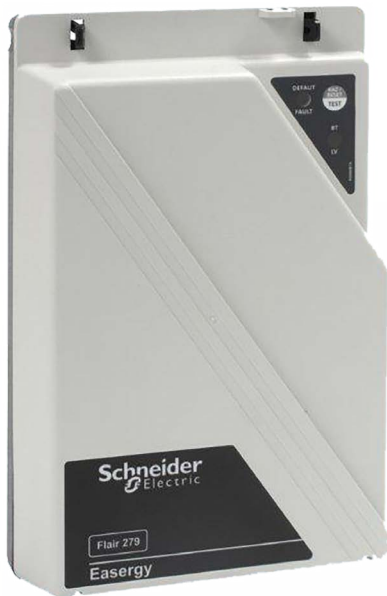


Easergy Flair 279 - Flair 219



Fault Passage Indicator for MV underground network

Application:

The Fault Passage Indicator Flair 279 and Flair 219 are dedicated to underground MV networks with direct, resistive or isolated with restriction earthing.

- Flair 279 : MV/LV substation with a 220Vac power supply
- Flair 219 : Distribution MV/MV substation without power supply.

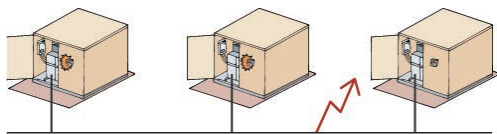
Description:

Flair 279 and Flair 219 boxes are made of polycarbonate ABS including a lead locking.

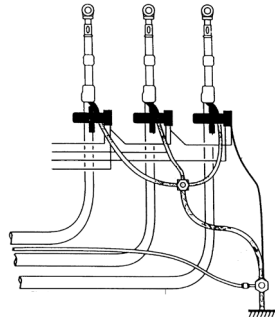
- Detection system is fully configurable on site by means of dip-switches.
 - Fault current setting (earth fault and phase fault)
 - Fault current time duration
 - Light indication duration
 - Reset mode
 - Lithium battery for :
 - Detector and outdoor light power supply (Flair 219)
 - Power supply backup (Flair 279)
 - TEST and RESET function :
 - By push button on the box
 - Light indication
 - Fault current : LED on the box and outdoor flashing light
 - LV supply presence : LED on the box (Flair 279)
 - Terminal block : power supply, current transformers
 - SCADA link : dry contact.

Benefits

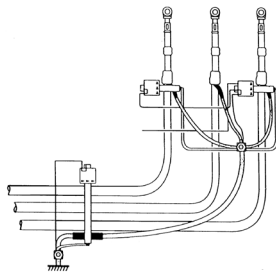
- Phase to earth and phase to phase fault detection and indication
- On site configuration (fault setting, duration, reset mode)



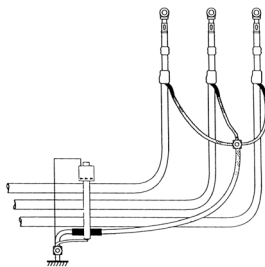
Earth bread mounting



Type A mounting



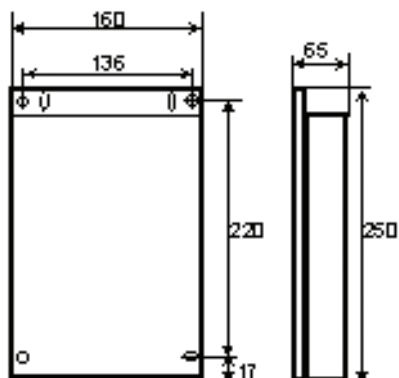
Type B mounting
(except 219)



Type C mounting



Bundle



Sensors

The detectors allow three types of sensors mounting :

Type A mounting : 3 phase CTs for detecting phase-to-phase faults and phase-to-earth faults > 20 A

Type B mounting : 2 phase CTs and 1 core balance CT for detecting phase-to-phase faults and phase-to-earth faults > 5 A (Flair 279)

Type C mounting : 1 core balance CT for detecting phase-to-earth faults only

Sensors :

MF1 CT for phase current measurement (cable $\lt; \varnothing 40\text{mm}$)

MFH 2200 CT for residual current measurement (cable $\lt; \varnothing 130\text{mm}$)

CTR CT Encapsulated waterproof for phase current measurement (cable <math>\lt; \varnothing 45\text{mm} < 80 \text{ mm}</math> without rubber bosses)

CTRH encapsulated waterproof CT for residual current measurement (3-pole cable $\lt; 130 \text{ mm}$)

CTW CT Single core waterproof CT, for earth fault current measurement (cable $\lt; \varnothing 146 \text{ mm}$)



MF1 CT



Encapsulated CTR



CTRH CT



Waterproof CTW

Light indication

■ BVE standard lamp

■ BVD anti vandalism lamp

■ LED Light



Outdoor mounting



Mounted inside the substation, with a 30 cm optical fiber light guide



Mounted on thin plate (door or metallic enclosure)

Characteristics			
		Flair 279	Flair 219
Application			
Network		4 kV to 36 kV	4 kV to 36 kV
Frequency		50 Hz and 60 Hz	50 Hz and 60 Hz
Neutral system		Direct, resistive, isolated	Direct, resistive, isolated
Substation		MV/LV	MV/MV
Fault detection			
Earth fault setting : Type A mounting		20-25-30-35-40-50-60-70-80-100-120-140-160	20-30-40-50-60-70-80-90-100-110-120-130-140-150-160
Earth fault setting : Type B mounting and single CT		5-10-15-20-25-30-35-40-50-60-70-80-100-120-140-160	10-20-30-35-40-50-60-70-80-90-100-110-120-130-140-160
Phase fault setting : Type A and B mounting		225-450-575-700	225-450-700-1200
Temporisation			
Fault duration	ms	50-100-200-350	50-100-200-300
Reset			
After power recovery		On voltage recovery	On current recovery > 1A *
Long duration delay	h	2 - 4	1-2-4-8-16-24-32-96
Manually on the box		Push button	Push button
Outdoor light indication			
Total light flow	Lm	7	7
Flashing period	s	3s (0 to 2h) - 5s (2 to 4h)	from 2 to 8s
Standard flashing capacity	h	400	800
Power supply			
External power supply		230 Vac (± 10%) Insulation 10 kV	Without
Lithium battery : standard life duration	years	Up to 10 years	Up to 10 years
Environment			
Operational temperature	°C	- 15 to +55	- 15 to +55
Protection		IP 21 (IP54 as an option)	IP 21 (IP54 as an option)
Mechanical characteristics			
Dimension H x L x D	mm	250 x 160 x 65	250 x 160 x 65
Net weight	kg	0,8	0,8
Standards			
Mechanical tests	Vibration tests Shock tests	IEC 60255-2-1 (IEC 60068-2-6) IEC 60255-21-2 (IEC 60068-2-27)	IEC 60255-2-1 (IEC 60068-2-6) IEC 60255-21-2 (IEC 60068-2-27)
Electrical tests		IEC 1000-4 IEC 1000-6/10 IEC 1000-4-2 / 8 kV	IEC 1000-4 IEC 1000-6/10 IEC 1000-4-2 / 8 kV

* except single core mounting

Commercial references

Fault detector devices

59956	Flair 279-1-type A	Flair 279 type A et C
59981	Flair 279-0 A	Flair 279 type A et C (IP54)
59995	Flair 279-1-type B	Flair 279 type B
59958	Flair 219-0	Flair 219 type A et C (IP54)

Current sensors

59963	MF1	Standard phase CT
59927	MFH2200	Standard earth fault CT (IP20)
59926	CTRH2200	High perf. earth fault CT (IP43)
59964	CTW	Waterproof earth fault CT (IP54)

Sensors kits

59968	3 MF1 kit	3 MF1 + type A bundle
EMS58181	3 CTR kit	3 CTR + type A bundle

Kits

59969	KFlair279A-BVE	Flair 279 + 3 MF1 + BUNDLE + BVE
59987	KFlair279B-BVE	Flair 279 + 2 MF1 + 1 MFH2200 + BUNDLE + BVE
59971	KFlair279A-BVD	Flair 279 + 3 MF1 + BUNDLE + BVD
C2991688	KFlair279A-LED	Flair 279 + 3 MF1 + BUNDLE + LED
59974	KFlair219A-BVE	Flair 219 + 3 MF1 + BUNDLE + BVE
59976	KFlair219A-BVD	Flair 219 + 3 MF1 + BUNDLE + BVD

Optional lamps

59988	BVE	Standard lamp
59967	LED	LED light
59961	BVD	Antivandalism lamp

Cables

59962	Bundle MF1-MFH - Type A et B	Short bundle connection cable 0.3m type A & B for MF1-MFH CTs
59997	Bundle MF1-MFH - Type B	Short bundle connection cable 0.3m type B for MF1+MFH or CTRH or CTW CTs
59998	IC30C	Cable-connector 3m for MF1/MFH CTs
59999	ICT30C	Cable-connector 3m for MF1/MFH with earth cable

Spare parts

59928	MFC3	Set of 3 connectors for
59965	BAT 279	Pile lithium pour Flair 279
59966	BAT 219	Pile lithium pour Flair 219

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