



**AC POWER CONTROL SPECIFICATIONS  
AND APPLICATION CIRCUITS FOR  
LAC-SAC-HAC-TAC SERIES  
STACKS**

**APC**

X10322

**INTRODUCTION**

To help assess the specifications for the TYPE of stack you require we need to generate a 'type' order code. General selection (e.g. Phasing and Power), type of load, method of control and possible optional feed back systems, all have to be considered and could affect the type of stack needed.

**Single Phase Stacks (Line to Neutral) and 2 Phase (Line to Line) @ typical voltage ratings**

RATED LINE CURRENT (A)	KVA AT 240V	KVA AT 415V
15 A	4	6
25 A	6	10
50 A	12	21
70 A	17	29
100 A	24	42
150 A	35	62
200 A	46	83
250 A	58	104
300A	69	125
400 A	96	166

THIS REFERENCE TABLE REFERS TO APPLICATION CIRCUIT 1.

- 2 WIRE 2 PHASE AS PHASE TO PHASE
- 2 WIRE 1 PHASE AS PHASE TO NEUTRAL

**Three Phase Stacks and Power Formulae @ typical voltage ratings**

RATED LINE CURRENT (A)	KVA AT 415V
25 A	18
50 A	36
75 A	54
100 A	72
150 A	108
200 A	144
250 A	180
300A	215
400 A	287

	<u>STAR LOAD</u>	<u>DELTA LOAD</u>
<b>LEG VOLTAGE</b>	<u>SUPPLY VOLTAGE</u> 1.73	LINE VOLTAGE
<b>LEG AMPERES</b>	LINE AMPERE	<u>LINE AMPERE</u> 1.73
<b>LEG POWER</b>	LEG AMPERES X LEG VOLTS	
<b>Total O/P Power (VA)</b>	SUPPLY VOLTS X LINE AMPERES X 1.73	

**Ordering Code**

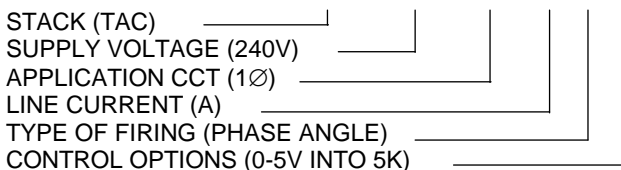
STACK TYPE  
50 - 600  
1 TO 9  
15 TO 300  
A - B - L  
1 TO 10

LAC/SAC/HAC/TAC.  
SUPPLY VOLTAGE.  
APPLICATION CIRCUIT (PAGE 2).  
LINE CURRENT (RMS).  
PHASE ANGLE - BURST FIRE OR  
ON/OFF LOGIC TRIGGERING  
CONTROL OPTIONS (SEE TABLE)

**Control Options**

1 MAN (EXT. 5K. POT)      6 LOGIC INPUT  
2 0 TO 1V INTO 5K      7 0 TO 10mA INTO 500R  
3 0 TO 5V INTO 5K      8 4 TO 20mA INTO 240R  
4 0 TO 10V INTO 5K      9 CONTACT CLOSURE  
5 0 TO 20V INTO 5K      10 OTHER - PLEASE DETAIL

e.g. LAC - 240 - 1 - 50 A 3



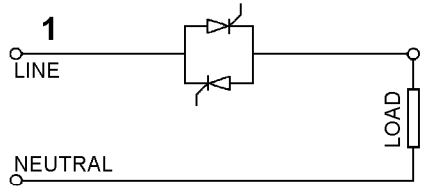
**SAMPLE SELECTED IS: -**

AC CONTROLLER, FOR 240V SINGLE PHASE, INVERSE PARALLEL THYRISTOR STACK, 50A RATED MAXIMUM LINE CURRENT, PHASE ANGLE FIRING, CONTROLLED BY 0-5V INTO 5K.

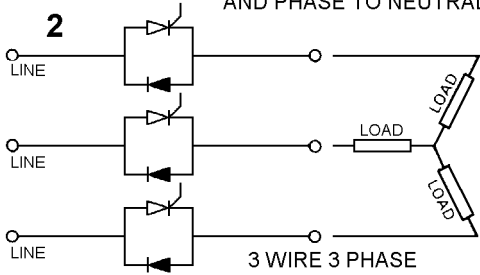
**Optional extras**

**CT** - CURRENT TRANSFORMER  
**FEEDBACK MODULES CIRCUITS** - ('V' OR 'I' FEEDBACK)  
**SPARES** - HS FUSES, POWER DEVICES, FIRING CIRCUITS.  
**SUPPRESSION** - TYPICALLY FOR RFI, FILTERS SNUBBERS AND VDR'S.  
 PLEASE DO NOT HESITATE IN CONTACTING US FOR ANY FURTHER INFORMATION REGARDING ANY OF THE ABOVE ITEMS

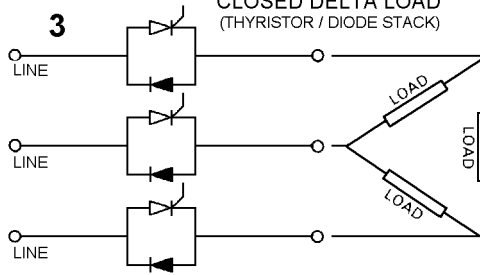
# APPLICATION CIRCUITS



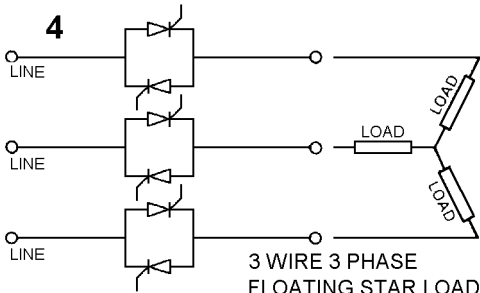
2 WIRE PHASE TO PHASE AND PHASE TO NEUTRAL



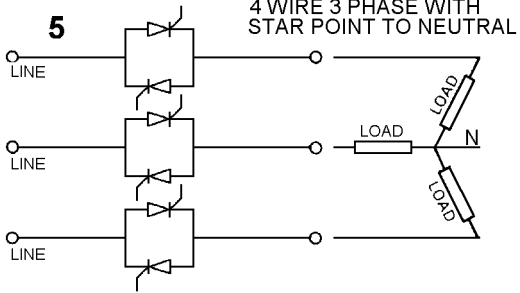
3 WIRE 3 PHASE FLOATING STAR LOAD (THYRISTOR / DIODE STACK)



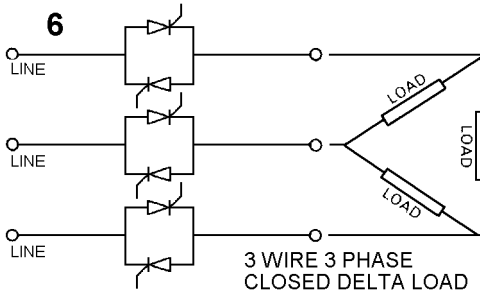
3 WIRE 3 PHASE CLOSED DELTA LOAD (THYRISTOR / DIODE STACK)



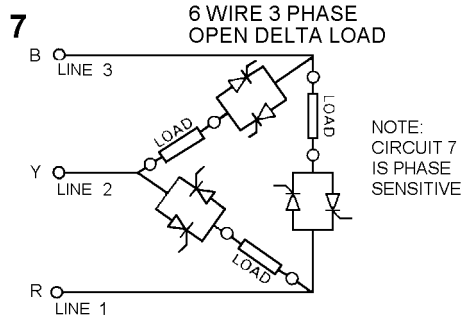
3 WIRE 3 PHASE FLOATING STAR LOAD



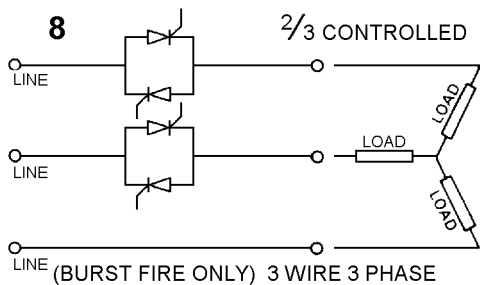
4 WIRE 3 PHASE WITH STAR POINT TO NEUTRAL



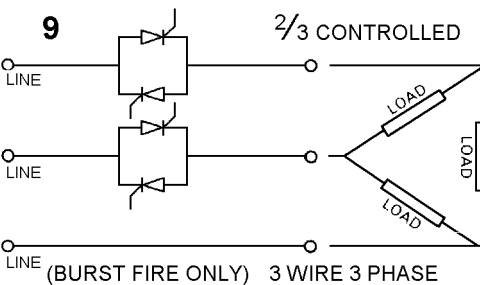
3 WIRE 3 PHASE CLOSED DELTA LOAD



6 WIRE 3 PHASE OPEN DELTA LOAD



2/3 CONTROLLED



2/3 CONTROLLED

(BURST FIRE ONLY) 3 WIRE 3 PHASE

(BURST FIRE ONLY) 3 WIRE 3 PHASE



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