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Modbus TCP is now available in SMSD-LAN programmable stepper motor controllers

Well-known and widely used in industry programmable stepper motor controllers SMSD-LAN series are now available with the Modbus TCP communication protocol

TALLINN, ESTONIA, May 14, 2024 /EINPresswire.com/ -- Over several years of successful use in various fields of industry, stepper motor controllers SMSD-LAN series have gained significant popularity due to the excellent performance of stepper drives, a wide range of useful functions and reliable design. Smart Motor Devices engineers took into account operating experience and gradually updated the exchange protocol and functionality of these devices. Taking into account the requirements of modern industry, the ability to work using the Modbus TCP communication protocol was added to the firmware of these devices.

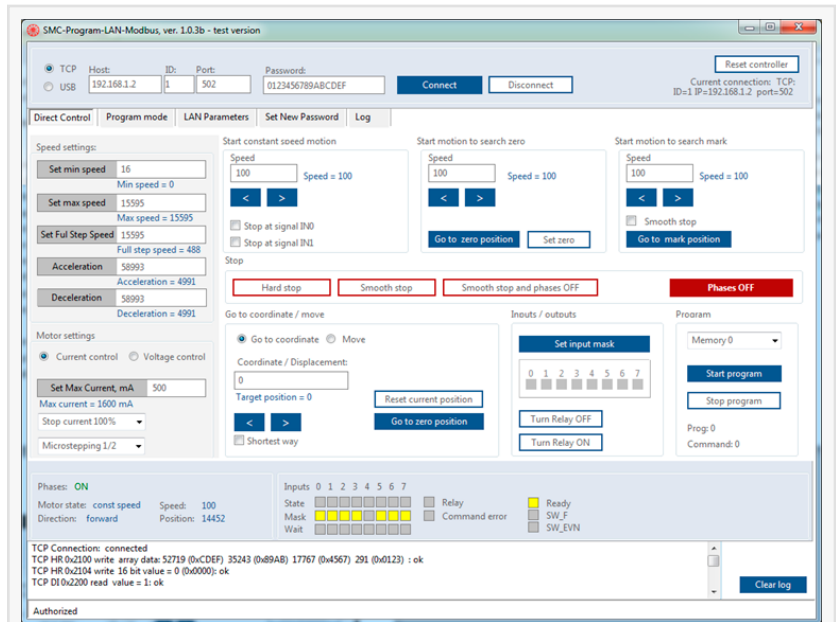Programmable stepper motor controller SMSD-4.2LAN with Modbus TCP protocol

Controller models and compatibility with stepper motors

Like the basic model, the version with Modbus TCP has two options for stepper motor maximum phase current – 0.1A to 4.2A for the model SMSD-4.2LAN and 1.0A to 8.0A for the model SMSD-8.0LAN.
With such a wide range of output phase currents, the controllers are suitable for operation with any two- and four-phase stepper motors - from the smallest stepper motors to high-torque drives.

Functions and features of the stepper motor controllers SMSD-4.2LAN and SMSD-8.0LAN:

• Remote control of stepper motor via Ethernet network, Modbus TCP protocol;

• A 32-bit password is used to protect access over the local network with an authorization interval of 1 s (136 years for brute-force search of password options);

• Autonomous operation and control of a stepper motor according to one of 4 independent programs stored in the controller's memory;

• Real-time stepper motor control by commands from a PLC or computer via Ethernet or USB;

• Software control of the relay;

• Pulse position control with standard signals "STEP", "DIRECTION" and "ENABLE";

• Analog speed control: using external or built-in potentiometer or analog voltage signal 0..5V;

• Analog motor rotation angle control: using external or built-in potentiometer or analog voltage signal 0..5V;

Software for stepper motor controllers SMSD-LAN Modbus

Smart Motor Devices

• Function of memorization of the current position and movement to the memorized position;

• Emergency signal to stop the motor in case of errors or alarm cases;

• External reverse signal allows changing rotation direction "on-the-fly";

• Operation of several controllers can be synchronized by using of external input and output signals and special commands;

• Motor control parameters (phase current, holding current, microstepping, control mode) are configured using an external panel and the unit's menu, or via a communication interface (Ethernet or USB);

• Undervoltage and overvoltage protection;

• Thermal protection;

• The controllers have an internal braking circuit with the ability to connect an external braking resistor;

• The controller has a built-in two-digit seven-segment indicator for setting, displaying critical situations and modes of operation of the controller;

Control modes of SMSD 4.2LAN and SMSD-8.0LAN controllers

The controllers provide 5 control modes:

- program mode - autonomous operation in accordance with one of 4 user programs stored in the memory;
- direct control mode - real-time command control via USB or Ethernet (Modbus TCP)
- analog speed control;
- analog positioning control - adjusting of the angle;
- pulse position control using "STEP" signals and "DIRECTION".

Additional digital inputs and outputs of the controller provide easy and fast connection to other electrical elements of the system
Software and parameterization of the stepper motor controllers SMSD 4.2LAN and SMSD-8.0LAN:
It is possible to use open communication protocol or ready software for stepper motor controllers SMSD-4.2LAN and SMSD-8.0LAN.

The ready to use free software SMC-Program-LAN-Modbus allows connection via LAN or USB. Using this software it is possible to configure the controller, to assemble, read or write user execution programs, control a stepper drive in a real-time mode, monitor the current state of the drive.

Conclusion
Smart Motor Devices engineers have done their best to design and upgrade one of the best their devices – programmable stepper motor controllers SMSD-LAN series. As a result a new version with Modbus TCP protocol is now available at the industrial market.
The controllers are:
- Programmable and multifunctional;
- Cost-effective;
- User friendly and easy to use;
- Full functional for motion control;
- Equipped with protection and a reliable device.

Sergei Sergeev
SMART MOTOR DEVICES OÜ
6559914
email us here

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