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Presentation

Contents of package

The **MultiSlot** optional module is made up of the following components (see figure 1):

- ▶ the **MultiSlot** module itself (not equipped with the optional cards);
- ▶ one power cord;
- ▶ one installation and user manual for the **MultiSlot** module (this document);
- ▶ four adhesive support pads;
- ▶ two M6 screws and two cage nuts;
- ▶ one spare fuse (500 mA, 250V, delayed).

Storage

If the module is stored prior to installation, it should remain in the original packing in a dry place. The storage temperature range is -40°C to $+70^{\circ}\text{C}$.

Recycling of packing materials

Packing materials must be disposed of in compliance with applicable laws and regulations.

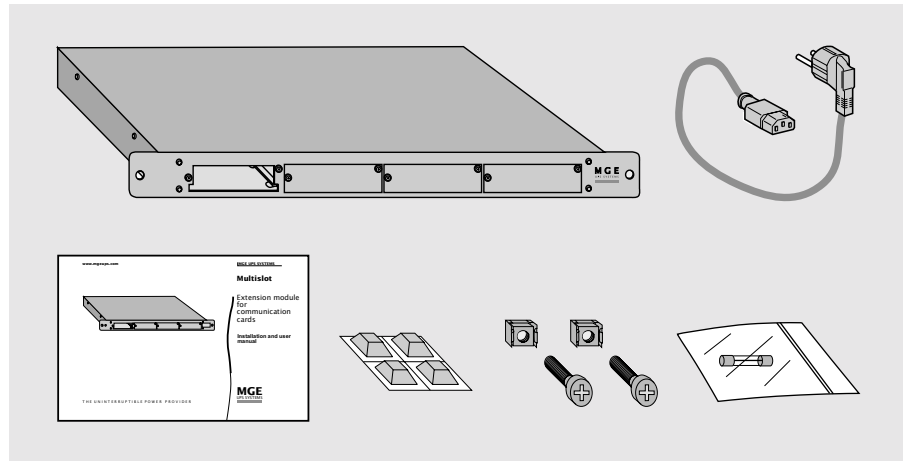


Fig. 1

Function

MultiSlot is an extension module for up to four communications cards.

The **MultiSlot** module may be connected to a UPS (Uninterruptible Power Supply) in either of two connection modes:

- ▶ direct connection to the UPS BUS port;
- ▶ connection via a U-Talk/Basic acquisition card.

Using one of the two connection modes, the **MultiSlot** module acquires measurements, status information and alarms from the UPS and transmits the information to the installed communications cards.

The communications cards provide the interface for user access to the information via a wide range of communications protocols.

The currently available protocols are:

- ▶ SNMP 10BaseT;
- ▶ JBus RS232 or RS485;
- ▶ U-Talk RS232 (ASCII-type protocol, property of MGE UPS SYSTEMS);
- ▶ Basic (status information coded using dry contacts).

MultiSlot-module characteristics:

- ▶ input voltage: 230 or 120V AC;
- ▶ input current: 150 or 300 mA;
- ▶ fuse protection: 500 mA, 250V AC, delayed;
- ▶ maximum operating temperature: 35°C;
- ▶ dimensions: 1 U x 19" (44.45 x 482.6 mm);
- ▶ weight: 2.8 kg.

Overall view

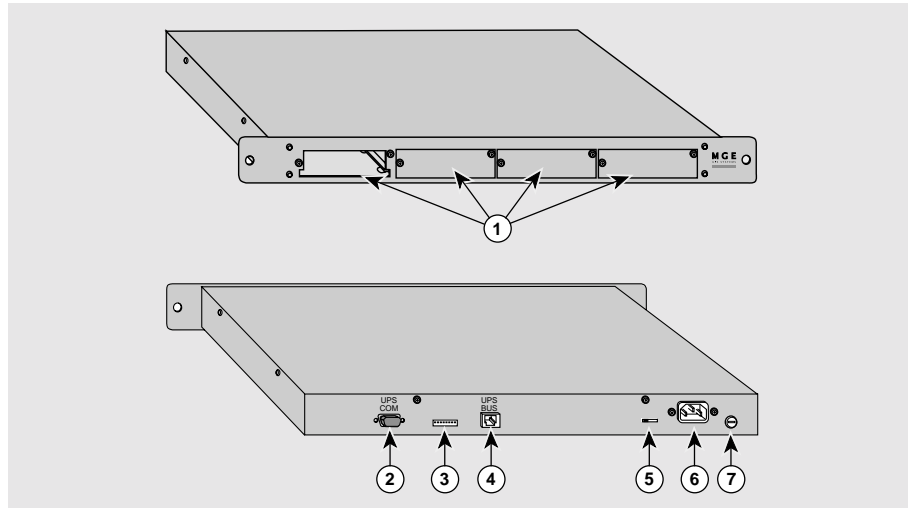


Fig. 2: Front and back of the MultiSlot module.

Key

- ① slots for communications cards (4 slots including 3 protected by a plate),
- ② UPS COM (DB9 connector),
- ③ selector for module number,
- ④ UPS BUS (RJ45 connector),
- ⑤ input voltage selector,
- ⑥ socket for connection to AC power,
- ⑦ module protection fuse.

Installation

Input voltage settings

Before making any connections, check that the AC power used to supply the **MultiSlot** module is compatible with module characteristics (230V 150 mA 50Hz or 120V 300 mA 60 Hz).

Set the appropriate voltage (230V or 120V) using the selector **5** (see figure 3). A 500 mA 250V delayed fuse protects the module against electrical faults.



The MultiSlot module must be deenergized (cord removed from the socket **6) before changing settings on the selector **5**).**

Once the voltage has been correctly set, insert the cord in the socket **6** at the back of the **MultiSlot** module (see figure 4). The cord is made up of two active wires and an earth wire which must be connected to the installation earthing terminal.

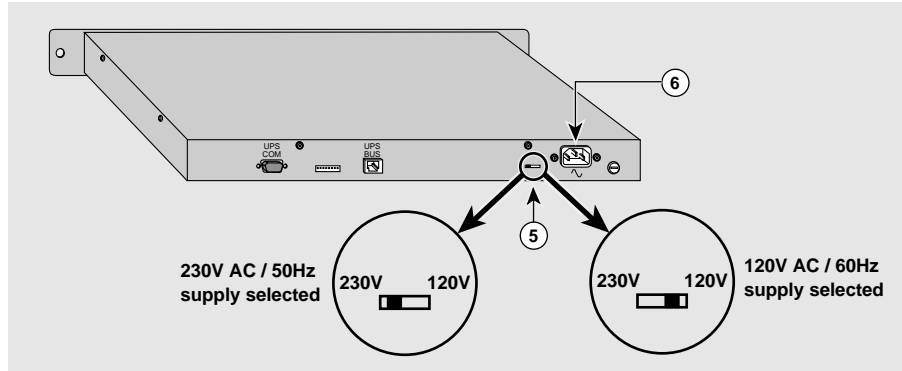


Fig. 3

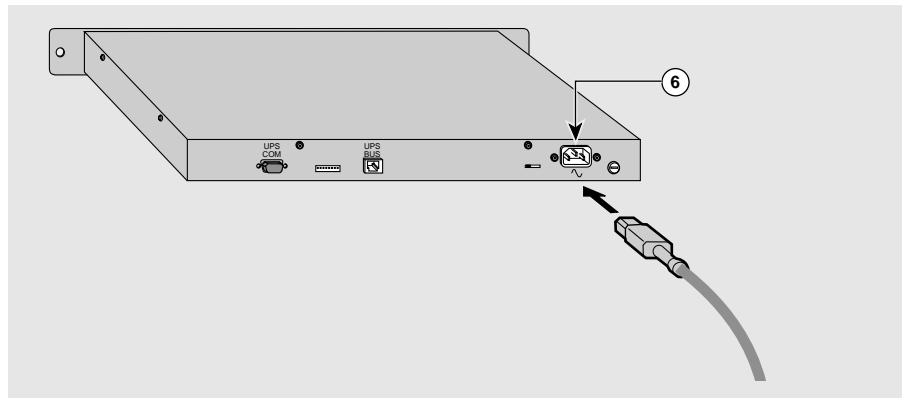


Fig. 4

Rack mounting

Figure 5 shows how to install the **MultiSlot** module in a 19" rack using the two M6 screws and the two cage nuts positioned at the desired height on the frame uprights. The module is not as wide as the rack and consequently does not block the circulation of air.



If the temperature inside the cabinet exceeds 35°C, ventilation is required or the MultiSlot module must be installed outside the cabinet.

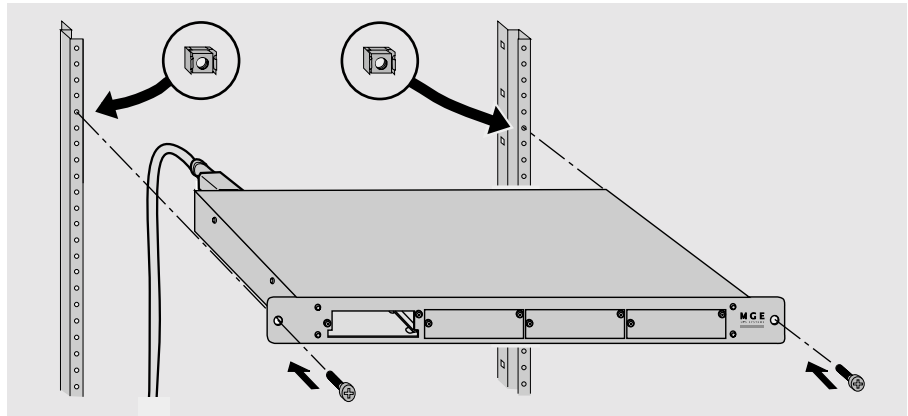


Fig. 5

Adhesive support pads

Figure 6 shows how to attach the four adhesive support pads under the **MultiSlot** module to keep it from slipping on a flat surface.

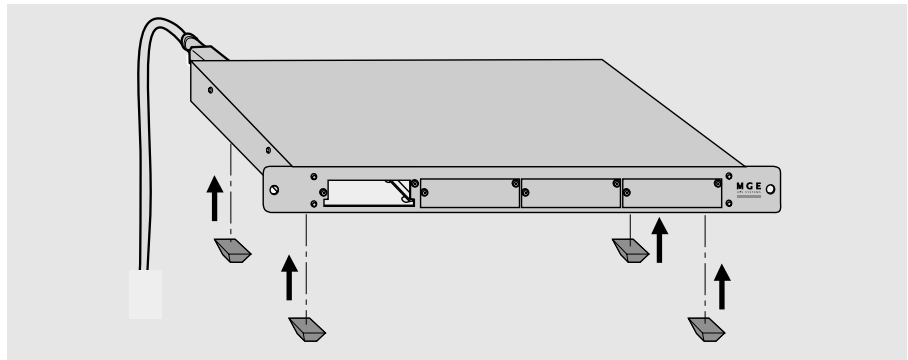


Fig. 6

Installation

Connection to the UPS

Via an acquisition card

Figure 7 shows connection of the **MultiSlot** module to a UPS using an acquisition card intended for a U-Talk/Basic communications port. Consult the user manual of the card concerning configuration in the U-Talk or Basic modes. The cable for connection to the UPS is supplied with the acquisition card.

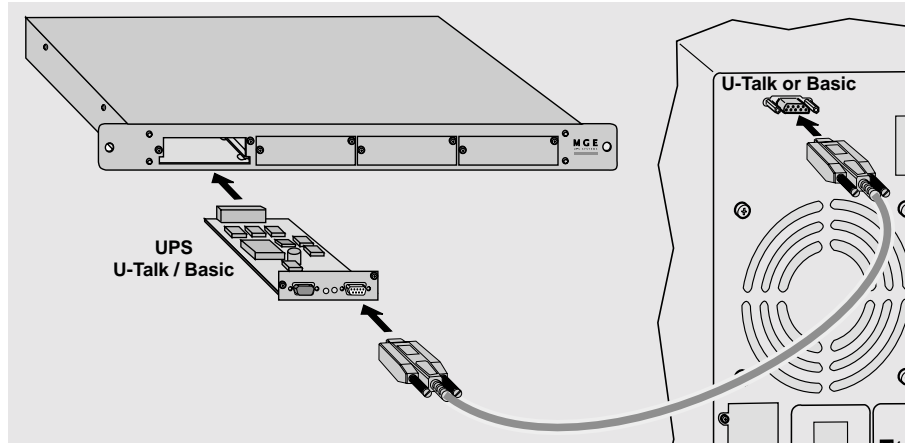


Fig. 7

Via the UPS BUS port

Figure 8 shows connection of the **MultiSlot** module to a UPS using an RJ45 cable.

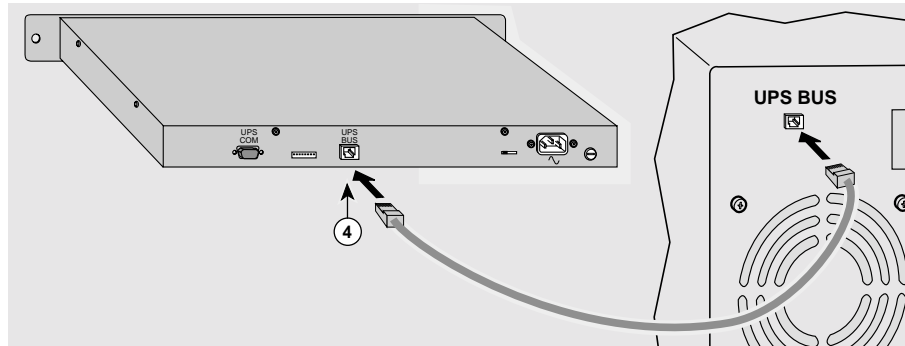


Fig. 8

The communications cards may be installed in any of the four slots.
No particular order is required.
Figure 9 shows one possible order.
Before a card may be installed, the protection plate must be removed.
The screws holding the plate are used to secure the card in the module.
The plates for unused slots must be left in place.



Consult the installation and user manuals of the cards prior to their installation in the MultiSlot module.

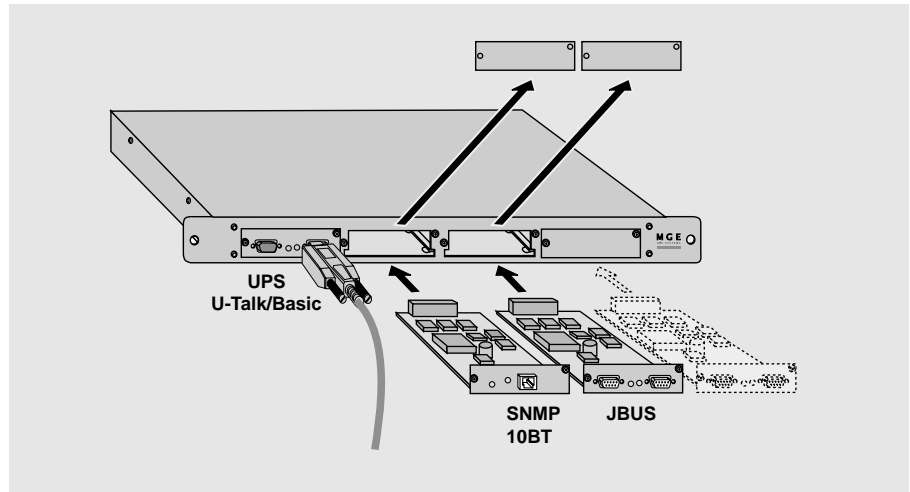


Fig. 9

Special settings

Installation of a second module

Depending on the surveillance needs for the installation, it may be useful to increase the number of connection points by installing a second **MultiSlot** module.

Figure 10 shows the parameter settings for each of the two modules.

Installation of a second **MultiSlot** module is possible only for UPSs equipped with a U-Talk or Basic communications port.

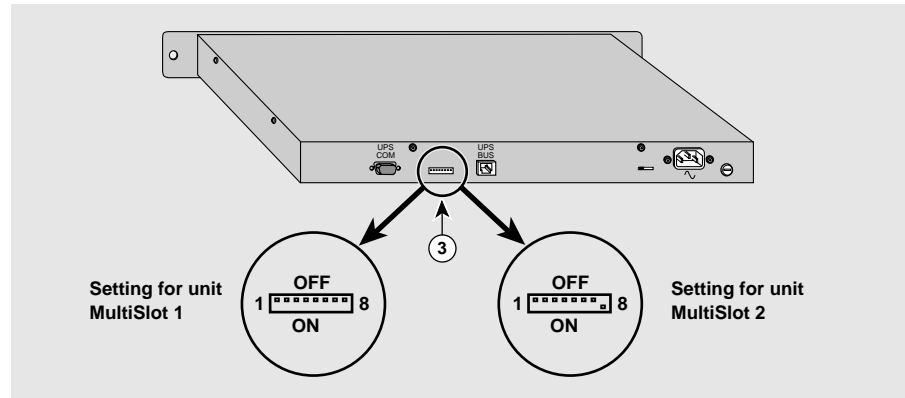


Fig. 10

Special settings

Figure 11 shows how to connect the two **MultiSlot** modules to the UPS.
Only one acquisition card should be used for the set of two modules.
The two modules are interconnected via the UPS BUS ports ④.

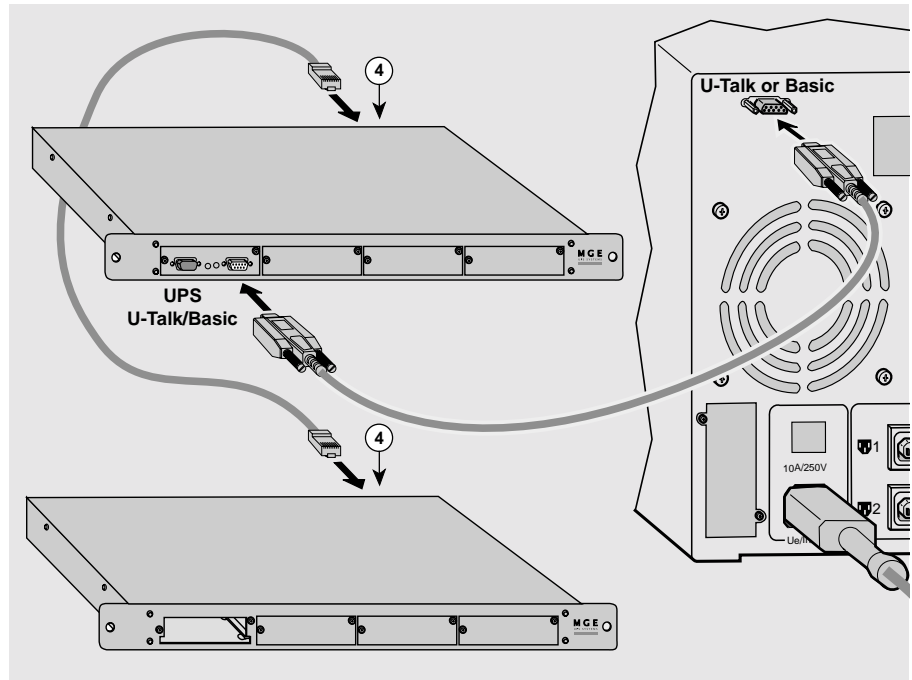


Fig. 11

Special settings

Figure 12 shows the wiring diagram for the RJ45 cable used to interconnect the two **MultiSlot** modules or to connect one of the **MultiSlot** modules to the UPS BUS port on the UPS. The cable is not supplied.

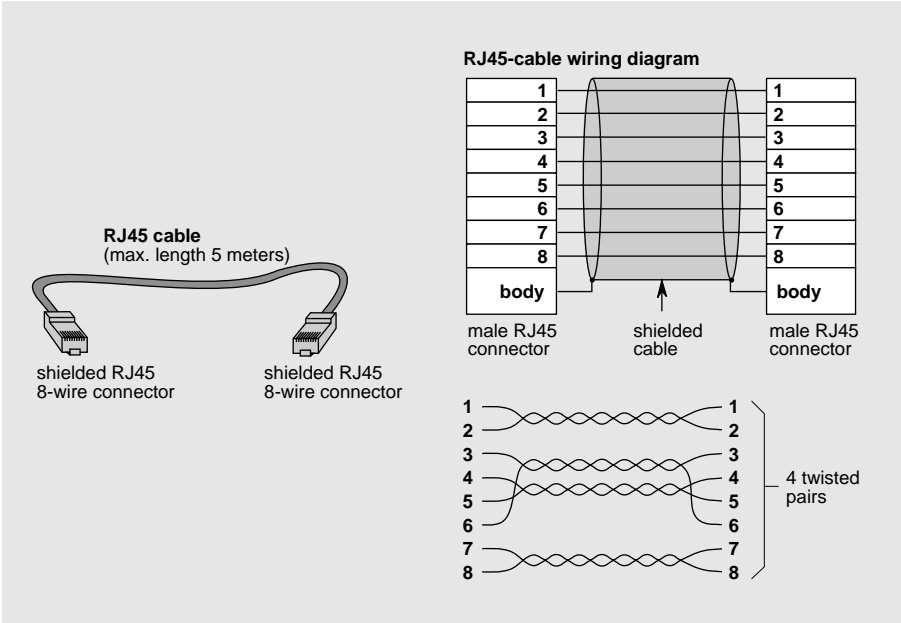


Fig. 12

UPS COM port

This port is reserved for future applications of the **MultiSlot** module and should not be used.

Troubleshooting

Operating anomalies

AC-power problem

The green lights on the communications cards and the acquisition card are all off:

- ▶ check the position of the input voltage selector (see figure 3),
- ▶ check that the power cable is properly connected (see figure 4),
- ▶ check the fuse and replace it if necessary (see below "fuse replacement").

Communications problem

The green lights on the communications cards flash regularly every second for more than one minute:

- ▶ check the connection between the **MultiSlot** module and the UPS (see figures 7, 8 and 11),
- ▶ check that the cards are correctly installed in the **MultiSlot** module,
- ▶ press the reset button on each card installed in the **MultiSlot** module,
- ▶ if necessary, deenergize and reenergize the **MultiSlot** module.

Card start-up problem

The green light on a communications card remains on or off:

- ▶ check that the card is correctly installed in the **MultiSlot** module,
- ▶ press the reset button of the faulty card.

Invalid installation configurations

The following installation configurations are invalid:

- ▶ **MultiSlot** module not connected to a UPS (no U-Talk/Basic acquisition card or no direct connection via the UPS BUS port),
- ▶ **MultiSlot** module equipped with two U-Talk/Basic acquisition cards,
- ▶ installation in duo mode (two modules) with an acquisition card in each **MultiSlot** module,
- ▶ **MultiSlot** module equipped with both a U-Talk/Basic acquisition card and a connection to a UPS via the UPS BUS port.

Fuse replacement

The **MultiSlot** module is protected by a fuse. If the fuse blows, it must be replaced, as shown in figure 13.

The replacement fuse must imperatively have the same characteristics as the original fuse (500 mA, 250V, delayed). A replacement fuse is supplied with the **MultiSlot** module.

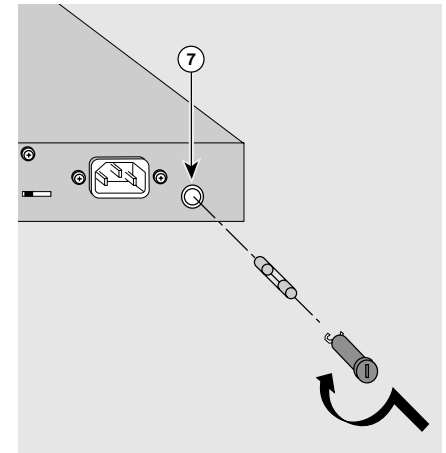


Fig. 13

If the problem continues, contact our after-sales support department.

Appendices

Glossary

Basic: information exchange protocol using dry contacts,

I2C: multi-point and multi-master communications protocol and bus,


JBus: master-slave communications protocol using a point-to-point (RS232) or multi-point (RS485) serial link,

SNMP: Ethernet communications protocol,

UPS: Uninterruptible Power Supply,

U-Talk: point-to-point ASCII communications protocol using an RS232 serial link. U-Talk is the MGE UPS SYSTEMS proprietary protocol.

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