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SIPROTEC 6MD86

Bay Controllers

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Description

The SIPROTEC 6MD86 bay controller is a universal control and automation device with a protection function. It is designed for use in all voltage levels from distribution to transmission. As a part of the SIPROTEC 5 family, it allows the use of a large number of protection functions from the SIPROTEC library. Adapt the hardware and the IO quantity structure exactly to your requirements and enable future-oriented system solutions with high investment security and low operating costs.

Main function	Bay controller for medium voltage and high to extra-high voltage switchgear with integrated operation and comprehensive protection functions. Powerful automation, simple configuration with DIGSI 5
Inputs and outputs	6 predefined standard variants with 8 current transformers, 8 voltage transformers, 11 to 75 binary inputs, 9 to 41 binary outputs
Hardware flexibility	Flexible adjustable and expandable I/O quantity structure within the scope of the SIPROTEC 5 modular system. For great requirements placed on the quantity structure, the device can be extended in the second row. For example, 240 (and more) binary inputs are possible with the IO230 (see Section Hardware)
Housing width	1/3 × 19" to 2/1 × 19"

Functions

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

- Integrated bay controller with versatile protection function from medium to extra-high voltage
- Control of switching devices

SIPROTEC 7MD86

- Synchrocheck, switchgear interlocking protection and switchrelated protection functions, such as circuit-breaker failure protection and automatic reclosing
- Integrated electrical Ethernet RJ45 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, DNP3 (serial+TCP), Modbus TCP, PROFINET IO)
- Redundancy protocols PRP and HSR
- Cyber security in accordance with NERC CIP and BDWE Whitepaper requirements
- Arc protection
- Graphical logic editor to create powerful automation functions in the device
- Optional overcurrent protection with 3-pole tripping

Modular and flexible

- Also used in switchgear with breaker-and-a-half configuration
- Overcurrent protection also configurable as emergency function
- Secure serial protection data communication, also over great distances and all available physical media (fiber-optic cable, 2-wire connections and communication networks)
- Capturing operational measured variables and protection function measured values to evaluate the plant state, to support commissioning, and to analyze faults
- Synchrophasor measured values with IEEE C37.118 protocol integrated (PMU)
- Powerful fault recording (buffer for a max. record time of 80 s at 8 kHz or 320 s 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

Applications

The SIPROTEC 6MD86 bay controller is a universal control and automation device with a protection function based on the SIPROTEC 5 system.

The standard variants of the SIPROTEC 6MD86 are delivered with instrument transformers. Furthermore, protection-class current transformers are also possible in SIPROTEC 6MD86 so that protection functions can be used.

Due to its high flexibility, it is suitable as selective protection equipment for overhead lines and cables with single-ended and multiended infeeds when protection communication is used. The device supports all SIPROTEC 5 system properties.

It enables future-oriented system solutions with high investment security and low operating costs.

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