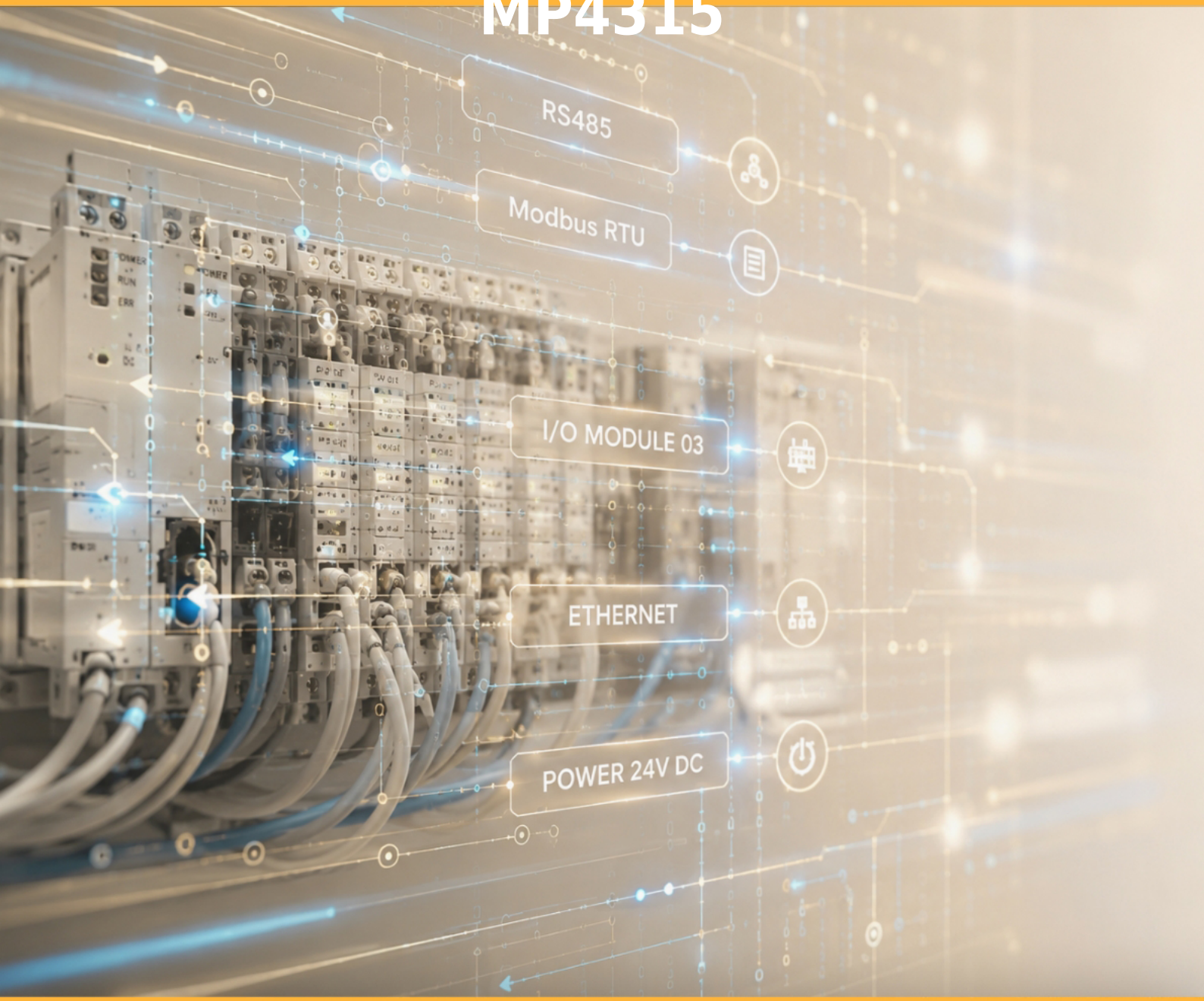
MD07012 - 12 V / 2.8 A Step-Down Converter Module with MP4315



Źródło: https://wiki.modig.pl/index.php?title=MD07012_-_12_V_/_2.8_A_Step-Down_Converter_Module_with_MP4315

Rev. 20261018104656

Table of contents

Description 1
Key Features and Specifications 1
Standard Equipment 1
Connection Diagram 1
Dimensions 2
Links 2

Description

MD07012 - 12 V / 2.8 A Step-Down Converter Module with MP4315

The Modig MD07012 is a compact switching regulator module with a 12 V output. Despite its small dimensions (21x18 mm), it delivers an output current of up to 2.8 A. It features built-in protection against reverse input voltage polarity, overloads, and overtemperature.

Key Features and Specifications

- Wide input voltage range: 12...42 V
- Maximum continuous output current: 2 A
- Maximum peak output current: 2.8 A (operation duration depends on thermal conditions)
- Output voltage: 12 V ± 5%
- Input voltage must be at least 0.5 V higher than the target output voltage
- MP4315 switching regulator
- DC/DC converter switching frequency: approx. 700 kHz
- Efficiency: over 90% at 2.5 A load
- Overload and overtemperature protection
- EN input to switch the regulator into standby mode (current consumption below 0.5 mA)
- PG output indicating proper converter operation
- Compact dimensions: 21x18 mm

Standard Equipment

Code	Description
MD07012	**• Assembled and tested module**

Connection Diagram

Along the edges of the module PCB, there are through-hole pads arranged on a 2.54 mm grid for the input (**VI**), output (**VO**), and ground (**GND**). Pin headers or wires can be soldered to them, allowing the module to be optimally tailored to the target application.

The **EN** input is pulled up to the positive supply rail (VI), enabling the regulator immediately upon power-up (the EN input can remain unconnected). Connecting the GND ground to this input will disable the regulator, resulting in zero output voltage and negligible current consumption (approx. 0.5 mA).

The **PG** (Power Good Indicator) output signals proper converter operation, at which point its voltage is approximately 5 V. If the voltage on the PG output drops to around 0 V, it indicates improper converter operation and/or a lack of proper output voltage.

Dimensions

The exact dimensions of the module are 20.3 × 17.8 mm. Along the edges of the module PCB, there are through-hole pads arranged on a 2.54 mm grid. The board also features 2 mounting holes with a diameter of 2 mm.

Links

- CAD Model (STEP)

MODIG Sp. z o.o.
15-540 Białystok
ul. Żurawia 71
tel.: +48 798 063 314
e-mail: biuro@modig.pl
https://modig.pl

Zastrzegamy prawo do wprowadzania zmian bez uprzedzenia.
Oferowane przez nas płytki drukowane mogą się różnić od prezentowanej w dokumentacji, przy czym zmianom nie ulegają jej właściwości użytkowe.
MODIG Sp. z o.o. gwarantuje zgodność produktu ze specyfikacją.
MODIG Sp. z o.o. nie ponosi odpowiedzialności za jakiekolwiek szkody powstałe bezpośrednio lub pośrednio w wyniku użycia lub nieprawidłowego działania produktu.
MODIG Sp. z o.o. zastrzega sobie prawo do modyfikacji niniejszej dokumentacji bez uprzedzenia.