



AFDD Self-checking Function

Table 1: Description of the status of the indicator when the product is closed

Number	Indicator Status	Duration	Fault description	Remarks
1	Red constantly on	on	manual trip test button trip leakage trip overcurrent trip	
2	Flash once a second	10 seconds	Electric Arc (series arc/parallel arc)	Self-check no fault, Red on after 10 seconds
3	Flash twice a second	10 seconds	Overvoltage $\geq 275V$	Self-check no fault, Red on after 10 seconds
4	Flash five times a second	continuous	Self-checking Fault (Tripping device is damaged)	Coil self-check, after failure of self-check, circuit breaker will trip within 5 seconds. If the unit does not trip after 5s, the flash will continue and no subsequent arc detection is performed.
5	Flash five times a second	continuous	The external power supply is abnormal (e.g., the external power supply frequency is not 50Hz/60Hz).	The device detects an abnormal external power supply

Self-checking function:

The self-checking function is initially carried out when the unit is switched on and then runs every 1 hour (this time delay can be extended).

The circuit breaker will trip within 5 seconds if the self-test fails.

If the AFDD cannot trip due to damage to the tripping device (for example PMR damage), the LED will continue to flash as long as the product remains energized, but no arc detection is being carried out.

When the product is closed; the status of the indicator light shows the reason for the last trip of the circuit breaker.

If the product indicator light flashes once a second → series arc fault.

If the arc fault has been resolved, the indicator light will be switched to red steady after flashing 10 seconds.

If the product still has series fault arc, parallel fault arc or other fault, the product shall operate within the time specified in the standard, according to the size of the arc.



AFDD Over Voltage Function

In case of an overvoltage, the unit must trip at the time specified in Table 2.

The circuit board of the product has overvoltage protection; When the line voltage $\geq 275V$, the product will trip, the higher the voltage, the faster the response time.

See the table below for specific requirements (the table refers to the overvoltage and undervoltage standards).

When the line voltage is less than 270V, the product will not trip

Table 2: Overvoltage action time and the limit of minimum no-drive time

Line voltage	275V	300V	350V	400V
Maximum response (S)	10	3	0.75	0.2
Minimum response (S)	3	1	0.25	0.1
Remarks: The unit MUST operate within the maximum response and MUST NOT operate before the minimum response time. For example, when the line voltage is 300V, the unit must operate after 1 second and before 3 seconds.				