



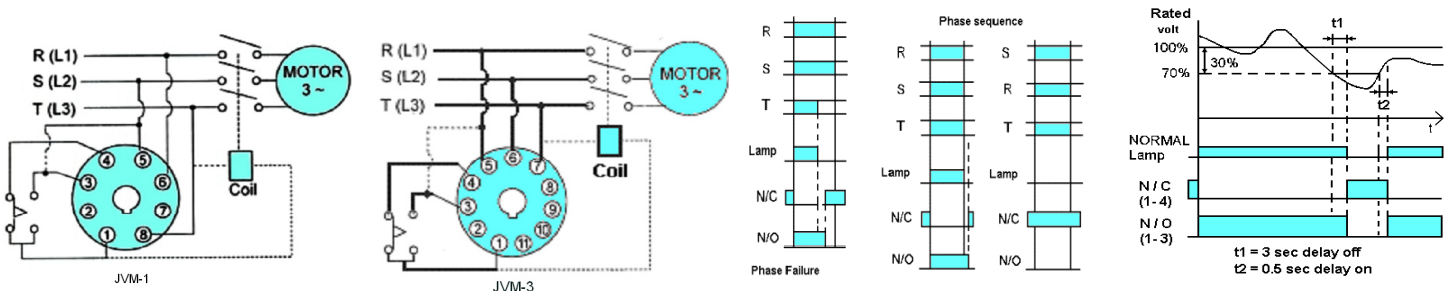


# SELF-POWERED VOLTAGE DETECTING & PROTECTING RELAY

Model No.		JVM-1	JVM-2	JVM-3	JVM-4
Classification					
Appearance					
Features		Phase Failure Phase Sequence	Phase Failure Phase Sequence Over Voltage Under Voltage	Phase Failure Phase Sequence	Phase Failure Phase Sequence Over Voltage Under Voltage
Surface Mounting		Socket base <a href="#">8PFA</a>	Socket base <a href="#">8PFA</a>	Socket base <a href="#">P2CF11</a>	Socket base <a href="#">P2CF11</a>
Output Capacity		SPDT 7Amp / 250Vac			
Response Time of Relay		Delay on : 0.5 Sec Delay off : 3 Sec			
Frequency		50Hz or 60Hz (Depend upon user's area)			
Rated Voltage (Range:85%~110%)		3 Phase 220 , 380 , 415 , 440V	3φ : 220 , 380 , 415 , 440V 1φ : 110 , 220 , 380 , 415 , 440V	3 Phase 220 , 380 , 415 , 440V	3φ : 220 , 380 , 415 , 440V 1φ : 110 , 220 , 380 , 415 , 440V
LIFE	Mechanical	10,000,000 Times			
	Electrical AC220VPF=1	500,000 Times			
ACCURACY	Repeat		+/- 2% Max		+/- 2% Max
	Setting		+/- 10% Max		+/- 10% Max
	Voltage		+/- 2% Max		+/- 2% Max
	Temperature		+/- 2% Max		+/- 2% Max
Reset time		0.2 Sec Max			
Ambient temp. & Humidity		-10~55Deg.C , 85% Max			

## CONNECTION & OPERATIONAL DIAGRAMS

**TYPE : JVM-1 & JVM-3 ( Phase failure / Phase sequence monitoring relay )**



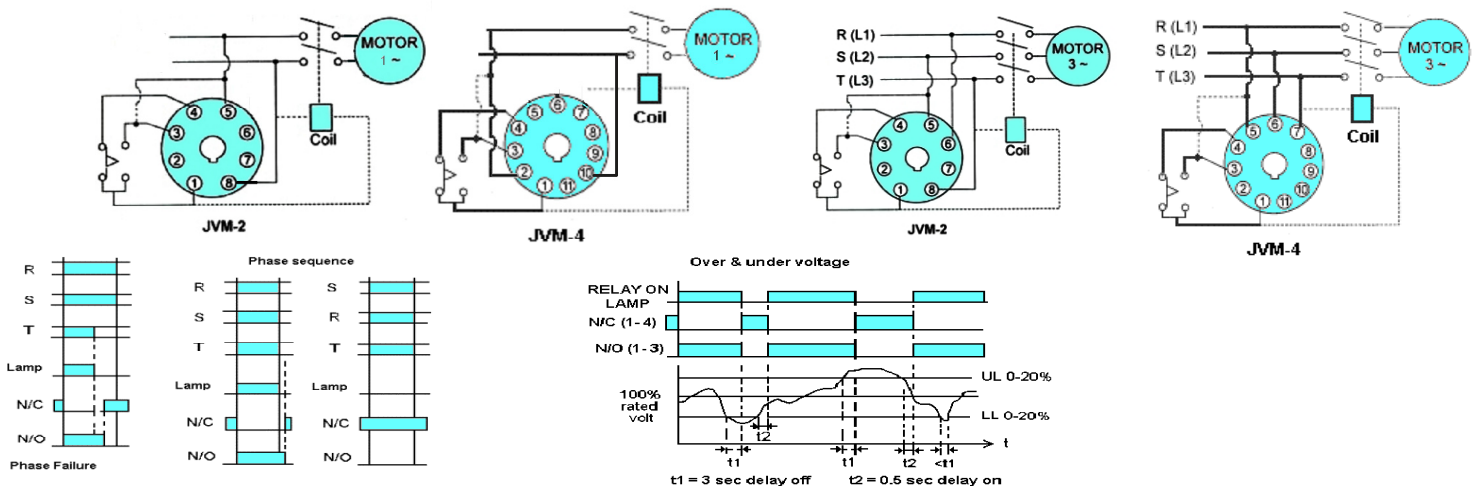
Output relay will be switched to ON ( pin#1 & pin#3 close ) immediately when power is applied to the unit with correct phase sequence and voltages

In case of any phase failure or voltage drops below 70% of the rated voltage and lasts for 3 seconds, then the output relay will return to its original position ( pin#1 & pin#4 close ) to cut power until 3 phase voltage and phase sequence are correct.

**TYPE : JVM-2 & JVM-4 ( Phase failure / Phase sequence / Under volt. monitoring relay )**

### A . Single phase



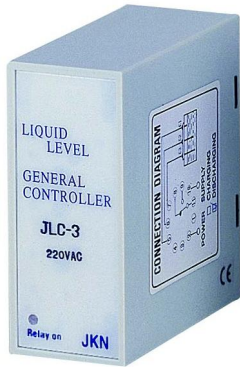
### B . Three phase



Output relay will operate to ON ( pin#1 & pin#3 close ) when power is applied to the unit normally, and simultaneously detect if supplied power voltages ( single or three phase ) are within the set voltage range, and phase in correct sequence for three phase type.

0% to 20% Knob-adjustable separately for over voltage and under voltage. If voltage is over or under than the setting voltage for over 3 second, then the output relay will be released to its original position ( pin#1 & pin#4 close ).

## LEVEL CONTROL RELAY

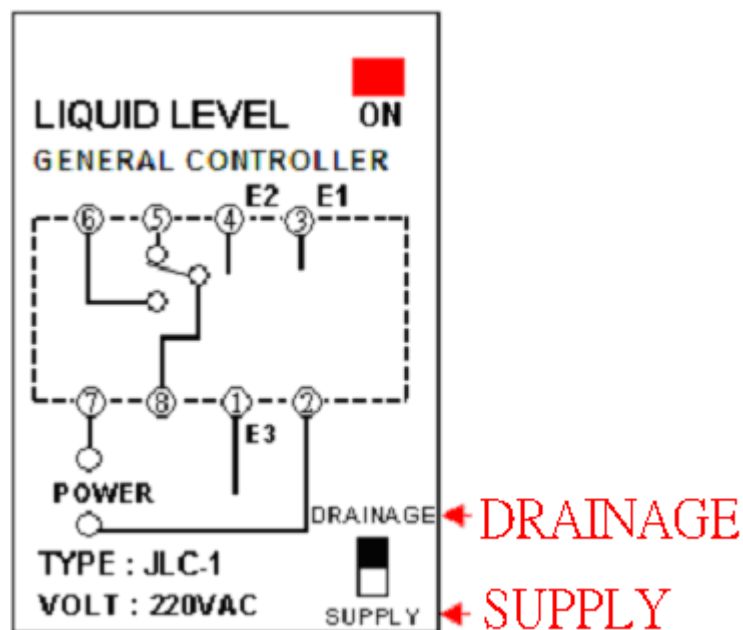
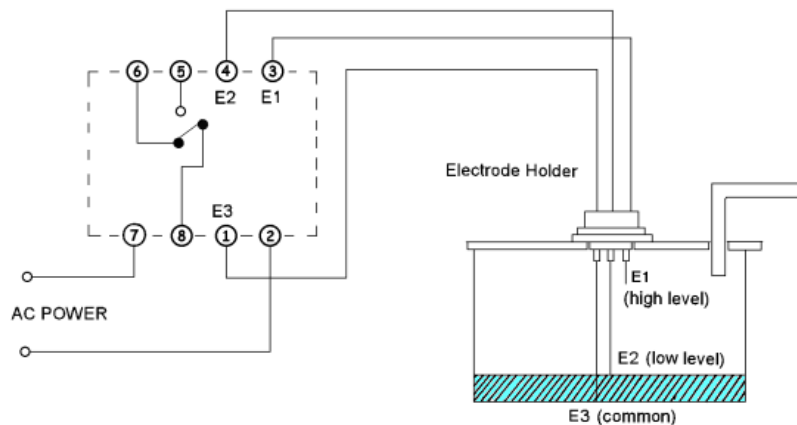
Model No.		JLC-1	JLC-2	JLC-3
Classification				
Appearance				
Features		Water Supply or Water Drainage for controlling conductive liquids under 40 k $\Omega$	Water Supply for controlling conductive liquids under 40 k $\Omega$	Water Drainage for controlling conductive liquids under 40 k $\Omega$
Surface Mounting		Socket base <a href="#">8PFA</a>	Socket base <a href="#">P2CF11</a>	Socket base <a href="#">P2CF11</a>
Output Capacity		SPDT 7Amp / 250Vac		
Response Time of Relay		Standard : 0.5 SEC		
Frequency		50Hz or 60Hz		
Rated Voltage (Range:85%~110%)		110VAC , 220VAC , 380VAC , 415VAC		
LIFE	Mechanical	10,000,000 Times		
	Electrical AC220VPF=1	500,000 Times		
ACCURACY	Repeat	*****		
	Setting	*****		
	Voltage	*****		
	Temperature	*****		
Reset time		0.2 Sec Max		
Ambient temp. & Humidity		-10~55Deg.C , 85% Max		

## CONNECTION & OPERATION DIAGRAM

### (1) JLC-1 (changeable for WATER SUPPLY or DRAINAGE)

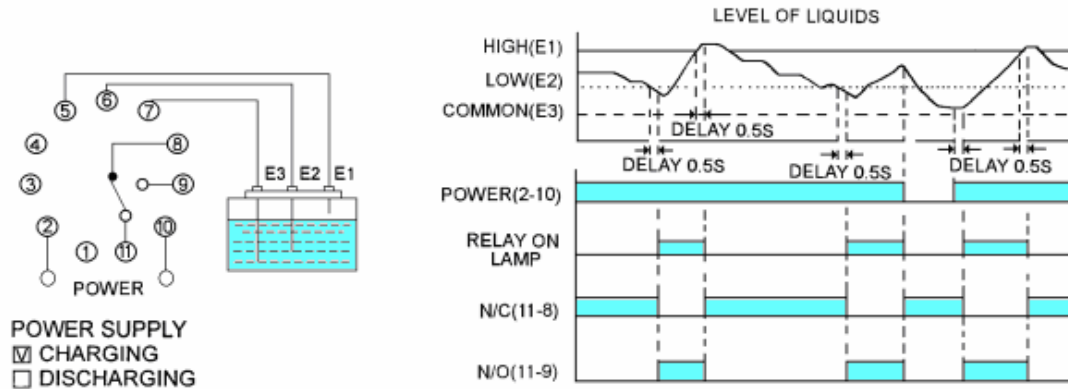
**WATER SUPPLY :** Output relay will be switched to ON (pin#8 & pin#6 connected) after 0.5 sec duration when liquid level is below than E2(low level) until level reaches E1 (high level) and lasting for 0.5 sec then relay OFF (pin8-6 disconnect)

**WATER DRAINAGE:** When liquid level is higher than E1, output relay will be switched (pin 8-6 connected) after 0.5 sec duration, and simultaneously pump starts to drain until level is downward under E2 (low level) for over 0.5 sec then relay transferred (8-6 disconnected) to stop drainage



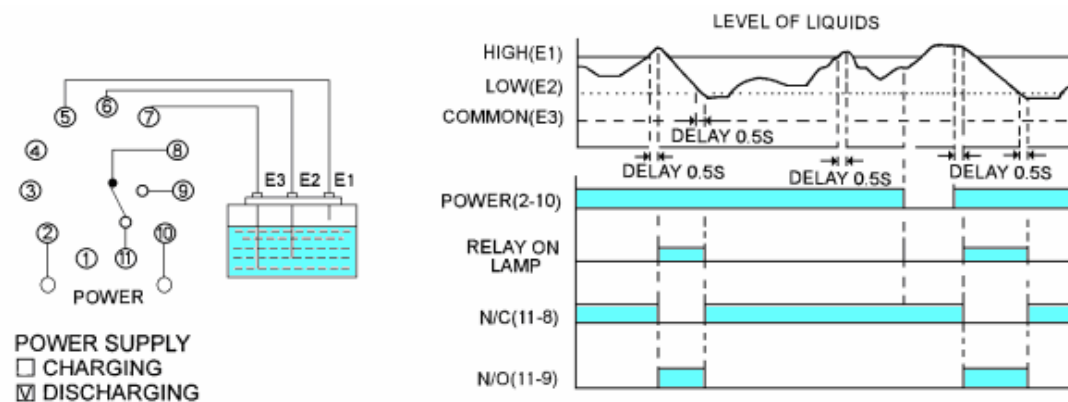
## (2) JLC-2 (WATRE SUPPLY ONLY)

Output relay will be switched to ON ( pin#11& pin#9 connected ) after 0.5sec duration when liquid level is below than E2 ( Low level ) until level reaches E1 ( High level ) lasting for over 0.5 sec. And then relay OFF ( pin#11-8 ).




## (3) JLC-3 (WATER DRAINAGE ONLY)

When liquid level is higher than E1 and lasts 0.5sec duration, output relay will be switched ( pin#11-9 connected ), and simultaneously pump starts to drain until level is downward under E2 ( Low level ) for over 0.5 sec then relay turn OFF ( pin#11-8 connected).



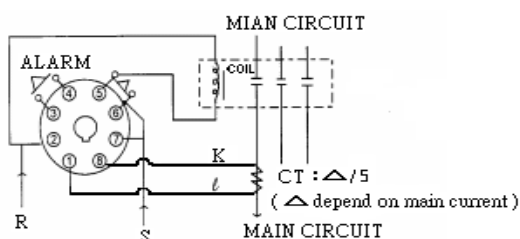
## OVER CURRENT RELAY

Model No.		JOC-1	JOC-2
Classification			
Appearance			
Features		Output relay will transfer to ON after time delay of 0.5 Sec while current exceeds the setting current ( 2~7A). <b>RESET :</b> Power off reset or excluding problem.	When current is over than the setting current, output relay will transfer to ON after 0.5 Sec duration Once current is less than setting current, relay contacts will be switched to its original position after response time.
Surface Mounting		Socket base 8PFA	
Output Capacity		1N/O + 1N/C Separately	
Response Time of Relay		0.5 SEC Fixed	
Current Range		AC 2~7 Amp Adjustable	
Rated Voltage Range:85%~110%)		50/60Hz 110VAC , 220VAC	
LIFE	Mechanical	10,000,000 Times	
	Electrical AC220VPF=1	500,000 Times	
ACCURACY	Repeat	+/- 2% Max	
	Setting	+/- 10% Max	
	Voltage	+/- 2% Max	
	Temperature	+/- 2% Max	
Reset time		0.2 Sec Max	
Ambient temp. & Humidity		-10~55Deg.C , 85% Max	

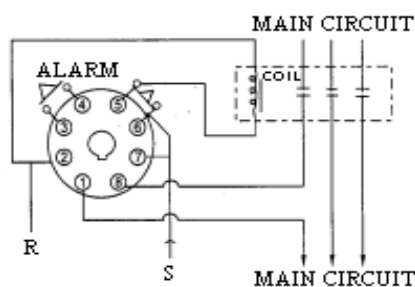
### CONNECTION & OPERATIONAL DIAGRAMS

**(1) Indirect connection** ( Main current more than 7 Amps ) :

Paralleled to CT k & l



**(2) Direct connection** ( Main current less than 7 Amps ) :



### OPERATIONAL DIAGRAM

