Sigma 2.0

Short-circuit indicator

Sigma 2.0

Sigma 2.0 AC/DC

PRODUCT FEATURES

- Short-circuit indicator for all medium voltage networks
- Phase-selective fault indication
- Trip current values: load-dependent self-adjustment or fixed values
- Single and double flash mode for operation in radial and ring networks
- With auxiliary supply and back-up capacitor available in AC/DC version

YOUR ADVANTAGES

- No false trips due to higher harmonics
- Highly visible LED fault indication
- Retrofit ready for short-circuit and earth fault indicators with monitoring/control and fault direction function

The Sigma 2.0 is a phase-selective short-circuit indicator. It is designed to detect, display and remotely indicate short-circuits in medium voltage distribution networks.

The current is measured via three Single-phase current sensors. By using the new sensors retrofit to more advanced indicator series is possible at any time — without changing the sensors.

There are two response criteria for short-circuit detection, fixed response value with response delay or auto-adjustment based on load current.

If the current for the selected response criterion — fixed value or self-adjustment — is exceeded, the fault-affected phase will be indicated by a bright flashing LED and remote contact will be activated. A double flashing LED signals a second fault that has occurred within the reset time, e. g. by an automatic reclose attempt and the remote contact will be reactivated.

For testing and commissioning purposes, the trip current values can be reduced to 10 A without changing the DIP switch settings.

Sigma 2.0 AC/DC

This version can be connected to auxiliary supply. If the auxiliary power drops out in the event of a fault, the LED indicator can operate using a back-up capacitor for up to 8 hours.

Technical data	Sigma 2.0
Short-circuit indicator	■
Earth fault detection method	Earth short-circuit
I>> short-circuit trip current	200, 300, 400, 600, 800, 1,000, 2,000 A Self-adjustment to load current (IL = load current): IL < 100 A → I>> = 400 A, IL > 100 A → I>> = 4 x IL
tI>> response delay	40, 80 ms
Accuracy	5 % (0—630 A) 10 % (>630 A)
Indication	3 red LEDs: 3 x short-circuit (L1, L2, L3)
Remote signal / communication	1 potential-free relay contact
Remote contact	Potential-free permanent or momentary contact Contact capacity: 230 V AC / 1 A / 62.5 VA max.; 220 V DC / 1 A / 60 W max.
Reset	▸ By button ▸ Automatic time reset: 1, 2, 4 or 8 h ▸ Remote reset
Power supply	
CT powered	■
Internal power supply	Long-life lithium cell, active flashing time >900 h, shelf life ≥20 years AC/DC version: back-up capacitor, max. 8 h
External auxiliary supply	AC/DC version: 24—230 V AC/DC
Housing	Polycarbonate, IP40
Temperature range	–30 °C to +70 °C

Equipment set	Page	Order no.
1 Display unit		
Sigma 2.0		37-1111-101
Sigma 2.0 AC/DC		37-1121-101
3 Single-phase current sensors	54	

Accessories	Page
Connection to remote monitoring	71
Wall-mounted housing	58
External signal lamp	58
Disassembly clip	59
Spring clip	59

Dimension drawing see on page 132 ff. | M3