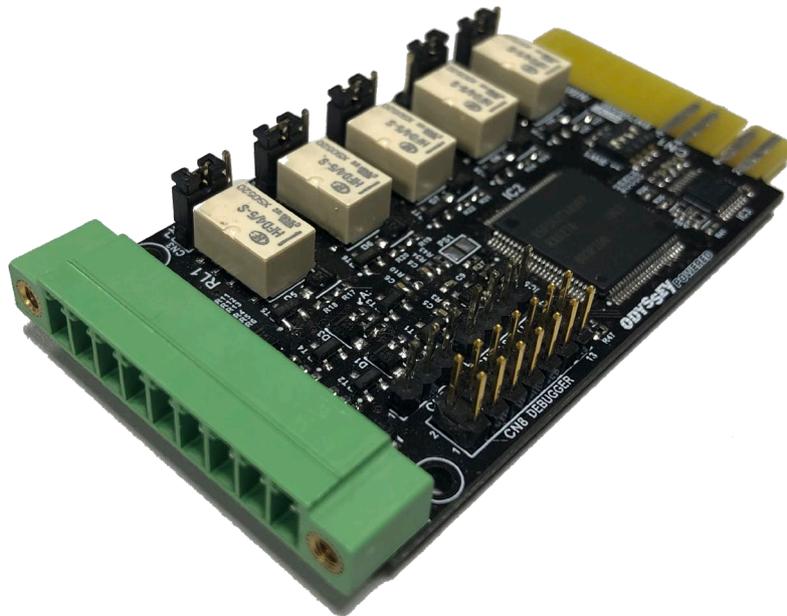


USER MANUAL



NIMBUS AS400 Card

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1. PRESENTATION

The NIMBUS AS400 communications card features potential-free contacts and has been designed to remotely monitor your UPS, allowing alarms and warnings to be handled by external systems. This card is also compatible with different models of the SALICRU range and can be easily reconfigured.

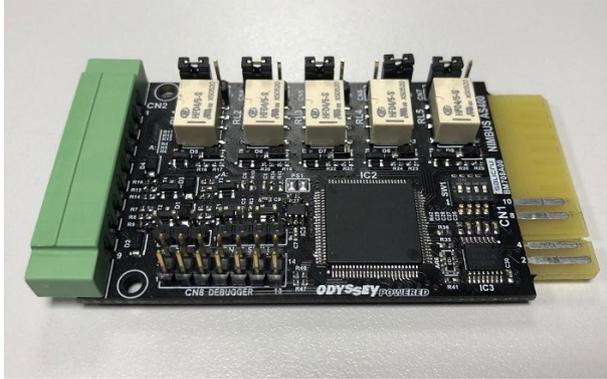


Fig. 1. Overview of the NIMBUS AS400 communications card

2. FUNCTIONALITY

The NIMBUS AS400 card has been designed to receive potential-free signals for the programmable controller and supervision system.

3. DOMAIN OF APPLICATION

The NIMBUS AS400 can be used in the following environments:

- IBM Servers, PCs & Workstations.
- Auto-control industrial equipment and communication applications.
- It allows users to design their own application program with the card's interface.

4. CONFIGURING THE CARD

4.1. MICROSWITCH USED TO CONFIGURE THE UNIT

The NIMBUS AS400 card features a configuration microswitch. Its details are shown below:

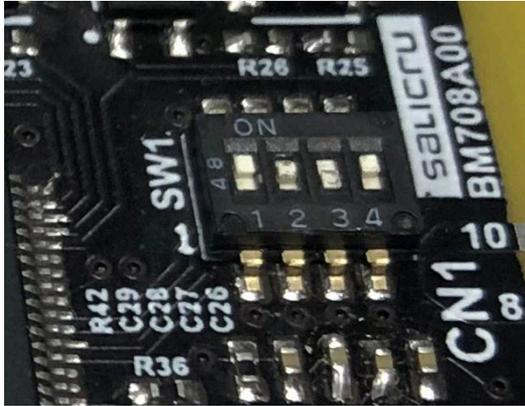


Fig. 2. Microswitch

This microswitch can be used to configure the different units, as shown in the figure below:

	ON	ON	ON
	1 2 3 4	1 2 3 4	1 2 3 4
SPS ADVANCE R	✓		
SPS ADVANCE T	✓		
SPS ADVANCE RT2			✓
SLC TWIN PRO2 0 - 3 kVA		✓	
SLC TWIN PRO2 4 - 20 kVA			✓
SLC TWIN RT2			✓
SLC TWIN PRO2 A			✓
SLC TWIN RT2 A			✓
SLC TWIN PRO2 T UL			✓
SLC TWIN RT2 T UL			✓

Fig. 3. Configuration of the unit using the microswitch

4.2. JUMPERS USED TO CONFIGURE THE RELAYS

Likewise, the NIMBUS AS400 card features a series of jumpers, which can be used to quickly and easily configure the default operation of relays, i.e., normally open (**NO**) or normally closed (**NC**).

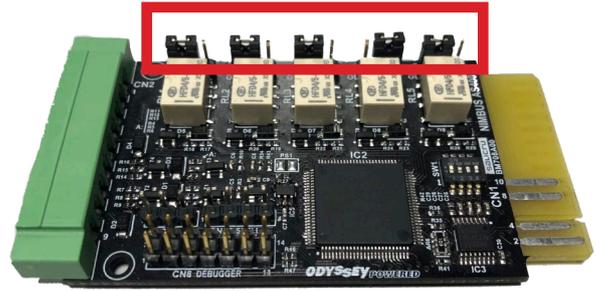


Fig. 4. Relay configuration

Refer to the table below to check the pins onto which the jumper must be inserted to configure the relay output as normally open (**NO**) or normally closed (**NC**):

RELAY 1		RELAY 2		RELAY 3		RELAY 4		RELAY 5	
CN3		CN4		CN5		CN6		CN7	
NO	NC								
Jumper pins 2-3	Jumper pins 1-2								

Tab. 1. Relay output

The image below shows an example with relay 1 configured as normally closed (**NC**), i.e., with the jumper between pins 1 and 2.

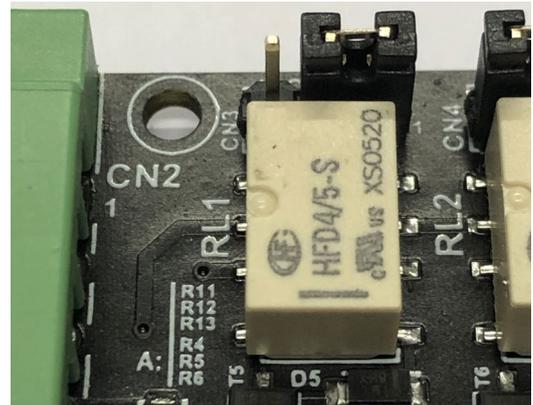


Fig. 5. Relay 1 with the NC configuration

Following the example, insert the jumper between pins 2 and 3 to configure relay 1 as normally open (**NO**), as shown in the image below:

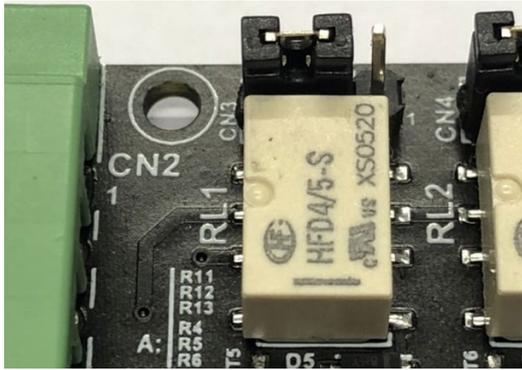


Fig. 6. Relay 1 with the NO configuration

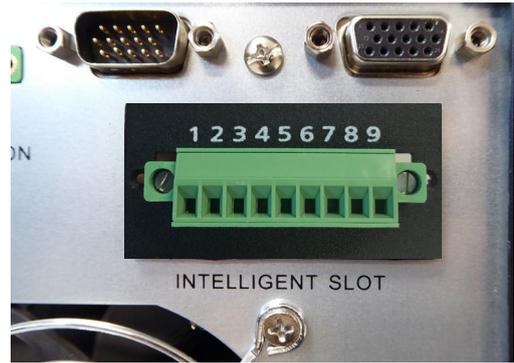


Fig. 9. Secure the NIMBUS AS400 Card

5. INSTALLATION

5.1. ACCESSING THE INTELLIGENT SLOT

Remove the cover of the intelligent slot from the rear panel.



Fig. 7. Intelligent slot cover

5.2. INSERTING THE CARD

Insert the NIMBUS AS400 card into the intelligent slot



Fig. 8. Inserting the NIMBUS AS400 card

5.3. SECURING THE CARD

The NIMBUS AS400 card must be secured close to the rear panel. Secure it with the screws supplied.

5.4. CONNECTORS

Two different fronts suitable for connecting the following series have been implemented:

1. All series: Standard connector for all series in Tab. 1 except for SLC TWIN PRO2 0 - 3 kVA series. **(Fig. 8)**. This front has also been implemented in a DB9 type connector, as can be seen in the following image:

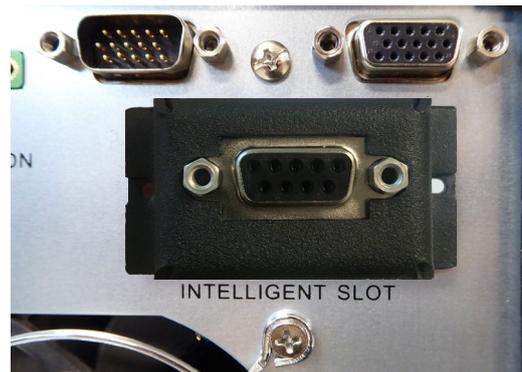


Fig. 10. DB9 connector

2. SLC TWIN PRO2 0 - 3 kVA series:



Fig. 11. Exclusive connector for SLC TWIN PRO2 0 - 3 kVA series.

6. APPLICATION

Basic circuit used to implement remote monitoring and control functions.

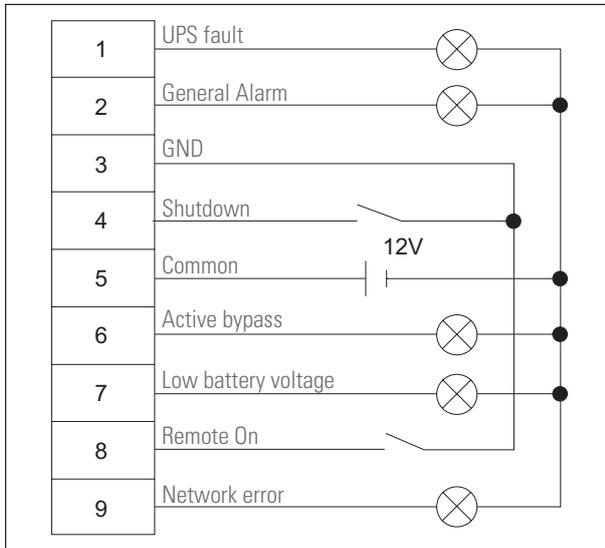


Fig. 12. User interface

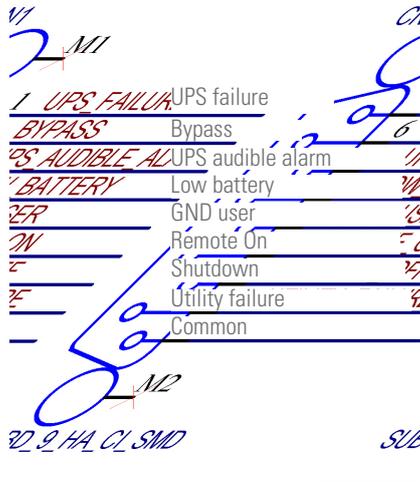


Fig. 13. DB9 Pin-out.

7. SPECIFICATIONS

7.1. DEFINITION OF THE PINS

Pin	Name-Pin	Reasons	I/O	NO/NC/ configure jumper pin
Pin1	UPS fault	One or more UPS faults occurred	O/P	NO: CN3 2-3 NC: CN3 2-1
Pin2	General alarm	Possible faults: fault, warning, active bypass, network error.	O/P	NO: CN3 2-3 NC: CN3 2-1
Pin3	GND	Common for Pin4	I/P	
Pin4	Shutdown	If the UPS receives a shutdown signal of 3 to 10 s when working as a backup battery, it will shutdown with a 12 s delay. Only potential-free relays must be used.	I/P	
Pin5	Common	Common for relays	I/P	
Pin6	Active bypass	UPS fault (or UPS being repaired); power supplied from the network; the system will shut down if this fails.	O/P	NO: CN5 2-3 NC: CN5 2-1
Pin7	Low battery voltage	The battery charge is below the default power level. If it continues to drop, the UPS will not be capable of supplying power to the system.	O/P	NO: CN6 2-3 NC: CN6 2-1
Pin8	Remote On	If the UPS receives a Remote On signal of 3 to 10 s when working as a backup battery, it will be started with a 12 s delay. Only potential-free relays must be used.	I/P	
Pin9	Network error	Network error. The UPS is supplying power to the system.	O/P	NO: CN7 2-3 NC: CN7 2-1

7.2. ELECTRICAL PARAMETERS OF THE PORT

Parameter	SYMBOL	MAX.	UNIT
Relay	DC voltage	V_{DC}	24 V
	DC current	I_{DC}	1.0 A

8. ANNEX

8.1. GLOSSARY

- **Bypass:** Physical connection, established manually or automatically, between the input and output of an electrical device.
- **GND:** Abbreviation of "ground", used in electrical wiring diagrams to refer to the electrical potential of the Ground surface.
- **Jumper:** Element used to create a reversible electrical connection between two contacts with mechanical means. In general, it is used to change the configuration of a hardware device.
- **NO:** "Normally open" relay. A normally open relay will remain normally open and only close when a current flows through its electromagnet.
- **NC:** "Normally closed" relay. A normally closed relay will remain normally closed and only open when a current flows through its electromagnet.
- **Relay:** Electromagnetic device that works as a switch, controlled by an electric circuit; it features an electromagnet, which is activated by one or more contacts that can open or close other independent electric circuits. It is derived from the French term ("relais": relay).

