

BENNING

PV 125

PV Installation Tester



NEW!

PV-Systeme up to 1500 V quick & easy testing

BENNING PV 125

Installation Tester for photovoltaic with 1500 V (U₀/c), 25 A (I_s/c) and RINSU measurement

BENNING SUN 3

Insolation and Temperature Measuring Instrument (Long Range)

BENNING CM 3-PV

Digital Current Clamp Meter with 1500 V DC measuring range



creating documentation and reports via BENNING Test Equipment Cloud (BTEC)



Bluetooth® interface for data exchange



over the air (OTA) for firmware update



Long Range ("LoRa") radio technology with ranges of up to 150 m to the BENNING SUN 3



highest measuring category CAT IV 1000 V



radio interface for operating current measurements using the BENNING CM 3-PV

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INFO

Installation Tester for photovoltaic

commissioning tests and periodic inspection of PV systems up to 1500 V

BENNING PV 125

Installation Tester for photovoltaic systems for testing grid-connected PV systems up to 1500 V

- testing in compliance with EN 62446-1 and EN 62446-2 with test procedure 1
- powerful – 1500 V (Uo/c), 25 A (Is/c) and RINSU measurement
- easy – AUTO test procedures and manual measurements
- quick – testing within a few seconds only

Features

- internal measured value memory for 1000 automatic measurements organised via object (10), inverter (10) and PV string (20)
- data exchange and firmware updates with all common operating systems (Windows, Mac, Android and iOS)
- intuitive colour display, navigation keys and coloured function keys
- Bluetooth®, LoRa radio interface, OTA (over the air) update
- manual measurements for troubleshooting and diagnostics
- powerful lithium-ion battery pack with charging base

Documentation and database management

- compatible with BENNING Test Equipment Cloud (BTEC)
- free cloud access with basic package for documentation and other optional feature



Installation Tester for PV systems

	BENNING PV 125
display	3,5" colour display
protective conductor resistance (R _{PE})	0.05 Ω - 199 Ω
open-circuit voltage with polarity (U _{o/c})	10 V - 1500 V DC*
short-circuit current (I _{s/c})	0.5 A - 25 A DC
insulating resistance (R _{INSU})	0.05 MΩ - 999 MΩ (250/500/1000/1500 V)
AUTO measurements 1	polarity, U _{o/c} , I _{s/c} , R _{INSU}
AUTO measurements 2	DC operating power (via CM 3-PV)
AUTO measurements 3	R _{PE} , U _{PE} (2-pin)
DC operating current/AC current	0.1 A - 400 A (via CM 3-PV)
DC operating power	0.50 kW - 600 kW (via CM 3-PV & Y adapter)
insolation	100 W/m ² - 1500 W/m ² (via SUN 3)
PV module/ambient temperature	-30 °C - +125 °C (via SUN 3)
voltage (2-pin)	10 V - 440 V AC/DC
measured value memory/interfaces	1000 PV strings/Bluetooth®, radio (LoRa)
dimensions/weight	265 x 115 x 78 mm/1 kg
item no.	10241491

* Powerful PV generators with high capacitances might reduce the maximum values of the measurable open-circuit voltage of the device. If short-circuit currents are too high, the device protects itself against overload and refuses to measure.

Scope of delivery

	BENNING PV 125
scope of delivery	carrying case, set of PV measuring leads MC4 compatible (yellow/black), 4 mm set of measuring leads with probe tip and alligator clips (yellow/black/red), lithium-ion batteries (11.55 V, 2930 mAh), charging base

Optional accessories

	item no.
BENNING CM 3-PV digital current clamp meter	11001235
BENNING SUN 3 insolation and temperature measuring instrument	11001143
BENNING TA 5 40 m measuring cable	044039
spare battery pack 11.55 V, 2930 mAh, lithium-ion batteries, rechargeable (for PV 125)	11005059
spare charging base with USB-C port, can also be used for charging in the car, red and green LEDs to indicate the charging cycle (for PV 125)	11005060
set of PV measuring leads with Y adapter for power measurements using the BENNING PV 125 and the BENNING CM 3-PV, MC4-compatible (yellow/black)	11005076

BENNING SUN 3

Insolation and Temperature Measuring Instrument with long range thanks to “LoRa” radio technology (“long range”)

- insolation measurement (W/m^2) via PV reference cell
- PV module temperature and ambient temperature ($^{\circ}C$)
- digital compass and inclinometer
- radio interface (“LoRa”) to the BENNING PV 125 with storage of insolation and temperature values
- integrated data logger for 5000 data records with real-time clock and date/time stamp
- USB interface for data download
- optional PV module fixture and suction-cup temperature sensor



BENNING CM 3-PV

TRUE RMS Digital Current Clamp Multimeter for PV systems with 1500 V DC system voltage

- safe voltage measurement up to 1000 V AC/ 1500 V DC
- highest measuring category CAT IV 1000 V
- AC/DC current measurement up to 400 A with a resolution of 10 mA
- radio interface (wireless connection) to the BENNING PV 125 for measuring the operating current of the PV string
- precise thanks to TRUE RMS measuring method
- connectable low-pass filter (LPF, 1 kHz)
- inrush current measurement
- memory of measured value (HOLD), maximum/minimum values (MAX/MIN), ZERO function
- LED measuring point illumination and rubberised grip area



Insolation and Temperature Measuring Instrument

	BENNING SUN 3
insolation	100 W/m^2 - 1500 W/m^2
PV module/ambient temperature	-30 $^{\circ}C$ - +125 $^{\circ}C$
compass bearing	0 $^{\circ}$ - 360 $^{\circ}$
inclinometer (module/roof pitch)	0 $^{\circ}$ - 80 $^{\circ}$
real-time clock	date/time stamp
measured value memory for W/m^2 and $^{\circ}C$	5000 data records
interface/radio range (LoRa)	1 x USB/approx. 150 m for unobstructed view conditions
dimensions/weight	150 x 80 x 33 mm/350 g
scope of delivery	case, protective rubber holster, module/ambient temperature sensor, batteries (2 x AA), USB cable
item no.	11001143

Optional accessories SUN 3

	item no.
temperature sensor (suction cup)	050424
PV module holder	050425

Digital Current Clamp

	BENNING CM 3-PV
indicating range	4000 (illuminated)
basic accuracy	1.0 %
AC/DC voltage	1 mV - 1000 V AC/ 1500 V DC
AC/DC current	0.1 μA - 400 μA (jack), 10 mA - 400 A (clamp)
resistance	0.1 Ω - 40 M Ω
continuity/diode	• / •
frequency	0.1 Hz - 5 MHz
capacity	0.1 nF - 100 μF
volt sensor	•
filter function	LPF (1 kHz)
memory	HOLD, MAX/MIN, INRUSH, ZERO
measuring method	TRUE RMS
clamp opening	30 mm
measuring category	CAT IV 1000 V
dimensions/weight	220 x 80 x 42 mm/270 g
scope of delivery	case, measuring leads, batteries (2 x AA)
item no.	11001235

BENNING Test Equipment Cloud (BTEC)

BENNING Test Equipment Cloud (BTEC) Rethinking the world of testing

The BENNING Test Equipment Cloud (BTEC) is the new and innovative cloud solution for your future testing tasks. With BTEC, a corresponding platform is now available that can be used to streamline testing processes and to make them more efficient.

Previously necessary workflows are optimised, administrative processes are significantly simplified and the overall process thus becomes much more efficient.

- manages all your testing activities in the field of appliance testing and testing of PV systems
- provides structuring for your testing tasks
- optimises data management
- flexible and future-proof
- efficient, uncomplicated and quick

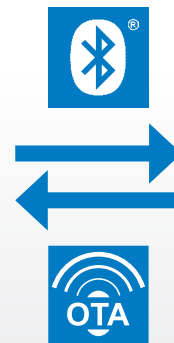
Customised cloud packages

With our BENNING Test Equipment Cloud, we offer you a suitable service package for all kinds of requirements.

Depending on your needs, you can decide on the required scope of functions, the number of users and the number of items of equipment/objects to be tested. This enables us to offer the optimum price/performance package for any requirements – you simply choose the scope of services that suits you best!

Free cloud access **NEW!**

For quick and easy documentation of your testing tasks, we will offer you free cloud access with basic functions in the future.



Remain independent

Use the BENNING Test Equipment Cloud wherever, whenever and as often as you like on all common devices:

- Android app for smartphone and tablet
- iOS app for smartphone and tablet
- Windows PC
- Apple Mac



Further information will be available shortly at:

<https://btec-info.benning.de>

or use the following QR code:



btec-info.benning.de

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