

# MP-170 I-V Checker

## Technical Specifications

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Portable IV checker

High power input range 10kW

Quick measurement time

Auto measurement schedule

Sensor unit with data logger

The robust portable battery operated MP-170 I-V Checker enables the operator to perform on-site accurate I-V performance measurements and inspection of PV modules or arrays. For direct control of the measurement functions and analyzing measurement results, the Main Unit has a key-pad and Graphical LCD display. The MP-170 offers an all in one measurement solution to make PV module testing very easy, hence all required accessories like the radiation sensor, temperature sensors, cables and PC software for control and extended data analysis are included.

The MP-170 I-V Checker is capable to measure I-V curves based on the parameters ( $V_{max}$ ,  $I_{max}$ ,  $P_{max}$ ,  $V_{oc}$ ,  $I_{sc}$ , FF,  $T_{mod}$ ,  $\eta_{eff}$ ) of any PV module type and arrays, also called strings. It is highly suitable during PV module installation, for routine checks for the inspection of energy yield, tracing module performance and potential defects and general maintenance checks. The MP-11 can be used for almost any module type as long as the output fits in the range (10 - 1000V / 100mA - 10A / 10W - 10 kW).

The Main Unit is capable of measuring, displaying and analyzing data, all functions can be accessed through the front panel keypad. Up to 300 I-V curves can be stored on board, which is sufficient enough for one day. Additionally, extensive data analysis, data storage and data format conversion to a (.CSV) file format can be done using a PC with the MP-170 control software. The I-V curve measurement data displayed on the Main Unit are automatically converted into STC values, known as Standard Test Conditions (STC), values

complying to the IEC 60981 and JIS C8914 Standards. This way measurement values converted to STC values can be better quantitatively compared when obtained during different environmental or atmospheric conditions (Global radiation, Temperature) or inter compared between different types of modules.

	<b>MP-170</b>
<b>Measurement range Voltage</b>	10 - 1000 V
<b>Measurement range Current</b>	0.1 - 10 A
<b>Measurement range Power</b>	10 - 10000 W
<b>Voltage range</b>	auto / 100V / 600V / 1000V
<b>Voltage resolution</b>	0.01 V
<b>Current range</b>	auto / 2A / 10A
<b>Current resolution</b>	0.01 A
<b>Sweep time Auto sweep</b>	4 - 640 ms
<b>voltage and current accuracy in %</b>	+/- 1
<b>Measurement time</b>	5 s
<b>Measurement time Interval</b>	30 s
<b>Data points</b>	400
<b>Data storage Internal memory</b>	300
<b>Operating temperature range</b>	0 - 35 °C
<b>Sensor unit</b>	Si-sensor / T-Type thermocouple
<b>Communication</b>	RS-422 / 232C
<b>Power supply</b>	12VDC, 5W / AA Bateries x 8
<b>Dimensions mm</b>	230 (W) x 320 (L) x 180 (H)
<b>Weight</b>	3 kg
<b>Ingress protection IP</b>	-

Specifications are subject to change without further notice.