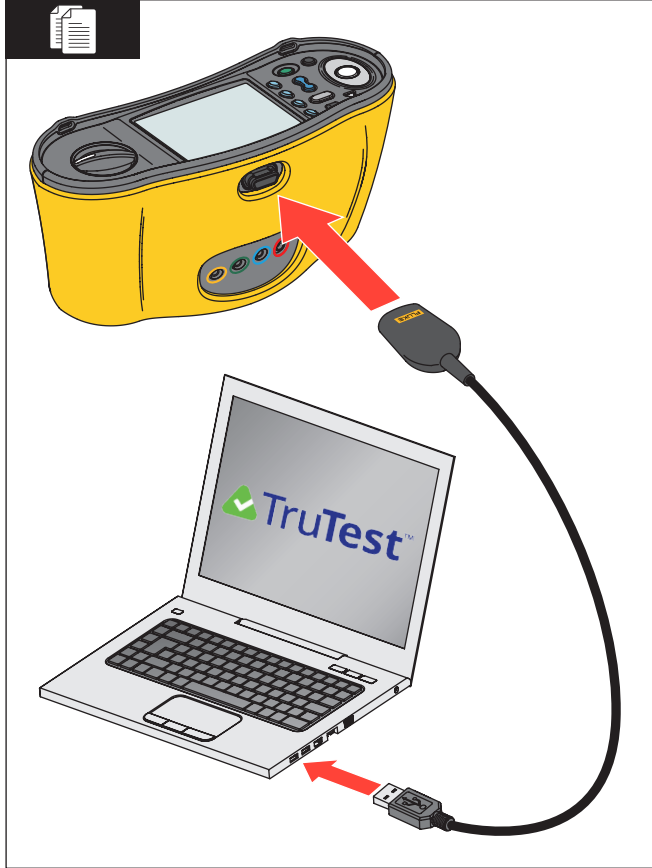
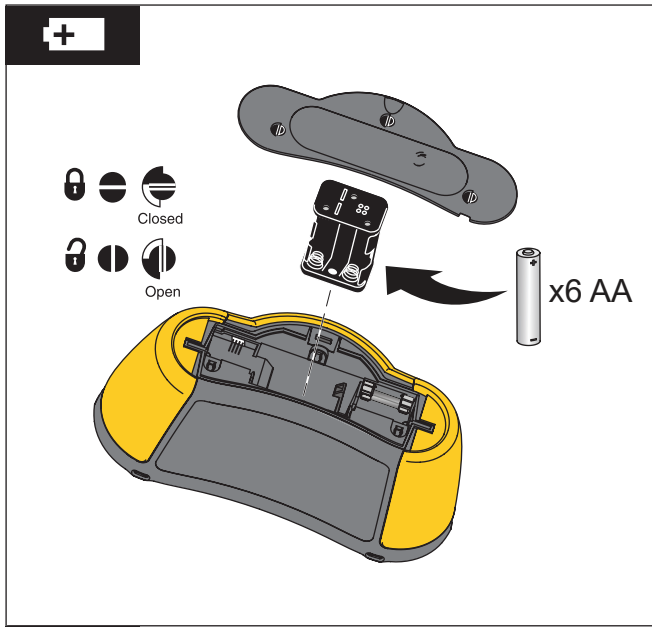
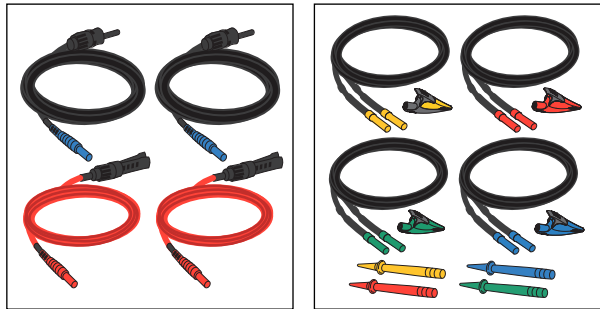
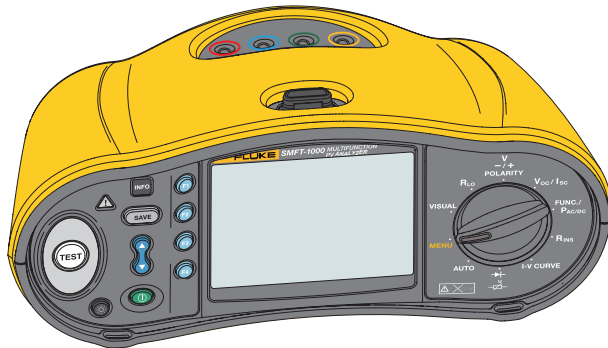
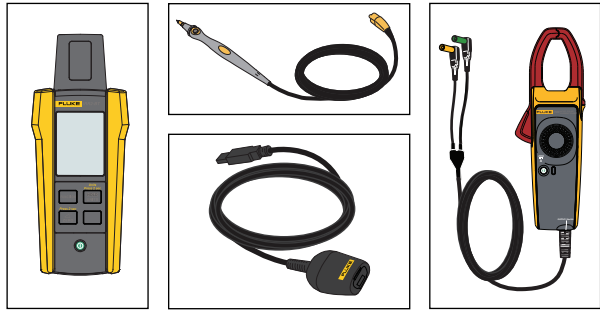


SMFT-1000
Multifunction PV Analyzer

www.fluke.com



R_{Lo}

1. Select R_{Lo} on the rotary switch.
2. Connect the test leads to the R_{Lo} ports.
3. Press F4 = ZERO.
4. Connect the test leads to a resistor.
5. Press TEST.

One Shot	12/12/20 10:10:31	R _{Lo}	0.19 Ω	✓
Cont. +		R _{Lo} +	0.12 Ω	✓
Cont. -		R _{Lo} -	0.19 Ω	✓
ZERO		IR _{Lo}	210.7 mA	

Reset Limit: < 0.2 Ω Equipotential Bonding

6. Press SAVE.

V -/+ POLARITY

1. Select V -/+ POLARITY on the rotary switch.
2. Connect the test leads to a solar panel.

12/12/20 10:10:31

Vdc + 90.2 V

Passed

Correct (+) Polarity

12/12/20 10:10:31

Vdc - 90.2 V

Failed

Reverse (-) Polarity

3. Press SAVE.

V_{oc} / I_{sc}

1. Select V_{oc} / I_{sc} on the rotary switch.
2. Connect the test leads to a solar panel under sunlight.

12/12/20 10:10:31

Irr: 1000 W/m² Tcell: 73 °F

V_{oc} 515.2 V

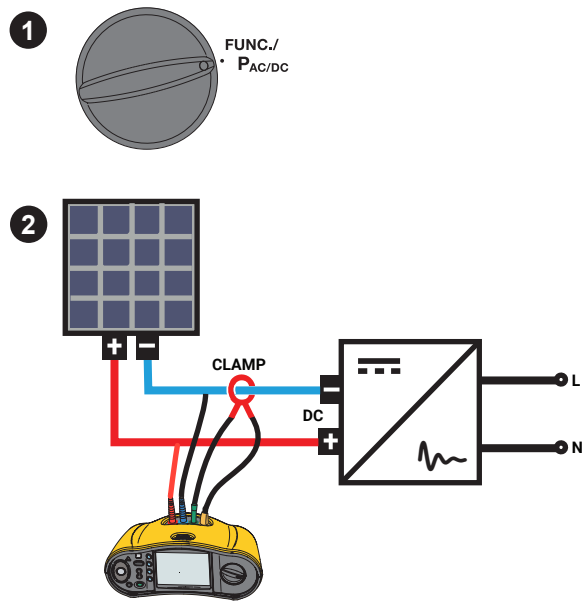
Voc 512.2 V ✓

Isc 19.2 A ✓

Voc STC: > 500.0 V Isc STC: > 19.0 A

3. Press SAVE.

FUNC./P_{AC/DC}



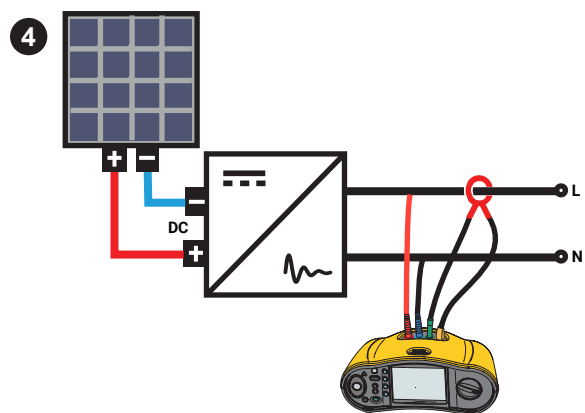
3

TEST

	DC	AC
Voltage	993.9 Vdc	--- Vac
Current	20.1 Adc	--- Aac
P	19.97 kW	--- kVA

Measure AC side
Press F3 to hold AC measurements.

Reset



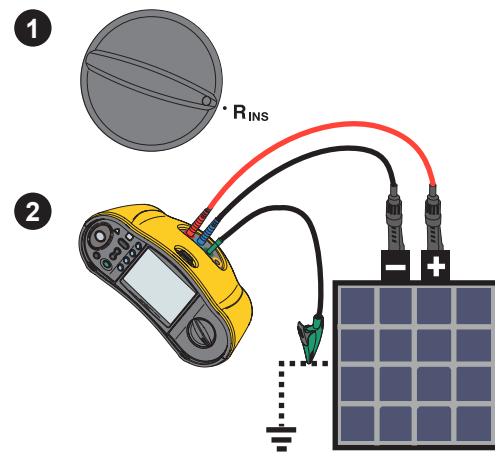
4

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

R_{INS}



1

R_{INS}

2

Rins I

Rins II

RINS (II) 1.23 MΩ ✓

Rins Cont.

Wet Insulation

VINS 512 V

Reset Vn: 500 V Limit: > 1.0 MΩ

3

SAVE

5

TEST

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

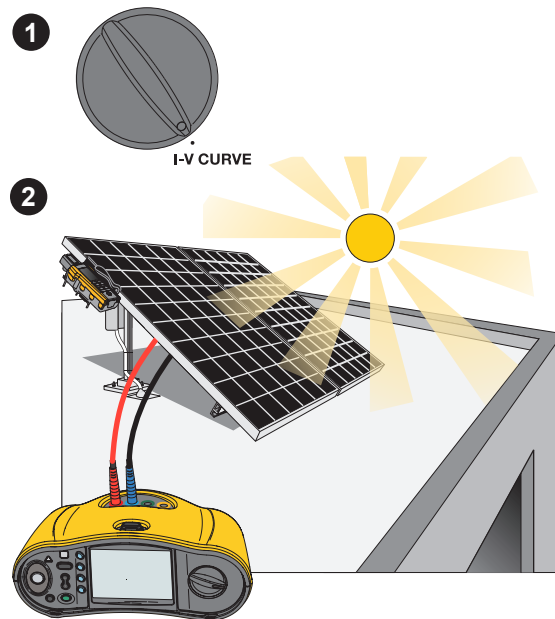
6

F3 Efficiency Factor: 94.5% ✓

7

SAVE

I-V CURVE



1

I-V CURVE

2

	NOM	STC
Voc	44.4 V	40.2 V ✓
Isc	5.4 A	5.1 A ✓
Vmpp	50.2 V	50.1 V ✓
Impp	6.4 A	6.1 A ✓
Pmpp	175 W	170 W ✓
FF	95 %	92 % ✓

Pass Criteria: 5%

3

SAVE

3

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

5

TEST

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

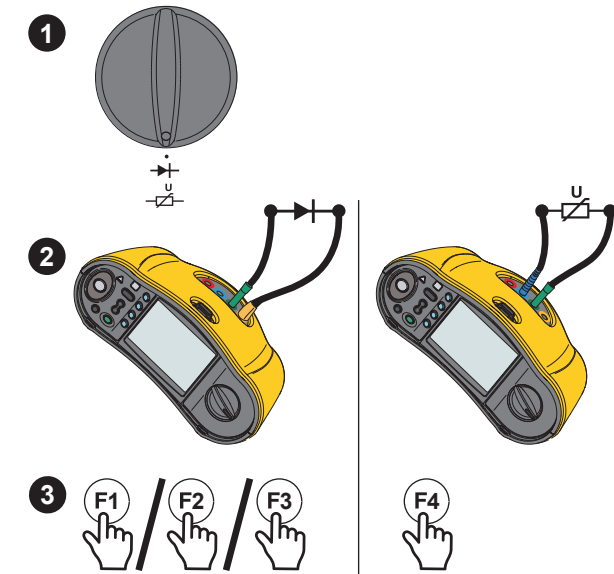
6

F3 Efficiency Factor: 94.5% ✓

7

SAVE

U_{DIODE}



1

U_{DIODE}

2

F1 / F2 / F3

F4

3

TEST

4

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

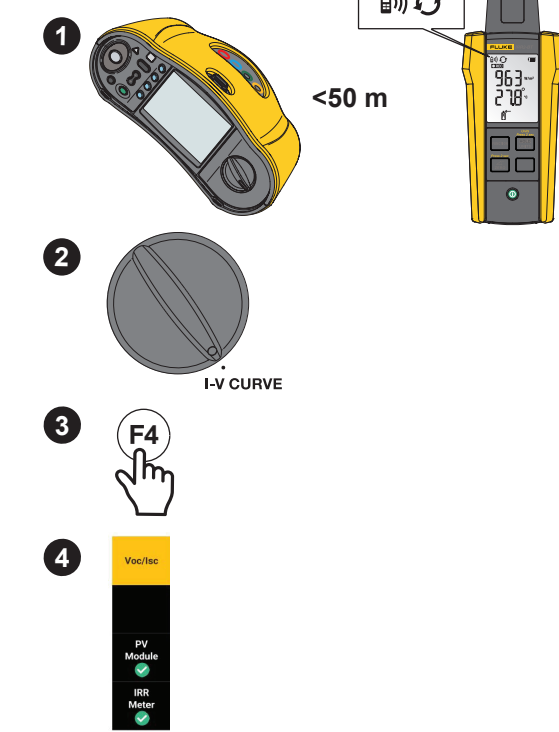
5

SAVE

5

SAVE

IRR2-BT



1

MENU

2

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

5

TEST

	DC	AC
Voltage	993.9 Vdc	989.1 Vac
Current	20.1 Adc	19.2 Aac
P	19.97 kW	18.89 kVA

Measure AC side
Press F3 to hold AC measurements.

Reset

6

F3 Efficiency Factor: 94.5% ✓

7

SAVE