SIEMENS SICAM FSI, FCG Fault Sensor Indicator Fault Collector Gateway Owner's Manual

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Contents

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SICAM FSI, SICAM FCG
Fault Sensor Indicator, Fault Collector
Gateway – Guardian for Your Overhead
Line Networks

siemens.com/sicam-fsi

Description

Utilizing the full range of benefits of distribution automation in overhead line networks requires reliable locating and signaling of earth faults and short circuits in overhead line networks. With SICAM FSI (Fault Sensor Indicator), Siemens now offers a fault detection device for MV overhead.

SICAM FSI is available in 2 versions:

- 6MD2314-1AB10 – SICAM FSI:
  The faults are signaled directly at the device by LEDs.
  Depending on the fault state, a specific flashing light is generated.
- 6MD2314-1AB11 – SICAM FSI, with integrated communication:

In addition to local LED display, earth faults and short circuits are transferred to a gateway (SICAM FCG) via a secured radio connection. SICAM FCG (Fault Collector Gateway) in turn establishes the connection to a higher-level control center via GPRS using the standardized telecontrol protocol IEC 60870-5-104 or DNP3.0 TCP/IP. In addition, the SICAM FCG can also send SMS directly to a field service engineer's mobile phone to attend the situation faster locally.

Alternatively, the SICAM FCG can also communicate to the FliC Cloud using the XMPP protocol and the faults can be visualized on FliC Application.

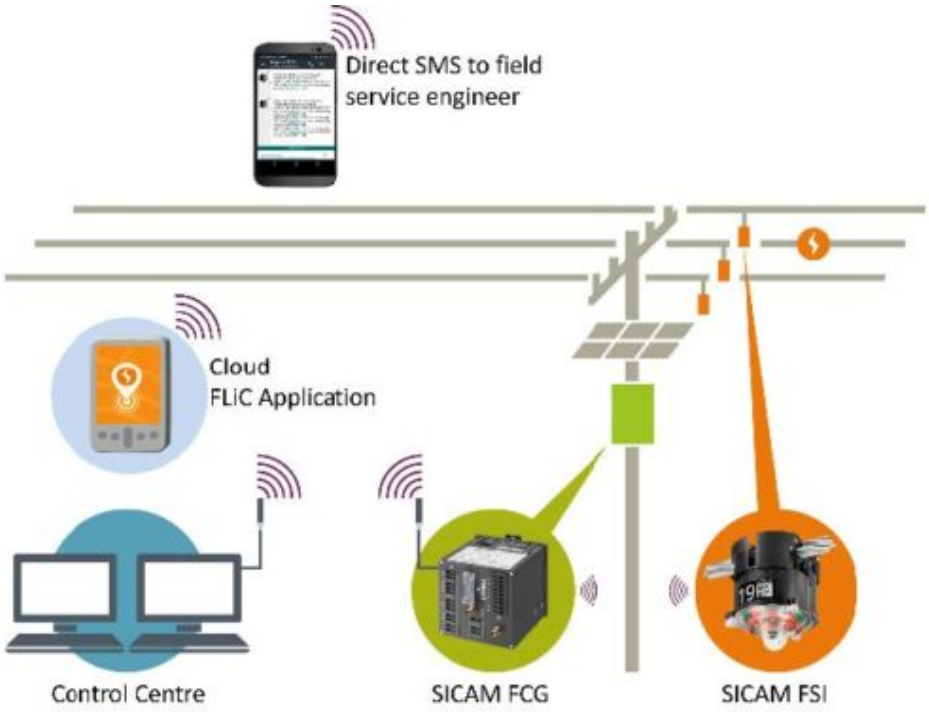
Benefits

- High availability – reduced downtime
- Quick fault detection – exact fault localization and information to maintenance teams Supports installation on non-insulated and insulated cables
- High degree of sensitivity – reliable detection of faults
- Self-sustained sensors reduce the energy consumption of the device – enhancing the service life of the supply battery in the device (battery life: 10 years)
- Own security key and IPsec encryption for data exchange with SICAM FCG – highest protection against unauthorized access (intruders) Quick and easy device configuration with QR code on SICAM FSI and a web browser rather than DIP switches – high degree of user-friendly configurability
- Maintenance free design of the device – with the excep-tion of a battery change after 10 years, the SICAM FSI is absolutely maintenance free. The large-size display of the initial commissioning year on the device enables

operat-ing personnel to see when the battery is due for changing while remaining on the floor
- Various flashing light frequencies depending on fault type – quick and precise fault diagnosis for the maintenance team

Application Area

Medium voltage overhead line networks 3.3 kV to 66 kV 50 Hz/60 Hz.



SICAM FSI
Fault Detection

- Trip threshold setting range 75 A to 1500 A Inom setting is user configurable from 50 to 500 A ena-bling closer coordination with the upstream protection system for the network. Trip threshold is user configurable between 1.5*Inom and 3*Inom (in steps of 0.5 Inom)
- trigger setting 5 A to 160 A The rate of change of cur-rent (DI) setting is user configurable in steps of 5 A up to 80 A, 120 A, 160 A
- Inrush restraint
- Settable time delays for inrush conditions or abrupt changes under load
- Presence/absence of voltage detection for fault confirma-tion

Configuration

- The SICAM FSI – 6MD2314-1AB10 – can be parameterized using “FSI Web Configurator” software
- The SICAM FSI with integrated communication – 6MD2314-1AB11 – can be parameterized via the SICAM FCG over the WEB GUI

Reset mechanisms
User configurable:

- Manual reset with a magnet
- Automatically at system voltage restoration
- Automatically over a specified time (user configurable time)
- Remotely with an acknowledgement signal from the con-trol center

Auxiliary voltage

- Battery (3.6V) service life approx. 10 years

Temperature range

- -25 °C to +70 °C

Housing

- Polycarbonate, UV-resistant
- Protection class: IP65

Mounting

- The SICAM FSI is clamped onto the overhead line using hot stick

SICAM FCG
Fault sensors

- Overhead line: 9 SICAM FSI via short range RF Radio (within a 100 m communication range)
- Cable: 3x SICAM FPI (Fault Passage Indicator) / SICAM FCM (Feeder Condition Monitor) via Digital Inputs

In-/Outputs

- 3 DI DC 24-250 V, 3 DI DC 12 V
- 3 DO DC/AC 250 V

Communication

- IEC 60870-5-104
- DNP3.0 TCP/IP
- XMPP
- SMS

Configuration

- QR Code and Web-Browser

Auxiliary voltage

- DC 12 V, 3W

Siemens AG
Smart Infrastructure
Electrification & Automation
Mozartstraße 31c
91052 Erlangen, Germany
Customer Support: http://www.siemens.com/csc

For the U.S. published by
Siemens Industry Inc.
3617 Parkway Lane
Peachtree Corners, GA 30092
United States

SICAM FSI – SICAM FCG Profile EN_September-24

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