Part 2 – Inspection, Test and Commissioning Report

Test Report for grid-connected photovoltaic systems
according to EN 62446, Annex A

Customer:
Customer Name:
_____

Customer Address:
_____

Customer Eircode:
_____

Installation Contractor:
Company Name:
_____

Company Representative:
_____

Company Address:
_____

PB System Description:
PV Module:
Manufacturer: _____ Module Type: _____
PV Module Performance: _____ Number of Modules: _____
Short Circuit Current Isc (A): _____ MPP Current (A): _____
Open Circuit Voltage Voc (V): _____ MPP Voltage (V): _____

PV Inverters:
Manufacturer: _____ Inverter Type: _____
AC Nominal Power (W): _____ Inverter Quantity: _____
AC Maximum Power (W): _____ DC Maximum Power (W): _____

Test Date: _____ Test Reason: ☐ Initial inspection
Next Test Date: _____ ☐ Retesting

Electrical Certs:
Safe Electric Cert Number: _____ Test Record Sheet Cert Number: _____

DC Test Results:
RE: _____ Loop: _____ RCDx1: _____ RCDx5: _____

Design, construction, inspection and testing

I/we, the responsible person(s) for the design, construction, inspection and testing of the electrical system (as specified by the signature(s)), details of which are described above, have inspected and tested the design and structure with suitable skill and care and confirm that the said words, for which I/we am/are responsible, were carried out to the best of our knowledge and expertise.

Test Result:
☐ No defects were found ☐ Defects were found

☐ The Photovoltaic system complies with the standards of electrical engineering

Signature/Tester: _____ Date: _____

Remarks:

_____

_____

_____

Inspection test report
according to EN 62446, Annex B

Testing:
Test Date: _____ Signature/Tester: _____
Inspected circuits (fill out one sheet for large systems and for separate inspections per inspection):

Design and installation of the PV generator

☐ The DC system was generally designed, selected and set up in accordance with the requirements in DIN VDE 0100 (IEC 60364) and in particular in accordance with DIN VDE 0100-712 (IEC 60364-7-712)

☐ The DC components were measured for DC operation

☐ The DC components are rated for the maximum current and maximum voltage

☐ Protection is provided by application of class II or equivalent insulation on the DC side

☐ PV strand cables, PV generator cables and PV DC main cables have been selected and constructed so that the risk of earth faults and short circuits is reduced to a minimum (DIN VDE 0100-712 para. 522.8.1)

☐ The wiring system has been selected and constructed so that it can withstand expected external influences such as wind, ice temperature and solar radiation (DIN VDE 0100-712. 522.8.3)

☐ AC and DC cables are physically separated

☐ Systems without strand overcurrent protective device: Strand cables are designed so that they can take up the highest combined leakage current of parallel lines (DIN VDE 0100-712 para.433)

☐ Systems with strand overcurrent protective device: Overcurrent protective devices are set correctly according to local rules or according to the PV module manufacturer's instruction (DIN VDE 0100-712 para. 433.2)

☐ There are DC load break switches installed on the DC side of the inverter (DIN VDE 0100-712 para.
536.2.2)

PV System/overvoltage protection/electric shock

☐ The inverter has a simple separation between the AC side and the DC side

☐ Alternatively: A residual device is installed in the circuit and corresponds to a type B RCD (DIN VDE 0100-712 para. 413.1.1.1.2)

☐ The area of wiring loops was kept as small as possible (DIN VDE 0100-712, para. 54)

☐ If equipotential bonding conductors are installed, they run in parallel and in as close contact as possible to the PV DC cables

Special factors of PV system – AC circuit

☐ Devices for disconnecting the inverter are provided on the AC side

☐ Separating and switching devices are connected so that the PV installation in connected on the "load"side and the public supply on the "sources" side (DIN VDE 0100-712 par,. 536.2.2.1)

☐ Protection settings of the inverter are programmed according to local regulations

Marking and labelling of the PV system

☐ All circuits, protection devices, switches and terminals have appropriate markings

☐ All DC connection boxes (PV sub-generator connection box and PV generator connection box) bear a warning that the active parts present in the connection box are supplied by a PV generator and may still be live after the shutdown of PV inverters and public supply

☐ The AC main switch has a clear inscription

☐ Warnings are present for the double supply at the point of interconnection

☐ The protection settings of the inverter and details of the installation are provided on site

☐ The procedures for emergency shutdown are provided on site

☐ All signs and markings are suitable and permanently attached.

General (mechanical) installation of the PV system

☐ Ventilation is provided behind the PV generator to prevent overheating/reduce the fire risk

☐ The frame and materials are properly attached and stable; the roof fasteners are weather-resistant

☐ The cable routing is weather-resistant

Notes:

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_____
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Test Report for grid-connected photovoltaic systems

according to EN 62446, Annex C

Test

String		**1**	**2**	**3**
PV generator	Module			
	Quantity			
PV generator parameters	Voc (STC)			
	Isc (STC)			
Protection device (branch fuse)	Type			
	Rated Value (A)			
	DC rating (A)			
	Capacity (kA)			
Wiring	Type			
	Phase conductor (mm2)			

	Earth conductor (mm2)			
Testing and Measurement of the strand	Voc (V)			
	Isc (A)			
	Irradiance			
Polarity monitoring				
Array Insulation Resistance	Test Voltage (V)			
	Pos – Earth (MΩ)			
	Neg – Earth (M Ω)			
Earth continuity (where fitted)				
Switchgear functioning correctly				
Inverter Make/Model				
Inverter Serial Number				
Inverter functioning correctly				
Loss of mains test				

Notes:

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