M2 Data Sheet

Product Code:	Product Range:	Issue Date:
M2AFR06B1 - M2AFR40B1	AFDD	29/03/2022

Description:

6 A - 40 A Single Module Double Pole Combined Arc Fault Detection and RCBO



Features:

- 6-40 A Rated
- Series and parallel arc fault detection
- Combined arc fault detection, short circuit, overload and earth leakage detection
- 30 mA earth leakage detection Type A
- B and C curve tripping characteristics
- Switched Live & Neutral
- Fits existing busbar system
- Self testing (AFDD function only)

CURRENT RATING (A)	KA RATING	B CURVE CAT. NO.	C CURVE CAT. NO.
6	6	**M2AFR06B1**	**M2AFR06C1**
10	6	**M2AFR10B1**	**M2AFR10C1**
16	6	**M2AFR16B1**	**M2AFR16C1**
20	6	**M2AFR20B1**	**M2AFR20C1**
32	6	**M2AFR32B1**	**M2AFR32C1**
40	6	**M2AFR40B1**	**M2AFR40C1**

Technical:

Standard	BS EN 62606, IEC 61009 - RCBO, EMC requirements as specified in IEC 62606
Current Rating	6-40 A
Voltage Rating	230 - 240 V - Single Phase
Frequency Rating	50Hz
Tripping Curve	B & C Options
Material	PBT Case
Colour	Grey
Maximum Operating Voltage	1.1Un
Minimum Operating Voltage	180 V
Number of Poles	Double Pole
AFDD Test Means	Automatic test function as per 8.17 IEC 62606
Classification per IEC 62606	4.1.2 - AFD unit integrated in a protective device
Ambient Operating Temperature	-5°C to +55°C
AFDD Ready Indication	Single LED Indication - see table below
Overvoltage Function	Overvoltage condition of 270Vrms to 300Vrms for 10 seconds will cause device to trip. LED indication of over-voltage trip will be provided on product re-latch.
Self Test Interval	1 Hour
Torque Setting	2.5Nm on the bottom (Line) terminal 1.5Nm on the top (Load) terminals

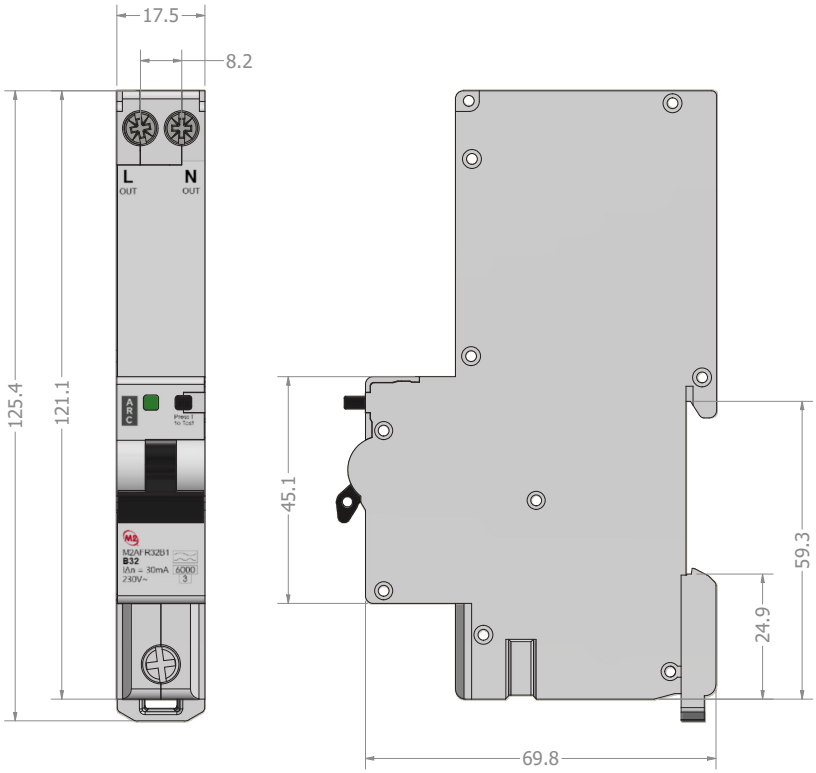
Tripping Characteristics:

Earth Fault Current	Trip time limit (typical measured value)
0.5 x Idn	No trip
1 x Idn	<300 ms (nominally <40 ms)
5 x Idn	<40ms (nominally <40 ms)
	Actual tripping threshold
30 mA	20 - 25 mA

M2 | Pipers Road | Park Farm Ind. Est. | Redditch | Worcs | B98 0HU
T: 01527 520678 **E:** sales@m2electrical.co.uk **W:** www.m2electrical.co.uk

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LED Indication

The table describes all possible LED states:

After tripping under a fault condition and upon resetting, the fault status indicator will show the fault nature according to the table.
LED flashing sequence repeats every 1.5sec for next 10 sec after powering up

CONDITION	AFTER 10 SEC
Series Arc Fault	● ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ●
Parallel Arc Fault	● ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ●
Over-Voltage Fault	● ○ ○ ○ ● ○ ○ ○ ● ○ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ●
Self-Test Fault	● ○ ● ○ ● ○ ● ○ ● ○ ● ○ ● ○ ● ○ ● ● ● ● ● ●
No Fault	● ●

1.5 Seconds

Detection Characteristics

When all three inputs are simultaneously sustained for **at least 100mS**, the AFDD will trip. This maximises arc fault detection whilst minimising the risk of nuisance tripping.

- A sustainable current of a certain magnitude >2.5 A
- A minimum number of consecutive half cycles of arcing conditions
- Hi-Lo asymmetrical frequency components

For further information contact our team:
M2 | Pipers Road | Park Farm Ind. Est. | Redditch | Worcs | B98 0HU
T: 01527 520678 **E:** sales@m2electrical.co.uk **W:** www.m2electrical.co.uk