# **REMOTE MIMIC PANEL**







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# **1. INTRODUCTION**

The remote mimic panel is a device which allows the control and monitoring of the main features of an uninterruptible power system (UPS). It is possible:

- to visualise the measurements and the alarms concerning the functioning of the equipment,
- to check the present state of the machine by the light indicators;
- to memorise a log file with all the events.



#### **General Alarm** L1 L2 Load on mains L3 Battery discharging Load on inverter L4 ESC **B1** Key Quit **B2** Key scroll UP **B**3 Key scroll DOWN ENTER **B4** Key Enable

# 2. USER INTERFACE

# 3. CONNECTIONS

# 3.1. Connecting the communication cable to the remote mimic panel

- Unscrew the screws that are on the backside of the box,
- Remove the back panel,
- Connect the communication cable to the right connector (see picture and table below), taking care to pass it through the hole on the back panel. Only for DELPHYS DS see also the appendix B.5.

Remote mimic panel PCB drawing:



Communication port and connector used		EQUIPMENT	Reference section
	RJ45	UPS-ENTERPRISE 5-6-8-10kVA	3.1.1
		MODULYS 4.5÷18ĸVA	3.1.2
Re 185		SM 1047 series UPS	3.1.5
NS 405		ST 3047 series UPS	3.1.5
		DELPHYS DS	3.1.4
	XB1\'	DELPHYS MP and MX	3.1.6
Rs 232	RJ11	Not used	
CAN BUS	RJ11	DIGYS series UPS	3.1.3

<sup>&</sup>lt;sup>1</sup> XB1 is a six wires connector shown on the left of the drawing above; see also the appendix B.5.1. **6** • ENGLISH

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#### 3.1.1. UPS-ENTERPRISE 5-6-8-10kVA

- fasten the cable to the back panel using the provided clip,
- close again the box and tight the screws.

#### 3.1.2. MODULYS 4.5÷18kVA

- fasten the cable to the back panel using the provided clip,
- close again the box and tight the screws.

#### 3.1.3. DIGYS 10 - 60kVA

- fasten the cable to the back panel using the provided clip,
- close again the box and tight the screws.

#### 3.1.4. DELPHYS DS

- the provided cable is a twisted and shielded cable, 25 m long (10 wire cable).
  Use 2 twisted wires cabling for the connection of RTX- and RTX+. For the power supply cabling, you can use 4 ore more wire cable,
- Choose the command functions you need (see §4.4) and then change the dipswitch S12-1 configuration if necessary (see appendix B.5),
- Fasten the cable to the back panel using the provided clip,
- Close again the box and tight the screws.

## 3.1.5. SM 1047 and ST 3047

for UPS SM1047 and ST3047 series, the installation and activation of remote mimic panel must be done by specialist technicians (after sales service).

#### 3.1.6. Delphys MP and MX

- The provided cable is a twisted and shielded cable, 25 m long (10 wire cable).
- Use 2 twisted wires for the connection of RTX- and RTX+ onto XB1 of the remote mimic panel.
- Use 2 (or 4 wires) to supply the remote mimic panel.
- No configuration is needed on the mimic panel.

# **3.2.** Connecting the communication cable to the equipment

#### 3.2.1. UPS-ENTERPRISE 5-6-8-10kVA

**Pay attention**: the connection must be done only when the UPS is powered off. The procedure, specified in the user manual, must be followed to assure the safety conditions during the installation operations.

**Warning:** the communication cable of the remote mimic panel must NOT be laid in the same cable duct as the power cables (cables carrying the mains input, output to the load, etc...). In cases of installation without cable ducts, leave a space of at least 20 cm between the power cables and the communication cable of the remote mimic panel.

- connect the communication cable of the remote mimic panel to the RS 485 connector in the rear panel of the UPS (see item 1 of Appendix B.1), using the appropriate connector converter, from RJ45 to DB9 standard.

#### 3.2.2. MODULYS 4.5÷18kVA

**Pay attention**: the connection must be done only when the UPS is powered off. The procedure, specified in the user manual, must be followed to assure the safety conditions during the installation operations.

**Warning:** the communication cable of the remote mimic panel must NOT be laid in the same cable duct as the power cables (cables carrying the mains input, output to the load, etc...). In cases of installation without cable ducts, leave a space of at least 20 cm between the power cables and the communication cable of the remote mimic panel.

- connect the communication cable of the remote mimic panel to the RS 485 connector in the rear panel of the UPS (see item 1 of Appendix B.2), using the appropriate connector converter, from RJ45 to DB9 standard.

## 3.2.3. DIGYS 10 - 60 kVA

**Pay attention**: the connection must be done only when the UPS is powered off. The procedure, specified in the user manual, must be followed to ensure safety conditions during the installation operations.

**Warning:** if laying the communication cable of the remote mimic panel in the vicinity of power cables, make sure to follow the recommendations of the UPS "installation" and "operating" manuals.

To connect the remote mimic panel, refer to the figure in Appendixes B.3, B.4 and the legend shown below.

	Legend for Appendixes B.3, B.4				
1	UPS mimic panel				
2	Connectors board				
3	Optional Interface boards				
4	Optional Interface board				
5	Pre-cutted part for cables tray				
6	Remote mimic panel				
Α	Connection from UPS to connectors board				
В	Connection to the UPS internal mimic panel				
С	Remote mimic panel connection cable				
Ø	Connector for the connection inside the UPS (board <sup>(2)</sup> )				
8	Connector for the connection to the UPS internal mimic panel (board $@$ )				
9	Connector for the connection to the remote mimic panel (board $\mathcal{Q}$ )				



All of the UPS configuration possibilities and the relative procedures for connection of the remote mimic panel are described below.

#### 3.2.3.1. UPS WITHOUT OPTIONAL INTERFACE BOARDS

In this standard configuration, the interface boards "**3**" and "**4**" are not installed. In this case:

- install the connectors board "2" (supplied with the connection cables kit), using the screws provided,
- take out the connection cable "A" which goes from the UPS to the local mimic panel "1" and plug it into connector "⑦" of the connectors board "2",
- connect the UPS local mimic panel "1" to the connector "<sup>®</sup>" using the special short serial cord, supplied with the connectors board,
- remove the cut-out part "5" from the metal panel,
- connect the connection cable "C" coming from the remote mimic panel "6" to the connector "⑨", threading it through the cut-out part "5", and fit the black cable-pass sleeve into the hole just made.
- close the front door and power the UPS up again according to the procedure described in the operating manual of the UPS.

When the UPS is powered on again it's possible to use all the features of the remote mimic panel.

#### 3.2.3.2. UPS WITH ONE OR MORE OPTIONAL INTERFACE BOARDS

One or more optional interface boards "3" and "4" may be installed inside the UPS. In this case:

- install the connectors board "2" (supplied with the connection cables kit), using the screws provided,
- take out the connection cable "A" which goes from the UPS to the optional interface board "3" and plug it into connector "⑦" of the connectors board "2",
- connect the UPS local mimic panel "1" to the connector "<sup>®</sup>" using the special cable supplied with the connectors board,
- connect the serial cable of the board "**3**" (previously connected to the UPS's mimic panel "**1**") to connector "**③**",
- remove the cut-out part "5" from the metal panel,
- connect the connection cable "**C**", coming from the remote mimic panel "**6**", to the free connector (RJ11 type) on the optional interface board:

no. "4" if both "3" and "4" are present,

no. "3" if this is the only one installed.

Be sure to thread the connection cable "C" of the remote mimic panel "6" through the cut-out part "5", and fit the black cable-pass sleeve into the hole just made.

- close the front door and power the UPS up again according to the procedure described in the operating manual of the UPS.

When the UPS is powered on again it's possible to use all the features of the remote mimic panel.

## 3.2.4. DELPHYS DS

Pay attention: the connection must be done only when the UPS is powered off.

**Warning:** the communication cable of the remote mimic panel must NOT be laid in the same cable duct as the power cables (cables carrying the mains input, output to the load, etc.). In cases of installation without cable ducts, leave a space of at least 20 cm between the power cables and the communication cable of the remote mimic panel.

The maximum length of cable is 200 m.

- Connect the cable from the remote mimic-panel (connector XB1) to the board FU620 (connector XB1) as shown on the drawing in the appendix B.5, taking care to pass it through the hole on the back panel.
- For mimic-panels, the jumpers configurations (on board 6.839) shall be as follow:

	XJ2	XJ3	XJ4
1 <sup>st</sup> panel	OPEN	OPEN	CLOSE
2 <sup>nd</sup> panel	CLOSE	OPEN	CLOSE

- Switch on the equipment again, following the procedure specified in the operative manual.
- When the UPS is powered on again it's possible to use all the features of the remote mimic panel (after a few time).

#### 3.2.5. SM 1047 and ST 3047

- for UPS SM1047 and ST3047 series, the installation and activation of remote mimic panel must be done by specialist technicians (after sales service).

#### 3.2.6. MASTERYS series

**Warning:** if laying the communication cable of the remote mimic panel in the vicinity of power cables, make sure to follow the recommendations of the UPS "installation and "operating" manual.

#### For parallel system:

- UPS with basic synoptic panel: the option must be installed in each single UPS.
- UPS with evolved synoptic panel: the option must be installed only in the concentrator UPS.

To connect the remote mimic panel, refer to the figure in Appendixes B.3, B.4 and the legend shown below.

	Legend for Appendixes B 6.1 – B6.4		
1	Remote mimic panel connection cable entry		
2	Connector for the connection to the remote mimic panel RS232/485		

# 4. MENU ARCHITECTURE

# 4.1. Main Menu



# 4.2. "ALARMS" Menu

This menu displays, if any is present, the internal alarms of the UPS. The alarm description is simplified, and then, to have more information on the kind of problem, it could be necessary to check the internal UPS mimic panel. To see all the information, if more than one alarm is present, use the scroll keys.

# 4.3. "MEASUREMENTS" Menu<sup>2</sup>

In this menu it is possible to monitor the main electric measurements concerning the UPS, and the remaining back up time. To move among the different pages use the scroll keys.



<sup>&</sup>lt;sup>2</sup> The number of available measurements depends on the different type of UPS.

# 4.4. "COMMANDS" Menu<sup>3</sup>



## 4.4.1. Commands available only for Delphys DS (S12-1 ON position<sup>4</sup>)



<sup>4</sup> See appendix B.5.

<sup>&</sup>lt;sup>3</sup> The number of available pages depends on the different type of UPS.



# 4.4.2. Commands available only for Delphys DS (S12-1 OFF position<sup>5</sup>)

For using the command, you have to switch to "Remote control" in the "Configuration\Local-Remote" menu (mimic-panel). Then, all the command that you want to send from the mimic panel are blocked and this message appears "Protected commands: UPS configured in remote monitoring".



<sup>&</sup>lt;sup>5</sup> See appendix B.5.



# 4.5. "PARAMETERS" Menu<sup>6</sup>



#### 4.5.1. "UPS CONFIGURATION" submenu

This menu allows monitoring some parameters concerning the standard configuration of the equipment.



#### 4.5.2. "SETTINGS" Submenu



<sup>&</sup>lt;sup>6</sup> The number of available submenus depends on the different type of UPS.



# 4.6. Menu "HISTORY LOG"



The log file, provided with the remote mimic panel, store, with date and time, all variations regarding the following parameters:

- [S] UPS states,
- [A] alarms,
- [C] commands sent by the remote mimic panel,
- [M] parameters modification.

Once you've entered the menu, you can scroll the dates using the two arrow keys.

 $\sim$   $\sim$ 

Pressing the **ENTER** key you can access all the events of the selected day. The mimic panel will display a different page for each different variation stored in the log file; again you can monitor all the events using the scroll keys.

Example: the picture above shows that on Nov/17/2000, at 10:53am the alarm A00 has been generated (ON - condition).

 $\succ$ Z 0 

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APPENDIX A

# **APPENDIX A**





# **APPENDIX B**

# B.1. UPS-ENTERPRISE 5-6-8-10kVA





# **B.2. MODULYS**





# B.3. DIGYS 10 - 30kVA







# B.4. DIGYS 40 - 60kVA







# **B.5. DELPHYS DS** B.5.1.





#### B.5.2.





B.5.3.





# B.6.1. Masterys BC





# B.6.2. Masterys MC/IP/EF/EM 15-40kVA





# B.6.3. Masterys MC 60-80kVA







# B.6.4. Mastery EB



