Thyristor Based Phase/ Heater Controller

HEATER CONTROLLER

Introduction:

- Thyristor based Phase/ Heater controller offers advantages including precise control of the heating process, extended heater life, improved product quality at faster production speeds and reduced maintenance costs.
- A heating element is made of wire in most cases. If you use a mechanical relay to turn on your heater, it will cycle on or off within 30 seconds or longer. The heater will expand and contract, getting more and more brittle each time. This is called thermal shock. Temperature overshoot may also occur. Relays also arc, spark and will burn out on a regular basis.
- Since the thyristor (Silicon Controlled Rectifier [SCR]) is solid state, it can have on and off cycle over a billion times, if properly used for application. Proper selection of an SCR power control with proper cooling and protection can result in many years of reliable service.

Advantages:

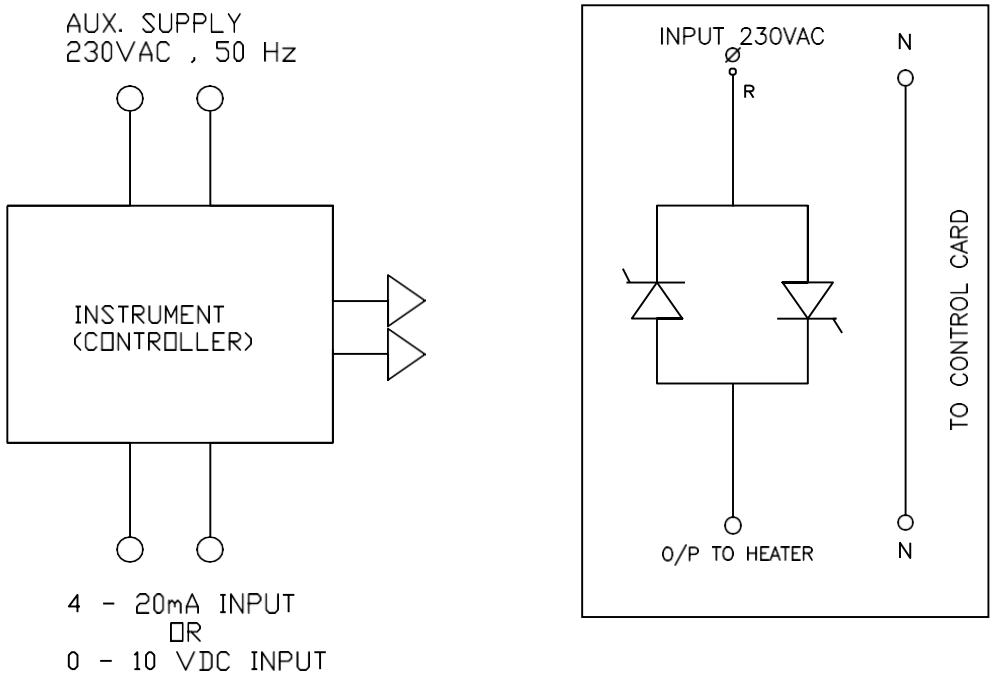
- Improved response time
- Improves control accuracy with virtually no switching hysteresis.
- Improves heater life by minimizing thermal cycling.
- Reduces maintenance costs and silent operation. No arcing and sparking.
- Reliable solid states switching of high current loads.
- Reduced peak power consumption

Features & Technical Specifications

- 1 Phase & 3 Phase available
- Up to 1000A
- Control method : Burst (Zero cross on/off) & phase angle firing modes.
- RC snubbers included for transient voltage protection.
- Isolated from high voltage.
- Internal overheat protection (optional)
- Aux Supply: 230V AC ± 10%, 50 Hz
- Control input signals: 4-20 mA / 0-10 VDC / 0-5 VDC

Model:

- 1 PHASE (R)- Single phase heater controller for Resistive heater load
- 3 PHASE (R)-Three phase heater controller for Resistive heater load
- 3 PHASE (I)-Three phase heater controller for Inductive heater load with soft start



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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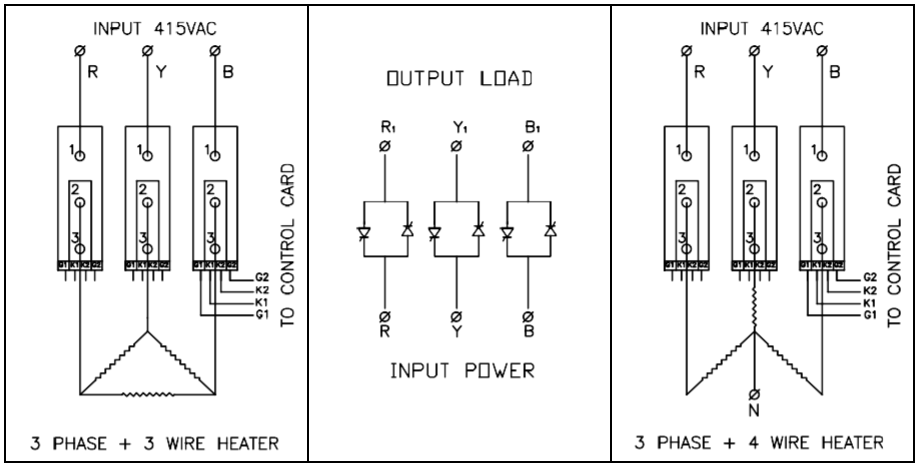
Title:- SINGLE PHASE HEATER CONTROLLER	Drawn:-Namrata	Sheet Name:- WIRING DRAWING
	Date:-	
Client:-	Scale:- NTS	Drg. Name:- ETI/DRG/20-21/HEATER CONTROLLER
Job No:-	Sheet No:- 01	

G1	K1	K2	G2
R			

G1	K1	K2	G2
Y			

G1	K1	K2	G2
B			



- STATUS
- AUTO MODE
- MANUAL MODE
- ZERO CROSS ON/OFF

- R PHASE
- Y PHASE
- B PHASE
- PHASE CONTROL

F1 F2 F3

P	N
230VAC	

−	+	A/M	START	COM	P1	P2	P3
4-20mA OR 0-10VDC							

CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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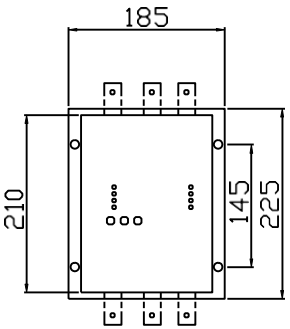
Title:- UPTO 10 KW HEATER CONTROLLER	Drawn:-Jahnavi	Sheet Name:- WIRING DRAWING
	Date:-	
Client:-	Scale:- NTS	Drg. Name:-
Job No:-	Sheet No:- 01	ETI/DRG/20-21/Heater controller



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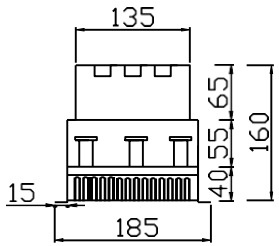
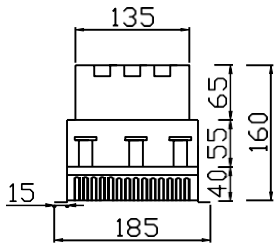


BACK VIEW



FRONT VIEW

DIMENSION : 225(L) X 185 (W) X 160 (H)

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NR. GAYATRI ICE FACTORY,
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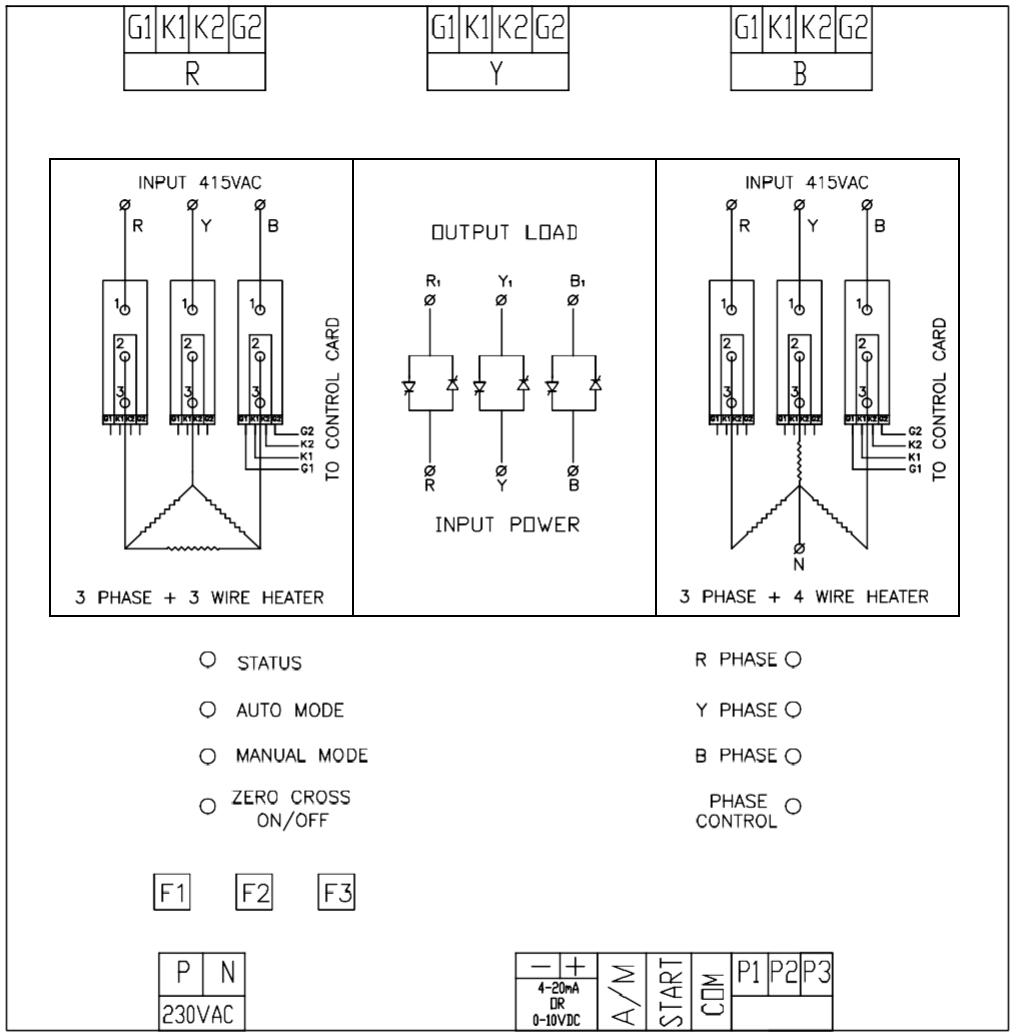
Email:–exell2003@yahoo.com

Title:–DIMENSION FOR UPTO 10 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– **DIMENSION HEATER CONTROLLER**
	Date.:–	
Client:–	Scale:– NTS	Drg. Name:– **ETI/DRG/20-21/ Heater Controller**
Job No:–	Sheet No:– 01	



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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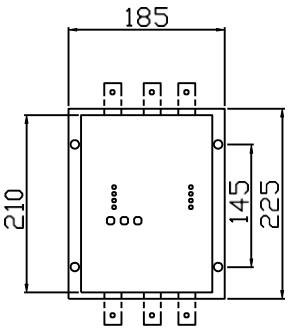
Title:– UPTO 15 KW HEATER CONTROLLER	Drawn:–Jahnavi	Sheet Name:– WIRING DRAWING
Client:–	Date:–	
Job No:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/Heater controller
	Sheet No:– 01	



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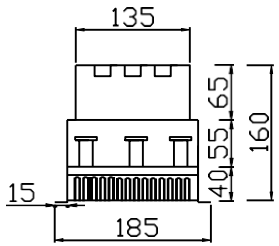

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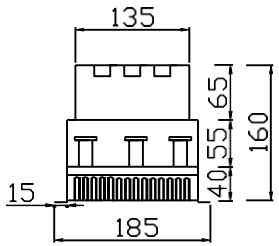

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Title:–DIMENSION FOR UPTO 15 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– DIMENSION HEATER CONTROLLER	
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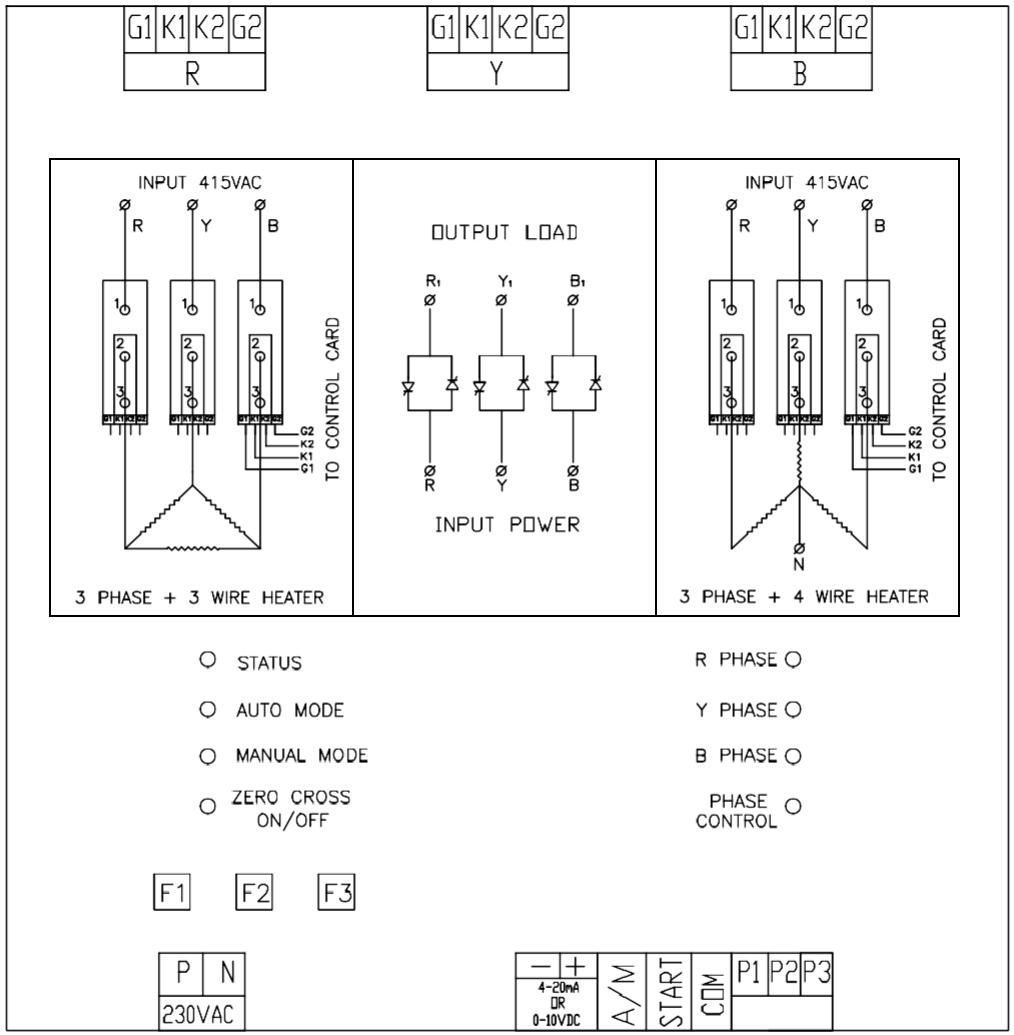
Client:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/ Heater Controller	
Job No:–	Sheet No:– 01		



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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Title:– UPTO 33 KW HEATER CONTROLLER	Drawn:–Jahnavi	Sheet Name:– WIRING DRAWING
Client:–	Date:–	
Job No:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/Heater controller
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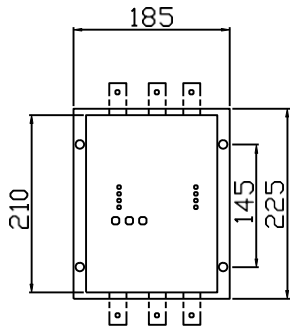

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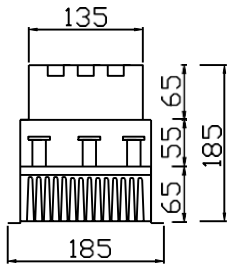

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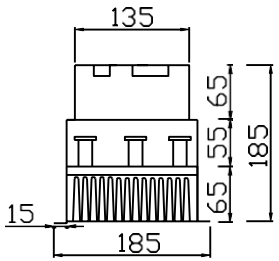

FRONT VIEW

DIMENSION : 225(L) X 185 (W) X 185 (H)

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Title:–DIMENSION FOR UPTO 33 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– DIMENSION HEATER CONTROLLER	
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Client:–	Scale:– NTS	Drg. Name:– ETI/DRG/20–21/ Heater Controller	
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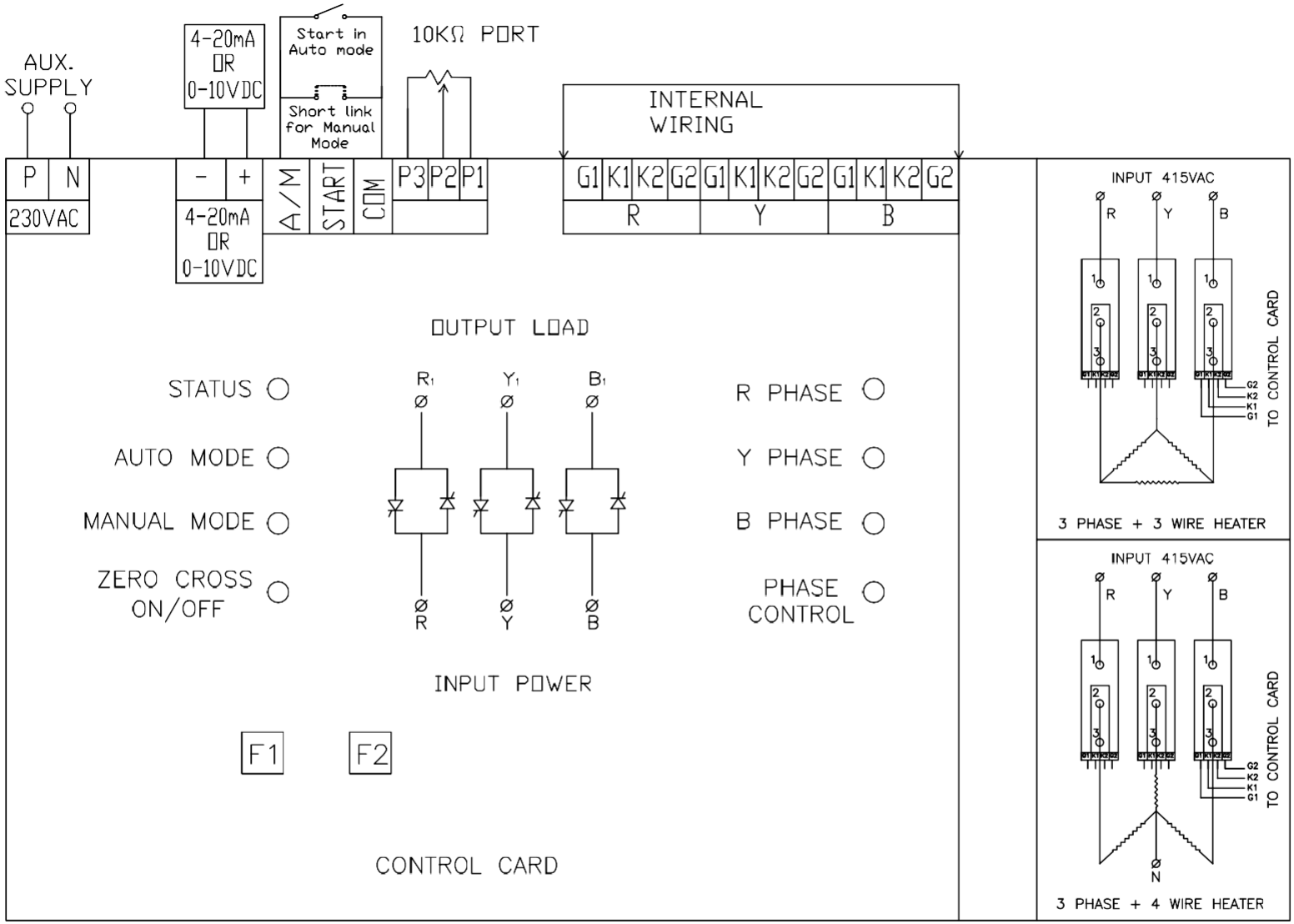

CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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Title:- UPTO 55 KW HEATER CONTROLLER	Drawn:-Jahnavi	Sheet Name:- WIRING DRAWING
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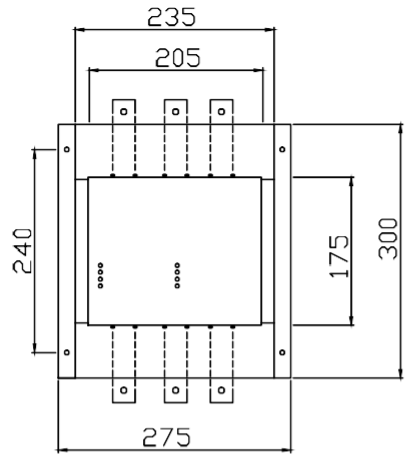
Client:-	Scale:- NTS	Drg. Name:-
Job No:-	Sheet No:- 01	ETI/DRG/20-21/HEATER CONTROLLER



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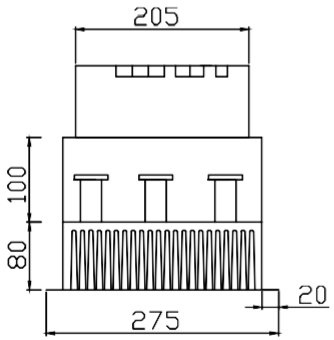

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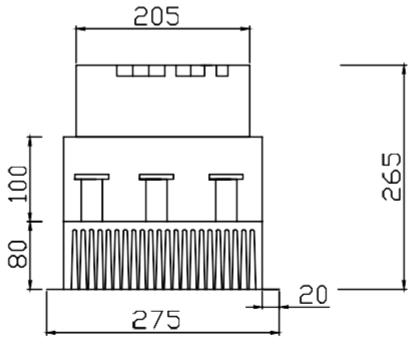

FRONT VIEW

DIMENSION : 300(L) X 275 (W) X 265 (H)

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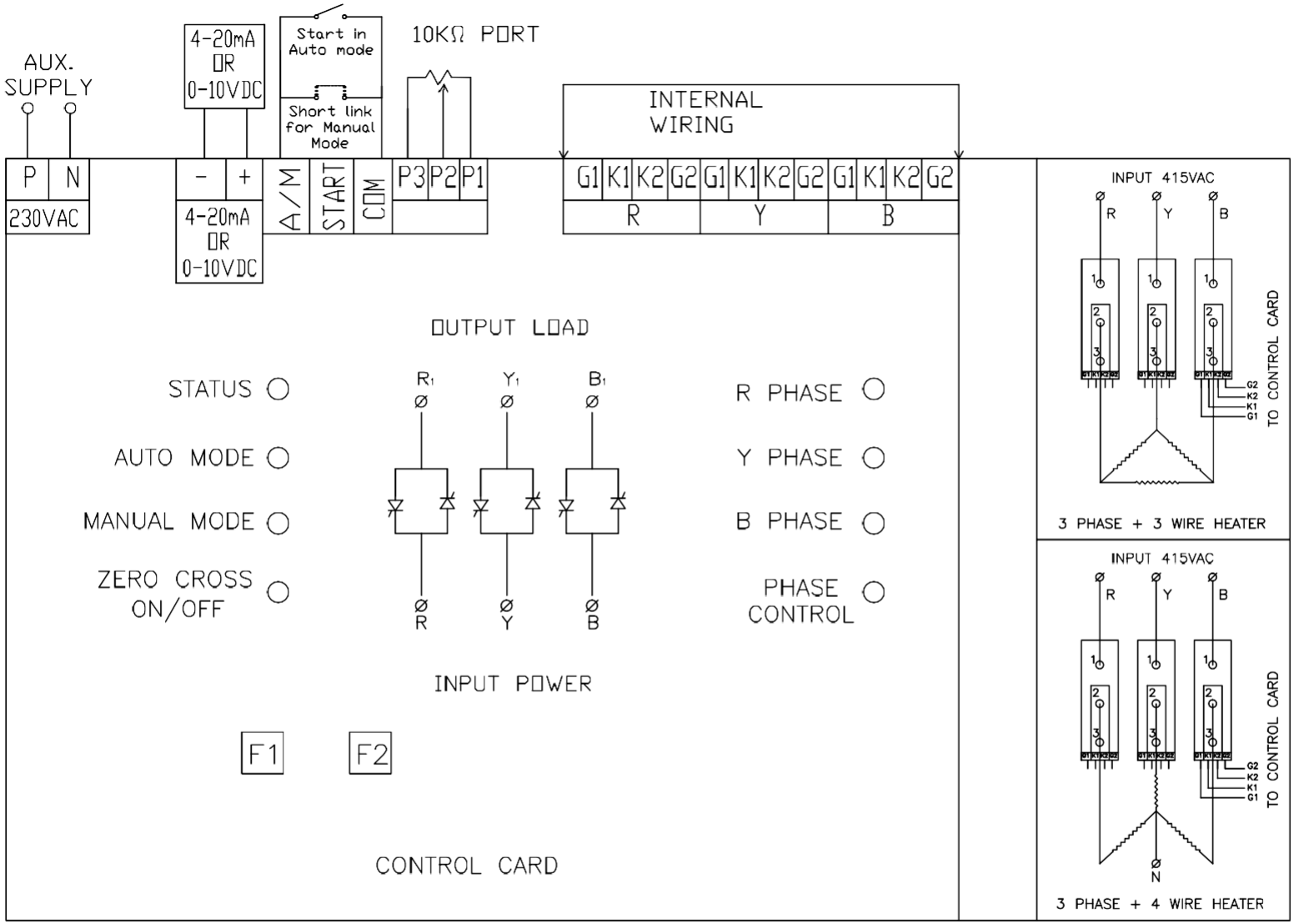

CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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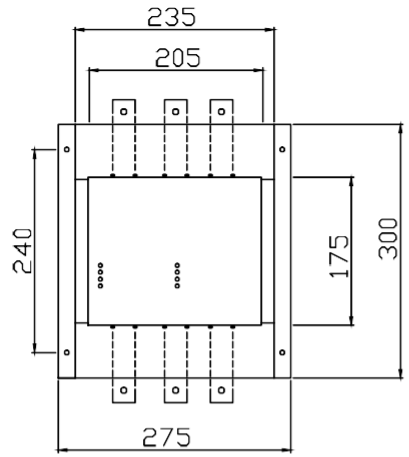
Title:- UPTO 80 KW HEATER CONTROLLER	Drawn:-Jahnavi	Sheet Name:- WIRING DRAWING
	Date:-	
Client:-	Scale:- NTS	Drg. Name:-
Job No:-	Sheet No:- 01	ETI/DRG/20-21/HEATER CONTROLLER



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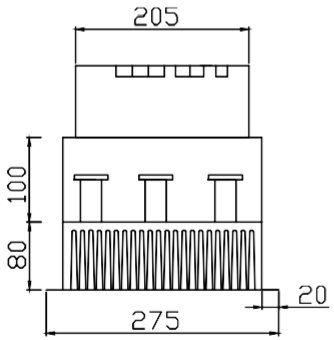

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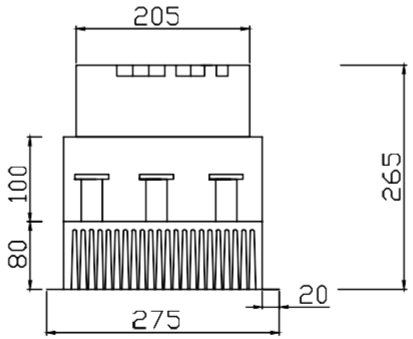

FRONT VIEW

DIMENSION : 300(L) X 275 (W) X 265 (H)

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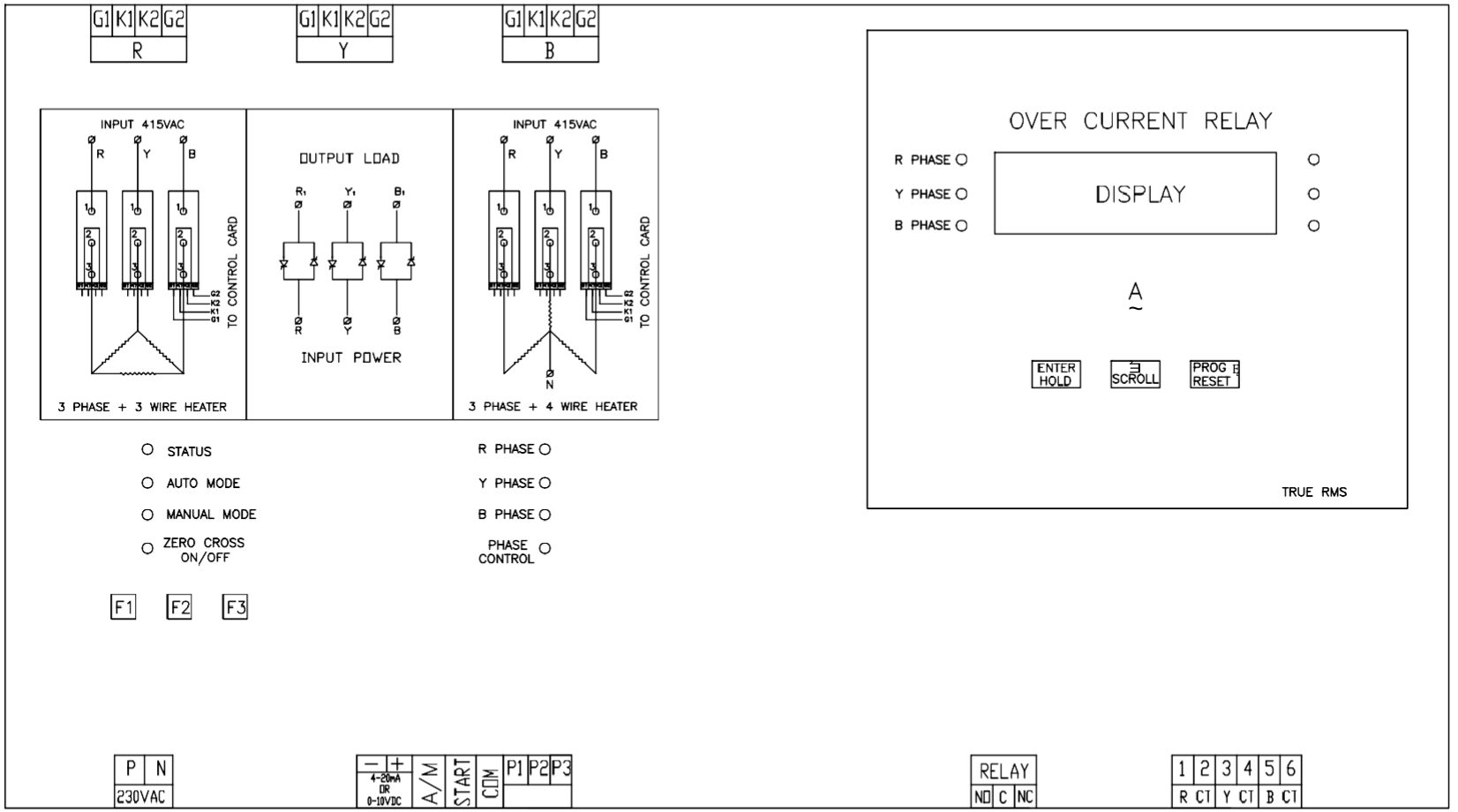
Title:–DIMENSION FOR UPTO 80 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– DIMENSION HEATER CONTROLLER
	Date.:–	
Client:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/ Heater Controller
Job No:–	Sheet No:– 01	



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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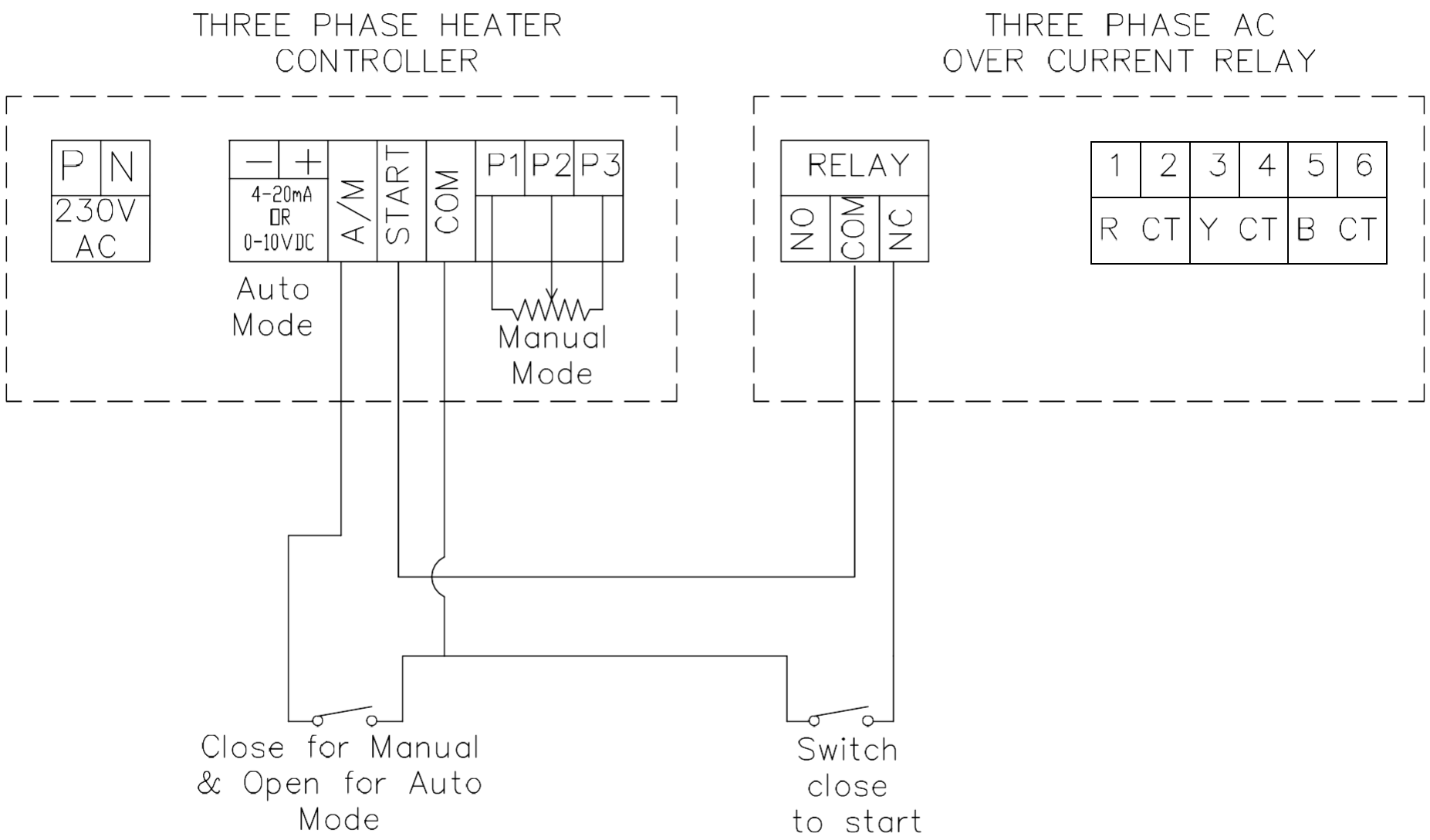
Title:– UPTO 100 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– WIRING DRAWING
Client:–	Date:–	
Job No:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/Heater controller
	Sheet No:– 01	



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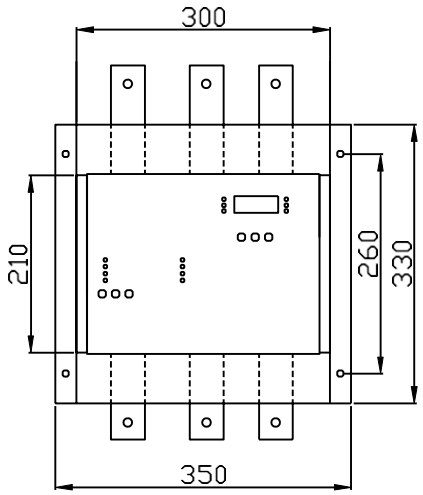
Job No:–	Sheet No:– 01	ETI/DRG/20-21/HEATER CONTROLLER



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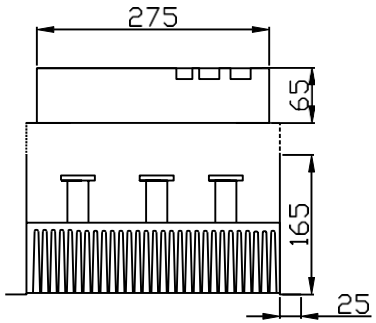

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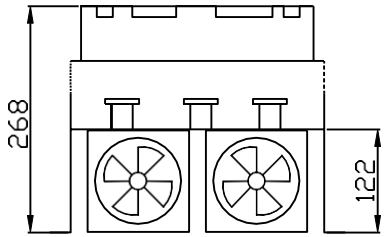

FRONT VIEW

DIMENSION : 330(L) X 350 (W) X 268 (H)

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Title:–DIMENSION FOR UPTO TO 100 KW HEATER CONTROLLER	Drawn:–JAHNAVI	Sheet Name:– **DIMENSION HEATER CONTROLLER**	
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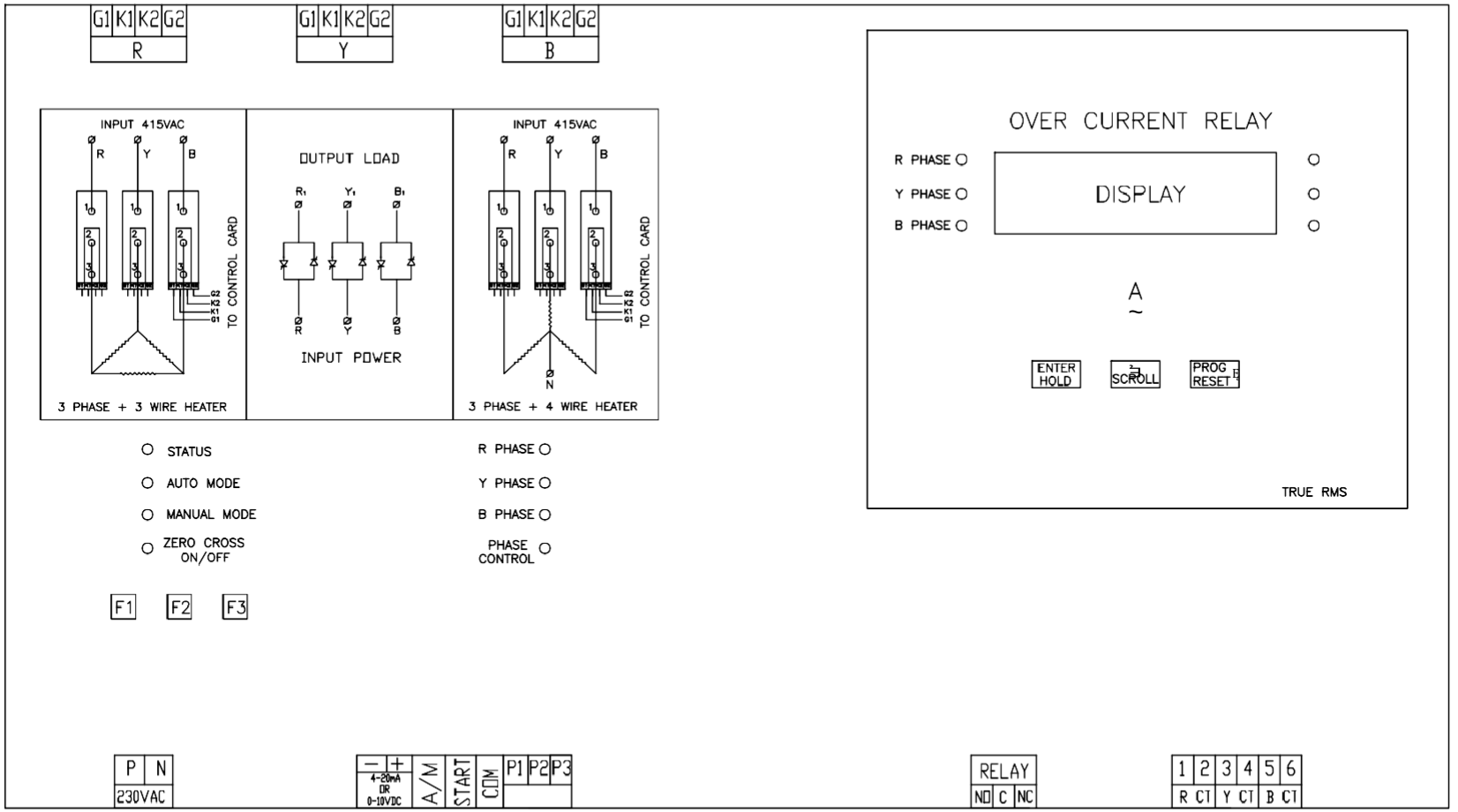
Client:–	Scale:– NTS	Drg. Name:– **ETI/DRG/20–21/ Heater Controller**	
Job No:–	Sheet No:– 01		



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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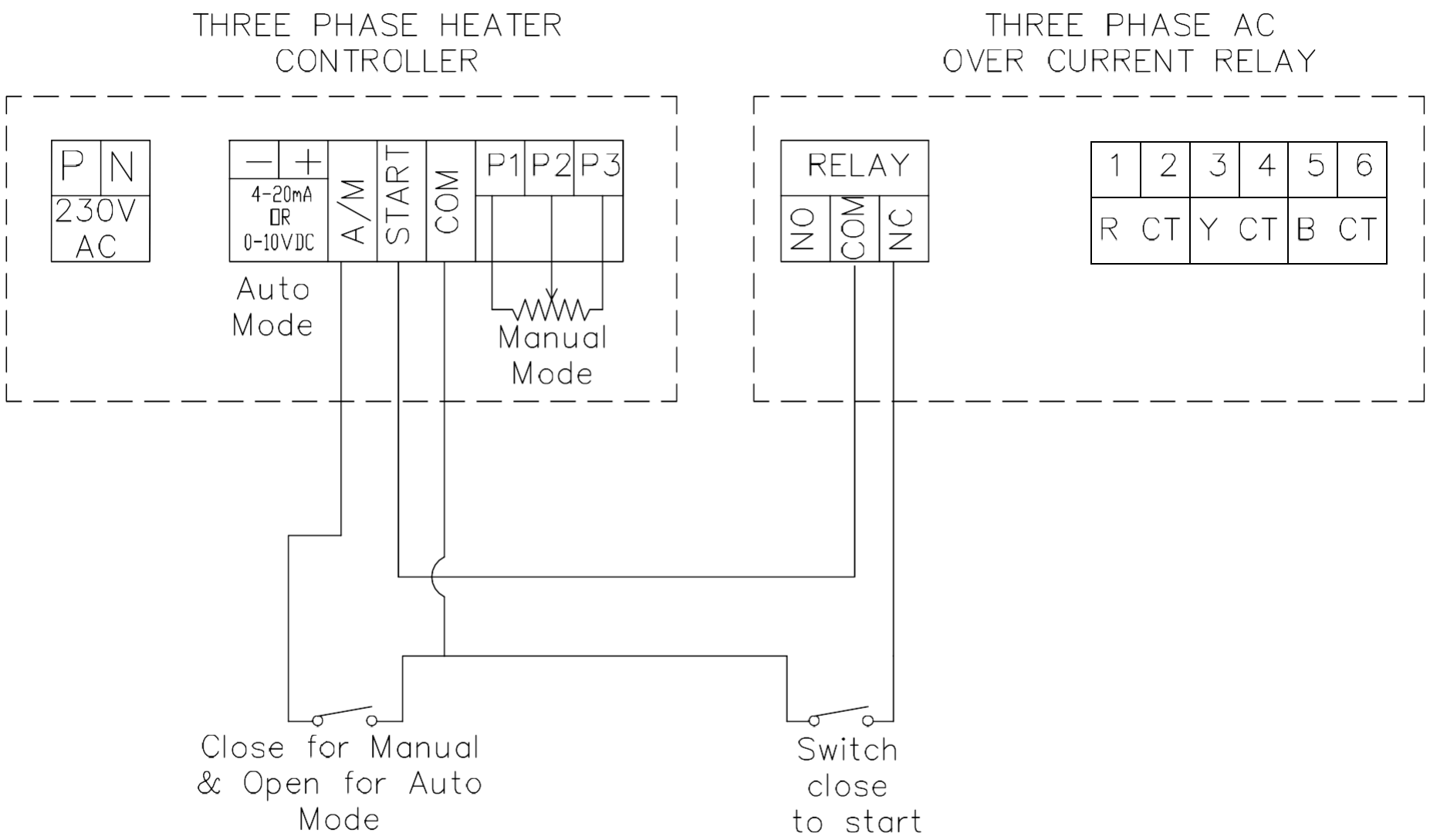
Title:– UPTO 150 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– WIRING DRAWING
	Date:–	
Client:–	Scale:– NTS	Drg. Name:–
Job No:–	Sheet No:– 01	ETI/DRG/20-21/Heater controller



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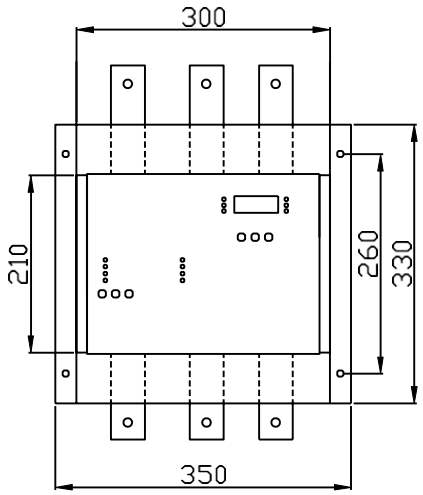
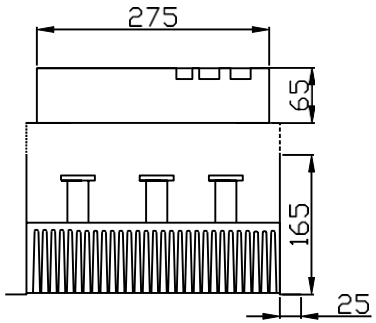
	Date:–	
Client:–	Scale:– NTS	Drg. Name:–
Job No:–	Sheet No:– 01	ETI/DRG/20-21/HEATER CONTROLLER



TOP VIEW



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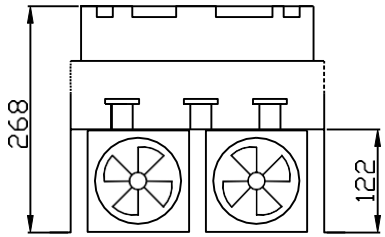

FRONT VIEW

DIMENSION : 330(L) X 350 (W) X 268 (H)

Excel

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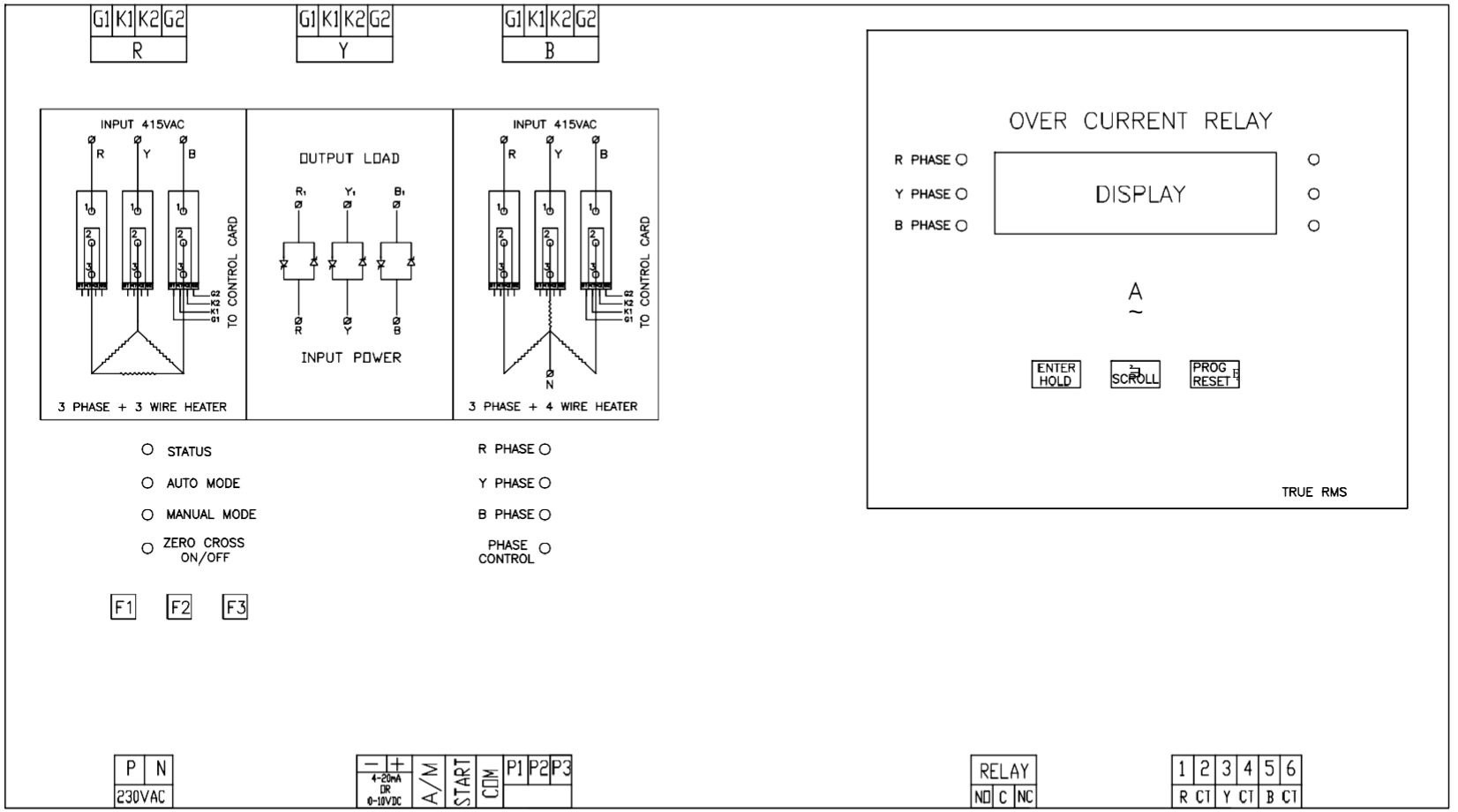
Title:–DIMENSION FOR UPTO TO 150 KW HEATER CONTROLLER	Drawn:–JAHNAVI	Sheet Name:– **DIMENSION HEATER CONTROLLER**	
	Date.:–		
Client:–	Scale:– NTS	Drg. Name:– **ETI/DRG/20–21/ Heater Controller**	
Job No:–	Sheet No:– 01		



CONTROL I/P SIGNAL - 4-20mA / 0-10VDC/ 0-5VDC

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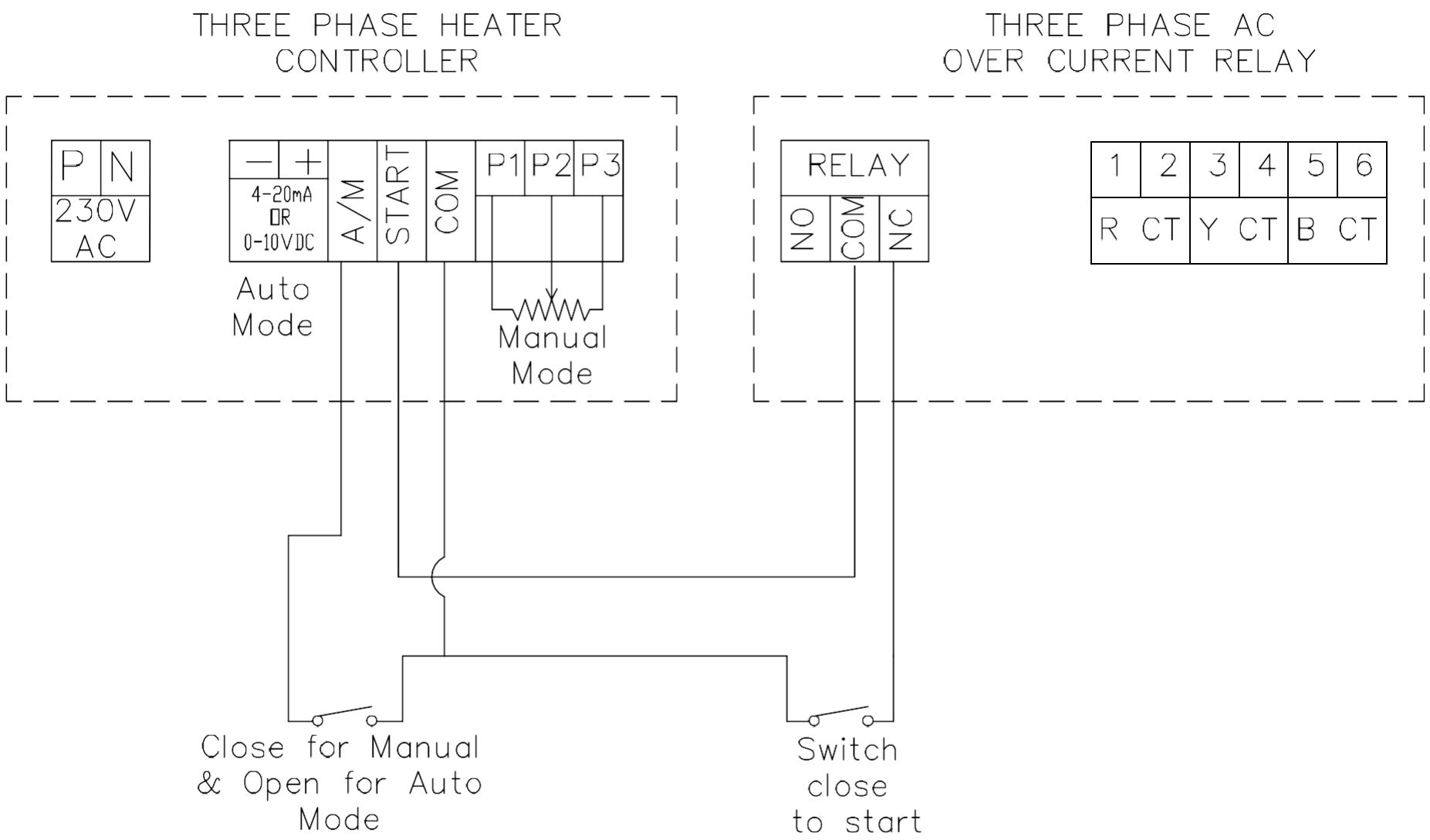
Title:– UPTO 250 KW HEATER CONTROLLER	Drawn:–Namrata	Sheet Name:– WIRING DRAWING
	Date:–	
Client:–	Scale:– NTS	Drg. Name:–
Job No:–	Sheet No:– 01	ETI/DRG/20-21/Heater controller



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Exceltech India Pvt Ltd.
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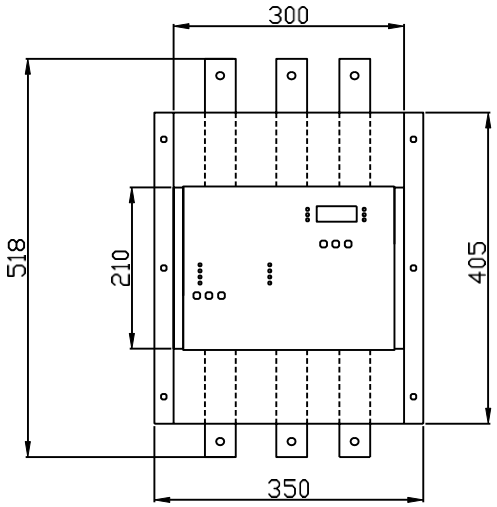
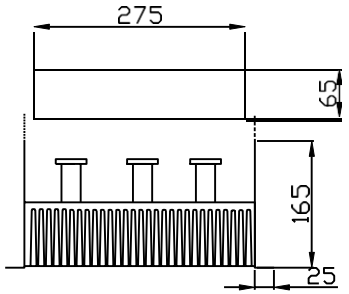
Makarpura, Vadodara – 390010.
Mo:– 9376222606
email:– exell2003@yahoo.com

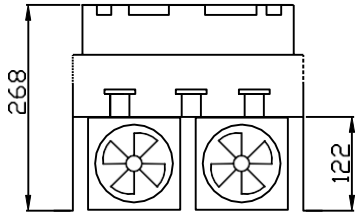
Title:– UPTO 250 KW HEATER CONTROLLER	Drawn:–Jahnavi	Sheet Name:– WIRING DRAWING
	Date:–	
Client:–	Scale:– NTS	Drg. Name:–
Job No:–	Sheet No:– 01	ETI/DRG/20-21/HEATER CONTROLLER



TOP VIEW



BACK VIEW



FRONT VIEW

DIMENSION : 405(L) X 350 (W) X 268 (H)

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Title:– DIMENSION FOR UPTO 250 KW HEATER CONTROLLER	Drawn:–JAHNAVI	Sheet Name:– DIMENSION HEATER CONTROLLER
	Appr.:–	
Client:–	Scale:– NTS	Drg. Name:– ETI/DRG/20-21/ Heater controller
Job No:–	Sheet No:– 01	