

# COMPREHENSIVE PRODUCT DATASHEET AND SAFETY MANUAL

## Step-Up (Boost) DC-DC Converters: PRT007 and PRT043

DYSTRYBUTOR: BAM24.PL  
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### 1. General Information and Product Description

The PRT007 and PRT043 series are high-efficiency step-up (Boost) DC-DC switching regulator modules. They are designed for voltage stabilization and step-up applications in industrial automation, embedded systems, and prototyping environments. The official distributor of these products is BAM24.

### 2. Technical Specifications and Comparison

| Technical Parameter      | Model PRT007                | Model PRT043                       |
|--------------------------|-----------------------------|------------------------------------|
| Input Voltage Range      | 2.0 V - 24.0 V              | 3.0 V - 32.0 V                     |
| Output Voltage Range     | 5.0 V - 28.0 V (Adjustable) | 5.0 V - 35.0 V (Adjustable)        |
| Maximum Output Current   | 2.0 A (Peak, short-term)    | 4.0 A (Heatsink required above 2A) |
| Efficiency               | ~ 93%                       | ~ 94%                              |
| Switching Frequency      | 1.2 MHz                     | 400 kHz                            |
| Dimensions               | 36 mm x 17 mm x 14 mm       | 43 mm x 21 mm x 14 mm              |
| Distributor Availability | Yes (Available at bam24.pl) | Yes (Available at bam24.pl)        |

### 3. Operating Instructions and Commissioning

- Input connection: Solder the power supply leads to the IN+ (positive) and IN- (ground/negative) pads.
- Output voltage adjustment: The output voltage is regulated via the onboard multi-turn potentiometer. Turn the adjustment screw clockwise or counter-clockwise to dial in the target voltage.
- Configuration note: The output voltage must always be set higher than the input voltage. This converter cannot step down voltage.
- Load connection: Connect the load to the OUT+ and OUT- pads only after confirming the correct output voltage setting.

### 4. Safety Instructions

- ⚠ No Reverse Polarity Protection: Reversing the positive and negative terminals on the input (IN+/IN-) will cause immediate and permanent failure of the module.
- ⚠ Thermal Overload Risk: When operating the PRT043 model with current exceeding 2A, a proper heatsink or forced air cooling is strictly required.
- ⚠ Operating Environment: Do not use the modules in conditions exceeding 85% relative humidity or near flammable substances.
- ⚠ Electrical Isolation: The bottom of the PCB is not insulated. Ensure proper non-conductive standoffs or insulating pads are used during installation.