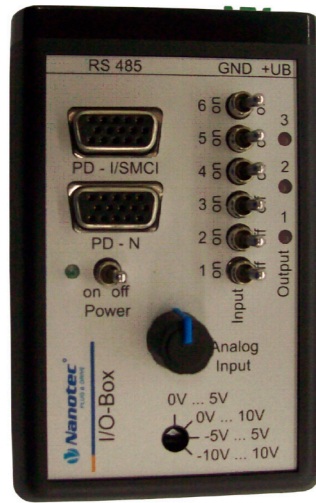


## IO box for SMCI positioning controls and PD-I/PD-N Plug & Drive motors



### Technical data

<b>Operating voltage:</b>	DC 24 to 48 V
<b>Interface:</b>	RS485, 4-wire
<b>Inputs:</b>	3 inputs with LED display
<b>Outputs:</b>	6 push-pull outputs with current limiter 1 analog output with adjustable voltage range
<b>Temperature range:</b>	0 to + 40 °C

### Notes for the application

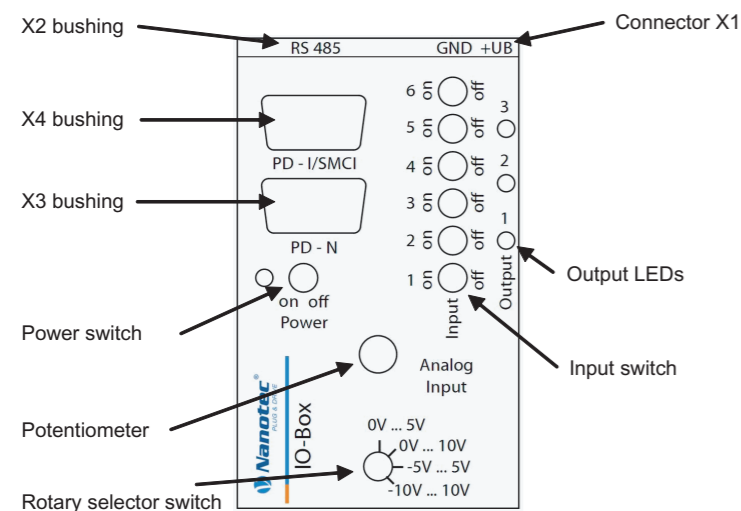
#### Connection of the supply

No additional charging condenser needs to be provided on the supply voltage as this is already integrated in the IO box.

#### Setting the analog voltage

- Select the voltage range for the analog voltage with the lower rotary selector switch.
- Adjust the desired voltage with the "Analog Input" potentiometer.

### Construction



### Supply (X1)

Pin	Function*
1	UB24-48V
2	GND

\* Phoenix connectors included in the delivery.

### RS-485 (X2) and PD-N (X3)

The X2 and X3 connectors were provided for a pre-series of the PD6-N motor and are no longer used. The current PD6-N motors are connected with the IO box via the additional board ZIB-PD6-N and the PD-I-/SMCI connection (X4).

### PD - I/SMCI (X4) connection

Pin	Function
1	Input 5
2	Input 4
3	Input 3
4	Input 2
5	Input 1
6	+UB24-48V
7	Input 6
8	Output 3
9	Signal GND
10	Power GND
11	+UB24-48V
12	Analog Input
13	Output 2
14	Output 1
15	Power GND

## Quick Start Guide

NANOTEC produces component parts that are deployed in a variety of industrial applications. The selection and application of NANOTEC products is the responsibility of the system constructor or end user. NANOTEC accepts no responsibility for the integration of the products in the end system.

Under no circumstances may a NANOTEC product be integrated as the sole safety control in a product or construction. All positioning controls without exception must be designed so that errors are detected dynamically and fail-safe under all circumstances. All products which contain a component part manufactured by NANOTEC must show appropriate warning notices and instructions for a safe application and safe operation on delivery to the end user. All warning notices provided by NANOTEC must be immediately passed on to the end user.

NANOTEC only accepts an express warranty for the quality of its own products in agreement with the standards and specifications as they appear in the NANOTEC manual. ALL OTHER IMPLICIT and EXPLICIT WARRANTIES ARE EXCLUDED. NANOTEC assumes no liability for injuries, product damage, loss or claims that arise through incorrect application of the products.

### Safety instructions

The symbols used in this manual are defined in the following in order to grade the safety instructions and to identify the degree of danger associated with it. Non compliance with the precautionary measures specified in this manual can lead to grave or even fatal injury, and/or personal damage, damage to products, facilities and systems.

#### CAUTION

Indicates a potentially dangerous situation that can lead to mortal or severe injury if they are not avoided.

#### ATTENTION

Indicates a potentially dangerous situation that can lead to minor or fairly serious injury if it is not avoided. The product is checked on delivery, installation, wiring, maintenance, inspection and during operation on the basis of following safety instructions.

### Installation

#### ATTENTION

Do not use the products in environments where they are exposed to water, corrosive gases, inflammable gases or fuels. Otherwise there is a danger of electric shock or fire.

### Wiring

#### ATTENTION

Make sure that the polarity of the power supply is correct. Otherwise the IO box can be damaged. Make sure that the wires mounted on the connector of the IO box are correctly seated. Otherwise there is a danger of short-circuit or fire.

### Operation

#### ATTENTION

Never touch rotating parts of the motor while the motor is running. Otherwise there is a danger of injury.

#### ATTENTION

Do not touch any of the motors during operation. Otherwise the high temperatures can cause panic reactions.

### Maintenance and inspection

#### ATTENTION

Do not attempt to disconnect the positioning control of the IO box while the voltage is switched on. There is a danger of electric shock and destruction of the IO box. After switching off the voltage supply wait until the back-up capacitors have discharged. There is a danger of electric shock from the residual voltage. Do not disassemble the positioning control and the IO box. The components are maintenance-free and opening them will invalidate any claim under guarantee. Otherwise there is a danger of electric shock or injury. Do not attempt to change the wiring while the voltage supply is switched on. Otherwise there is a danger of electric shock or injury.

### General safety instructions

#### PAY ATTENTION TO THE FOLLOWING INSTRUCTIONS TO ENSURE SAFE APPLICATION:

Some figures in this manual show the product with the protective covers or shielding removed. Always replace the protective cover or shielding as stated before putting the product into operation according to the specifications in the manual.

The figures in this manual are used as typical examples and can vary from your actual product.

The manual is subject to change as a result of product improvements, changes to the specifications and revision of the manual. If revisions are made to the manual, the version number is updated and the new manual is issued as a new edition.

If you would like to reorder a manual because of loss or damage, you can download it free of charge from the Nanotec homepage at [www.nanotec.de](http://www.nanotec.de). If it is not available, please contact NANOTEC directly.

NANOTEC accepts no responsibility for results that arise from unauthorized changes to the product. NANOTEC assumes no liability for damage or failures that are caused by unauthorized changes.

