

NIO 22

Network input/output module

User's guide



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2 Product description

The **NIO 22** ¹⁾ input/output network module is designed for connection to the APS BUS of the APS 400 system. Up to 64 **NIO 22** modules can be connected to a single MCA 168 system controller. This module can be combined with other APS 400 network modules on a communication line; however the total number of addresses on the line must not exceed 64.

The I/O module can be installed wherever additional inputs or outputs are necessary or for mechanical and security reasons. The device is intended for mounting in installation box or for DIN rail mounting.



Pic. 1: NIO 22

¹⁾ Commercial designation of available versions is described in *table 1*.

3 Technical parameters

3.1 Product version

Version	Product designation	Catalogue number
	NIO 22	54422000

Table 1: Product version

3.2 Technical features

Technical features	Supply voltage		8 ÷ 18 VDC
	Current demand	Typical	50 mA
		Maximal	110 mA
	Inputs		2x logical potential-free contact
	Outputs		2x relay NC/NO, 2A/24V
	Indicators		2x LED 1x low level output for PIEZO buzzer or LED
	Tamper protection		External NC contact
	Communication interface		RS 485 – APS BUS

Table 2: Technical features

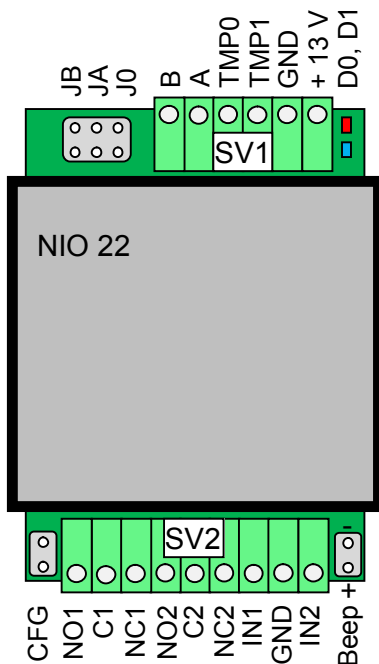
3.3 Mechanical design

Design	Weight	0,038 kg
	Operating temperature	-10°C ÷ +40°C
	Humidity	Max. 75%, non-condensing
	Environment	Indoor
	Housing	Plastic box suitable for DIN rail mounting
	Dimensions	60 x 44 x 16 mm

Table 3: Mechanical design

4 Installation

4.1 Terminals and jumpers



Pic. 2 Terminals and jumpers

Indication	D0	Blue – Buzzer status indication
	D1	Red – Communication status indication

Table 4: Indication LEDs

Config. jumpers	JB	Idle state definition (B)
	JA	Idle state definition (A)
	J0	Line terminator
	CFG	Configuration jumper
	Beep	Ext. signalization conn.

Table 5: Configuration jumpers

Terminal block SV1	B	RS 485 – B cable
	A	RS 485 – A cable
	TMP0	Tamper contact 0
	TMP1	Tamper contact 1
	GND	0 V
	+13V	+ 13 VDC

Table 6: Terminal block SV1

Terminal block SV2	NO1	Relay1 NO
	C1	Relay1 C
	NC1	Relay1 NC
	NO2	Relay2 NO
	C2	Relay2 C
	NC2	Relay2 NC
	IN1	Input 1
	IN2	Input 2

Table 7: Terminal block SV2

4.2 LED Indicators

LEDs	Red	Continuously lit	Online operating mode via RS 485
		Flashing	Offline
	Blue		Buzzer status indication (shining = buzzer on)

Table 8: LED indicators

4.3 Configuration jumpers

Jumpers	JA, JB	RS 485 line idle state definition	Table 9: Configuration jumpers
	J0	RS 485 line termination	
	CFG	Configuration jumper for HW address setting confirmation	
	Beep	Low level output for external PIEZO buzzer or LED connection, copies the buzzer status (indicated with blue LED)	

4.4 Installation instructions

The device is suited for DIN rail mounting in indoor environment.

5 Setting parameters of the module

5.1 Configurable parameters

All parameters are given by programming through the MCA 168 control module, see http://www.techfass.cz/files/aps_400_config_en.pdf.

5.2 Module HW address setting

Setting of the HW address of the module can be done only when the module is connected to the system bus of MCA 168 controller. Detailed instructions for setting module parameters are described in the *APS 400 Config* configuration program user's guide available at the address http://www.techfass.cz/files/m_aps_400_config_en.pdf.

Note: Since the input/output module does not feature own ID media reader, the confirmation ID reading is substituted by clipping the CFG jumper (see *table 5*) in the HW address setting mode. After the HW address is set the jumper must be removed!

6 Useful links

- Wiring diagrams: <http://techfass.cz/diagrams-aps-mini-plus-en.html>
- Program equipment: <http://techfass.cz/software-and-documentation-en.html>