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SIPROTEC 6MD85

Bay Controllers

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Description

The SIPROTEC 6MD85 bay controller is a general-purpose control and automation device with protection function. It has been designed for utilization on 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. The modular hardware permits action-related IOs to be integrated. Adapt the hardware exactly to your requirements and rely on 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 extensive protection functions. Powerful automation, simple configuration with DIGSI 5
Inputs and outputs	5 predefined standard variants with 4 current transformers, 4 voltage transformers, 11 to 75 binary inputs, 9 to 41 binary outputs
Hardware flexibility	Flexibly 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, this permits an additional 240 binary inputs (and more) to be used with the IO230 (see chapter "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
- Synchrocheck and switchgear interlocking protection
- Integrated electrical Ethernet RJ45 for DIGSI 5 and IEC 61850 (reporting and GOOSE)



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- Up to 4 pluggable communication modules, usable for different and redundant protocols (IEC 61850, IEC 60870-5-103, IEC 60870-5-104, DNP3 serial and TCP, Modbus TCP, PROFINET IO)
- Redundancy protocols PRP and HSR
- Arc protection
- Cyber security in accordance with NERC CIP and BDWE Whitepaper requirements
- Graphical logic editor to create powerful automation functions in the device
- Optional overcurrent protection for all voltage levels with 3-pole tripping
- Also used in switchgear with breaker-and-a-half configuration

Modular and flexible

- Selective protection of overhead lines and cables with single-ended and multi-ended feeders using protection communication
- 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 integrated with IEEE C37.118 protocol (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 6MD85 bay controller is a general-purpose control and automation device with protection function on the basis of the SIPROTEC 5 system.

The standard variants of the SIPROTEC 6MD85 are delivered with instrument transformers. Furthermore, protection-class current transformers are also possible in SIPROTEC 6MD85 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 multi-ended infeed with two ends 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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For all products using security features of OpenSSL, the following shall apply:

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (www.openssl.org) and cryptographic software written by Eric Young (ey@cryptsoft.com).