors may be purchased from AFL Telecommunications. The CKSM kits may be packed with one of cleaning kit options (purchased separately) as follows:

| DESCRIPTION | INCLUDES | AFL NO. |
| :---: | :---: | :---: |
| Wet Cleaning Kit | 8500-10-0016, Cletop -SB | 8500-20-0900 |
|  | CCTS-25-0900, Connector Cleaning Tips for 2.5 mm ferrule in adapters or sockets (SC, FC, ST in adaptors).Blue (40 sticks per tube). Qty $=2$ tubes |  |
|  | FCC2-00-0900, Optical Quality Cleaning Fluid for fiber connector end faces. |  |
| Dry Cleaning Kit | 8500-10-0016, Cletop -SB <br> 8500-10-0024 ACT-01 2.5mm adapter cleaning tips - Qty = 200 | 8500-20-0901 |

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## CSS1-SM Specifications ${ }^{\text {a }}$

| OPTICAL | CSS1-SM (SINGLE PORT) |
| :--- | :--- |
| Output Wavelength | $1310 \mathrm{~nm} \pm 20 \mathrm{~nm}, 1550 \mathrm{~nm} \pm 20 \mathrm{~nm}$ |
| Spectral Width (max) | 5 nm |
| Output Power | $\geqslant 0.0 \mathrm{dBm}$ into 9/125 fiber |
| Emitter Type | Laser, Class I FDA 21 CFR 1040.10 and 1040.11, <br> IEC 60825-1: 2007-03 |
| Output Stability | $\pm 0.05 \mathrm{~dB}$ typical over 1 hour (after 30 sec. ) <br> $\pm 0.15 \mathrm{~dB}$ over 8 hours (after 30 sec. typically) |
| Tone Output | $270,330,1000,2000 \mathrm{~Hz}$ |
| GENERAL |  |
| Output Connector | SC, FC, ST, LC |
| Power | $2 \times \mathrm{AA}$ batteries |
| Battery Life | 75 hours typical |
| Operating Temperature | $-10^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |
| Storage Temperature | $-30^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |
| Size (H xW x D) | $11.4 \times 6.4 \times 3.2 \mathrm{~cm} \mathrm{(4.5} \mathrm{\times 2.5} \mathrm{\times 1.3} \mathrm{in)}$ |
| Weight | $0.18 \mathrm{~kg}(0.4 \mathrm{lb})$ |

## CSM1-2 Specifications ${ }^{\text {a }}$

| OPTICAL | CSM1-2 |
| :--- | :--- |
| Calibrated Wavelengths | $850,1300,1310,1550 \mathrm{~nm}$ |
| Detector Type | Germanium (Ge) |
| Measurement Range | +6 to -60 dBm |
| Tone Detect Range | +6 to $-50 \mathrm{dBm} ;+6$ to -45 dBm for 850 nm |
| Accuracy ${ }^{\text {b }}$ | $\pm 0.3 \mathrm{~dB}$ |
| Resolution | 0.01 dB |
| Measurement Units | $\mathrm{dB}, \mathrm{dBm}, \mu \mathrm{W}$ |
| GENERAL |  |
| Power | $2 \times \mathrm{AA}$ batteries |
| Battery Life | $>300$ hours |
| Operating Temperature | $-10^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |
| Storage Temperature | $-30^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |
| Size (H x W x D) | $11.4 \times 6.4 \times 3.2 \mathrm{~cm} \mathrm{(4.5} \mathrm{\times 2.5} \mathrm{\times 1.3} \mathrm{in)}$ |
| Weight | $0.18 \mathrm{~kg}(0.4 \mathrm{lb})$ |

## CSS1-MM Specifications ${ }^{\text {a }}$

| OPTICAL | CSS1-MM (SINGLE PORT) |  |
| :---: | :---: | :---: |
| Output Wavelength | $850 \mathrm{~nm} \pm 20 \mathrm{~nm}$ | $1300 \mathrm{~nm}+40 /-60 \mathrm{~nm}$ |
| Spectral Width (max) | 35 nm | 170 nm |
| Output Power | $\geqslant-20.0 \mathrm{dBm}$ into 62.5/125 fiber |  |
| Emitter Type | LED, Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03 |  |
| Output Stability | $\pm 0.1 \mathrm{~dB}$ over 1 hour (after 30 sec typically) $\pm 0.15 \mathrm{~dB}$ over 8 hours (after 30 sec typically) |  |
| Tone Output | 270, 330, 1000, 2000 Hz |  |
| GENERAL |  |  |
| Output Connector | SC |  |
| Power | $2 \times$ AA batteries |  |
| Battery Life | 30 hours typical |  |
| Operating Temperature | $-10^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |  |
| Storage Temperature | $-30^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}, 90 \% \mathrm{RH}$ (non-condensing) |  |
| Size (HxW x D ) | $11.4 \times 6.4 \times 3.2 \mathrm{~cm}(4.5 \times 2.5 \times 1.3 \mathrm{in})$ |  |
| Weight | $0.18 \mathrm{~kg}(0.4 \mathrm{lb})$ |  |

## Notes:

a. All specifications at $25^{\circ} \mathrm{C}$.
b. Accuracy measured at $25^{\circ} \mathrm{C}$ and -10 dBm per N.I.S.T. standards.

## Authorized Channel Partner

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