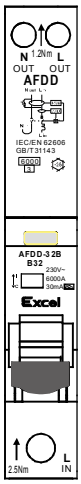
RCBO+AFDD

RCBO With Arc Fault Protection ---------- Standard_ IEC62606
IEC61009



Protection

1、Arc Fault Protection
2、Overload Protection
3、Short-Circuit Protection
4、Earth-Leakage Protection
5、Overvoltage Protection

Technical Data

Electrical Features	Mode	Electronic
	Type	A
	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 residual operating current(I△n)	30mA
	Break time under I△n	≤0.1s
	Rated breaking capacity	6,000A
	Energy limiting class	3
	Rated impulse withstand voltage(1.5/50)Uimp	4,000V
	Dielectric test voltage at ind.Freq.for 1min	2kV
	Pollution degree	2
	Magnetic tripping curve	B、C
	Over-voltage tripping range	AC 275V±5%
Mechanical Features	Electrical endurance	4,000 cycles
	Mechanical endurance	10,000 cycles
	Contact position indicator	Yes
	Protection degree	IP 40 in Sentry MCU & Enclosures
	Reference temperature for setting of thermal element	30℃
	Ambient temperature(with daily average≤35℃)	-5℃~+40℃
	Storage temperature	-25℃~+55℃
Installation	Terminal connection type	Cable/Pin-type busbar
	Tightening torque for L-LINE	2.5Nm
	Tightening torque for L&N-LOAD	1.2Nm
	Mounting	On DIN rail EN60715(35mm) by means of fast clip device
	Connection	Terminal

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Excel

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Residual current tripping characteristics

Tripping Current Range	Type	Tripping current I△/A		
		Lagging Angle	I△n > 0.01A	I△n≤0.01A
	A	0°	0.35I△n≤I△≤1.4I△n	0.35I△n≤I△≤2I△n
		90°	0.25I△n≤I△≤1.4I△n	0.25I△n≤I△≤2I△n
		135°	0.11I△n≤I△≤1.4I△n	0.11I△n≤I△≤2I△n

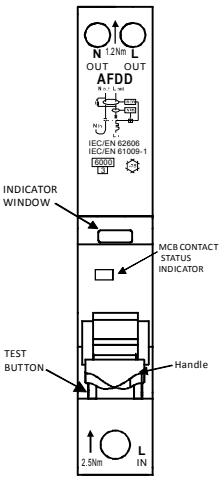
Thermal-magnetic tripping characteristics

	Thermal Tripping				Magnetic Tripping	
Asper IEC60898	No tripping current	Tripping current I_2	Time Limits t	Hold current I_4	Trip current I_5	Time Limits t
B Curve	$1.13\times I_N$	$1.45\times I_N$	≥ 1h < 1h	$3\times I_N$	$5\times I_N$	≥ 0.1s < 0.1s
C Curve	$1.13\times I_N$	$1.45\times I_N$	≥1h < 1h	$5\times I_N$	$10\times I_N$	≥ 0.1s < 0.1s

AFDDs at low arc currents up to 63A
Limit values of break time for Un=230V

Test arc current (r.m.s. values)	3 A	6A	13A	20A	40A	63 A
Maximum break time	1s	0.5s	0.25s	0.15s	0.12s	0.12s
This test current is the prospective current before arcing in the testing cirrcuit						

Fault identification



Upon proper terminal connections, with power supply on, the LED shall be off before the AFDD is switched on.

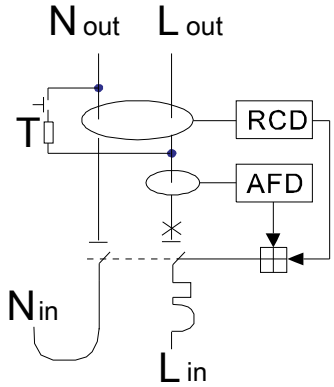
Switch the AFDD to ON position, LED shall illuminate green colour and the device operates normally. Please consult electrical engineer in case LED does not illuminate or illuminates red colour.

Once AFDD trips during its regular service, in order to analyse and identify circuit faults, please disconnect its downstream load first and then switch the device to ON position. Here below are the cross references of LED illumination and faults:

a. red LED flash x 5, serial or parallel arc fault.
b. yellow LED flash x3, 5 cycles, earlth leakge.
c. yellow LED flash x2, 5 cycles, over-voltage.
d. green LED on, overcurrent or short circuit.

Green LED on	**Normal operation**
Red LED on	**Out of service, consult engineer**
Red flash x5	**Serial or parallel ARC fault**
Yellow flash x2–5	**Over–voltage：275V ± 5%**
Yellow flash x3–5	**Earth leakage**
LED non–illuminated	**No power supply**

Circuit Diagram



Overall and Installation Dimension(mm)