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SIPROTEC 6MD89

Bay controller

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Description

The SIPROTEC 6MD89 bay controller is a universal control and automation device with a protection function for railway applications (1-phase and 2-phase systems with a rated frequency of 16.7 Hz). It is designed for use in all voltage levels from contact wire power supply to power transmission. As part of the SIPROTEC 5 family, it enables a wealth of protection functions from the SIPROTEC library. The modular hardware permits integration of the IOs depending on the application. Adapt the hardware precisely to your requirements and rely on the future-oriented system solutions with a high level of investment protection and low operating costs.

Main function	Bay controller for railway applications, optimized for 1-phase and 2-phase systems with a rated frequency of 16.7 Hz. Integrated operation and extensive protection functions are possible. Powerful automation, simple configuration with DIGSI 5
Inputs and outputs	2 predefined standard variants, flexible extension possible
Hardware flexibility	Flexibly adjustable and expandable I/O quantity structure within the scope of the SIPROTEC 5 modular system. If high requirements are placed on the quantity structure, the device can be extended in the 2nd row. For example, 240 (and more) binary inputs are possible with the IO230 (see SIPROTEC 5 Hardware section)

Functions

DIGSI 5 permits all functions to be configured and combined as required.

- Integrated bay controller, optimized for 1-phase and 2-phase systems with a rated frequency of 16.7 Hz.

Abbildung 1SIPROTEC 6MD89 Bay Controller Railway (1/3 Device with 1/6 Expansion Module)

- Control of switching devices

- Synchrocheck and switchgear interlocking protection

- Fixed integrated electrical Ethernet RJ45 interface for DIGSI 5 and IEC 61850 (reporting and GOOSE)

- Up to 4 pluggable communication modules, usable for different and redundant protocols (IEC 61850, IEC 60870-5-103, IEC 60870-5-104, Modbus TCP, DNP3 serial and TCP, PROFINET IO)

- Reliable data transmission via PRP and HSR redundancy protocols

- Extensive cyber security functionality, such as role-based access control (RBAC), protocolling security-related events or signed firmware

Modular and flexible

- Simple, quick and secure access to device data via a standard Web browser – without additional software

- Graphical logic editor to create powerful automation functions in the device

- Optional overcurrent protection for all voltage levels with 2-pole tripping

- Overcurrent protection

- Capturing operational measured variables and protection function measured values for the evaluation of the systems, to support commissioning, and to analyze faults

- Powerful fault recording (buffer for a max. record time of 20 sec. at 8 kHz or 80 sec. at 2 kHz)

- Auxiliary functions for simple tests and commissioning

- Flexibly adjustable I/O quantity structure within the scope of the SIPROTEC 5 modular system

Benefits

- Safe and reliable automation and control of your systems

- Purposeful and easy handling of devices and software thanks to a user-friendly design

- Cyber security in accordance with NERC CIP and BDEW Whitepaper requirements

- Highest availability even under extreme environmental conditions by "conformal coating" of electronic boards

- Powerful communication components warrant safe and effective solutions

- High investment security and low operating costs due to future-oriented system solutions

Applications

The SIPROTEC 6MD89 bay controller is a general-purpose control and automation device with a protection function for railway applications based on the SIPROTEC 5 system. The device is designed for 1-phase and 2-phase systems with a rated frequency of 16.7 Hz. The device supports all SIPROTEC 5 system characteristics. It enables upgradeable system solutions with high investment security and low operating costs.

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