

## RCBOs 10kA - 1 Pole + Neutral

### Features & Specifications

- Rated Current (A): 10, 16, 20, 25, 32
- Rated Voltage: 240VAC
- Width: 17.8mm
- Rated Frequency: 50/60 Hz
- Residual Tripping Characteristics: Type A
- Minimum Operating Voltage UB min (V): 85
- Terminals: Top Phase out, Neutral out Bottom Phase in, Neutral in Flying Leads
- Operating Temp: -5°C - +55°C
- Curve type: C-type
- Length of Neutral Lead: 1.4m
- Installation: DIN rail mount
- Rated residual operating current: 30mA
- Mechanical Cycles: 20,000
- Electrical Cycles: 10,000
- Residual making & breaking capacity: 3000A
- Short circuit capacity Ics: 10Ka
- Short circuit capacity Icn: 7.5Ka
- Connection Torque: 2.5Nm
- Standards: IEC 61009-1
- ESV Compliant

### Product Images



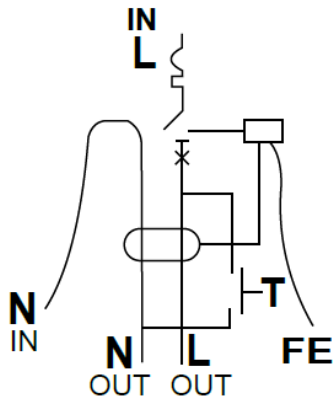
**Product Details**

Part No.	Current (A)	mA	kA	Type
RCBO101030AH	10A	30	10	A
RCBO101630AH	16A	30	10	A
RCBO102030AH	20A	30	10	A
RCBO102530AH	25A	30	10	A
RCBO103230AH	32A	30	10	A

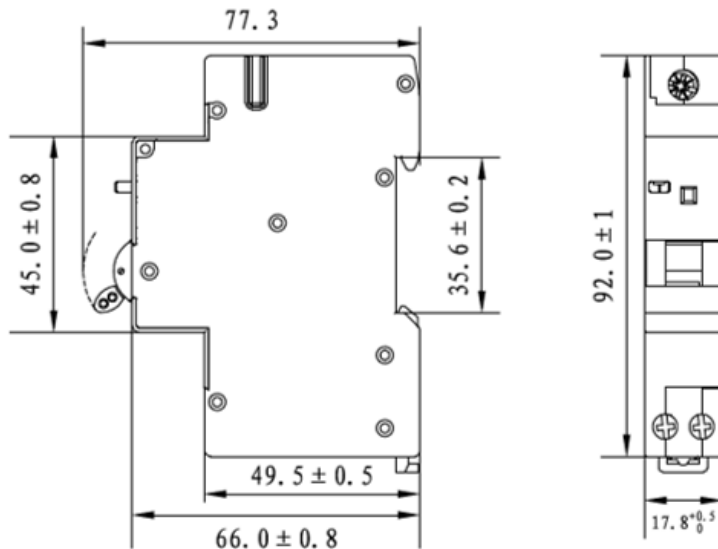
**Watt Loss Data:**

ITEM	SPECIFICATION	Resistance value		WATT LOSS (N Pole)		WATT LOSS (L Pole)	
		MIX~MAX (N Pole)	MIX~MAX (L Pole)	Minimum	Maximum	Minimum	Maximum
RCBO101030AH	1P+N C10A 30mA	5.32~7.35	17.4~20.1	0.53	0.74	1.7	2.01
RCBO101630AH	1P+N C16A 30mA	6.8~7.87	10.30~18.78	1.74	2.01	2.64	4.81
RCBO102030AH	1P+N C20A 30mA	4.28~7.41	5.7~9.1	1.71	2.96	2.28	3.64
RCBO102530AH	1P+N C25A 30mA	5.0~6.45	5.41~6.87	3.13	4.03	3.38	4.29
RCBO103230AH	1P+N C32A 30mA	3.49~7.85	3.69~4.75	3.57	8.04	3.78	4.86

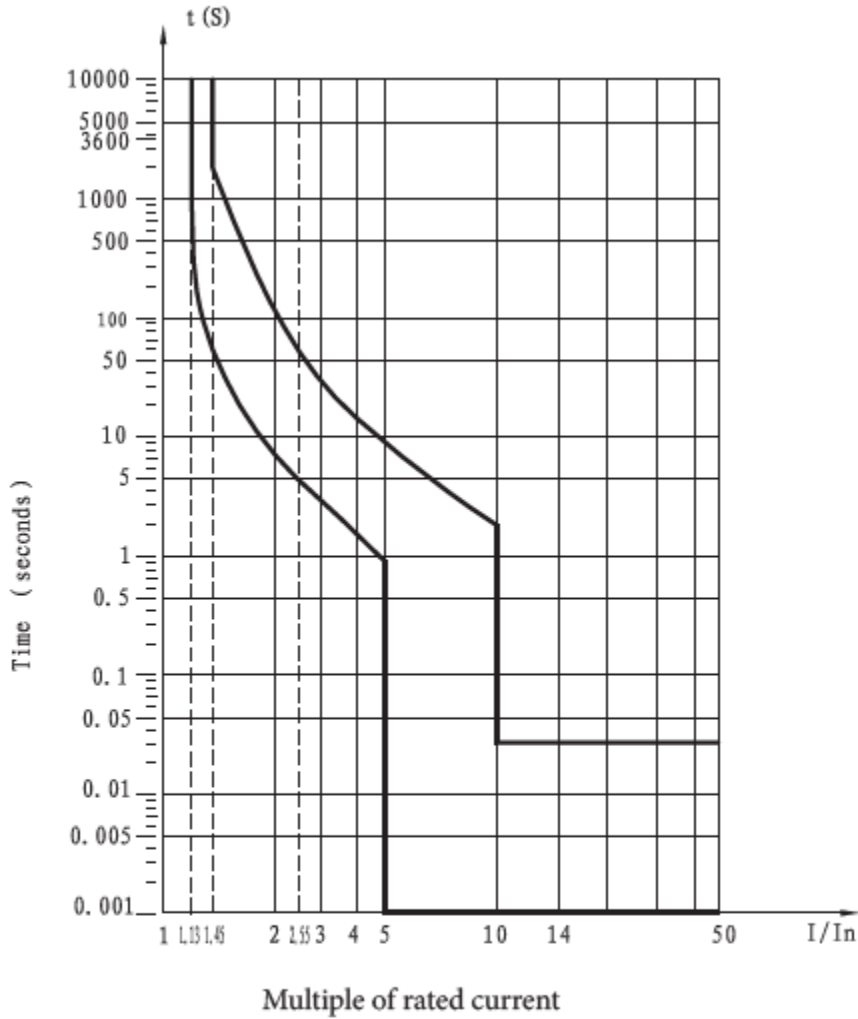
**Wiring Diagrams**



**Dimension Diagrams**

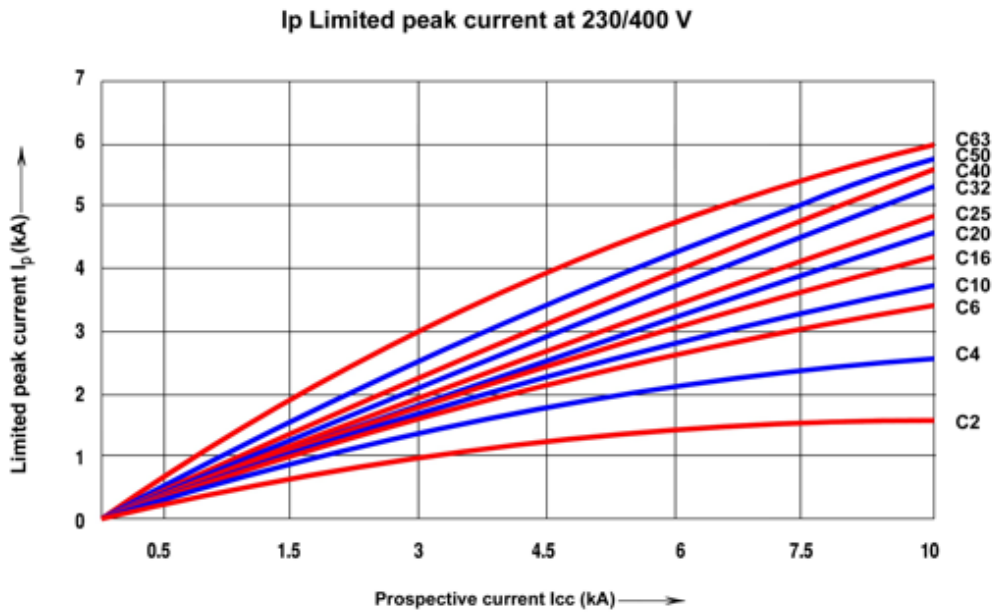
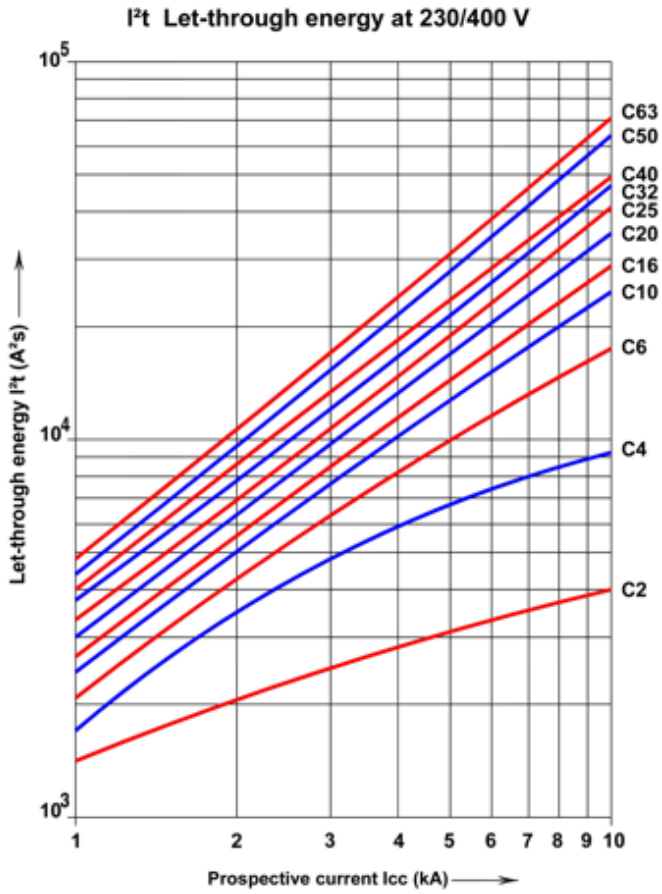


**Tripping C Curve Characteristics**



Multiple of rated current	1.13	1.45	2.55	3	5	10	14
Minimum Trip Time In sec	No Trip	60	9	3.5	0.101	-	-
Maximum Trip Time In sec	No Trip	2000	60	35	9	0.099	0.099

**Energy Limited & Energy Peak Current Curves 10kA**



**Cascade (Back-up)/Selectivity Tables**

The Cascade and Selectivity tables shown in the following pages are verified according to AS/NZS 60947.

**Back-up - Upstream MCCB/Downstream RCBO**

Voltage 230/240V, Icc max. In kA

Downstream			Upstream	
			MCCB3160FH	MCCB3250JTM
Icu(kA)			50kA	50kA
Type	kA	In (A)		
RCBO	6	6-40	25	30
RCBO	10	6-40	36	36

Voltage 400/415V, Icc max. In kA

Downstream			Upstream	
			MCCB3160FH	MCCB3250JTM
Icu(kA)			50kA	50kA
Type	kA	In (A)		
RCBO	6	6-40	25	30
RCBO	10	6-40	36	36

**Selectivity / Discrimination Table 1**

Downstream	Upstream	MCCB											
		G- Frame				F- Frame (25kA, 36kA)				F- Frame (50kA)			
In (A)	In (A)	16A	20A	25A	32A	16A	20A	25A	32A	25A	32A	40A	50A
Selectivity limit in kA <sup>(1)</sup>													
MCB, RCBO QP,DQ,DN,DNB RQP,ODN	≤6	0.16	0.2	0.25	0.32	0.16	0.2	0.25	0.32	0.2	0.26	0.32	0.5
	10	--	0.2	0.25	0.32	--	0.2	0.25	0.32	0.2	0.26	0.32	0.5
	16	--	--	--	0.32	--	--	--	0.32	--	0.26	0.32	0.5
	20	--	--	--	--	--	--	--	--	--	--	0.32	0.5
	25	--	--	--	--	--	--	--	--	--	--	--	0.5
MPCB	≤6	0.16	0.2	0.25	0.32	0.16	0.2	0.25	0.32	0.2	0.26	0.32	0.5
	10	--	0.2	0.25	0.32	--	0.2	0.25	0.32	0.2	0.26	0.32	0.5
	16	--	--	--	0.32	--	--	--	0.32	--	0.26	0.32	0.5
	20	--	--	--	--	--	--	--	--	--	--	0.32	0.5
	25	--	--	--	--	--	--	--	--	--	--	--	0.5
MCCB G FRAME, F FRAME	16	--	--	--	0.32	--	--	--	0.32	--	0.26	0.32	0.5
	20	--	--	--	--	--	--	--	--	--	--	0.5	
	25	--	--	--	--	--	--	--	--	--	--	0.5	
	25	--	--	--	0.32	--	--	--	0.32	--	--	--	0.5
	32	--	--	--	--	--	--	--	--	--	--	--	0.5

## Selectivity / Discrimination Table 2

Upstream		MCCB																	
		G- Frame					F- Frame (25kA, 36kA)					F- Frame (50kA)							
Downstream	In (A)	40A	50A	63A	80A	100A	125A	40A	50A	63A	80A	100A	125A	40A	50A	63A	80A	100A	125A
		160A					160A					160A							
Selectivity limit in kA <sup>(1)</sup>																			
MCCB, RCBO QP, DG, DN, DNB RQP, ODN	≤16	0.6	2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	0.6	2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	--	0.8	1.2	T	T	T	1.6	T	T	T	T	T	1.6	T	T	T	T	T
	32	--	--	1.2	3	T	T	--	--	T	T	T	T	--	--	T	T	T	T
MPCB	≤20	0.6	2.5	6	6	10	T	10	10	T	T	T	T	10	10	T	T	T	T
	25	--	1	1.2	6	6	T	--	3.5	15	T	T	--	3.5	15	15	T	T	
	32	--	--	1.2	3	6	10	--	--	6	6	T	T	--	--	6	6	T	T
	40	--	--	--	3	4	6	--	--	--	6	T	T	--	--	--	6	T	T
MCCB G FRAME, F FRAME	50	--	--	--	1.2	1.6	6	--	--	--	3.5	T	T	--	--	--	3.5	T	T
	63	--	--	--	--	1.6	2	--	--	--	--	8	T	--	--	--	--	8	T
	≤25	0.4	0.5	0.6	0.8	1	1.3	0.6	0.8	0.9	1.2	1.5	3.5	0.6	0.8	0.9	1.2	1.5	3.5
	32	--	0.5	0.6	0.8	1	1.3	--	0.8	0.9	1.2	1.5	3.5	--	0.8	0.9	1.2	1.5	3.5
	40	--	--	--	0.8	1	1.3	--	--	--	1.2	1.5	3.5	--	--	--	1.2	1.5	3.5
	50	--	--	--	0.8	1	1.3	--	--	--	1.2	1.5	3.5	--	--	--	1.2	1.5	3.5
	63	--	--	--	--	1	1.3	--	--	--	--	1.5	3.5	--	--	--	--	1.5	3.5
	80	--	--	--	--	--	1.3	--	--	--	--	--	3.5	--	--	--	--	--	3.5

## Selectivity / Discrimination Table 3

Upstream		MCCB																					
		Fr Frame (25kA, 36kA)					F- Frame (50kA)					J- Frame, (50kA)											
Downstream	In (A)	63A	80A	100A	125A	160A	100A	125A	160A	63A	125A	160A	63A	125A	160A	125A	160A	200A	250A	125A	160A	250A	
		Selectivity limit in kA <sup>(1)</sup>																					
MCCB, RCBO QP, DG, DN, DNB RQP, ODN	≤20	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	1.2	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	1.2	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	--	3	4	T	T	T	T	T	--	T	T	T	T	T	T	T	T	T	T	T	T	T
MPCB	≤20	6	6	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	1.2	6	6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	1.2	3	6	10	10	T	T	T	T	T	T	10	T	T	T	T	T	T	T	T	T	T
	40	--	--	4	6	6	T	T	T	T	T	T	6	10	T	T	T	T	T	T	T	T	T
MCCB G FRAME, F FRAME	50	--	--	1.6	6	6	T	T	T	--	T	T	6	6	10	T	T	T	T	T	T	T	T
	63	--	--	--	2	2	--	T	T	--	T	T	2	6	6	T	T	T	T	T	T	T	T
	≤40	0.6	0.8	1	1.2	1.6	30	30	30	36	36	36	1.6	2	2.5	42	42	42	42	50	50	50	50
	50	--	0.8	1	1.2	1.6	30	30	30	--	36	36	1.6	2	2.5	42	42	42	42	50	50	50	50
	63	--	--	1	1.2	1.6	30	30	30	--	36	36	1.6	2	2.5	42	42	42	42	50	50	50	50
	80	--	--	--	1.2	1.6	--	30	30	--	36	36	1.6	2	2.5	42	42	42	42	50	50	50	50
	100	--	--	--	--	1.6	--	--	30	--	--	36	1.6	2	2.5	--	42	42	42	--	50	50	50
	125	--	--	--	--	--	--	--	--	--	--	--	2	2.5	--	--	42	42	--	--	50	50	50
160	--	--	--	--	--	--	--	--	--	--	--	--	2.5	--	--	--	42	--	--	--	50	50	

(1) Where T is mentioned Selectivity is Full up until the Icu of the downstream device.

# Selectivity / Discrimination Table 4

Upstream		MCCB															
		F- Frame			J- Frame Thermal			J- Frame			K- Frame Thermal		K- Frame Thermal				
Downstream		Selectivity limit in kA <sup>(1)</sup>															
		In (A)	63A	80A	160A	125A	160A	200A	250A	125A	160A	250A	250A	350A	400A	400A	500A
MCB, RCBO QP,DQ,DN,DNB RQP,ODN	≤16	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	20	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
MPCB	≤25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	≤25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
MCCB G FRAME, F FRAME	≤40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	--	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	--	--	T	--	T	T	T	T	T	T	T	T	T	T	T	T
	100	--	--	T	--	--	T	T	--	T	T	T	T	T	T	T	T
	125	--	--	--	--	--	T	T	--	--	T	T	T	T	T	T	T
	160	--	--	--	--	--	--	T	--	--	T	T	T	T	T	T	T
MCCB J FRAME	125	--	--	--	--	--	--	--	--	--	3.5	10	15	T	T	T	T
	160	--	--	--	--	--	--	--	--	--	3.5	10	15	T	T	T	T
	200	--	--	--	--	--	--	--	--	--	--	10	15	T	T	T	T
	250	--	--	--	--	--	--	--	--	--	--	10	15	T	T	T	T
	250	--	--	--	--	--	--	--	--	--	--	5	6	5	7	7	7
MCCB K FRAME	350-400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7

# Selectivity / Discrimination

Upstream		L- Frame	
		800A	
Downstream		In (A)	
MCB, RCBO QP,DQ,DN,DNB RQP,ODN		ALL	T
		ALL	T
MPCB		ALL	T
MCCB G FRAME	Trip Units	ALL	T
MCCB F FRAME	Trip Units	ALL	T
MCCB J FRAME	Trip Units	ALL	T
MCCB K FRAME		400	T
	Trip Units	500	15
		630	15
MCCB L FRAME	Trip Units	800	--