

MAXGE



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Single Module Miniature AFDD
ARC FAULT DETECTION DEVICE





#AFDD

- ◆ PREVENTS FIRES
- ◆ FITS IN NEW AND EXISTING INSTALLATIONS
- ◆ SWITCHED NEUTRAL
- ◆ 4 IN 1 PROTECTION



ARC FAULT DETECTION DEVICE

AFDD

OVERLOAD

Test current:
In: 6-40A
1.13 x In No-trip
1.45 x In Trip

SHORT CIRCUIT

B, C characteristic
B: $(3-5) \times I_n$
C: $(5-10) \times I_n$

4>1

PROTECTION

ARC FAULT

Serial Arcing Fault
Parallel Arcing Fault

EARTH LEAKAGE

$I_{\Delta n}$: 30, 100, 300mA
Type A & AC

Technical Specification

Electrical Characteristics

Protection

Installation

Environment

Features

Size

Technical Specification

Product description	AFDD+eRCBO
Conforms to standard	IEC/BS EN 62606, IEC/BS EN 61009-1
Technical Specifications	Rated Current: 6-40A
	Frequency: 50/60Hz
	Sensitivity: 30,100,300mA
Application	Consumer unit
Type & mounting arrangement	Din-Rail

Electrical Characteristics

Dependent/independent on supply voltage		Dependent
eRCBO Type		A & AC
Operational Voltage Range		180V to 264V
Pole		1P+N (with switched neutral)
Insulation Voltage (V)		500
Impulse Voltage (V)		4000
Protection degree		IP20 /IP40 (Terminals/Housing)
Rated nominal breaking capacity I _{cn} (A)		6kA
Rated service breaking capacity I _{cs} (A)		6kA
Rated residual breaking/making capacity I _{Δm} (kA)		3kA
Tripping Curve		B and C
Endurance	Mechanical operations	>10000
	Electrical operations	≥1200
Quality mark on product		SEMKO,CE

Protection

Overload Protection	As per IEC 61009-1
Instantaneous Protection	As per IEC 61009-1
Test circuit monitoring for AFDD	As per IEC62606 Cl.8.17 Integrated automatic function self-test.

Installation

Isallation type	Dinrail
Connections	Incoming : Cable and Busbar
	Outgoing : Cable

Environment

100% Current rating (no derating)	@30°C
Operational Temperature range	-25°C +40°C
Storage Temperature	-20°C +60°C
Altitude	2000m (no derating)
Frame width	1 module: 17.8mm
Positive Contact Indication	Yes
Suitability for Isolation	Yes
Terminal cable capacity	M5: 25 mm² M4: 10 mm²
Terminal Torque capacity	M5: 3 N.m M4: 2 N.m

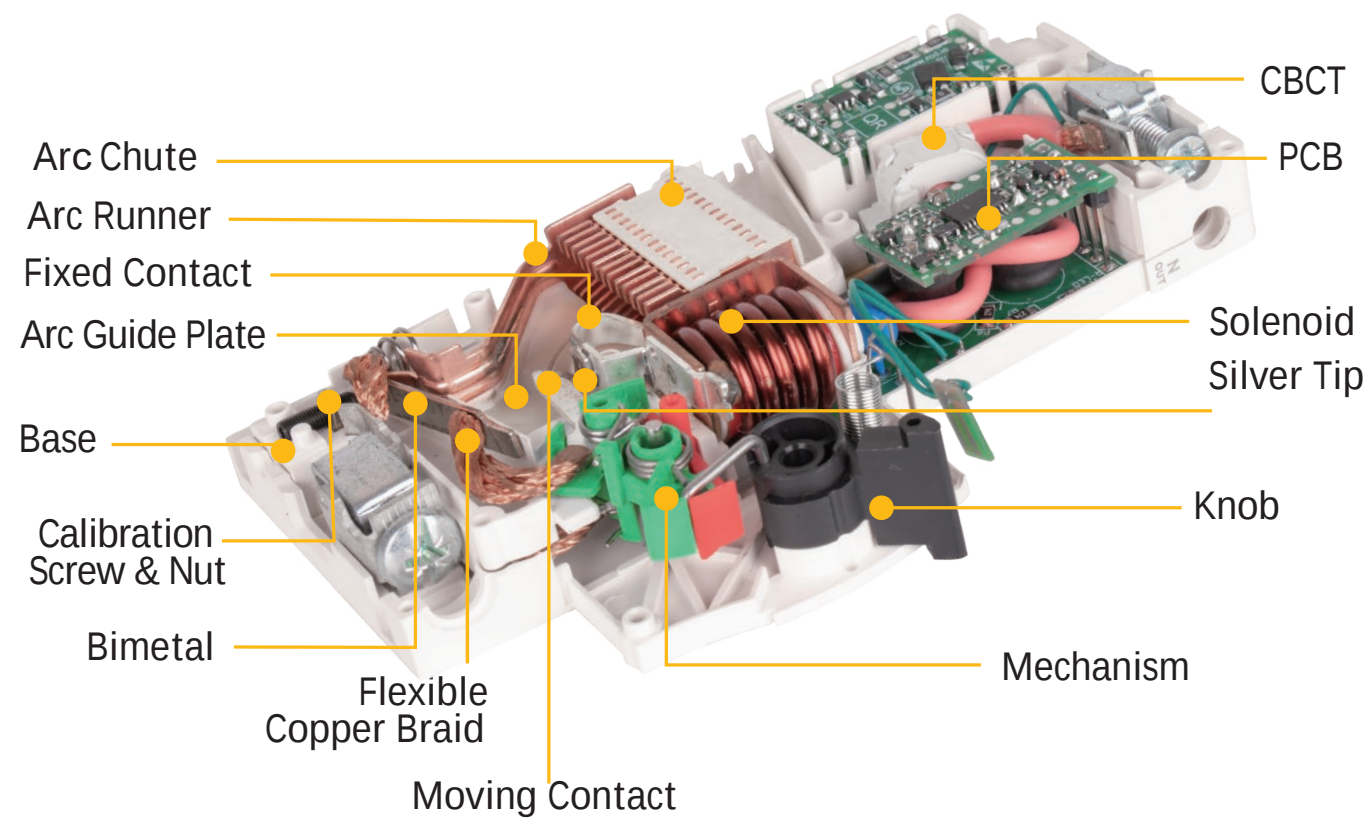
Features

Switched neutral	Yes
Neutral position	Right side w.r.t. mounting

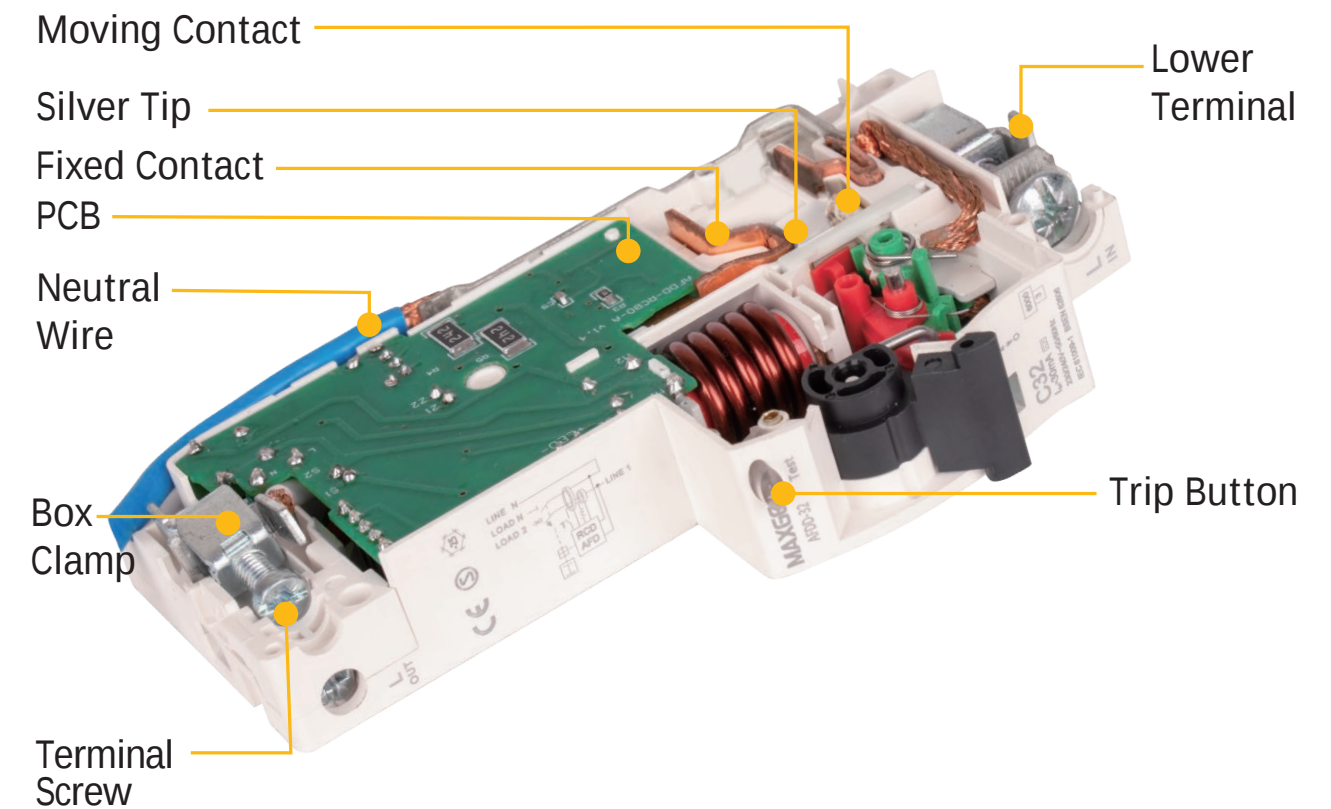
Size

With Flying Neutral and Neutral Swithing	Length: 110mm, Width:17.8mm & Height:78mm
Without flying neutral and Neutral Switching	Length: 110mm, Width:17.8mm & Height:78mm

AFDD Line Pole Internal view



AFDD Neutral Pole Internal view

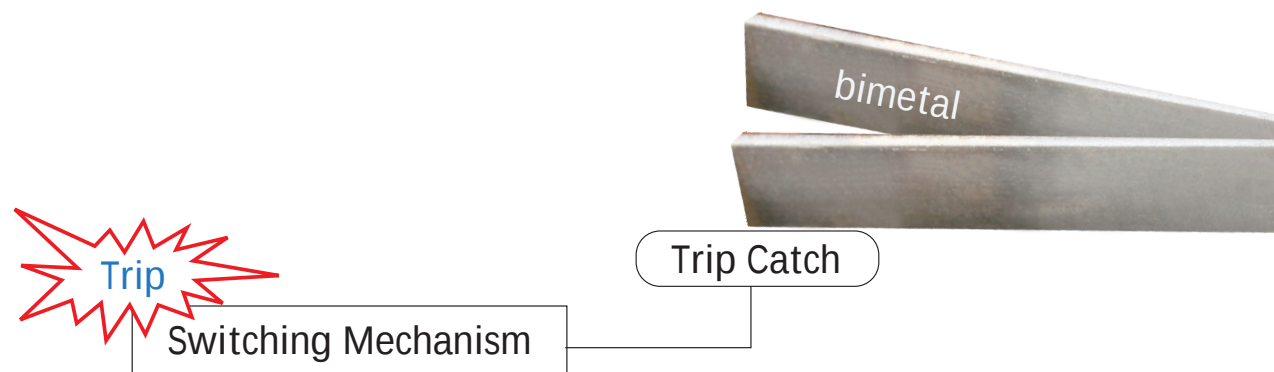
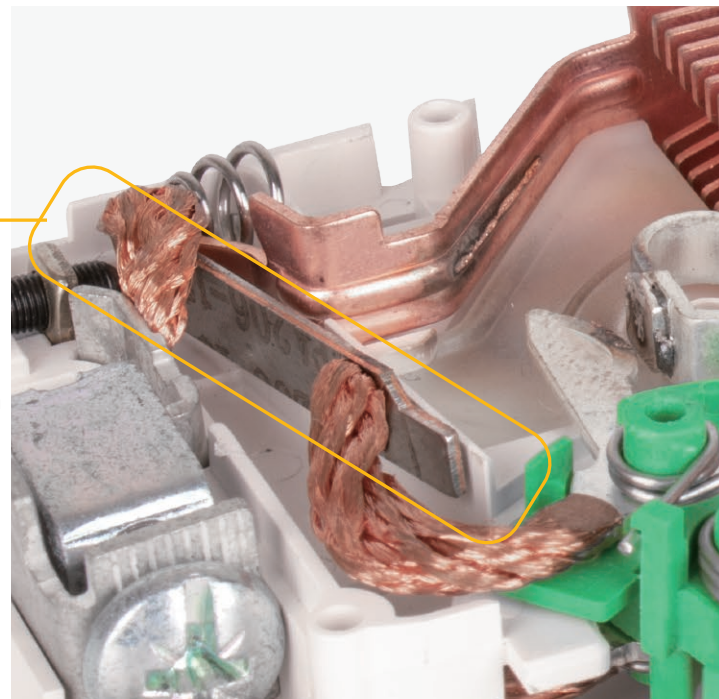


Overload Operation

Bimetal
Metal Alloy

Overload Protection:Through
Consists of 2 differernt metals bonded together
Different metals have different coefficient of expansion

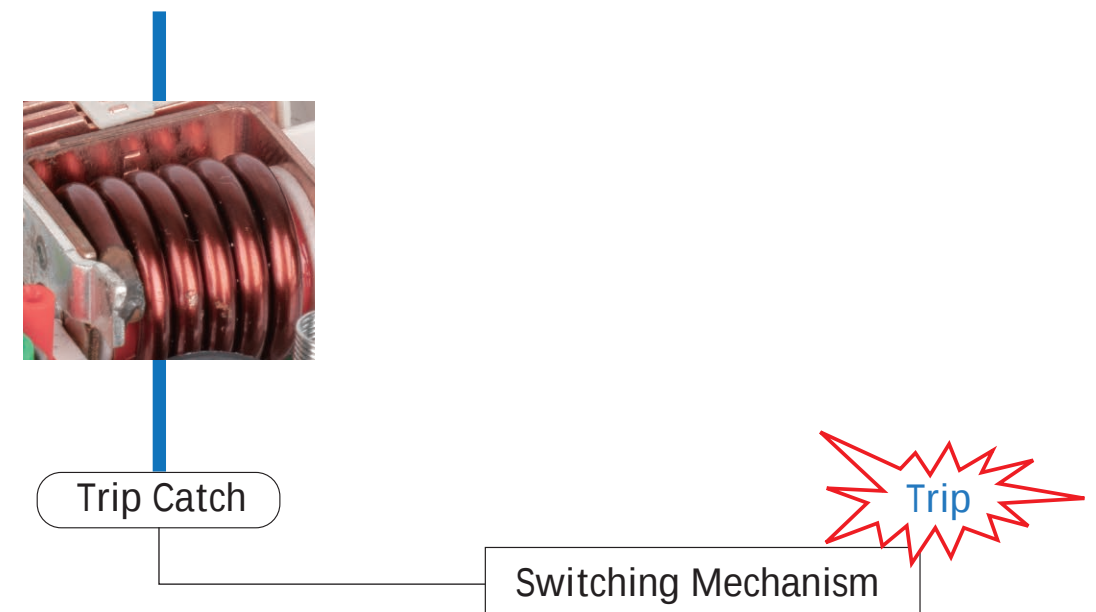
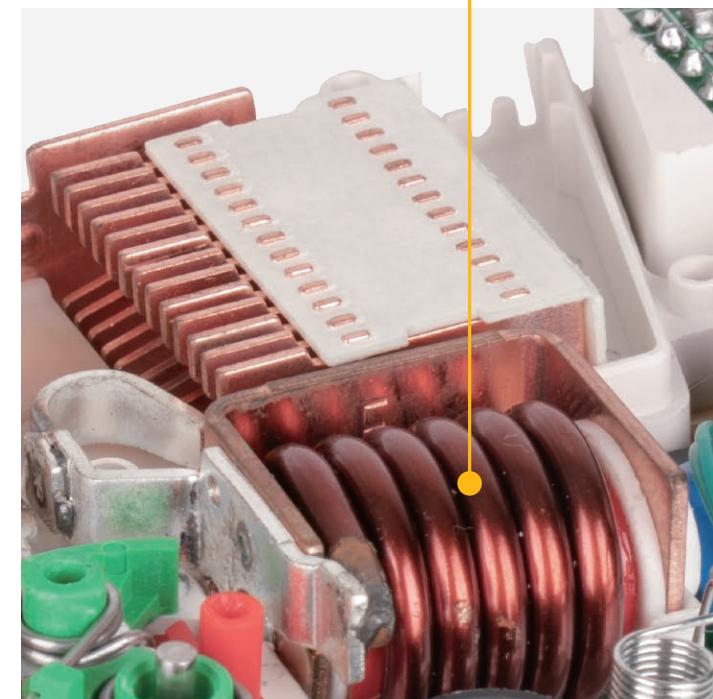
- ▼ On heating-it bends towards tripping
- ▼ Pushes the trip catch lever
- ▼ Switching mechanism actuated



Short Circuit Operation

Solenoid

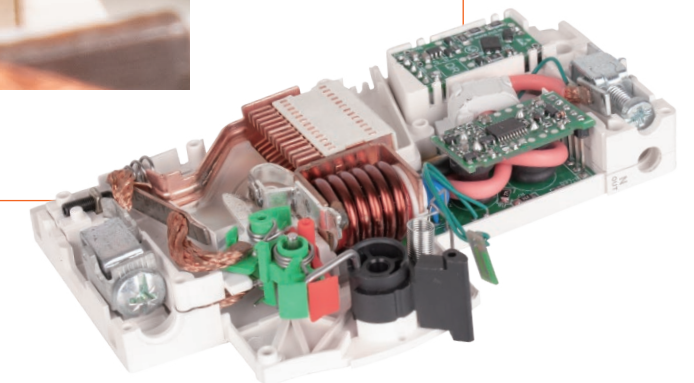
- ▼ High current flows
- ▼ Solenoid gets magnetized
- ▼ Attracts tripping plunger
- ▼ Lower portion of plunger pushes trip catch lever
- ▼ Switching mechanism actuated



Features & Benefits

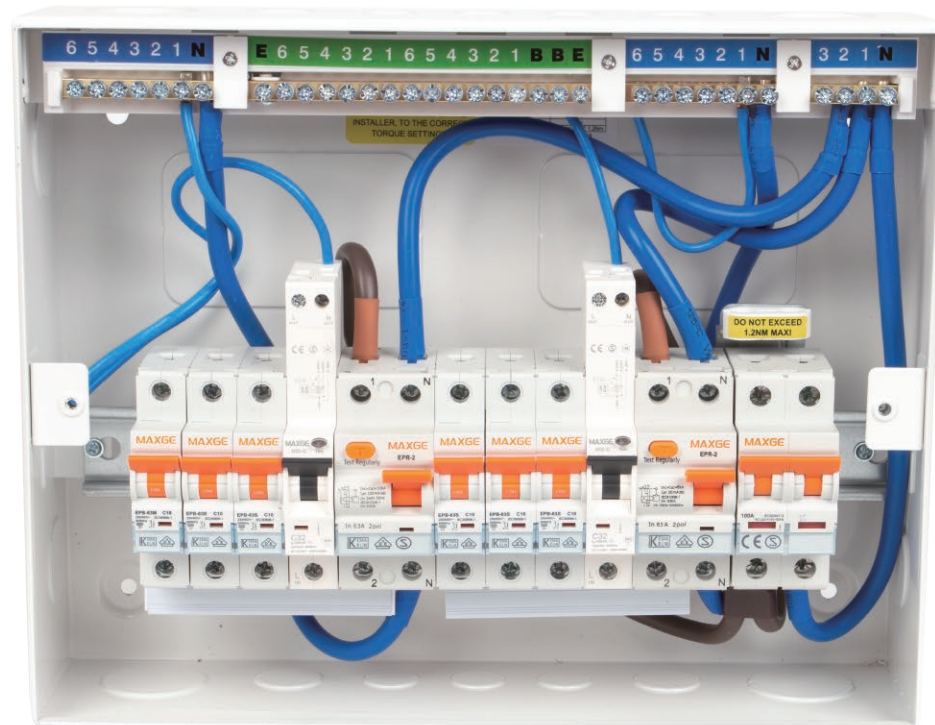
Features & Benefits

Real Silver Graphite, AGc
anti-weld contact tips



Highest Electrical Life
Maximum Safety against Contact welding
Rare possibility of AFDD replacement

AFDD FOR THE CONSUMER UNIT



The 18th edition wiring regulations (BS7671) sets out requirements for electrical installations in the UK, including requirements for protection of persons, livestock & property against the risk from fires that may be generated & propagated in electrical installations.

Designers & installers are required to ensure that installations are arranged so that the risk of ignition from high temperatures or electric arc is minimised. Protection requirements include protecting against the risk of fire from insulation faults, arcs & sparks & high temperatures.

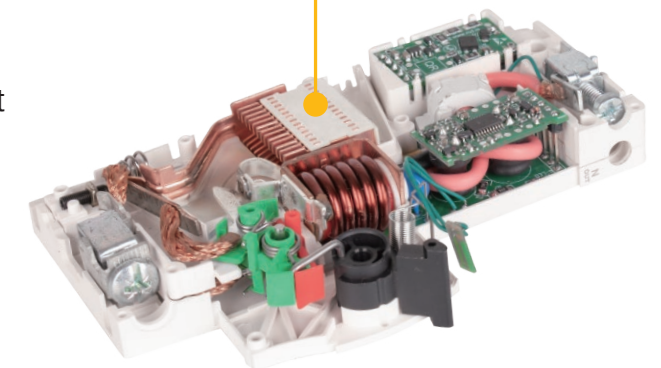
Installing arc fault detection devices is recommended in the 18th Edition as a method for mitigating the risk from fire in final AC circuits from arc faults.

Features & Benefits

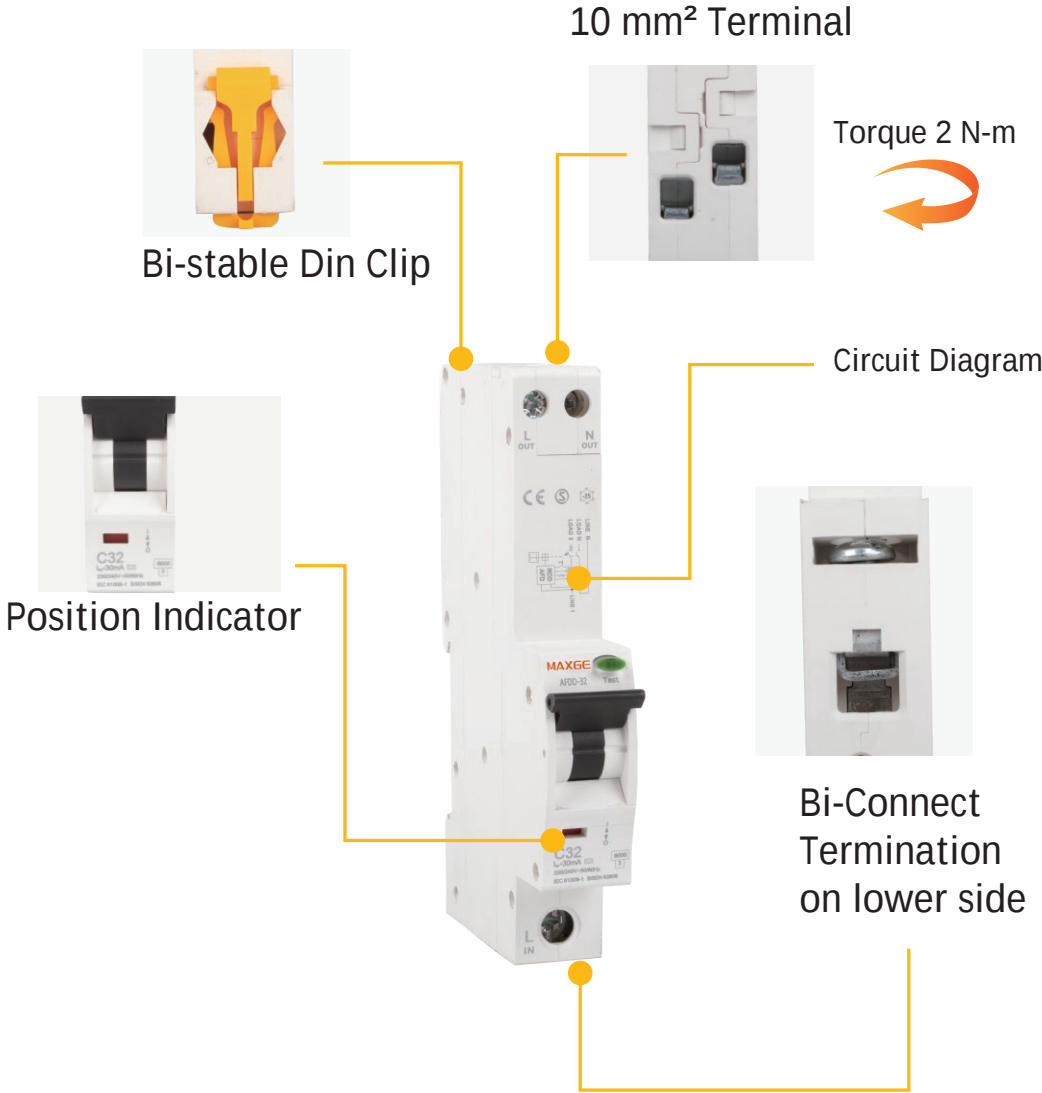


13 Plates Arc Chamber

- ▼ Quick & Efficient Arc Quenching
- ▼ Very low let through energy, class 3
- ▼ Increases life of Installation & equipment



Features & Benefits



Features & Benefits

