

Operating- and mounting instructions

PowerBlock s4 DC

Order number: 77024-180-11

General usage

Power Block series consists of different devices types. It can be installed in a standard distribution board.

- 4 DIN Rail module for 4 outputs and 6 inputs
- 4 DIN Rail module for 8 outputs
- 4 DIN Rail module for 8 inputs 230 VAC
- 4 DIN Rail module for 4 Blinds/Shuter 24 VDC
- 8 DIN Rail module for 8 outputs and 8 inputs
- 8 DIN Rail module for 16 outputs



A brief overview of the functionality is given in the following table:

Channel outputs	
Bus failure	Facede control
Central move	Presets
Shutter slits control	Timers
True height positioning	Alarms
Counters	Disable function
Scenes	Manual control

ADVANCED FUNCTIONS	
Analog & digital alarms	Logic functions
Scene controller	Setpoints
Timers (with cyclic sending of time remaining)	Faced control
Overwrite end user parameters	Internal variables
	Behavior at bus recovery DPTs obj

Device type and accessories

At present the following device types are available in the PowerBlock control group:

Product	Description	Order number:
PowerBlock o8	8 capacitive outputs	77024-180-01
PowerBlock o8m	8 capacitive outputs	77024-180-04
PowerBlock o16	16 capacitive outputs	77024-180-02
PowerBlock o16m	16 capacitive outputs	77024-180-05
PowerBlock io64	4 capacitive outputs + 6 analog / digital inputs	77024-180-03
PowerBlock io88	8 capacitive outputs + 8 analog / digital inputs	77024-180-07
PowerBlock s4 DC	4 Jalousie Ausgänge 24VDC	77024-180-11
InBlock i8 HV	8 x 230VAC inputs	77024-180-30

Scope of delivery

The following individual components are included in the delivery of the PowerBlock device:

- KNX Actuator
- KNX bus connector
- KNX protection cap
- Operating and mounting instructions

Application programs

The following application programs are currently available for the PowerBlock device:

- 77024-PowerBlock s4 DC_V1.0.0

Installation device



Risk of death by electric shock.

- The device is intended for interior installation in dry rooms.
- The device must only be installed and commissioned by an accredited electrical engineer.
- When planning and construction of electrical installations, the national guidelines, rules and regulations of the country in questions are to be obeyed, as well as all current KNX guide lines.
- For the installation the device must be switched to zero potential.
- The device must not be opened.
- Any faulty device is to be sent together with a return delivery to the manufacturer.

Technical data

POWER AND OUTPUTS SPECIFICATIONS		
Power supply	Supply Voltage: Max. Consumption: Additional power supply:	21..30VDC 9,4mA No
Number of outputs		4 outputs for DC shutter control with separated supply inputs
Maximum switching capacity per output	DC rated current / voltage:	6A / 24V DC
Load Type		Motor 24V DC
Output life expectancy	Mechanical: Electrical:	> 5x10 ⁶ operations (at 180 times/min) > 1x10 ⁵ cycles with 10A load
Connections	KNX bus connection terminal: Terminal screw block: Tightening torque for terminal screw:	0,8 mm Ø solid max. 6 mm Ø solid maximum 0.6 Nm

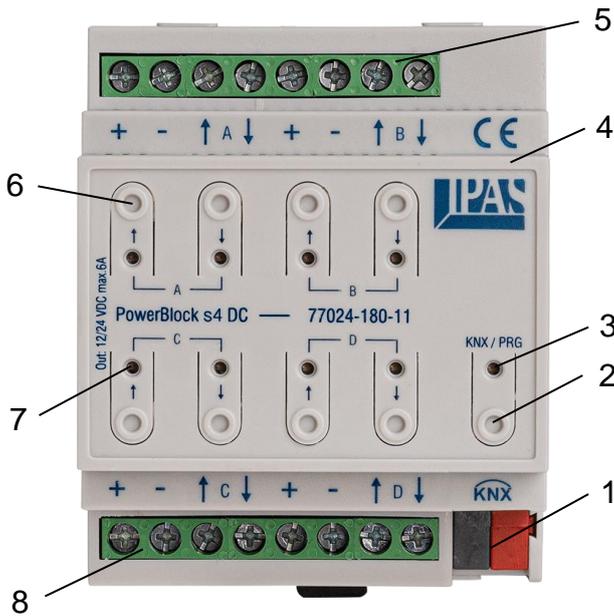
GENERAL SPECIFICATIONS

Control and display elements	Programming button: LED, red: 8 x buttons: (for manual channels control) 8 x LEDs, red:	To assign the physical address Displays addressing mode To Move Up/Down To display actual outputs/channels status
Mechanical data	REG casing 4TE: Width: Height: Lenght: Weight Mounting:	Plastic ABS – V0 72 mm 58 mm 90 mm 235 g 35 mm DIN rail
Electrical safety	Pollution class: Protection type: * Protection class: ** Overvoltage category: KNX Bus:	2 IP20 III III SELV DC 30V

EMC requirements	Complies with:	EMC directive 2014/30/EU
Environmental conditions	Weather resistance: Environmental conditions in operation: Storage temperature: Transportation temperature: Rel. humidity: (non condensing)	EN 50090-2-2 -5°C to +45°C -25°C to +55°C -25°C to +70°C 5 % to 93 %
Certification CE-Signage	KNX registered: According to EMC-Guidelines:	Yes (Residential and commercial buildings), Low Voltage guidelines

* (according to EN 60529); ** (according to IEC 1140)

Location and function of the LEDs and control elements



- 1: KNX bus connector
- 2: Programming button
- 3: Programming LED
- 4: SD card slot (only for internal use)
- 5: 24VDC input and shutters output terminal
- 6: Manual control: Long press: move up / Short press: Stop/Step
- 7: Status Led: move
- 8: 24VDC input and shutters output terminal

Mounting and wiring

As an REG device, the Power Block series are suitable for mounting in distribution boxes on 35 mm DIN rails and wall boxes.

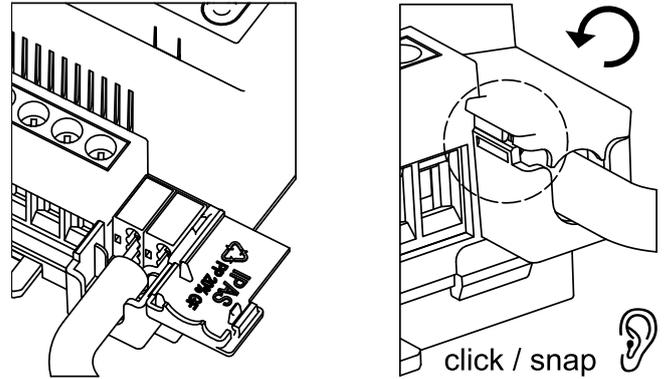
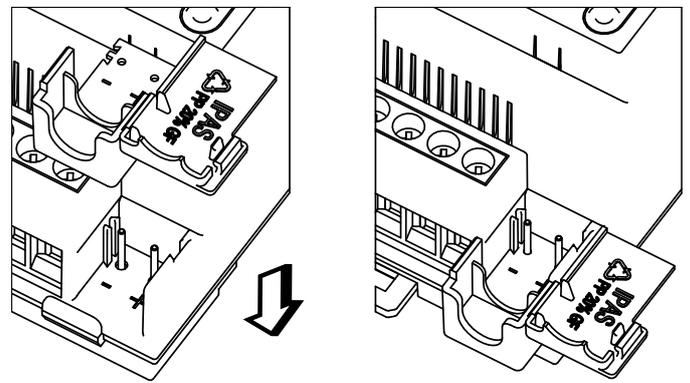
To mount the device, it must be angled to slide onto the DIN rail from above and then locked into place with a downward movement.

Please make sure that the security latch at the bottom side of the device snaps into place and that the device is firmly attached to the rail. To dismount the device, the security latch can be pulled downwards with a suitable tool and then the device can be removed from the rail.

After the device has been inserted, the cables for the Outputs should be attached to the upper and lower connectors. However, please make sure that these are labelled clearly.

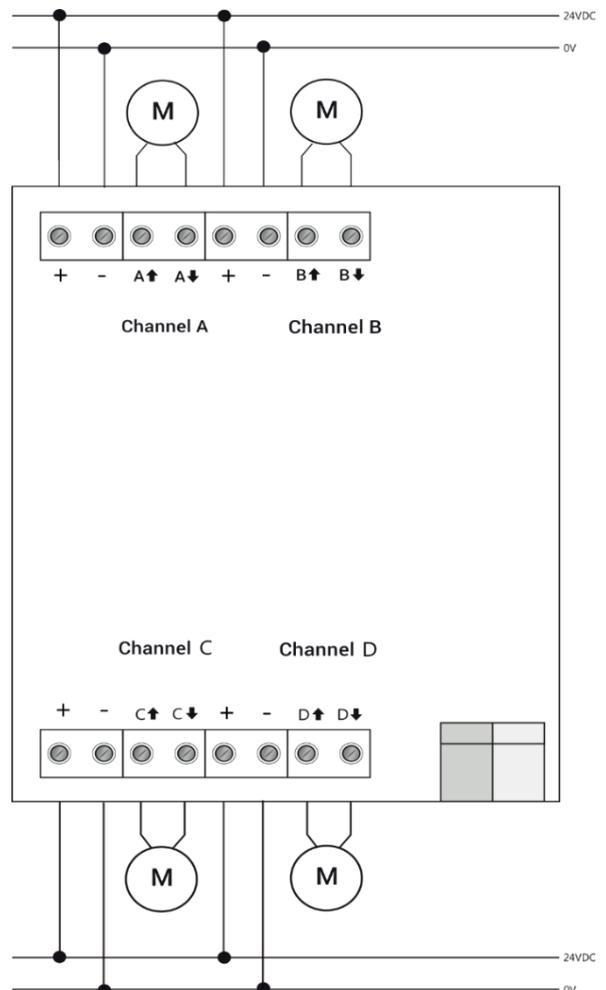
To connect the KNX cable, a standard KNX bus terminal and a protection cap are included with the device.

Please make sure that the KNX cable is installed with the protection cap as shown in the drawing below.



OUTPUTS SCHEMATIC

Each channel can be configured to be used as one shutter channel for DC motor:



ANNEX 1: Manual Control

The Power Block actuator has 2 push buttons and 2 status LEDs for each channel on the front side:
These buttons can be activated to control each and every channel individually if you select "yes" in the relevant parameter options in Shutter/Blinds. The LEDs are arranged in two rows, whereas the LEDs represent:

- The top row: A -> UP, A -> DOWN, B -> UP, B -> DOWN
- The bottom row: C -> UP, C -> DOWN, D -> UP, D -> DOWN

MANUAL CONTROL PARAMETER

The Parameter Mode allows you to control all the channels of the actuator as configured in the ETS. The Action simulates a telegram received at the switching object of the selected channel.

SHUTTER

Long press action (Channel output 1):

Sends a UP command "0" to the "Move" object.

Long press action (Channel output 2):

Sends a DOWN command "1" to the "Move" object.

Short press action (while shutter/blind is moving) of same button:

Sends a Stop command to the "Stop..." object

Status LED:



LED blinks while moving UP/DOWN during parameterized time