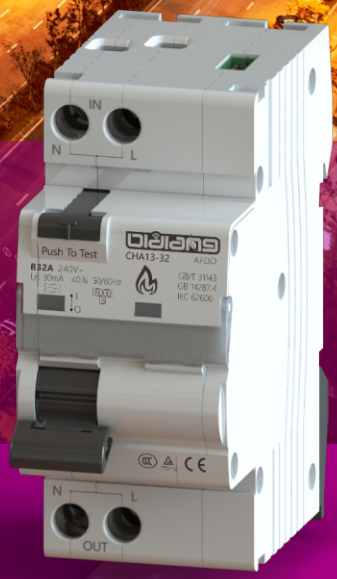
ISO 9001 ISO 14001 OHSAS 18001

LEADING THE RECYCLING ECONOMY,
INNOVATIVE ENERGY-SAVING EMISSION REDUCTION!

Oldlang Smart Electrical

PRODUCT CATALOG 2017

CHA13-32
Arc Fault Detection Device (AFDD)



MCB+RCCB+AFDD
230VAC; 1~32A; B, C
10，30mA; AC,A

GB/T 31143
GB 14287.4
IEC/EN 62606

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Electrical Fire Prevention

CHA13-32 (AFDD)
Arc Fault Detection Device

About Oldlang Smart Electrical

Oldlang smart electrical is dedicated to innovating energy conservation and emission reduction and promoting circular economy modernization technology enterprises. Products focus on originality, and products provide services for energy management. We help users effectively manage and efficiently use energy. Low carbon, energy saving, collection, remote control and other functions are the characteristics of the smart electrical products of Oldlang. It is the value philosophy of Oldlang smart electric to enable users to use energy safely, reliably and conveniently, therefore, smart energy management is the development direction of Oldlang smart electrical. To provide practical products for smart cities and smart homes, enrich people's lives, improve the earth environment, and insist on sustainable development is the firm belief of Oldlang smart electrical.

In Oldlang smart electrical, we are always advocating:
INNOVATIVE ENERGY-SAVING EMISSION REDUCTION LEADING THE RECYCLING ECONOMY!

Electrical Fire Prevention

CHA13-32 (AFDD)
Arc Fault Detection Device

GB/T 31143 (China)
GB 14287.4 (China)
IEC/EN 62606 (Europe)
General requirements for arc detection devices.

■ CHA13-32 monitors electric arcs that occur in cables and connections and cause a fire.
These arcs are the result of localised cable deterioration or loose connections
■ It is used for three types of situations that can result in a fire:
☐ parallel arc: insulation problems between two live conductors that cause a resistive short-circuit, too weak to be detected by a circuit breaker and with no earth leakage that would be detected by an earth-leakage protection device,
☐ series arc: a damaged conductor or connection that causes part of the current to pass into its carbonised insulation due to a local rise in temperature,
☐ overheating of electronic components in loads, when exposed to an overvoltage for several seconds.
■ It combines the following functions:
☐ protection against fire hazards by detection of abnormal electric arcs,
☐ protection against load fire hazards due to slow overvoltages,
☐ circuit opening and positive break indication (green strip),
☐ fire hazard tripping indication via the front panel indicator,
☐ device self-diagnostics via the test button.
■ CHA13-32 is a MCB + RCBO + AFDD, max. 32A, it protects Phase-Neutral or Phase-Phase circuits, in full coordination under short-circuit conditions up to a rated breaking capacity (Icn) of 6,000 A.

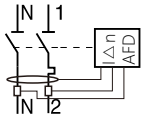
CHA13-32 is an arc fault detection device which aims to reduce the risk of electrical fire.

By continuously analyzing a large number of electrical parameters, it detects the appearance of electric arcs that are responsible for starting fires. It isolates the circuit concerned which reduce flame appearance occurrence.

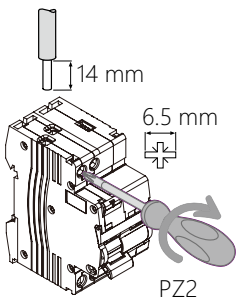
The European installation standard IEC 60364- 4-42, recommends the use of AFDD to protect against arc fault in final circuit:
· in locations with sleeping accommodations (e.g., hotels, nursing homes, bedrooms in homes)
· in locations with risks of fire due to high quantities of flammable materials (e.g., barns, wood-working shops, stores of combustible materials)
· in locations with combustible constructional materials (e.g., wooden buildings)
· in fire propagating structures (e.g. high rise buildings)
· in locations where irreplaceable goods are housed (e.g., museums).

More specifically, the installation of CHA13-32 is highly recommended to protect circuits with highest risk of fire, such as:
· protruding cables (risk of knocks)
· outside cables (greater risk of deterioration)
· unprotected cables in secluded areas (like storage rooms)
· aging, deteriorating wiring or wiring for which the connection boxes are inaccessible.

Operating frequency

CHA13-32			
Arc Fault Detection Device (AFDD) to IEC/EN 62606		Model	Width in 9 mm
1P+N			
	Rating 32A (In)	CHA13-32	4
Operating voltage	230 V AC		
Operating frequency	50 Hz		

Connection



Tightening torque	Copper cables only	
	Rigid	Flexible or with ferrule
		
2 N.m	1X1 to 16mm² 2X1 to 2.5mm²	1X1 to 10mm² 2X1 to 2.5mm²

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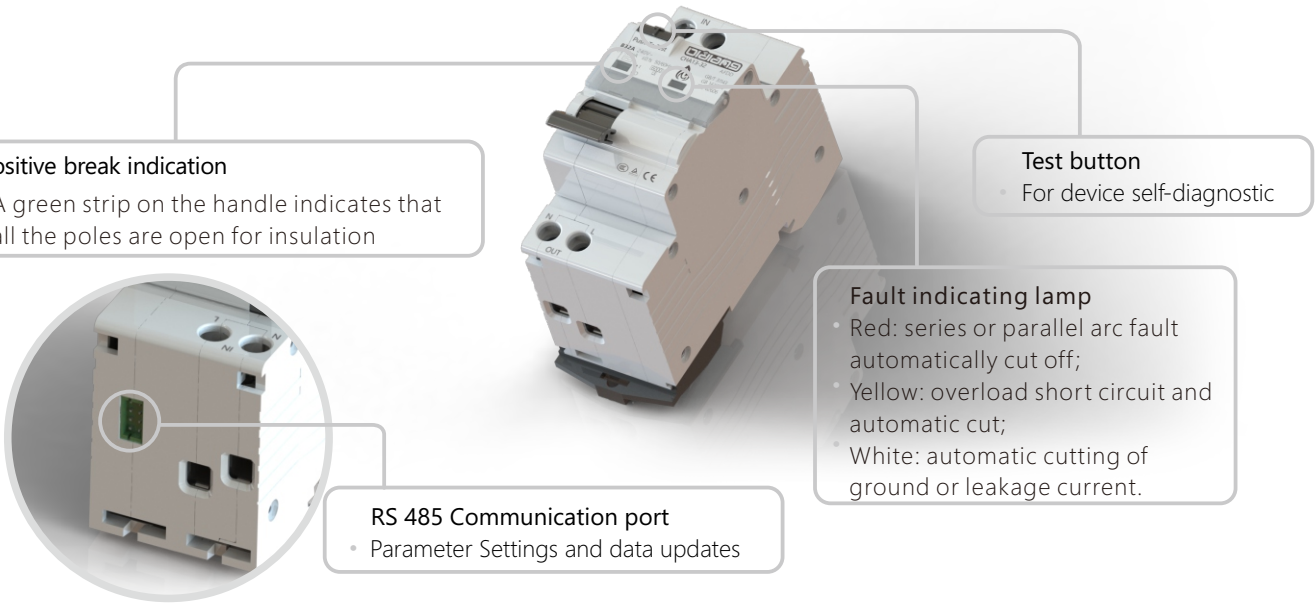
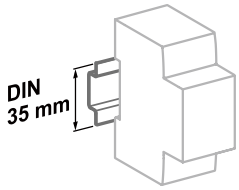
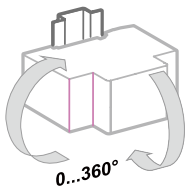
Arc Fault Detection Device

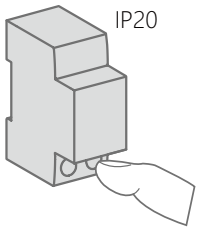


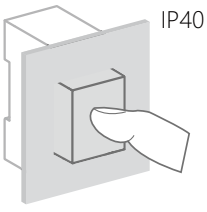


Clip on DIN rail 35 mm.



Indifferent position of installation.





Technical data

Main characteristics							
Tripping time/arc current value with Un = 230 V AC (to IEC/EN 62606)	Arc current	3A	6A	13A	20A	25A	
	Max. operating time	1s	0.5s	0.25s	0.15s	0.14s	
Overvoltage tripping time (neutral conductor break)		400 V AC, 200 ms					
Insulation voltage (Ui)		400 V AC					
Degree of pollution		2					
Rated impulse withstand voltage (Uimp)		4kV					
Rated making and breaking capacity (Im)		500A					
Overvoltage category		III					
Characteristic of RCBO	Max. rating	32A					
	Curve	B or C					
	Residual operating current ($I_{\triangle}n$)	10, 30mA					
	Type	AC, A					
	Boost voltage	Electronic					
	Rated breaking capacity (Icn)	6,000A					
Additional characteristics							
Degree of protection	Device alone	IP20					
	Device in a modular enclosure	IP40 Insulation class II					
Endurance (O-C)	Electrical ≤20 A	20,000 cycles					
	Electrical 25 A	10,000 cycles					
	Mechanical	20,000 cycles					
Operating temperature		-25°C to +60°C					
Storage temperature		-45°C to +85°C					
Tropicalization (to IEC/EN 62606)		Severity B (to IEC 60068-2-30) during 28 days					

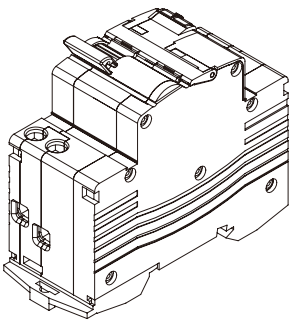
CHA13-32 (AFDD)
Arc Fault Detection Device

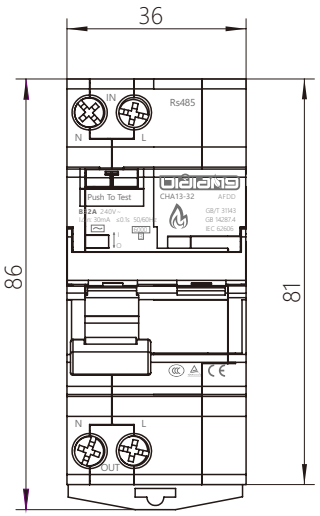
Weight (g)

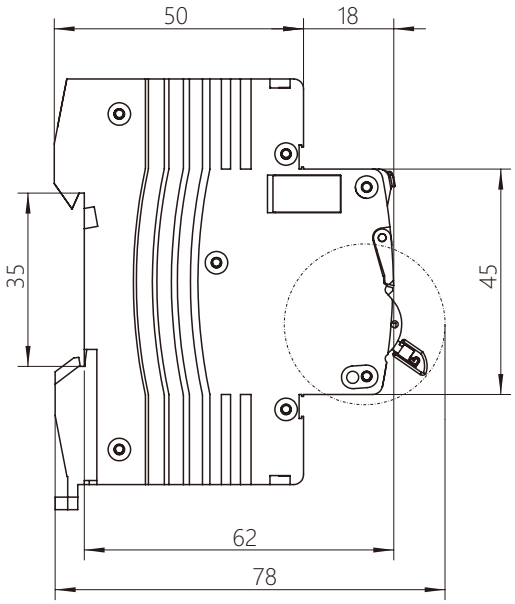
Arc fault detection device	
Type	CHA13-32
1P+N	200

Outline Size And Connection Diagram (mm)

Arc fault detection device	
Undimensioned tolerance	Mounting hole size tolerance
< 1mm:±0.2mm 1~5mm:±0.3mm > 5mm:±0.5mm	±0.4mm







SAVE ON ENERGY, STARTS FROM ME !

Oldlang Smart Electrical

Low Carbon

Wireless

Energy Saving

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