Features

- Programmable motion
- Free software for parameters setting and programming
- RS-485 Modbus speed and position control
- Speed stabilization for motors with Hall sensor
- Supply voltage 12 to 24 VDC
- Motor overload protection with adjustable current limiting 1 to 20 A
- START/STOP and DIRECTION discrete signals
- Soft start and stop settings
- HARD_STOP emergency signal

Programmable DC Motor Controller, RS-485 Modbus, 12 → 24 V, 20A

RS Stock No.: 434544

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Product Description

The controller is an electronic device to operate and control DC brush motors with a maximum voltage of 24VDC and power up to 480W. The controller is programmable and can operate both as a Modbus slave and as a standalone device (according to a user program). The controller is designed to control speed, position, direction, smooth start, and stop of DC brush motors. Speed stabilization and positioning functions are available for motors with Hall sensors.

The device provides the function of precise adjustable motor overcurrent protection.

The device is controlled via the RS-485 interface, Modbus RTU or ASCII protocol, or by external signals applied to the controller inputs. The controller provides the following functions and capabilities:

- speed control of a DC brush motor with smooth start and stop settings;
- speed stabilization and positioning functions of a DC brush motor with encoder based on Hall sensors;
- positioning to a given coordinate or a displacement by a given value according to Hall sensors data within the range from – 2,147,483,647 to + 2,147,483,647 Hall sensor switching;
- assignment of acceleration and deceleration values;
- motion settings are given via Modbus communication protocol;
- programming of the motor operation algorithm, start of the user control program by the command via Modbus or automatically when the drive is powered on;
- programming of inputs IN1 and IN2, which can also be used as START/STOP and REVERSE/DIRECTION signals;
- selection of the logic of operation of the input signals IN1 and IN2 (START/STOP and REVERS) – triggering on the front edge or signal level.

General Specifications

Compatible Motor Type	DC brush motors
Phase	1
Control Input	RS-485 Modbus, discrete inputs
Operating Modes	Open or closed-loop speed control, position control
Protective Functions	Current limit, overcurrent, excess temperature, under voltage
Applications	Industrial automation, package machines, robots, and household devices

Display	
Status operation indicator	Green and red LED

Electrical Specifications

DC Motor Power up to	480W
Supply Voltage	12VDC to 24VDC

Current Rating	Up to 20A
Maximum Output Voltage	24V
Current limiting setting	1A to 20A, 5 s
Hardware short-circuit protection	30A, 15 µs

Inputs	
Digital Inputs	3
Functionality Of Digital Inputs	Start/stop, rotation direction, emergency STOP, programmable inputs

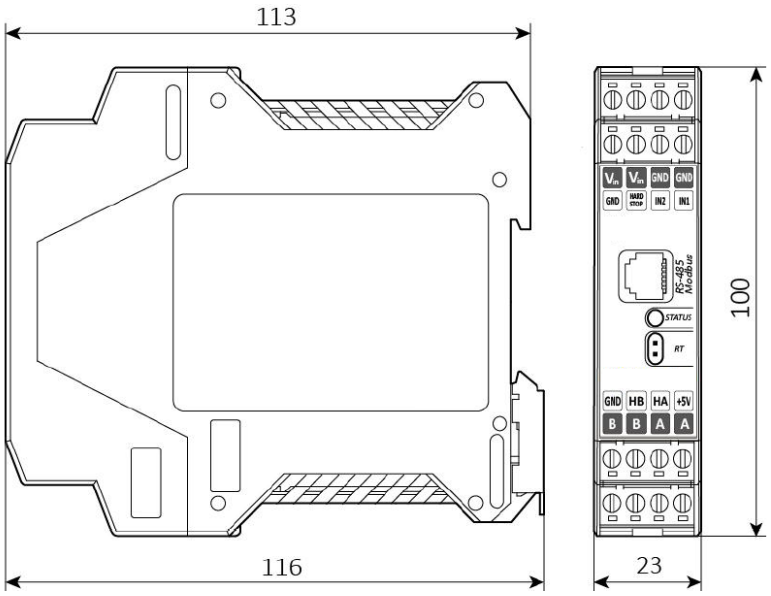
Mechanical Specifications

Mounting Style	DIN-rail Mount
Dimensions	116 mm x 23mm x 100 mm
Height	100 mm
Width	23 mm
Depth	116 mm
Weight	0.15 kg

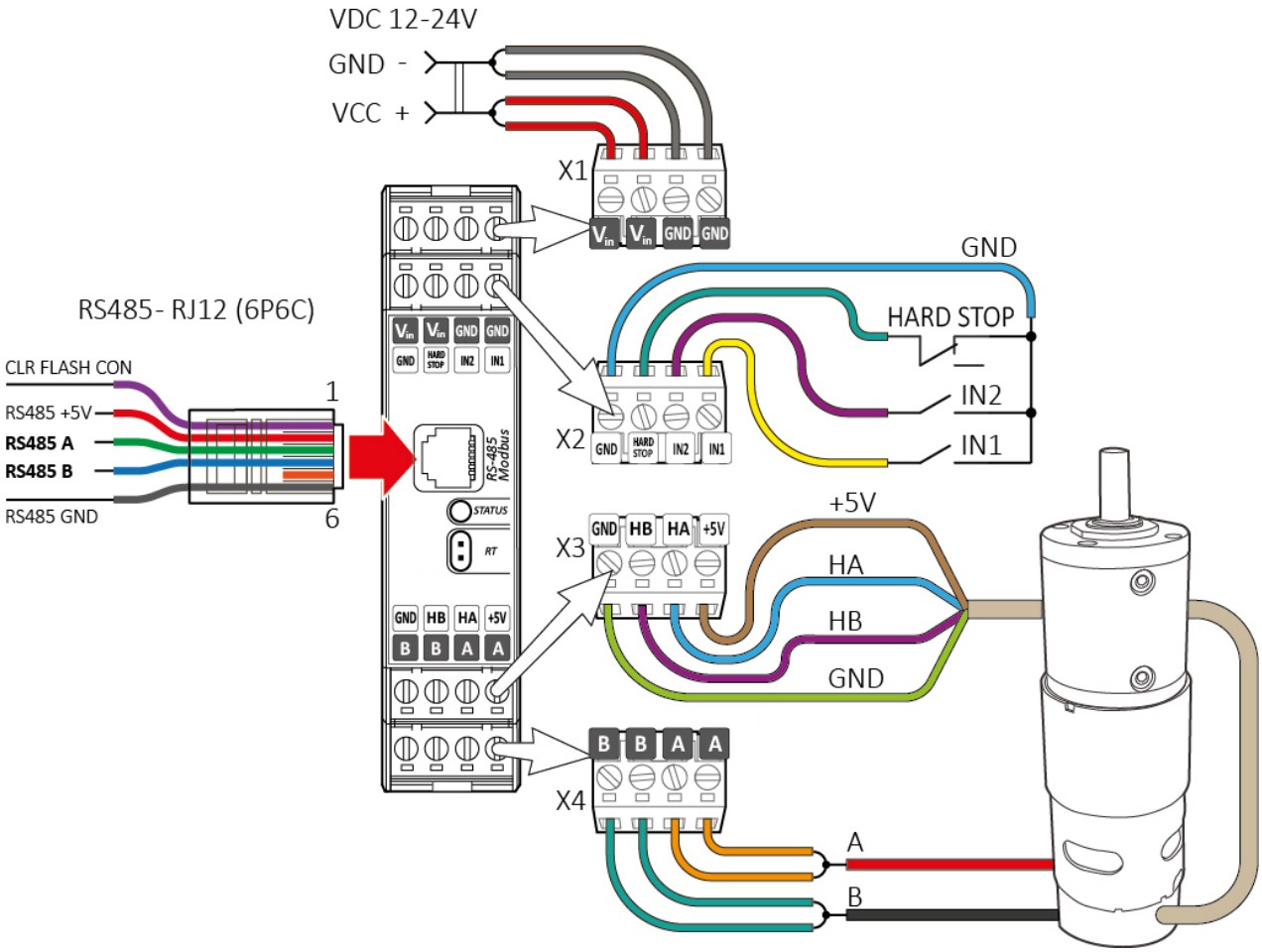
Operation Environment

Operating Temperature Range	0°C to 40°C
Humidity (non-condensing)	up to 90%

Dimensions:



Connection:


VDC 12-24V
GND -
VCC +
X1
GND
HARD STOP
IN2
IN1
X2
RS485- RJ12 (6P6C)
CLR FLASH CON
RS485 +5V
RS485 A
RS485 B
RS485 GND
1
6
+5V
HA
HB
GND
X3
B B A A
X4
A
B