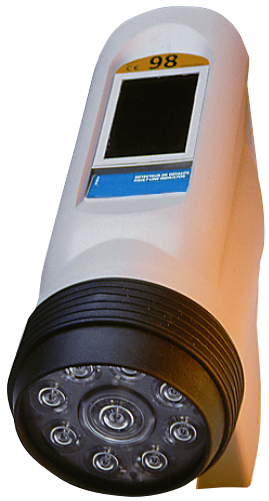
**Technical data sheet**

MV network management - Easergy range

# Flite 210 - 230

## Pole mounted fault indicator for overhead MV network

PE41005



- **Microprocessor**
- **Pole mounted**
- **Earth fault and phase to phase faults detection**
- **Permanent and transient fault current indication**
- **Fully on site configurable.**

## Application

The fault indicators Flite 210 and Flite 230 are dedicated to overhead MV network with direct or resistive earthing neutral system.

Mounted on the pole, the detection is done through analysis of the electrical and electromagnetic field. They have to be mounted on pole on which the electrical field is free of influence from the environment.

**Flite 210:** lithium battery powered

**Flite 230:** power supply by solar cells and Cd-Ni rechargeable battery.

## Description

Flite 210 and Flite 230 boxes are made of polycarbonat ABS to be mounted on the pole by 10 mm steel wrap bands.

■ Functions:
□ permanent fault indication
□ transient fault indication

■ Detection system fully configurable on site:
□ phase fault threshold (I0)
□ earth fault threshold (Imax or di/dt)
□ fault duration
□ flashing duration
□ reset mode

■ Power supply:
□ lithium batteries (Flite 210)
□ solar supply and Cd-Ni rechargeable battery (Flite 230)

■ Test function (magnet)

■ High efficiency LED light system:
□ permanent fault indication
□ transient fault indication

■ SCADA interface (optional):
□ one dry output contact (SCADA).

## Fault detection

A patented sensor, permanently measures the magnetical field, image of the MV current, and an other sensor measures the electrical field, image of the voltage. A fault is either a passing over an absolute current threshold (Imax) or a passing over a current increase during a defined time (di/dt).

The permanent faults are confirmed by the loss of voltage which follows the fault current, issued by the protection tripping upstream the fault.

On fault current occurence, the transient fault LED (Amber) starts flashing for 24 h.

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## Characteristics

| | | Flite 210 | Flite 230 |
|---|---|---|---|
| **Application** | | | |
| Overhead network | kV | 6 to 69 | 4 to 69 |
| Frequency | Hz | 50 and 60 | 50 and 60 |
| Neutral system | | Resistive or direct | Resistive or direct |
| **Fault detection (configurable)** | | | |
| Absolute setting | A | 10 - 20 - 40 - 80 - 200 - 400 - 800 | 10 - 20 - 40 - 80 - 200 - 400 - 800 |
| di/dt setting | | 25% - 50% - 100% - 200% | 25% - 50% - 100% - 200% |
| dT | ms | 40 - 100 - 300 - 400 | 40 - 100 - 300 - 400 |
| **Temporisation** | | | |
| Loss of voltage validation | | No or 5 s | No or 5 s |
| Inrush delay | s | 3 | 3 |
| **Reset** | | | |
| Automatic reset on voltage recovery | V/m | Level: 25 | Level: 25 |
| Delay after power recovery | s | 3 or 30 | 3 or 30 |
| Long duration delay | h | 2 - 4 - 6 - 8 - 16 | 2 - 4 - 6 - 8 - 16 |
| Manually on the box | | By magnet | By magnet |
| **Light indication** | | | |
| Total flight flow | Lm | 7 | 7 |
| Flashing period | s | 3 | 3 |
| Standard flashing duration | h | 400 | 400 |
| **Power supply** | | | |
| Power supply | | Lithium battery | Solar cell + Cd-Ni battery |
| Battery: standard life duration | year | > 10 | > 5 |
| **Environment** | | | |
| Service temperature | °C | – 40 to +70 | – 40 to +70 |
| Protection level (IEC 60529) | | IP 54 | IP 54 |
| **Mechanical characteristics** | | | |
| Dimensions | mm | 300 x 150 | 300 x 150 |
| Weight | kg | 0.8 | 0.8 |

## References

| | | | Power supply | | SCADA output |
|---|---|---|---|---|---|
| | | | Battery | Solar | |
| **59946** | C 1011039 | Flite 210 | ■ | | |
| **59948** | C 1051270 | Flite 210 TS | ■ | | ■ |
| **59947** | C 101104 | Flite 230 | | ■ | |
| **59949** | C 1051125 | Flite 230 TS | | ■ | ■ |



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