

# SH-GEN24-PP

**USER MANUAL** 



### 1. Introduction

The operation manual described below is used for assembling the connection box SH-GEN24-PP. The switchgear, when connected to the inverter, allows you to use the full functionality of the PV-POINT connector, enabling powering the receivers during a network failure as well as during normal operation. Before sale, each switchgear is tested with the use of an inverter and marked with a serial number, any modifications inside the switchgear as well as its incorrect assembly will result in the loss of warranty.

## 2. Housing assembly

The connection board is designed for surface mounting. The board case provides IP65 protection to the component inside the electrical switchboard. For installation, open the connection board case, then attach it to the wall by screwing it with screws, using the wall plugs in the wall



**Dimensions :** 

	А	В	С	D	E	F
PHS 12T	256mm	319mm	144mm	-	210mm	130mm

#### Parameters

Numbers of rows	1		
Case material	Plastic		
Expandable	No		
Type of cover	Close		
Lock	No		
Installation type	Surface mounting.		
Built-in depth	0		
Protection class (IP)	65		



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## 3. Connection





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To connect the inverter, use the PV-POINT connector. First, install the M16 gland in the inverter casing and then, through the gland, insert the cable to the inside of the inverter casing, which will be connected to the connection switchboard. Place the blue N and black L wires in the connectors marked with the same symbol, PV-POINT connectors. The greenish/yellow PE wire should be screwed to the PE strip inside the inverter housing. A separate wire from the earthing strip must be attached to the first input of the PV point connector marked N '.





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The cable from the PV-POINT connector should be connected to the connector of the connection switchboard. The cable should be led inside the housing through the installed cable gland. To connect the cables, use the connectors on the right side marked "P.P." (PV POINT), observe the following sequence when making connections:

- gray connectors phase wires,
- blue connector- neutral wire,
- greenish/yellow connector- neutral-protecting wire.



**Connecting the switchgear power supply** - to connect the power supply to the switchgear, the existing circuits in the customer's installation can be used. When making the connection, it is important to use the same phase that is used as L1 in the three-phase inverter connector. Introduce the single-phase cable from the customer's installation to the switchgear using the second choke. To connect the cable, use the connectors marked as "Network" and observe the following sequence:

- gray connectors phase wires in the order L1, L2, L3,
- blue connector- neutral wire,
- greenish/yellow connector- neutral-protecting wire.



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After complete assembly, before putting the switchgear into operation, the assembler is obliged to carry out electrical measurement tests and check the phase sequence, he is also obliged to verify the tightening torque of all electrical devices before starting up.

After connecting the switchgear, activate the PV-POINT function in the inverter settings, this operation should be carried out using the Solar.start application.

After activating the PV-POINT function in the inverter settings and after activating the switchgear protection, its emergency socket will be activated both during the grid operation and in the event of a grid failure, when the inverter activates the emergency power supply connector. From then on, receivers with a total power of up to 3kW can be connected to the emergency socket.



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## 4. General informations

- The junction box is fully protected by the receivers connected to the emergency socket in the form of a 30mA residual current switch and a 16A overcurrent switch.
- The ON time depends on the inverter control and is <90sec
- Disabling the protection switches off the emergency circuits but does not disconnect the control system.
- In order to use the inverter backup power, the PV-POINT function must be enabled in the inverter settings.
- With the correct connection of the entire system to the L1 phase, the loss of voltage in this phase causes the switchover of the emergency circuits power supply from the mains supply to the emergency power supply from the inverter.
- In the emergency power mode, the system maintains network compatibility and works in the network system TN-S.
- The system enables the load of the emergency power supply socket with loads up to 3kW.
- In order to operate the system in emergency mode, energy is required to be supplied to the inverter, it can be energy from a PV generator and / or energy storage.
- The system provides double disconnection from the network in the system when it is operating in emergency mode
- When designing the installation, it should be ensured that all connected components are usable only within the permissible operating range of the connection switchboard.



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