

Easergy - Flair 279/Flair 219

Fault Passage Indicator for MV underground network



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

Product at a glance

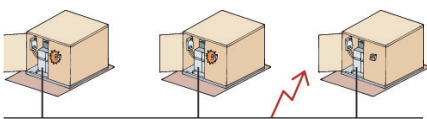
Standard applications

Flair 279: MV/LV substation with a 220 Vac power supply

Flair 219: Distribution MV/MV substation without power supply

Phase to earth and phase to phase fault detection and indication

On site configuration (fault setting, duration, reset mode)



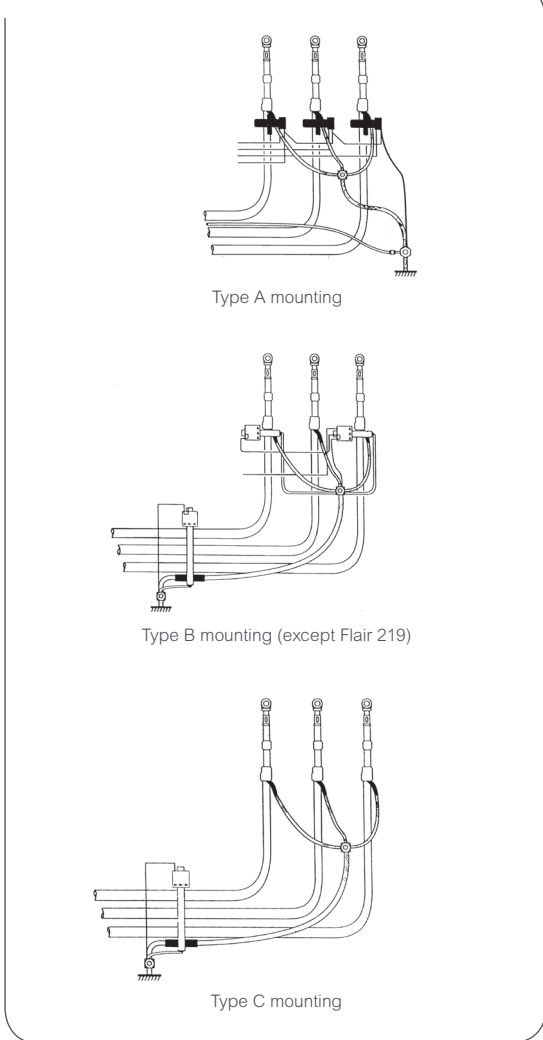
Flair 279 and Flair 219 boxes are made of polycarbonate ABS including a lead locking.

- 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.

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Earth bread mounting



Sensors mounting

The detectors allow three types of sensors mounting :

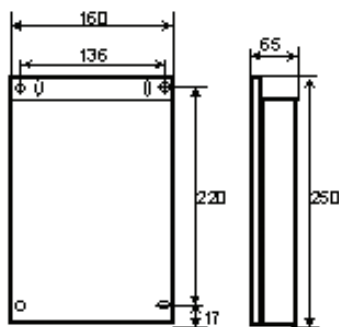
- **Type A mounting** : 3 phase CTs for detecting phase-to-phase faults and phase-to-earth faults > 20 A
- **Type B mounting** : 2 phase CTs and 1 core balance CT for detecting phase-to-phase faults and phase-to-earth faults > 5 A (Flair 279)
- **Type C mounting** : 1 core balance CT for detecting phase-to-earth faults only.

Sensors type

- **MF1 CT** for phase current measurement (cable < Ø 40mm)
- **MFH 2200 CT** for residual current measurement (cable < Ø 130mm)
- Bundle for MH1 and MFH CTs (ref: 59962)
- **CTR CT** encapsulated for phase current measurement (cable < Ø 45mm < 80 mm without rubber bosses)
- **CTRH** encapsulated CT for residual current measurement (3-pole cable < 130 mm)
- Bundle for CTR and CTRH CTs
- **CTW CT** Single core waterproof CT, for earth fault current measurement (cable < Ø 146 mm)



Dimensions



Light indication

- **BVE** standard lamp, outdoor mounting
- **BVD** anti-vandalism lamp, mounted inside the substation, with a 30 cm optical fiber light guide
- **LED** Light, mounted on thin plate (door or metallic enclosure)



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Technical characteristics

Product		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) IK 07	IP 21 (IP54 as an option) IK 07
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	IEC 60255-2-1 (IEC 60068-2-6)	IEC 60255-2-1 (IEC 60068-2-6)
	Shock tests	IEC 60255-21-2 (IEC 60068-2-27)	IEC 60255-21-2 (IEC 60068-2-27)
Electrical tests		IEC 1000-4	IEC 1000-4
		IEC 1000-6/10	IEC 1000-6/10
		IEC 1000-4-2 / 8 kV	IEC 1000-4-2 / 8 kV

* except single core mounting

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Commercial references

Part number	Short designation	Designation
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)
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
Current sensors		
59968	3 MF1 kit	3 MF1 + type A bundle (ref: 59962)
59963	MF1	Standard phase CT
59927	MFH2200	Standard earth fault CT (IP20)
59998	IC30C	Cable-connector 3m for MF1/MFH CTs
59999	ICT30C	Cable-connector 3m for MF1/MFH with earth cable
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
EMS58181	3 CTR kit	3 CTR + type A bundle
59926	CTRH2200	High performance earth fault CT (IP43)
59964	CTW	Waterproof earth fault CT (IP54)
Optional lamps		
59988	BVE	Standard lamp
59967	LED	LED light
59961	BVD	Anti-vandalism lamp
Spare parts		
59965	BAT 279	Pile lithium pour Flair 279
59966	BAT 219	Pile lithium pour Flair 219

Schneider Electric Industries SAS

35 rue Joseph Monier
92500 Rueil-Malmaison, France

SAS capital social 928 298 512 €
954 503 439 RCS Nanterre
www.schneider-electric.com

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