LCI Furnaces DIVISION OF LOCHABER CORNWALL INC	DATA SHEET	DOC NBR: 11-004	802-101501	R0
	IR FURNACE SYSTEM POWER & CURRENT	MODEL: AG-1215	APVL SLB	4/1/14
		SERIAL NBR: 1815129601	CONF: JMC	3/27/14
Customer: Aeroflex (UTMC FO 32442)		PRINT: 11/09/22	SHT 1 of 1	

INPUT TABLE	Entry OK?	VALID		
Enter Line Voltage: (208,220,380,400,415,480)	480	Vac	TRUE	
Limit Lamps to Max Rating? (Y/N)	Y		TRUE	
Line Frequency (50/60)	60	Hz	TRUE	
Number of Phases:	3	Φ	TRUE	
Lamp Length (6, 9, 15, 24, 36)	15	inches	TRUE	
Typical Operating %	39	%	TRUE	

SUMMARY OF RESULTS		
Max Power:	116.3	kW
Max Current:	139.9	A
Typical Power:	45.8	kW
Typical Current:	55.1	A

HARDWARE			
Lamps: 112		SCRs: 20	
EMs: 10		TCs: 8	
EM IDC5: 10			
Nbr strings	40		
Nbr Lamps in 10" zone:	6	AOV-25: 10	
		AITM: 4	

CONFIGURATION	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 10	Zone 11	Zone 12	Totals
Length (6.6,7.5,10,14.3,15,20,30) in.	10	20	20	10	10	20	20	10					120 in.
Length Entry OK?	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE					
(F)urn., Furn. (1) SCR-Zn, (D)ryer	F	F	F	F	F	F	F	F					8
Zone Type OK?	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE					
No. Lamps in Series/String (1-5)	2	2	4	3	3	4	4	2					
Lamps/String OK?	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE					
No. Lamps in Top/Bottom	6/6	8/8	8/8	6/6	6/6	8/8	8/8	6/6					Plenum:
Power	F	F	H	H	H	H	H	F					480
SCR PHASE Zone Entry OK?	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID					Lamp Balance (kW)
Top Lamp Phase (1/2/3):	1	2	3	1	2	3	1	3					
Bottom Lamp Phase (1/2/3):	1	2	3	1	2	3	1	3					
SCR POWER													Phase 1: 37.8
Rated Lamp Voltage	225	225	225	225	225	225	225	225					Phase 2: 34.6
Max. Lamp Wired Voltage	225	225	120	160	160	120	120	225					Phase 3: 36.2
50% Power SCR Cal Span Setting	**318**	**318**	**339**	**339**	**339**	**339**	**339**	**318**					<-- Vrms
Max. Lamp Wired Power (W)	1500	1500	570	887	887	570	570	1500					
No. Strings per SCR	3	4	2	2	2	2	2	3					
Max. Current per String (A)	6.7	6.7	4.7	5.5	5.5	4.7	4.7	6.7					
No. Lamps in Zone	12	16	16	12	12	16	16	12					112
No. SCRs in Zone	2	2	2	2	2	2	2	2					16
No. Strings in Furnace Zones	6	8	4	4	4	4	4	6					40
												Nbr. lamp strings per element monitor:	4
Top Lamp Power (kW)	9.0	12.0	4.6	5.3	5.3	4.6	4.6	9.0					
Bottom Lamp Power (kW)	9.0	12.0	4.6	5.3	5.3	4.6	4.6	9.0					
Total Power/Zone (kW)	18.0	24.0	9.1	10.6	10.6	9.1	9.1	18.0					108.6
Current Required Top SCR (A)	20.0	26.7	9.5	11.1	11.1	9.5	9.5	20.0					
Current Required Bottom SCR (A)	20.0	26.7	9.5	11.1	11.1	9.5	9.5	20.0					
Color Temp (K) (nominal: 2500K)	**2500**	**2500**	**1981**	**2204**	**2204**	**1981**	**1981**	**2500**					
Peak Wavelength (µm)	**1.16**	**1.16**	**1.46**	**1.31**	**1.31**	**1.46**	**1.46**	**1.16**					
Estimated Lamp Life (hrs)	5000 hr	5000 hr	Long	Long	Long	Long	Long	5000 hr					
Lumen Output vs. Rated (%)	100	100	13	34	34	13	13	100					

Furnace Total	Number of Item?	Voltage (Vac)	Current (Amps)	Power (kW) Max	Power (kW) Typical	Phase Assigned	EH in EM? (y/n)	Other Items
Lamps	112	480	as above	108.6	42.4	as above	N	10" Cabinet or CACT Fans, 117 Vac, 0.30/029 A for 50/60 Hz
PC, Monitor	1	117	1.3	0.2	0.2	1	TRUE	4" Box (Muffin) Fans, product cooling, 117 Vac, 0.16 A
Belt, Opto22, EM	1	117	2.1	0.2	0.2	1		Cross-flow Fans, product cooling, 230 Vac, 1.27 A max
UC (Pump & Gen)		117	10.0					Lower Cabinet Blowers (Impellers), 230 Vac, 0.72 A max
UC (Tank Heater)		117	8.4					H2 Igniters, 120 Vac, 5 A 24 Vdc PS, 120 Vac, 2 A
UCD (Blower)		117	2.0					No more than 8 SCRs/phase per TRx xfmr 24 Vac secondary
UCD (Heater)		480	16.0					TR1: 6 TR2: 6 TR3: 8
Edg Htr 1 **Length**	60	480	7.2	3.5	1.3	3	OK	EH1 Ω: 135 Current: 3.6 A Cal Span: **339 Vac**
Edg Htr 2 **Length**	60	480	7.2	3.5	1.3	2	OK	EH2 Ω: 135 Current: 3.6 A Cal Span: **339 Vac**
Edg Htr 3 **Length**								EH3 Ω: Current: Cal Span:
Cabinet Vent Fan 10"	4	117	0.29	0.1	0.1	2	OK	Cabinet/CACT/Control Box Fans: 1.74 A
CACT Fans 10"	2	117	0.29	0.1	0.1	2	OK	
CACT Fans 4"		117	0.16					
Control Box Fans 4"		117	0.16					
Prod Cooling fans	6	117	0.16	0.1	0.1	2	OK	
			Furnace Totals:	**116.3**	**45.8**			

	PHASE BALANCING			TOTAL
PHASE	1	2	3	ALL
LAMP PWR, kW	37.8	34.6	36.2	108.6
EH/OTHER	0.4	1.7	1.3	3.4
TOTAL	38.2	36.3	37.6	112.1