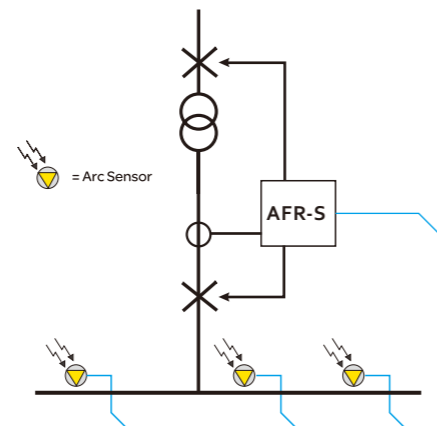## Arc Flash Protective Relay

AFR arc flash protective relay is a cost-effective solution that reduces arc-fault damage by detecting the light from an arc flash and rapidly tripping in low-voltage (LV) and medium-voltage (MV) electrical networks. three remote light sensors can be connected to one relay.

It used to limits damages to equipment, improve safety, avoid and protect personnel injuries. It's also can be used as a stand-alone arc protection relay or applied in more complex switchgear layouts.
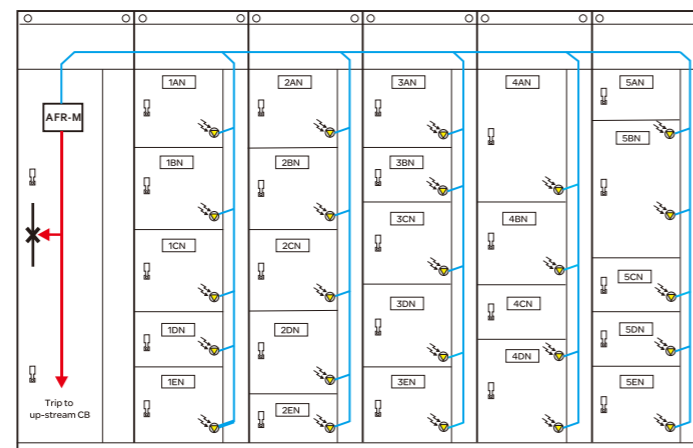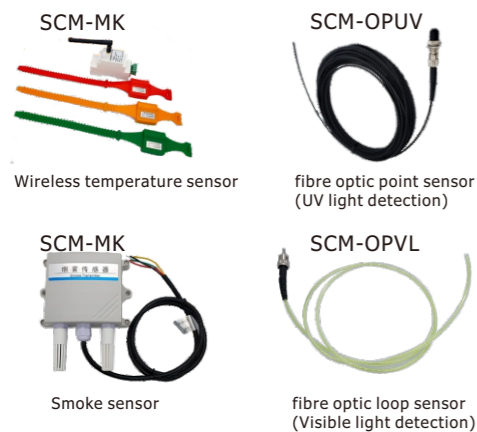
Features

- Panel mounting design.
- 3-phase current and earth-fault current measurement.
- Informative display on LCD screen.
- Less than 10 ms operation time (including the output relay).
- Multiple passive DI point, indicate CB status.
- Multiple trip contacts, free to configuration NC / NO status.
- Programmable CB protect trip logic.
- Optional extra monitor functions by RS-485 connection, user can customized.
- Support OEM and add customized program for VCB control and protection logic.

Accessories

SCM-MK

Wireless temperature sensor

SCM-OPUV

fibre optic point sensor (UV light detection)

SCM-MK

Smoke sensor

SCM-OPVL

fibre optic loop sensor (Visible light detection)

Wiring Schematic

= Arc Sensor

AFR-S

AFR-S Single switchgear protection

AFR-M Multiple switchgear protection

Technical characteristics

	AFR-S	AFR-M12	AFR-M24	AFR-M36	AFR-M48
Basic parameter					
Power supply	85~265Vac/dc, optional 48Vdc				
Consumption	Monitoring stanby <5W DO trigged <10W	Monitoring stanby <8W DO trigged <10W			
Rated current (In)	5A or 1A				
Protection range	0~20 In				
Burden	0.5VA				
Protect current accuracy	<2%				
Protect frequence accuracy	0.1Hz				
Arc signal & control					
Sensor type	lenspoint fiber optic sensors(1) or bare fiber optic sensors(2)				
Arc sensor access channels	3	12	24	36	48
DO relay channels	6	4	4	9	9
Trip coil contact	AC250V/8A fast relay, passive node				
Trip operation time	<10ms @ only arc protection <20ms @ overcurrent + arc protection				
Safty isolation	2500V isolation capacitry				
Binary inputs	5	12	12	16	16
Others					
Comm prot	RS485 MODBUS-RTU	1* RS485 MODBUS-RTU 1* 10/100M Adaptive Default 192.168.12.2/192.168.13.2 IEC-60870-5-103			
SOE record	512	512	512	512	512
Waveform capture	/	8	8	8	8
Optional modules	Wireless joints temperature monitor Smoke detector				

Notes: wireless sensor node is optional, use LoRA
Standard sensor is 12Vdc, RS-485 Daisy chain connect to HMI unit.

Install dimension and terminal definition

AFR-S

AFR-M