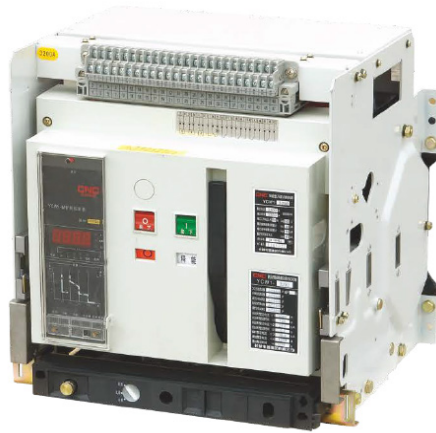


**NEPEAN**  
Power

# Air Circuit Breakers

AVAILABLE FROM  
NEPEAN ELECTRONICS



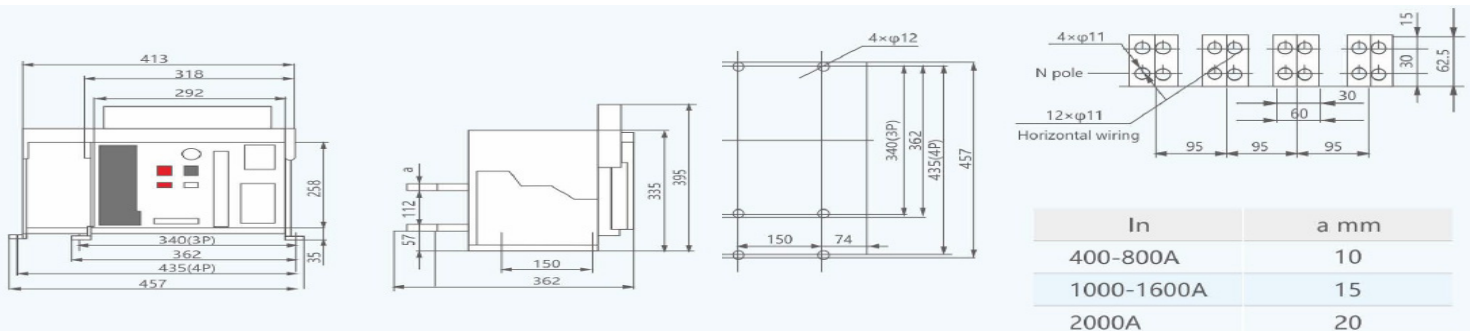
NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

## General

YCW1 series Intelligent Air Circuit Breakers (ACB) are used for the distribution networks on AC 50Hz, 415V and 690V circuits with rated current between 630A and 6300A. Mainly used for distribution systems the ACB offers protection including short circuit, overload undervoltage, etc. The ACB has an intelligent protection system with modbus communications including Current, Power, PF, Reactive Power monitoring, etc. The unit can be supplied as a fixed or withdrawable unit.

The products conform with IEC60947-1, IEC60947-2 standards.

## Overall and Mounting dimensions



Installation and figure dimension of fixed type circuit breaker (Inm = 2000A 3P 4P)

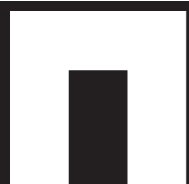
## Ordering Information

Part Number	Description
YCW1-20-3P-16F	YCW1-2000/3P 1600A Fixed CB UV-110VAC, ST-110V AC, CC-110V AC, MT-110VAC Aux-110V AC, Modbus
YCW1-20-3P-16D	YCW1-2000/3P 1600A Withdrawable UV-110VAC, ST-110V AC, CC-110V AC, MT-110VAC Aux-110V AC, Modbus
YCW1-32-3P-32F	YCW1-3200/3P 3200A Fixed CB UV-110VAC, ST-110V AC, CC-110V AC, MT-110VAC Aux-110V AC, Modbus
YCW1-32-3P-32D	YCW1-3200/3P 3200A Withdrawable UV-110VAC, ST-110V AC, CC-110V AC, MT-110VAC Aux-110V AC, Modbus

# Air Circuit Breaker

## Data

Type			YCW1-2000	YCW-3200	YCW1-6300
Pole			3P, 4P	3P, 4P	3P, 4P
Using category			B	B	B
Rated current In	A		630,800, 1000, 1250, 1600, 2000	2000,2500,3000	4000,5000,6300
Rated frequency	Hz		50	50	50
Rated operation voltage Ue	V		400, 660	400, 660	400, 660
Rated insulation voltage Ui	V		800	800	800
Arcing distance	mm		0	0	0
Rated impulse withstanding voltage	Uimp	V	8000	8000	8000
Rated operation short circuit breaking capacity Ics (O-t-CO)	400V	kA	40	50	100
	600V	kA	40	50	65
Rated limiting short circuit breaking capacity Icu (o-t-CO)	400V	kA	65	80	120
	600V	kA	50	65	75
Rated short time withstanding current Icw (O-t-CO, AVS)	400V	kA	45	65	100
Operation life	Per hour	times	20	20	20
	Electrical	times	1000	500	500
	Mechanical	times	10000	10000	10000
Full breaking time		ms	20~30	20~30	20~30
Full closing time		ms	55~70	55~70	55~70
Power consumption	3P	W	360	1200	2000
	4P	W	450	1750	2300
Resistance of each pole	Fixed type	$\mu\Omega$	11	9	-
	Draw out type	$\mu\Omega$	20	14	10
Dimensions (LxWxH)	3P fixed type	mm	362 x 323 x 402	422 x 323 x 402	
	3P draw out type	mm	375 x 461 x 452	435 x 471 x 452	-
	4P fixed type	mm	457 x 323 x 402	537 x 323 x 402	-
	4P draw out type	mm	470 x 461 x 452	550 x 471 x 452	-
Approximate weight	3P fixed type	kg	41	55	-
	3P draw out type	kg	71	95	245
	4P fixed type	kg	51.5	65	-
	4P draw out type	kg	86	115	260



**NEPEAN**  
Power

www.nepeanpower.com

For more information please contact:

P: +61 2 4088 2790

E: [power@nepean.com](mailto:power@nepean.com)

# Air Circuit Breaker

## Release Current Setting and Tolerance

Long-time delay		Short Time Delay		Instantaneous		Grounding Fail	
Ir1	Tolerance	Ir2	Tolerance	Ir3	Tolerance	Ir4	Tolerance
(0.4~1) In	± 10%	(0.4~15) In	± 10%	1In ~100kA + off	± 15%	(0.2~0.8) In (Max 1200A) (Min 160A)	± 10%

**NOTE:**

1. While of three sections protection, the setting value should not be across.
2. Expect additional provision in the contract, the current setting value of Ex-factory is Ir1-In, Ir2-8In, Ir3-12In and Ir4-0.8In.
3. YCW 1-2000 Ir3-In-50kA. YCW1-320 Ir3-In-75kA. YCW1-6300-In-100kA.

## Characters of Short-time delay inverse action.

Current	Time						
1.05Ir1	> 2h no action						
1.3Ir1	< 2h action						
1.5Ir1	Setting Time (s)	15	30	60	120	240	480
2.0Ir1	Action Time (s)	8.4	16.9	33.7	67.5	135	270

**NOTE:**

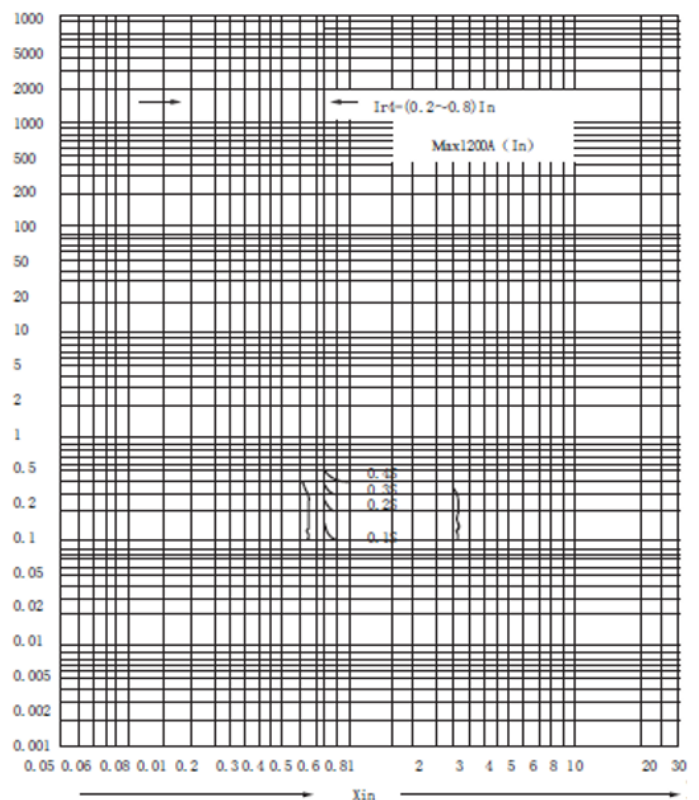
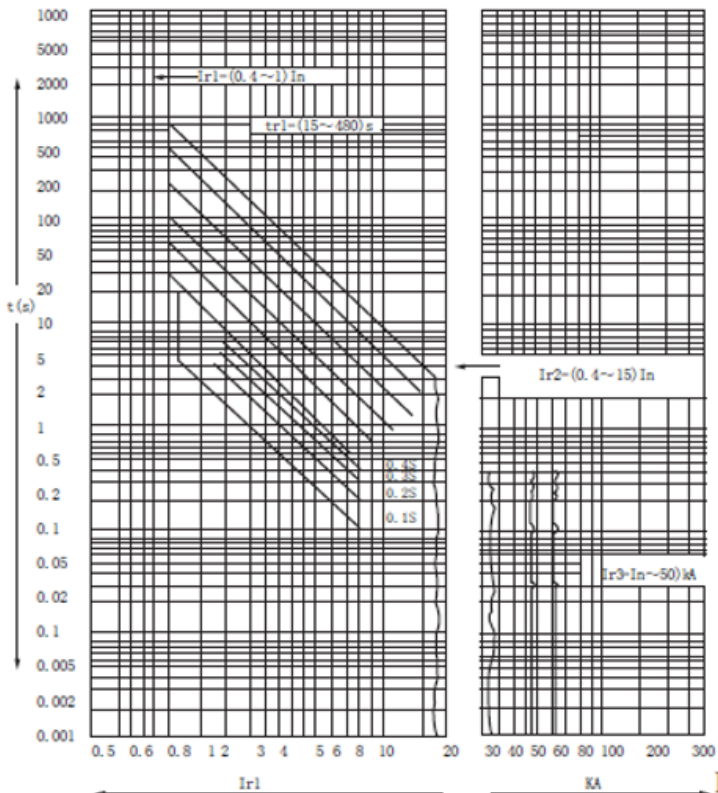
1. Time tolerance of action is ± 15%.
2. Expect additional provision in the contract, the current setting value t1 of ex-factory is 120s.

## Characters of Short-time delay action.

Current	Time					
I > Ir2, I < Ir1	Inverse		$I^2 t = (8 Ir1)^2 t_2$			
I > Ir2, I > 8Ir1	Definite Time Lad	Setting Time (s)	0.1	0.2	0.3	0.4
		Action Time (s)	0.06	0.14	0.23	0.35

**NOTE:**

1. Time tolerance of action is ± 15%.
2. Expect additional provision in the contract, the current setting value t1 of ex-factory is 120s.
3. In the table, I is practical action current, t<sub>2</sub> is practical action time.



**NEPEAN**  
Power

www.nepeanpower.com

For more information please contact:

P: +61 2 4088 2790

E: power@nepean.com