

DATE	REV	DESCRIPTION
9MAR23	0	CONSTRUCTION RELEASE
24JUL23	1	AS BUILT

PROTOTYPE HEATER CONTROL SYSTEM

NEMA 12 240VAC / 40 AMP / 1PH / 60HZ

PROJECT CONSISTS OF:

1 SINGLE DOOR POWER AND CONTROL PANEL

16"W X 20"H X 6"D (~60LBS.)

ALL WIRING DENOTED AS FIELD WIRING TO BE SUPPLIED BY OTHERS AND
INSTALLED BY A QUALIFIED ELECTRICAL CONTRACTOR PER LOCAL AND
NATIONAL CODES.

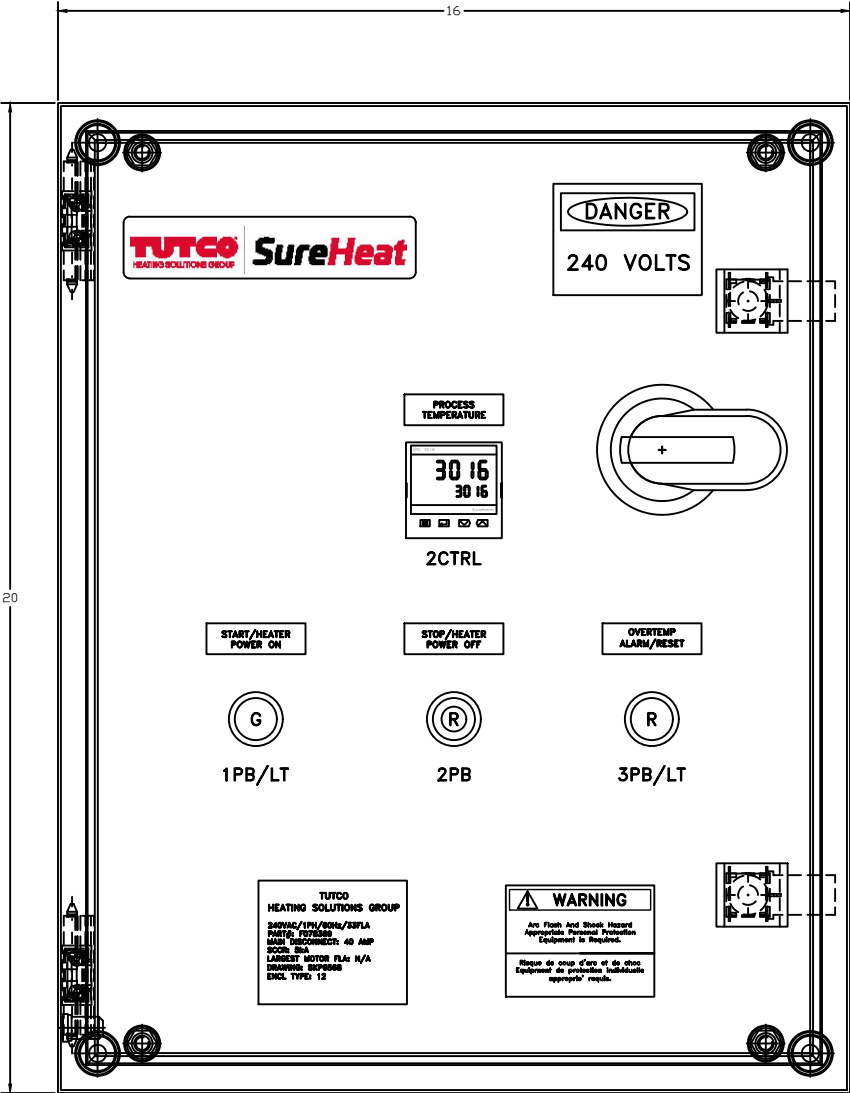
ENCLOSURE TO SHIP WHOLE, NO MECHANICAL RE-ASSEMBLY WILL BE
REQUIRED

TUTCO HEATING SOLUTIONS GROUP, INC.

ARDEN, NC (828) 301-8260

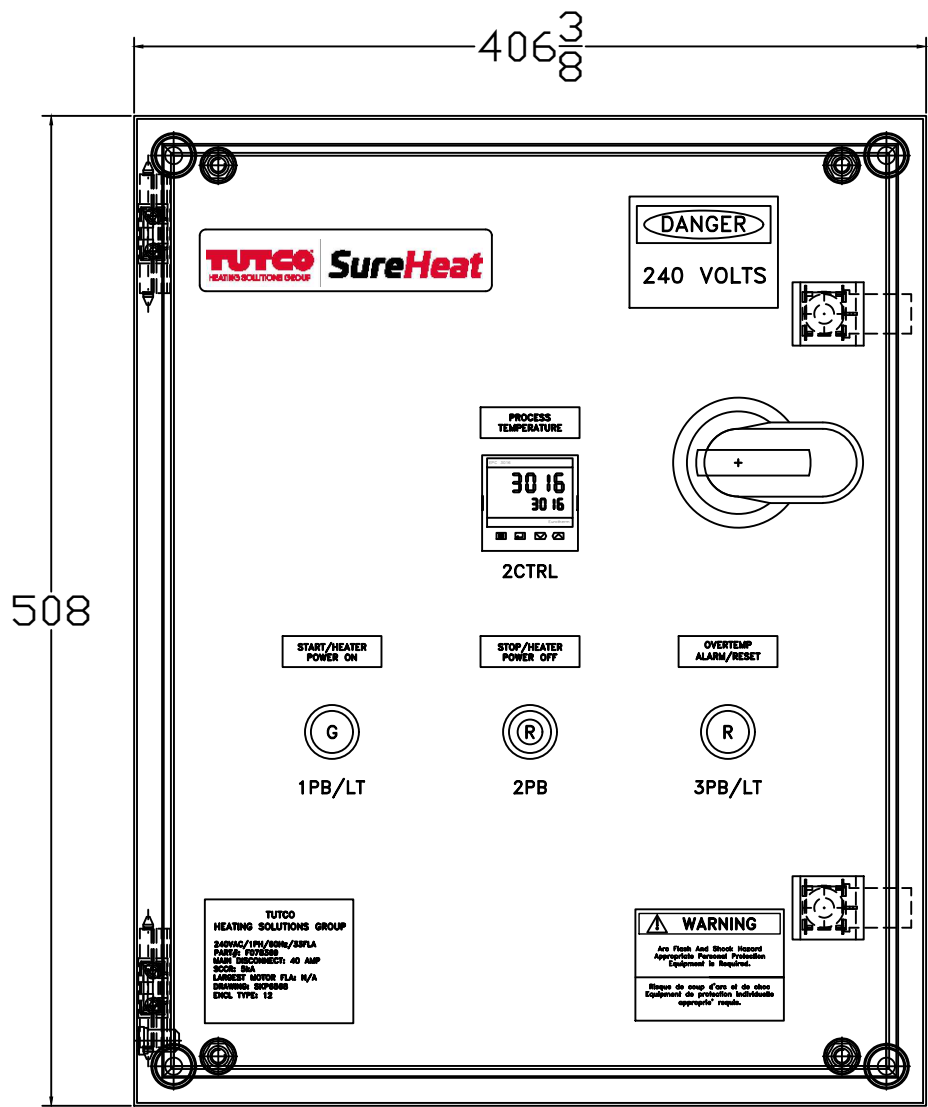
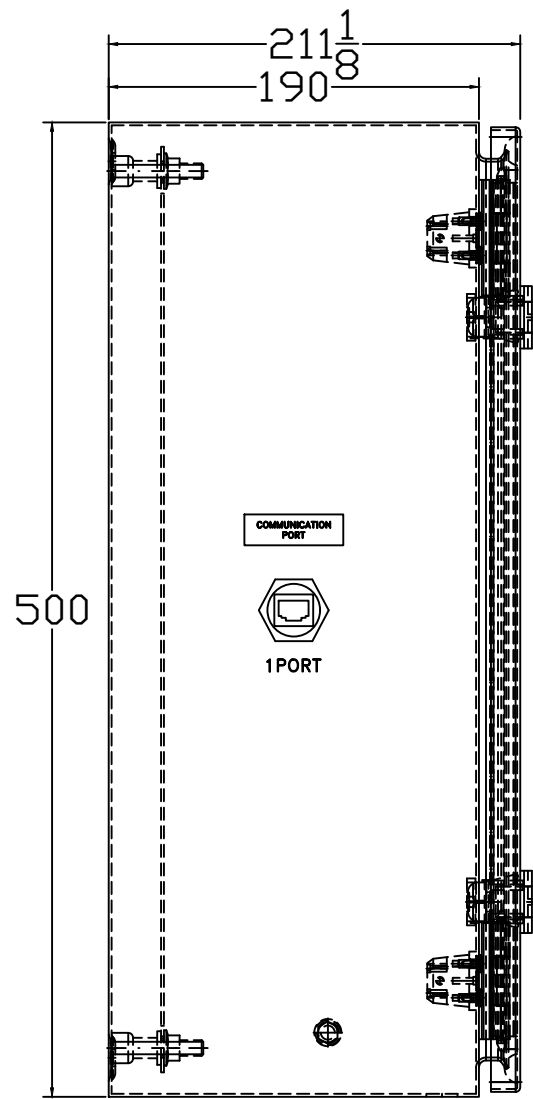
EXETER, NH (800) 258-8290

WWW.TUTCO.COM



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	CHK	TITLE F078420	
	APPD	HEATER CONTROL PANEL	
	APPD	COVER SHEET	
	REVD	SIZE B	DRAWING NO. SKP6693
		SCALE	SHEET 1 OF 8

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	CHK	TITLE F078420 HEATER CONTROL PANEL ENCLOSURE LAYOUT	
	APPD	SIZE B	
	APPD	DRAWING NO. SKP6693	
	REVD	REV 1	
SCALE		SHEET 2 OF 7	

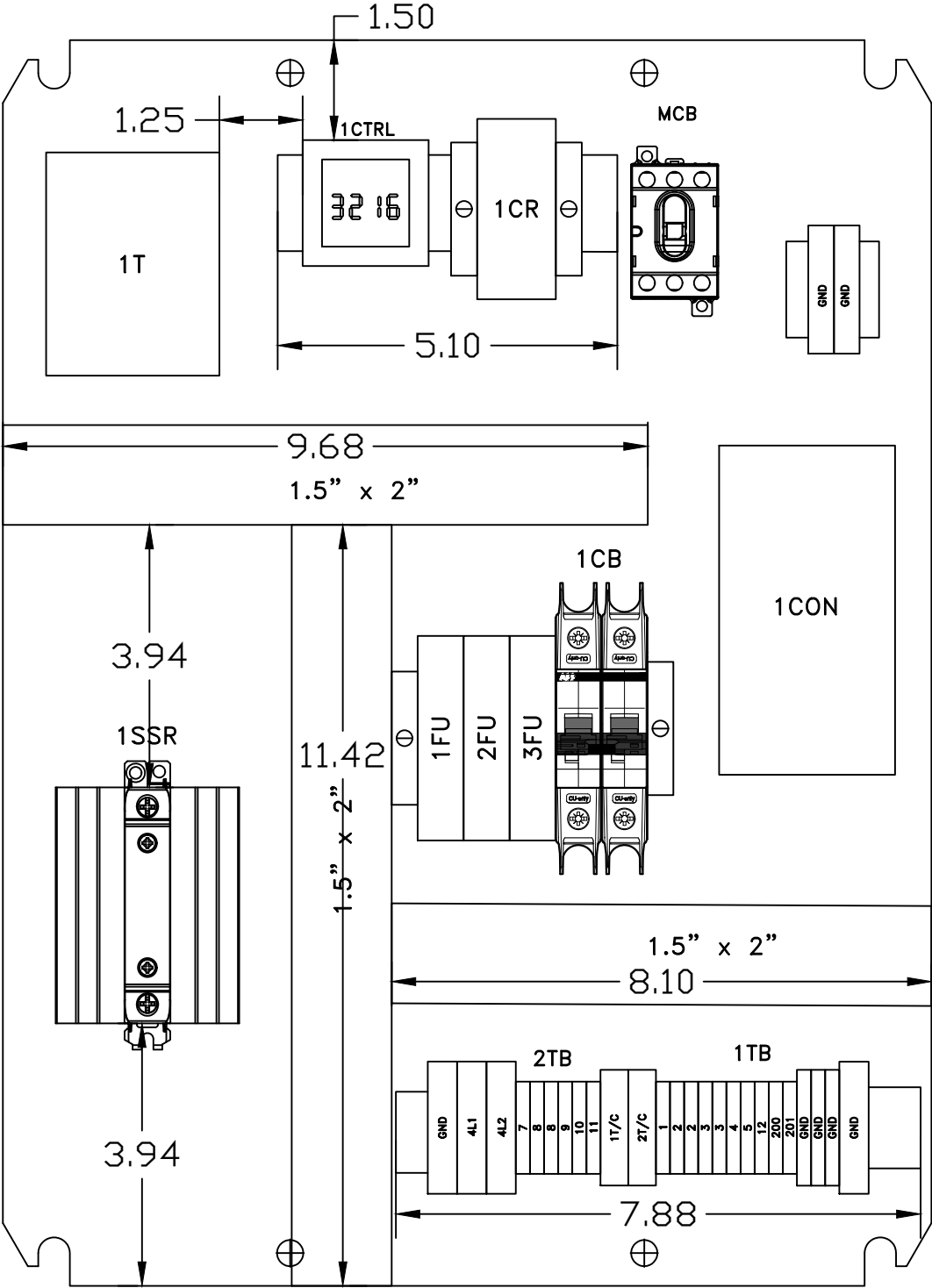
DATE	REV	DESCRIPTION
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1TB

2TB

- 1
- 2
- 2
-
- 3
- 3
- 4
- 5
- 12
- 200
- 201
- GND
- GND
- GND
- GND

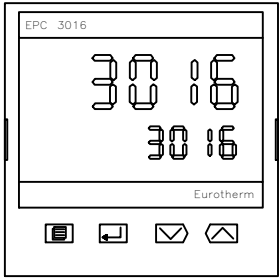
- GND
- 4L1
- 4L2
- 7
- 8
- 8
- 9
- 10
- 11
- 1T/C+
- 1T/C-
- 2T/C+
- 2T/C-



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	CHK	TITLE F078420	
	APPD	HEATER CONTROL PANEL	
	APPD	SUB PANEL LAYOUT	
	REVD	SIZE B	DRAWING NO. SKP6693
SCALE		SHEET 4 OF 8	

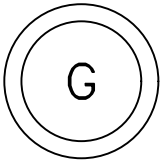
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PROCESS
TEMPERATURE



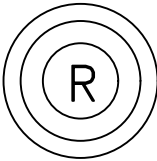
2CTRL

START/HEATER
POWER ON



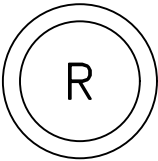
1PB/LT

STOP/HEATER
POWER OFF



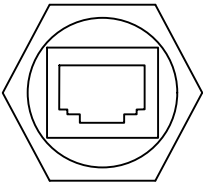
2PB

OVERTEMP
ALARM/RESET



3PB/LT

COMMUNICATION
PORT



1PORT

TUTCO
HEATING SOLUTIONS GROUP

240VAC/1PH/60Hz/32FLA
PART#: F078420
MAIN DISCONNECT: 40 AMP
SCCR: 5kA
LARGEST MOTOR FLA: N/A
DRAWING: SKP6693
ENCL TYPE: 12



WARNING

Arc Flash And Shock Hazard
Appropriate Personal Protection
Equipment is Required.

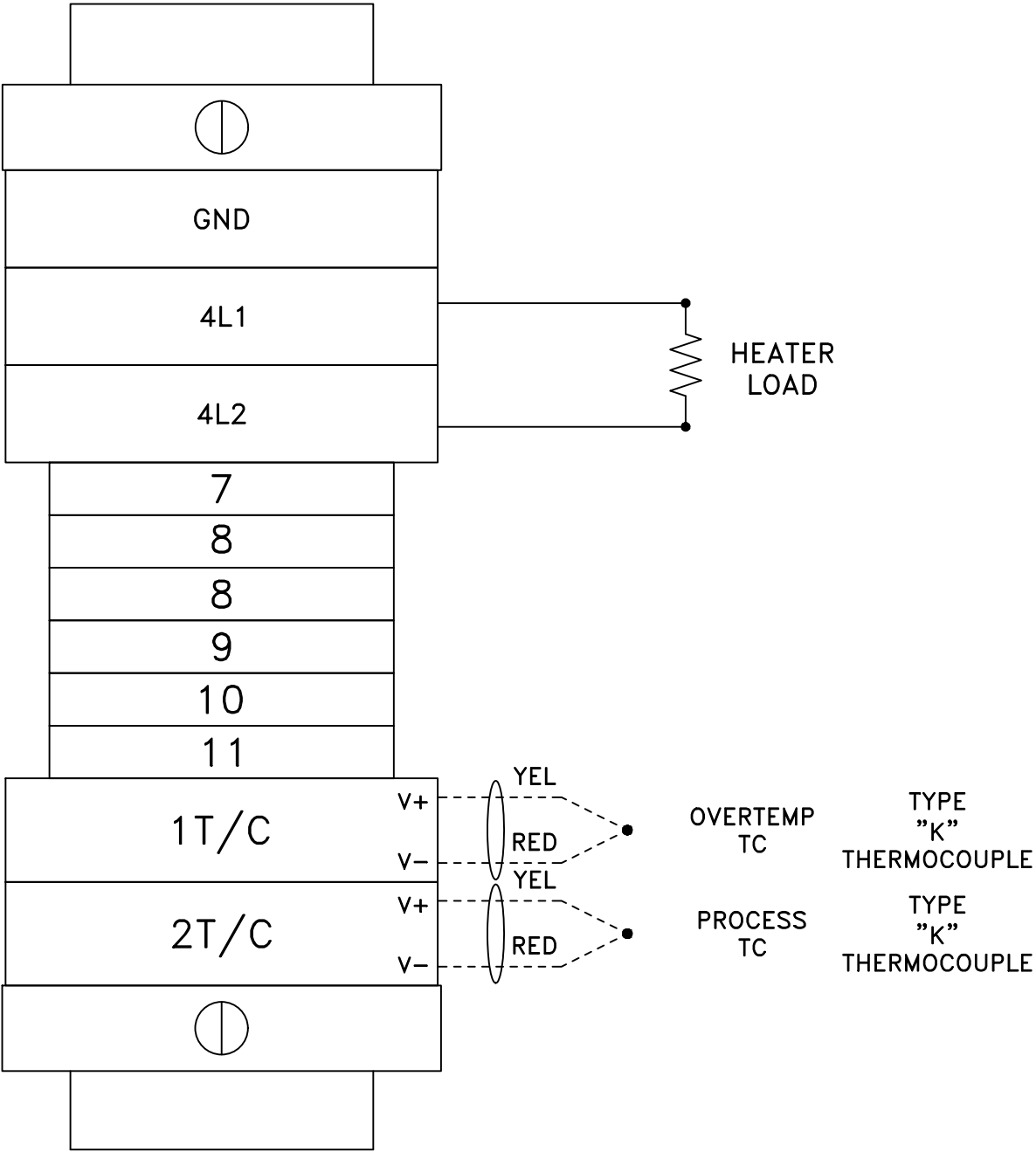
Risque de coup d'arc et de choc
Equipment de protection individuelle
approprié requis.

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	CHK		TITLE F078420	
	APPD		HEATER CONTROL PANEL	
	APPD		DOOR DETAIL	
	REVD		SIZE B	REV 1
		SCALE		SHEET 5 OF 8

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2TB

CUSTOMER CONNECTIONS



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	CHK		
	APPD	TITLE F078420 HEATER CONTROL PANEL LABEL DETAIL	
	APPD		
	REV D	SIZE B	REV 1
		DRAWING NO. SKP6693	
		SCALE	SHEET 6 OF 8

DATE	REV	DESCRIPTION
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TUTCO
HEATING SOLUTIONS GROUP
240VAC/1PH/60Hz/32FLA
PART#: F078420
MAIN DISCONNECT: 40 AMP
SCCR: 5kA
LARGEST MOTOR FLA: N/A
DRAWING: SKP6693
ENCL TYPE: 12

Heater Control Panel
240VAC/40A/1PH/60Hz
33A MAX Heater Load
SKP# 6693 10 OF 10
Date: 7/19/2023
UL FILE: E215926

TORQUE GUIDE	
MCB	62in.lbs(7Nm)
MAIN GND	17.7in.lbs(2.0Nm)
4L1,4L2	17.7in.lbs(2.0Nm)
GND	17.7in.lbs(2.0Nm)

DANGER

240 VOLTS

WARNING

Arc Flash And Shock Hazard
Appropriate Personal Protection
Equipment is Required.

Risque de coup d'arc et de choc
Equipment de protection individuelle
appropriée requis.

COMMUNICATION
PORT

START/HEATER
POWER ON

STOP/HEATER
POWER OFF

OVERTEMP
ALARM/RESET

FUSE DESIGNATION/FUSE RATING	
1FU,2FU	KLDR.600
3FU	CCMR1.25

Note: Replace fuse with same rating and type.

CUSTOMER TERMINAL CONNECTIONS	
HIGH LIMIT T/C	1T/C+,1T/C-
PROCESS T/C	2T/C+,2T/C-
HEATER	GND, 4L1, 4L2

Note: All labels to be white with black writing
with exception of the torque guide, which
is to be yellow with black writing.

	DR MJC 03NOV2021	TUTCO HEATING SOLUTIONS GROUP ARDEN, NC & EXETER, NH		
	CHK	TITLE F078420 HEATER CONTROL PANEL LABEL DETAIL		
	APPD			
	APPD			
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		SCALE SHEET 7 OF 8		

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Reference	Description	Part #	Qty
ENC	RITTAL ENCLOSURE 20X16X8 CARBON STL,1045250	WM201608NC	1
1CON	ABB Contactor 3 Pole 60A 100-250V coil	AF40-30-11-13	1
1CTRL	3216iFM/VH/RRXX/R/X/4XL/ ENG	3216IFM/RRXXR4XL	1
1CTRL	Tempco Temp Controller DIN bracket, 1/16	TEC99920	1
1SSR	GEFRAN SSR 40A 600VAC 6-32 VDC Input F083574	GRS-H-60-60-D-0-0-0-0	1
2CTRL	Eurotherm TEMP Controller	EPC3016/CP/VH/L2/D1/CEST	1
MCB	ABB 3P 40A disc Sw	OT40F3	1
1CB	2P 40A UL489 BRANCH CB	SU202M-K40	1
MCB	ABB Pistol Handle Blk NEMA 1 3R 4 4X 12	OHB80L6	1
MCB	ABB Shaft	EXP6X290	1
1TB, 2TB	Wieland end clamp	Z5.522.8553.0	6
1FU	LITTELFUSE ASC 600 V CC PWR-SAF 30A IND 2 POLE	LPSC0002ZXID	1
1FU	Littelfuse .6a 600v Fus	KLDR.600	2
1T	Hammond Power Pri. 240/480V, Sec. 120V	SP50MQMJ	1
1T	Hammond Power Transformer Finger Guard	SPFG1	2
3FU	LITTELFUSE ASC 600 V CC PWR-SAF 30A IND 1 POLE	LPSC0001ZXID	1
3FU	LITTELFUSE FUSE 600V T/D CC 1.25A RoHS	CCMR1.25	1
2TB	ASI TYPE UKL-W2.5/TC-K 1A/55V T/C K TERM BLK	ASI431016	2
1TB, 2TB	Wieland TB WKN10/U	57.510.0155.0	2
1TB, 2TB	Wieland TB 10mm Sgl Tier End Plate	07.311.6655.0	1
1TB, 2TB	Wieland WKN10SL/U	57.510.9055.0	2
1TB, 2TB	Wieland Mdl Gnd Term	57.504.9055.0	4
1TB, 2TB	Wieland Gray End Plate	07.311.0155.0	3
1TB, 2TB	Wieland VBWK4-12/12 Pole Jumper	Z7.281.2227.0	1
1TB, 2TB	Wieland TB WK4/U 22-10 AWG UL 6mm Wide	57.504.0055.0	16
1PB/LT	ABB MOM FLUSH GRN BP ILL	MP1-11G	1
3PB/LT	ABB MOM FLUSH RED BP ILL	MP1-11R/B	1
1PB/LT, 3PB/LT, 2PB	ABB 3 CONTACT BLOCK HLDR	MCBH-00	3
1PB/LT, 3PB/LT, 2PB	ABB NO Blk	MCB-10	3
1PB/LT, 3PB/LT	ABB LED 110 VAC WHITE	MLBL-04W	2
1CR	Idec 110-120vDPDT Rly	RH2B-UAC110-120V	1
1CR	Idec Hold Down Clip Top Notch	SFA-101	1
1CR	Idec Finger Safe Sckt	SH2B-05C	1
2PB	ABB Pushbutton 22 mm Flush Red	MP1-10R	1
2PB	ABB NC Con Blk	MCB-01	1

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	CHK	TITLE F078420 HEATER CONTROL PANEL BILL OF MATERIALS		
	APPD			
	APPD			
	REVD			
		SIZE B	DRAWING NO. SKP6693	REV 1
		SCALE SHEET 8 OF 8		