

ENEAS Ultra Compact Box

Control package for main units

ENEAS (Efficient Network and Energy Automation Systems) provides an economical and versatile control package for medium-voltage ring main units.

The ENEAS control package is available in compact and rugged housing design which offers benefits in new and retrofit installations. The cabinet also contains an auxiliary power supply, a battery-backed UPS unit and fuses. The implementation of the „Ultra Compact Setup“ for distribution automation solution is the perfect box for monitoring, remote control und self-healing application.

The box consists of well proven Siemens components SICAM CMIC, SITOP power supply, charger and battery and space for SCALANCE modem. The battery is designed to switch the motor multiple times in case of a fault and to reach a standby time of up to 8 hours. The battery has a design life time of 10 to 12 years. The components are assembled on a mounting plate, which can be mounted into a metal, plastic, glass-reinforced plastics cubical.

Modular design – suitable for ring main unit configurations of up to five ring cables

The monitoring and control are directly placed in the cable feeder – the design of the box always stays the same. SICAM FCM is placed directly inside the RMU and the information are collected via Modbus communication. In addition the binary contacts are directly connected to the RMU based on our ENEAS distribution automation templates in the TOOLBOX 5.1. Motor drives are also connected via Modbus interface to the 8DJH or external drives like LINAK-idrive. In case of binary connection to the motor drives, the SICAM CMIC has to be extended with DI and DO.

The SICAM CMIC and SICAM FCM combination can be used in distribution network to monitor and automate feeders in all kinds of solid or low-resistance grounded, isolated or compensated medium-voltage distribution networks.

Benefits at a glance:

- **Cost-effective and future-proof solution for new or retrofit configurations**

- **External connectors and flexibility**

1 external connector: Modbus and power supply for e.g. SICAM FCM or Motor Controller.

2 external connector for DI / DO for separate disconnection of indications and commands.

- **Engineering landscape**

Design fits perfectly to the predefined ENEAS templates of TOOLBOX and enables fast and error-free engineering. Tailormade web engineering for distribution automation configuration enables the operator also to parameterize without any engineering tool.



Remote terminal specifications

- SICAM CMIC
- 12 binary inputs, 8 binary outputs
- Automatic parametrization of SICAM FCM

Human machine interface

- Large display with 4 function keys
- Status indication of BI and BO via display
- Web-based HMI
- Indicator LEDs

Communication ports and protocols

- Electrical Ethernet, 2 ports
- Serial port, 2 ports
- IEC 61850 edition 1 and 2
- IEC 60870-5-104, DNP modus
- Ethernet redundancy protocols
- Ethernet front interface for TB II

Monitoring functions

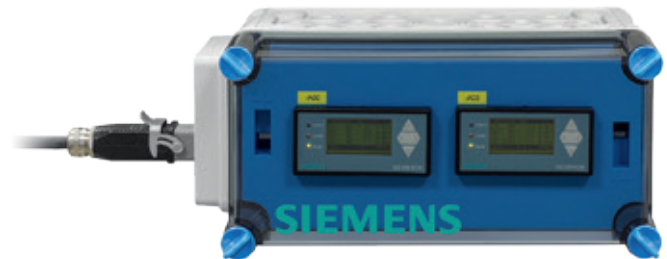
- Measured and metered values U, I, f, Wp, Wq β via SICAM FCM or SICAM Power Meter
- Communication network supervision
- Automatic function via IEC 61131
- Extended test and simulation functions with TB II

Power supply / battery charger

- Power supply: 115 or 240 V AC, 50/60 Hz
- Charger: 10 or 20 A, regulated 24 V DC
- Battery: 7.2 amp hour sealed lead acid
- Expected batteries carry-over: 8 hours
- 3-time switching per feeder

Enclosure

- Material: with RA7035, IP64
- Dimensions: W 300 x H 450 x D 170 mm
- Connectors:
 - 1 connector for binary inputs
 - 1 connector for binary outputs
 - 1 connector for combined Modbus and power supply



ENEAS Ultra Compact Box extension with fault condition monitor SICAM FCM

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Siemens AG
Energy Management
Humboldtstr. 59
90459 Nuremberg, Germany

For more information, please contact our
Customer Support Center
Phone: +49 180 524 84 37
Fax: +49 180 524 24 71
E-mail: support.energy@siemens.com

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