

# WB601-40 ARC FAULT DETECTION DEVICES



**WB601-40**

## Introduction

HB601-40(ARC FAULT DETECTION DEVICES,or AFDD/RCBO) is new smart protection device by using digital electronics to analyse the waveform of A.C. circuit, to continuously monitors the circuit for different variations including the duration of an arc and the waveform. Once the device detects an irregular fault the device trips and disconnects the circuit, reducing the chance of it over heating and potentially causing an electrical fire. Under the standards of IEC/EN-62606,GB/T31143-2014,IEC/EN61009,GB14048.2, and combined arc fault detection, short circuit, overload, over-voltage and earth leakage detection, HB401-40 is used for electrical fire prevention or monitoring occasions, and also for infrequent switching of the circuit under normal circumstances.

## Features

- (1) New algorithm to monitor with high detection accuracy;
- (2) With the protection of short circuit, overload, over-voltage;
- (3) Series and parallel arc fault detection;
- (4) Type A+F earth leakage protection;
- (5) With the detection of under-voltage,earth leakage and arc fault;
- (6) LED indication;
- (7) Tripped the circuit by switching the device, in case of any electrical fire;
- (8) One button operation on self testing of arc fault and earth leakage;
- (9) Compact design with low energy consumption.

## Series arcing faults:

Typically caused by a loose connection or a damaged conductor. In this arc fault condition current flow is always lower than the operational load current. MCB and RCD will not detect these electrical faults. However AFDDs are extremely sensitive and will disconnect series faults from 2.5A

## Parallel arcing faults between conductors:

These are caused by electric arcs resulting from damage to the insulation that permits minimum contact between the two live conductors, MCBs or RCBOs may trip if the fault current is high enough.

## Parallel arcing faults between phase (or neutral) and protective conductor:

AFDDs will detect arcing faults against the protective conductor and provide adequate fire protection where no RCD is used. However WB601 AFDDs are combined with 30mA Miniature RCBOs that reliably detect and shut down this type of parallel arc fault.

## Technical Data

Rated Current In	6,10,16,20,25,32,40A
Poles	1P+N
Rated Voltage Ue	230V~
Insulation Voltage Ui	400V
Rated Frequency	50Hz
Rated Sensitivity(I <sub>Δn</sub> )	30mA, Type A
Tripping Time under I <sub>Δn</sub>	0.1s
Rated Short-circuit Capacity(I <sub>cn</sub> )	6,000A
Rated Impulse Withstand Voltage(U <sub>imp</sub> )	4,000V
Thermal Tripping Characteristic	B,C
Electrical Life	4,000 times
Mechanical Life	10,000 times
Ambient Temperature	5°C ~+55°C
Guarantee	2 Years
Width	18mm
IP Rating	IP20

Series Arcing Fault	
TEST CURRENT (A)	Maximum allowed tripping time(s)
2.5	1
5	0.5
10	0.25
16	0.15
32	0.12
40	0.12

  

Parallel Arcing Fault	
TEST CURRENT (A)	Maximum allowed number of arcing half-waves within 0.5s (N)
75	12
100	10
150	8
200	8
300	8
500	8

