WOAFDRCBO10210
WOAFDRCBO10216
WOAFDRCBO10220
WOAFDRCBO10225

WOLVERINE AFD RCBO SERIES
TYPE A 10kA

The TRADER Wolverine AFDRCBO series of Arc Fault Detection Devices (AFDDs) combined with Residual Current with Overcurrent Circuit Breaker (RCBO) provide a greater level of protection for personnel and property. AFDD's have been proven to reduce the number of incidents of electrical fires in many countries where these devices are already used, particularly in European regions. AFDDs detect & automatically disconnect arc faults that occur in damaged or crushed cables, in loose terminations, and in ageing installations where the insulation quality degrades over time.
These two module wide devices feature overcurrent protection, short circuit protection, earth leakage protection (residual current) and arc fault protection, with two poles isolation switching as standard. They have been tested and certified in accordance with AS/NZS 62606 and AS/NZS61009.1 with a fault current rating at 10kA and available from 10A to 40A overcurrent protection in C curve tripping characteristic and Type A RCD function with 30mA Residual current level.
The device features automatic test function as per 8.17 of IEC 62606 and is classified as clause 4.1.2 - AFDD unit integrated in a protective device and uses single LED indication.

The AFDRCBO Provides

- Protection of people from electric shock in case direct contact with live parts of electrical installation;
- Protection of people in case of indirect contact with accessible live parts of electrical installation in case of insulation damage;
- Protection against fires resulting from leakage of differential (residual) current to earth in case of insulation damage of lives parts;
- Protection against over currents (overload and short circuit) occurring in electrical installations of buildings.
- The AFDRCBO's features a neutral block moulding to help prevent incorrect installation with busbars. Care must be taken to ensure the bar is installed correctly with the insulation block under the terminal screw.
- Provide safety against arc faults that occur in damaged or crushed cables, in loose terminations, and in ageing installations where the insulation quality degrades over time that can cause firest

Catalogue Number	Description
WOAFDRCBO10210	AFDRCBO Arc Fault Detection Residual Current Breaker with Overcurrent Protection 10kA 2 Pole 10A 230 240V ac 30mA Type A 2 Module Wide
WOAFDRCBO10216	AFDRCBO Arc Fault Detection Residual Current Breaker with Overcurrent Protection 10kA 2 Pole 16A 230 240V ac 30mA Type A 2 Module Wide
WOAFDRCBO10220	AFDRCBO Arc Fault Detection Residual Current Breaker with Overcurrent Protection 10kA 2 Pole 20A 230 240V ac 30mA Type A 2 Module Wide
WOAFDRCBO10225	AFDRCBO Arc Fault Detection Residual Current Breaker with Overcurrent Protection 10kA 2 Pole 25A 230 240V ac 30mA Type A 2 Module Wide

Standard Number:
AS/NZS 61009-1
Certification Number:
GMA-522971-EA

GSM Electrical (Australia) Pty Ltd
Level 2, 142-144 Fullarton Road, Rose Park SA 5067
P: 1300 301 838 F: 1300 301 778 E: service@gsme.com.au
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100% AUSTRALIAN TRADER OWNED & OPERATED

10 Yr Warranty TRADER

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Parameter denomination				Value
Number of poles				1P+N
Rated operating voltage Ue, V				230
Rated mains frequency, Hz				50
Rated insulation voltage, Ui, V				230
Rated Current in A				10; 16; 20; 25; 32; 40;
Rated impulse withstand voltage Uimp, V				4000
Rated residual operating current IΔn, A				0,5· IΔn
Minimum value of rated residual short-circuit making and braking capacity IΔm, A				2000
Rated maximum switching capacity Icn, A				10000
Over-current protection				Yes (in phase poles only)
Over-voltage protection	operating voltage, V			265±10
	operating time, ms			15~300
Type of operating characteristic according to operating conditions in the presence of a DC component				A
Over-current tripping characteristic				C
Time-current operating characteristic at calibration reference temperature plus 30°C	Tripping time ranges at the specified currents			1.13 In: t≤1 hour – without tripping 1.45 In: t<1 hour – tripping 2.55 In: 1 s<t<60s (at In≤32A) – tripping 1 s<t<120s (at In>32A) – tripping
	Tripping current ranges depending on the type of protective characteristic	C	5In	t≤0.1 s – without tripping
		C	10In	t<0.1s – tripping
Cross-sections of conductors to be connected, mm²				1-16
Material of conductors to be connected				Coper, Aluminum
Maximum withstanding tightening torque of the output screw when using a screwdriver, Nxm*				2.5
Recommended tightening torque of output screw when using a screwdriver, NxM*				1.5
Mechanical wear resistance, On-Off cycles, minimum				4000
Electrical wear resistance, On-Off cycles, minimum				4000
Sinusoidal vibration	Frequency range, Hz			
	maximum acceleration amplitude, m·s-2 (g)			5 (0.5)
Rated Duty				Continuous

Tripping current ranges for A-type RCBO		
Current delay angle α	Tripping current	
	Lower Limit	Upper Limit
0	0.35IΔn	1,4IΔn (IΔn > 0,01 A) 2IΔn (IΔn ≤ 0,01 A)
90	0.25IΔn	
135	0.11IΔn	

Capacity Reduction Coefficient When Installing Multiple Products Side by Side

No. Of Parallel AFDRCBO's	Derating coef.
2-3	0.9
4-5	0.8
6-9	0.7
≥ 10	0.6

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Operating time-current characteristics of circuit breaker over-current operation					
Type	Test current	Initial state	Tripping or non-tripping time	Required result	Note
C	1.13 In	Cold	t ≤ 1h (at In ≤ 63A)	without tripping	-
C	1.45 In	Immediately after testing with current of 1.13 In	t < 1h (at In ≤ 63A)	tripping	continuous current build-up for 5s
C	2.55 In	Cold	1 s<t<60s (at In≤32A) 1 s<t<120s (at In>32A)	tripping	-
C	5 In	Cold	t≤0.1s	without tripping	Current is generated by closing the auxiliary switch
C	10 In	Cold	t<0.1s	tripping	

Type and parameters of AFDRCBO			Limit values of operating time and non-operating time, s, for AFDRCBO type under conditions of alternating residual currents (root-mean-square values)						
Type	In, A	IΔn, A	IΔn	2IΔn	5Δn	5Δn 0.25 A	5-200, 500, A	IΔt	operating and non-operating time
Common	Any Value	less than 0.03	0.3	0.15	-	0.04	0.04	0.04	maximum operating time
		0.03	0.03	0.15	-	0.04	0,04	0.04	
		above 0.03	0.03	0.15	0,04	-	0.04	0.04	

Maximum value of operating time at the alternation residual current (root mean square value) of AFDRCBO of A type.										
Type and parameters of AFDRCBO			Maximum value of operating time, s, for AFDRCBO of A type at the alternation residual currents (root mean square value).							
Type	In, A	IΔn, A	1.4IΔn	2IΔn	2.8IΔn	4IΔn	7IΔn	0.35A	0.5A	350A*
Common	Any Value	less than 0,030	-	0.3	-	0.15	-	-	0.04	0.04
		0.03	0.3	-	0.15	-	-	0.04	-	0.04
		above 0.03	0.03	-	0.15	-	0.04	-	-	0.04
This value is limited to the lower limit of the instantaneous tripping current range according to type C.										

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LED Indication Status for Arc Fault

Indication Type	LED Status (The following illustration shows one cycle)	Number of Cycles	Standby Mode
No Fault	Ever Bright	Continuous	
Leakage Fault	Flash	30 Times	
Series Arc Fault	Flash	30 Times	
Parallel Arc Fault	Flash	30 Times	
Over voltage Fault	Flash	30 Times	
Self-testing Fault	Flash	Continuous	
Note	LED indicates, white colour; Fault Indication 1.5 seconds for 30 cycles before entering standby mode.		

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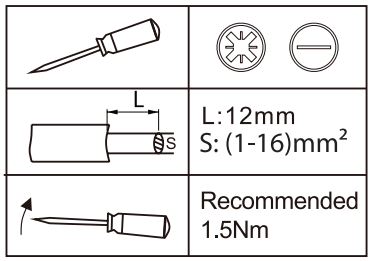
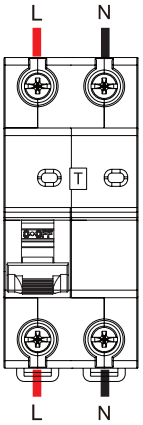
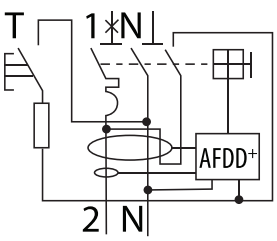
Installation Instruction

This product MUST be installed by a licensed electrician.
Line and Load can be top or bottom.
To avoid damage to RCD disconnect before insulation testing Connect the Neutral cable before the Line active cable.



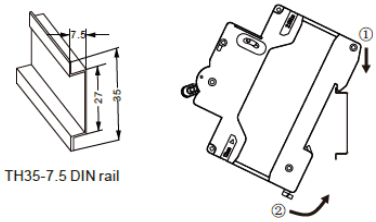




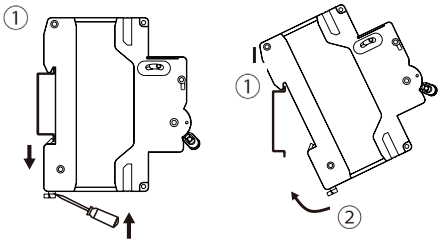
Applications:

- Used in domestic installations, as well commercial electrical distribution systems
- Protection of circuits against short-circuit currents
- Protection of circuits against overload currents

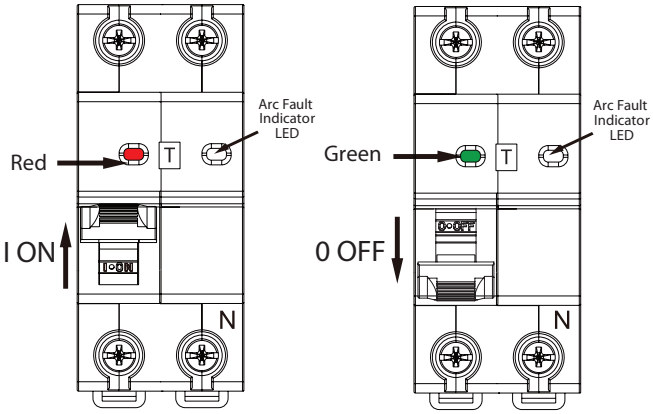
Mounting



Dismounting



Status Indication



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