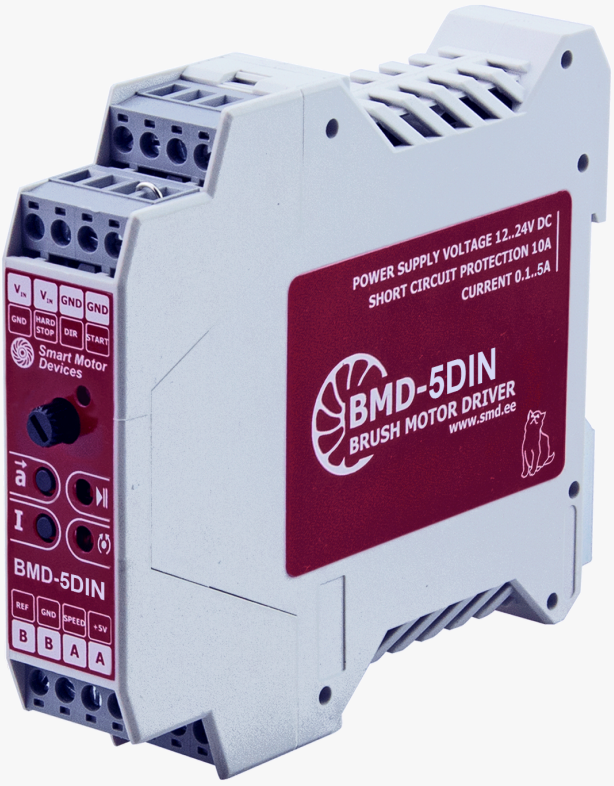
New cost-effective solution for fully-featured control of a DC motor was proposed by Smart Motor Devices

New controller for DC motors - BMD-5DIN, which simultaneously meets all three wishes of the developers: cost-effective, fully functional and a reliable device.



BMD-5DIN - DC brush motor speed controller

TALLINN, ESTONIA, September 12, 2023 /EINPresswire.com/ -- There are several most important requirements of technical equipment developers for electric motor control systems: low cost, full functionality and reliability of the device. The reliability and competitiveness of the final equipment depends on each of these points. Unfortunately, most of the current market offerings offer some compromise between these three requirements. Smart Motor Devices has made every effort to create a product that meets all requirements without compromise, and introduced to the market a new device to control DC brush motors - BMD-5DIN.

What was a task?

We decided to create a device that meets the basic wishes of engineers: a controller for DC motors with functionality and reliability that meets modern industry standards, and at the same time is inexpensive.

For which motors?

Based on statistics from many years of work with industrial equipment developers, we have

concluded that it is more effective to diversify controller models by maximum motor current than to create a universal device. In this way, it is possible to avoid product redundancy and reduce its cost.
Many industrial equipment uses DC motors up to 100 Watts. To work with such motors, there is no point in using common 10A to 20A controller models, since they are redundant. We have provided 5A as the operating current of the motor and added the ability to overload up to 10A.


Smart Motor Devices

Functionality

However, for successful operation of the drive in the system, the controller must provide full functionality for motor control. Therefore, we have added the ability to regulate smooth acceleration and deceleration, control of start/stop and direction of rotation with discrete signals, control the shaft rotation speed with a built-in regulator or with an external analog signal with the ability to select the signal level.
To better integration of the controller to the system, we have provided the ability for the user to regulate the maximum motor current. This makes it possible to protect both the motor itself from overload and the mechanics from the effects of excess torque.
We also provided a HARD_STOP signal, which turns off the motor windings when the external safety circuit opens.

Protection

Considering that for serious and critical devices the reliability of the drive cannot be neglected, we have added protection to the controller against short circuits, overloading, overheating and exceeding the input voltage range. These features are not usually found in cheap controllers, but we have included them in our product to ensure the reliability of the device.

Final result

As a result, Smart Motor Devices introduced to the market a new controller for controlling DC motors - BMD-5DIN, which simultaneously meets all three wishes of the developers. The controller is:
- cost-effective;

- full functionality for motor control;
- equipped with protection and a reliable device.

More information at the company officeal web-site: https://smd.ee/

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