

T&J ELECTRIC (SINGAPORE) PTE LTD

Company Registration No: 200205797Z
10 Ubi Crescent, #02-24, Ubi Techpark, Singapore 408564
Telephone: +65 6547-4333 Fax: +65 6547-4666

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Subject: Recommended Use of High Current Switch (TM-020012)

A. Single Phase Air Conditioner and Water Pump Application

When Air Conditioner and Water Pump is started, its motor shall draw 6 to 7 times of nominal current when it is started. The estimated current rating for switch is calculated as follow:

$$I = (\text{horsepower}) * 747W / 220V * 7 * 1.15$$

Where

7 → Multiplier for starting current against nominal current

1.15 → Allowance

Horsepower (hp)	Calculated Current (A)	Switches
1/2	13.67	K220L
3/4	20.50	K220L or K232L
1	27.33	K232L
1 1/2	41.00	K245L, 45A Isolator
2	54.67	63A Isolator
2.5	68.33	80A Isolator

B. Single Phase Water Heater

As Water Heater is a resistive load, the formula of current rating as:

$$I = (\text{Power in Watt}) / 220 * 1.15$$

Where 1.15 → Allowance

Power (W)	Calculated Current (A)	Switches
< 3500W	18.30	K220L