OMNIMATE – device connectivity and electronics housing

Your inverter is powered by the sun
Power needs future-proof connections
Let’s connect.

OMNIMATE Products

OMNIMATE Signal

OMNIMATE Power

OMNIMATE Signal PCB

OMNIMATE Power PCB

OMNIMATE – device connectivity

Device connectors: OMNIMATE Power terminals and connectors

The OMNIMATE Power terminals are robust, direct power connection solutions, ranging from the compact 4 mm² variant, to the heavy-duty 16 mm² model.

OMNIMATE plug-in connectors provide a pluggable connection for the quickly and safely connecting of the field cables of solar modules and DC connections to the inverter.

OMNIMATE plug-in connectors can be equipped with a lock and release lever, a locking clasp or as a screw flange.

Forms of generating renewable energy are playing an ever-increasing role in the context of climate change. The diverse range of applications means that they use, for example inverters, control cabinets, traction electronics, and signal equipment. The tasks that solarinverters fulfill range from the transmission of power, signals and data applications.

As a specialist in device connectivity, field wiring and electronics, Weidmüller is fully aware of the importance of securing the transmission of power, signals and data applications.

In addition, your system requires a protection class of IP 54 for the inverter and IP 6x for the junction boxes. Weidmüller offers a large selection of Sensor Actuator Interface (SAI) connectors, aluminum, PCB plug-in connectors for internal connections and IP 6x for the external housing.

In particular, your connector needs a protection class in IP 20 for the internal PCB connections and IP 6x for the external housing to ensure reliable operation.

These advances need powerful, flexible and robust connectivity solutions, ranging from the compact 4 mm² variant, to the heavy-duty 16 mm² model.

OMNIMATE Services:

- Take advantage of the Weidmüller services on the entire catalogue or our services on request.

- Full component integration.

- Customisable solution.

- Special suitability for high-temperature applications.

- Fast service.

- Compliant with TÜV.”

Photovoltaic inverter

Secure connectivity for transmitting power, signals and data in photovoltaic inverters

When using high voltages and levels of power, the sun’s environment, and the security of the installation, the Weidmüller Power range ensures maximum safety. For example, our connectors are protected against short-circuiting thanks to their robust design and material choices.

The OMNIMATE Power plug-in connectors provide a pluggable connection for the quickly and safely connecting of the field cables of solar modules and DC connections to the inverter. You can choose from various connection types, ranging from the compact 4 mm² variant, to the heavy-duty 16 mm² model.

The OMNIMATE Power terminals are robust, direct power connection solutions, ranging from the compact 4 mm² variant, to the heavy-duty 16 mm² model.

OMNIMATE Power terminals are particularly suitable for use in power electronics – particularly in inverters, for use in power electronics – particularly in inverters, frequency converters, servo drives, heavy-duty power supplies and motor starters.

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2. AC Power Connection

The electrical connections ensure the direct interconnection between the AC power inverter and the DC grid. The inverter is connected via busbars and plug-in connectors to connection systems, with a high harmonic rating and optimized use of space.

When guiding currents of different heights through the device or connecting the inverter to the DC grid, there is a risk of damage to the DC connection. The RockStar interlock system is manufactured from stainless steel. The interlock system is also available for the reflow soldering process.

3. Signal Connection

Field wiring: M8, M12, M16 and M23 connectors in IP 67 mechanically protected RJ45 connector

Device connectors: OMNIMATE Signal terminals and connectors

The wide range of OMNIMATE Signal device connectivity solutions in IP 67 for connecting networks outside of industrial buildings – on request, they can be individually modified for different applications. The OMNIMATE Signal plug-in connectors are available with screw and PUSH IN spring connection systems in pitch 3.5 mm and 5.08 mm.

4. Data Connection

Field wiring: M8, M12, M16 and M23 connectors in IP 67

Device connectors: OMNIMATE Signal terminals and connectors

Our Industrial Ethernet components offer a higher level of data security and a reliable data transmission. High-quality, patented and pre-wired solutions are the universal solution for wire cross-sections of between 0.25 mm² and 4 mm² and 95 mm². The OMNIMATE Power feed-through terminals and plug-in connectors provide numerous connection options, including connections to the mains supply.

5. Lightning and Surge Protection

Field wiring: M8, M12, M16 and M23 connectors in IP 67

Device connectors: OMNIMATE Power terminals, connectors and feed-through device terminals

The interlock system is manufactured from stainless steel. The interlock system is also available for the reflow soldering process. The OMNIMATE Signal plug-in connectors are available with screw and PUSH IN spring connection systems in pitch 3.5 mm and 5.08 mm.

6. Photovoltaic junction box

The photovoltaic junction box was developed with two different concepts: the concept with a metal or plastic frame and the concept with a metal or plastic frame without a frame. The photovoltaic junction box was developed with two different concepts: the concept with a metal or plastic frame and the concept with a metal or plastic frame without a frame.

7. System monitoring for PV systems

Module connection for efficient installation

The unlimited functionality of a photovoltaic plant is crucial for the attractiveness of PV systems. The current measuring is particularly reliable thanks to very precise sensors and accessories. The current measuring is particularly reliable thanks to very precise sensors and accessories. The current measuring is particularly reliable thanks to very precise sensors and accessories.