

Foundation MCR

Parts Manual



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Precision Cooling
For Business-Critical Continuity

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1. Product Description

The Liebert MCR is a self-contained rack enclosure system that includes a load-sized, computer-grade air conditioner located at the bottom of the enclosure, with the option of a top mount design, supplying cool air to sensitive equipment on all levels. A back-up cooling system ensures environmental security. Power can be supplied and protected through an optional Liebert GXT on-line UPS or Liebert PSI line-interactive UPS.

Internal ECM

The integrated ECM enclosure design promotes the best air circulation to prevent hot spots within the enclosure. Inside and outside air are isolated for maximum cleanliness.

Back-Up Cooling

During high internal temperature or power outage conditions, the BCM (Back-Up Cooling Module) — powered by the enclosure's UPS — is automatically activated, drawing in filtered outside air to ensure continuous air flow to protected equipment.

Air Distribution

Exclusive ECM conditioned air distribution duct ensures uniform air flow for multiple enclosures.

External ECM

The top mounted ECM allows maximum use of internal rack space or can be used with the internal/rack mount ECM to double cooling capacity.

Flexibility:

- Designed as a plug-and-play system ready to install
- Wheel-mounted cabinet for easy relocation
- Adjustable racks and rack rails support a wide variety of equipment
- Optional top mounted air conditioning allows maximum use of internal rack space or can be used to double cooling capacity with the internal air conditioning unit

Higher Availability:

- Cools IT equipment to eliminate downtime from overheating
- Lockable door protects against unauthorized access
- Specially designed door gasket and sealed cable entrance ensure stable cooling environment.
- Back-up cooling assures continued cooling in the event of a power loss
- Improved cable access and management improves airflow to reduce overheating of protected IT equipment

Lowest Total Cost of Ownership:

- Competitively priced as an integrated system, compared to purchasing separate components
- Simplified plug-and-play installation reduces overall implementation time, reducing costs
- Optional energy saver control saves money by allowing back-up cooling to operate as primary enclosure cooler
- Integrated air conditioning reduces potential downtime costs by assuring proper system operation

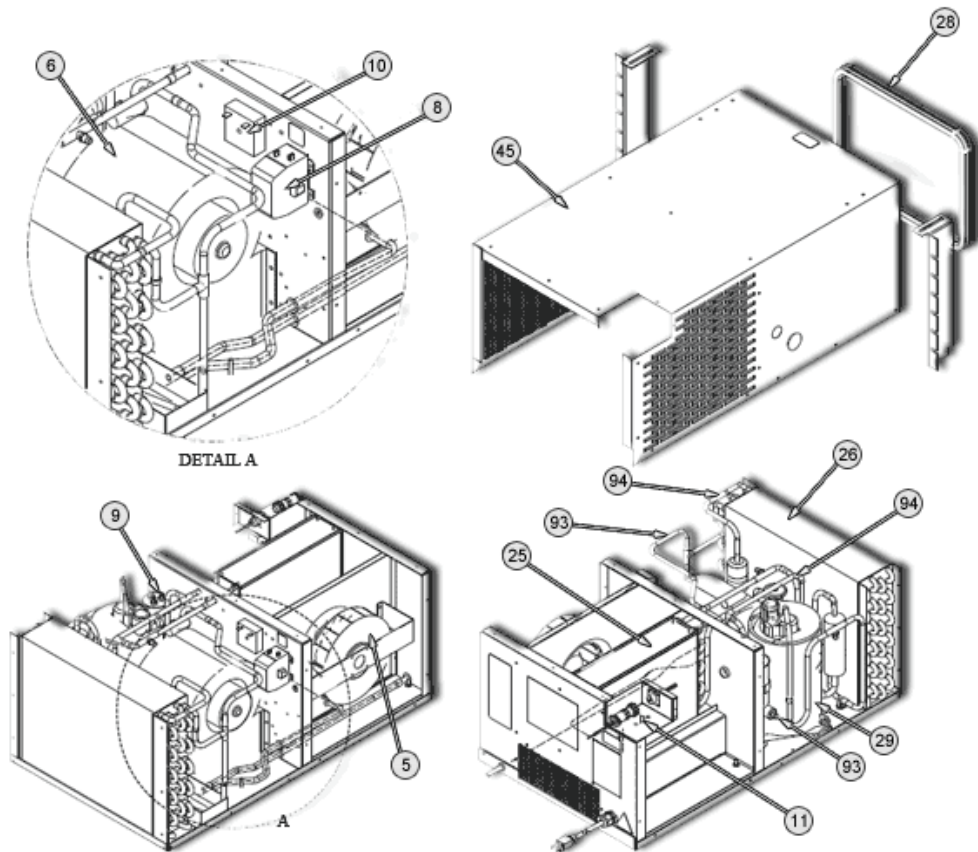
Ideally Suited For:

- Network closets
- Server closets or small rooms

2. Model Number Definition

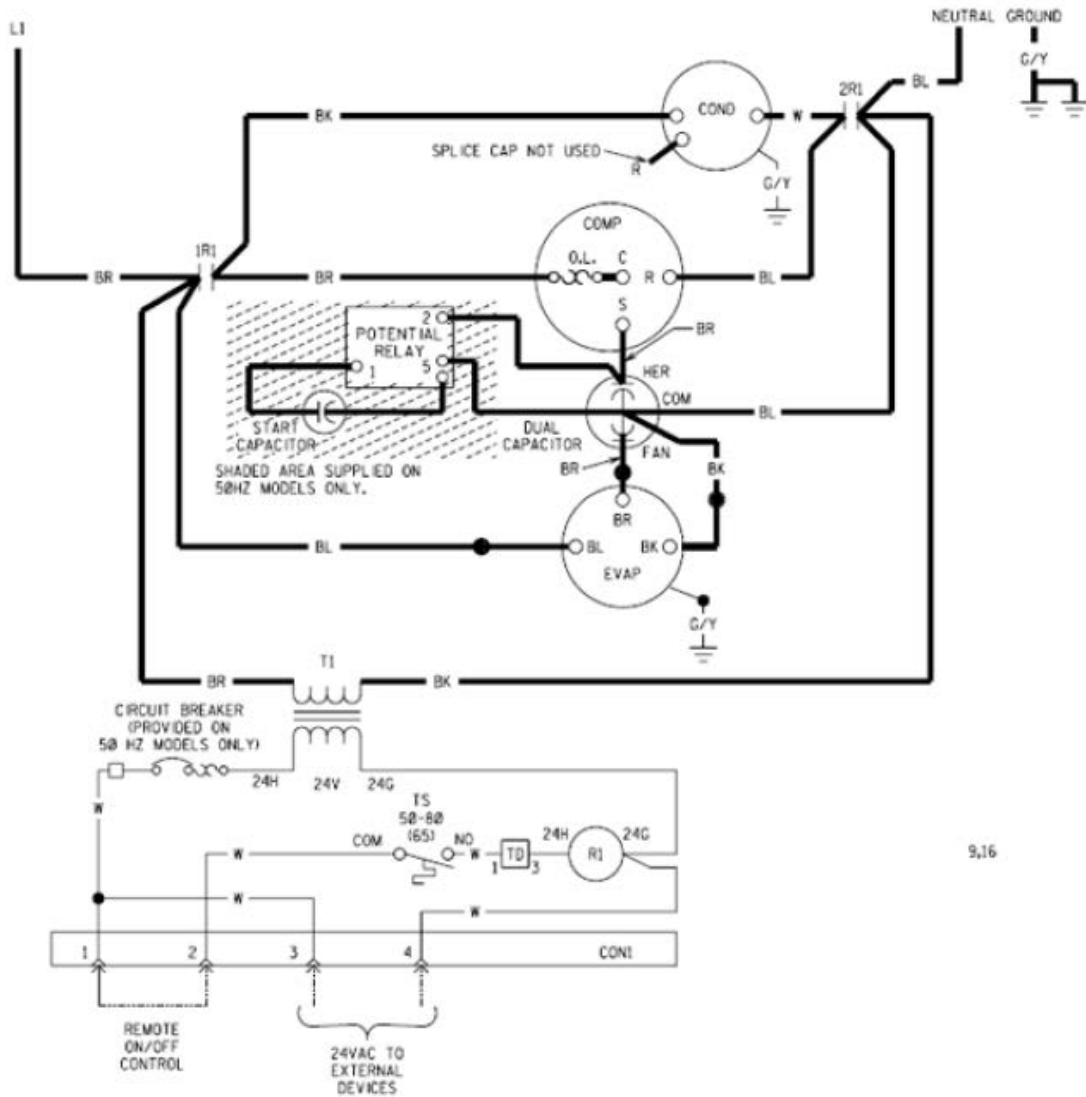
HD	780	C	C	C	0	K
Enclosure Width/Type	Enclosure Height/Depth	Primary Cooling	Back-up Cooling	UPS Type	Monitoring Option	Input Power
H = 19" Rack	44" Height	0 = None	0 = None	0 = None	0 = None	K = 120VAC 60HZ
R = 23" Rack	78" Height	1 = FAN1000L	A = BCM1000L	A = GXT2-1000	1 = SNI-SE	S = 230VAC 50HZ
	84" Height	2 = FAN1000H	B = N/A	B = GXT2-1500	2 = SNI-SE + LCM	
D = Sealed		3 = FAN2000L	C = BCM2000L	C = GXT2-2000	4 = LCM Only	
K = Non-Sealed	0 = 30" Depth	4 = FAN2000H		D = GXT2-3000		
	8 = 38" Depth	5 = XDA5B (1)		E = GXT2-700		
		6 = XDA5B (2)		F = PS1000RT2		
		A = ECM1000LR		G = PS1440RT2		
		B = ECM1000LT		H = PS2200RT2		
		C = ECM2000LR		I = PS3000RT2		
		D = ECM2000LT		K = GXT2-2700*		
				L = GXT2-6000*		
		H = High Ambient		* = 208VAC	SE = Ethernet	
		L = Low Noise				
		R = Rack-Mount				
		T = Top-Mount				

3. Environmental Control Module



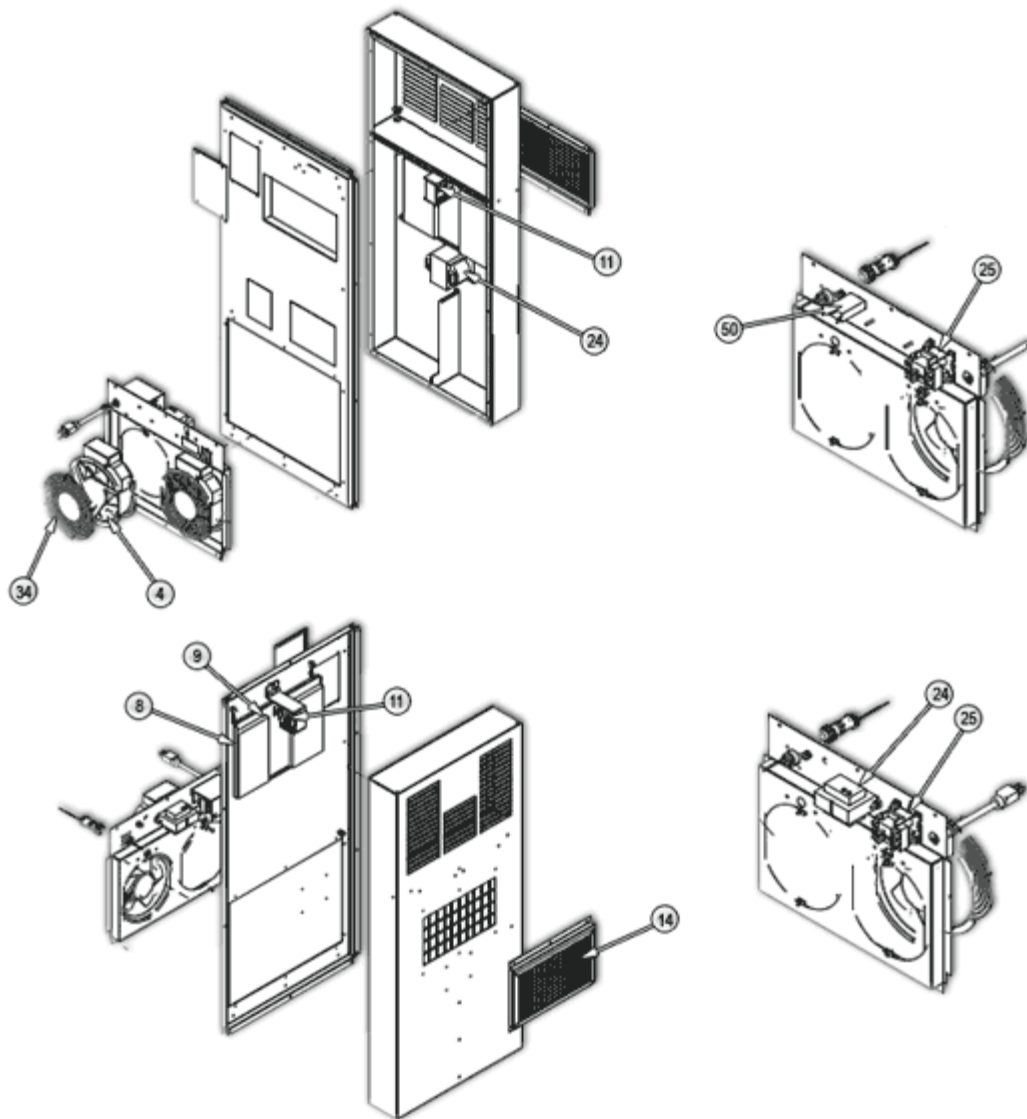
Item	Part Number	Description	Quantity
5	163631P1	IMPELLER EVAPORATOR BLOWER (115-1-60)	1
6	163640P1	BLOWER CONDENSER 115V 60HZ	1
8	E-011B	CONTACTOR 2PL 24VCOIL 25	1
9	163776P3	CAP DUAL 30 μ F /10 μ F 370VAC (ECM 2000)	1
	163776P5	CAP DUAL 35 μ F /10 μ F 370VAC (ECM 1000)	1
10	138490P2	RELAY TIME DELAY 120SEC OFF DELAY	1
11	168634P1	THERMOSTAT SPST 65-95F DIFF 5F	1
25	163996G1	COIL EVAP ECM 1000	1
	163747G1	COIL EVAP ECM 2000	1
26	163998G1	COIL COND ECM 1000	1
	163726G1	COIL COND ECM 2000	1
28	141927P1	GASKET RUBBER TUBULAR#209	1
29	163693G1	COMPRESSOR ROTARY (ECM 1000)	1
	163697G1	COMPRESSOR ROTARY (ECM 2000)	1
45	168781G1	COVER RACK MOUNT ECM INSUL	1
93	163993G1	HOT GAS BYPASS VALVE/SERP LINE ECM1000/2000	1
94	163994G11	EVAP/FLTR LINE/VALVE TEV 3/8X3/8 ODF	1

4. Electrical Schematic (ECM)



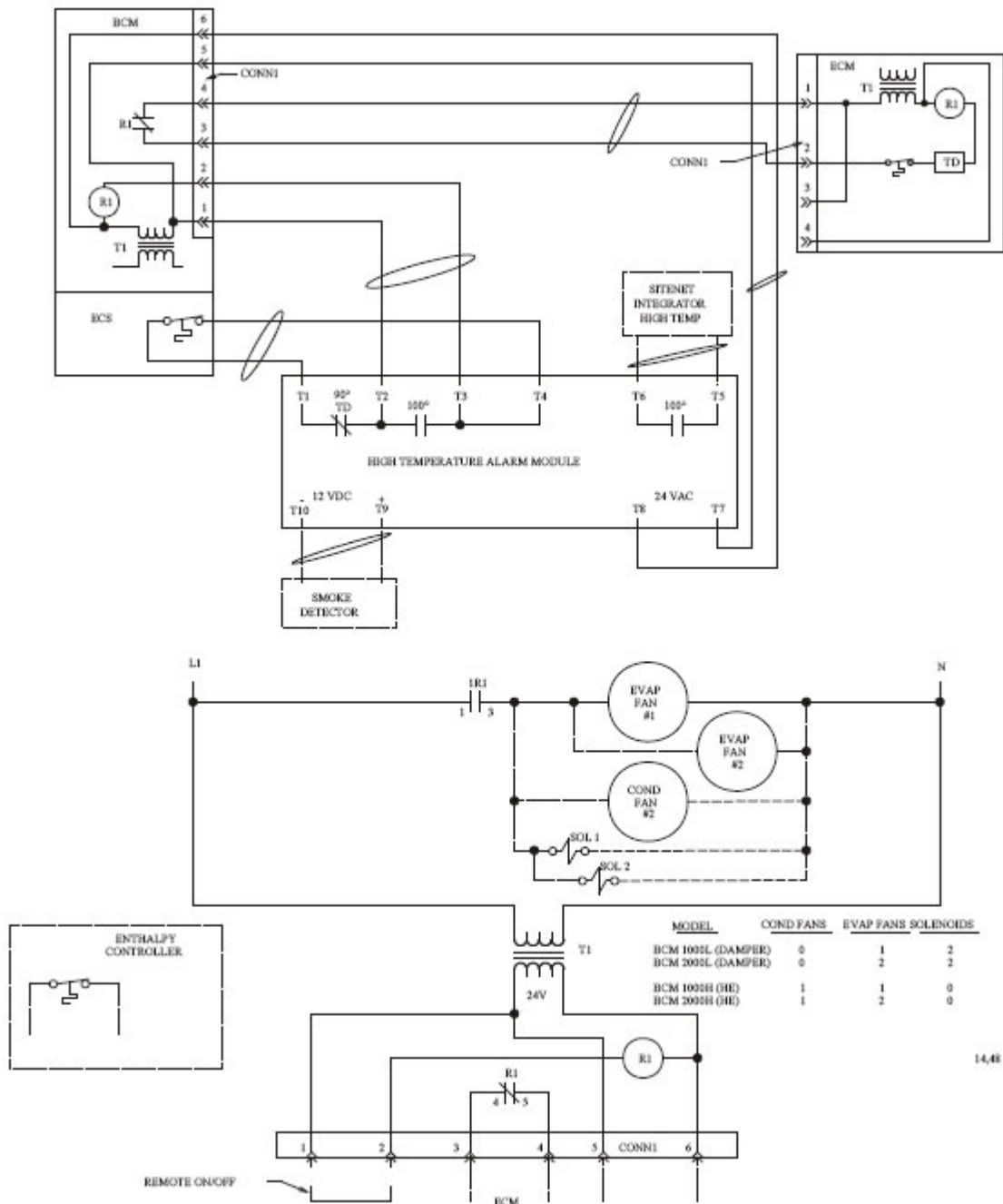
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5. Backup Cooling Module



Item	Part Number	Description	Quantity
4	5C10877P1	FAN 240CFM 115V	1
8	176170P1	GASKET MAGNETIC	1
9	163983P1	DOOR DAMPER BCM	1
11	163990P1	SOLENOID (115VAC)	1
14	140953P6	FILTER WIRE MESH 5.9X9.9X	1
24	159463P3	XFMR 40VA 120-24 50/60HZ	1
25	E-0130	RELAY 2P2T 24VAC COIL	1
34	516703P1	FINGER GUARD 6"	1
50	E-276C	Circuit Breaker 3.2A	1

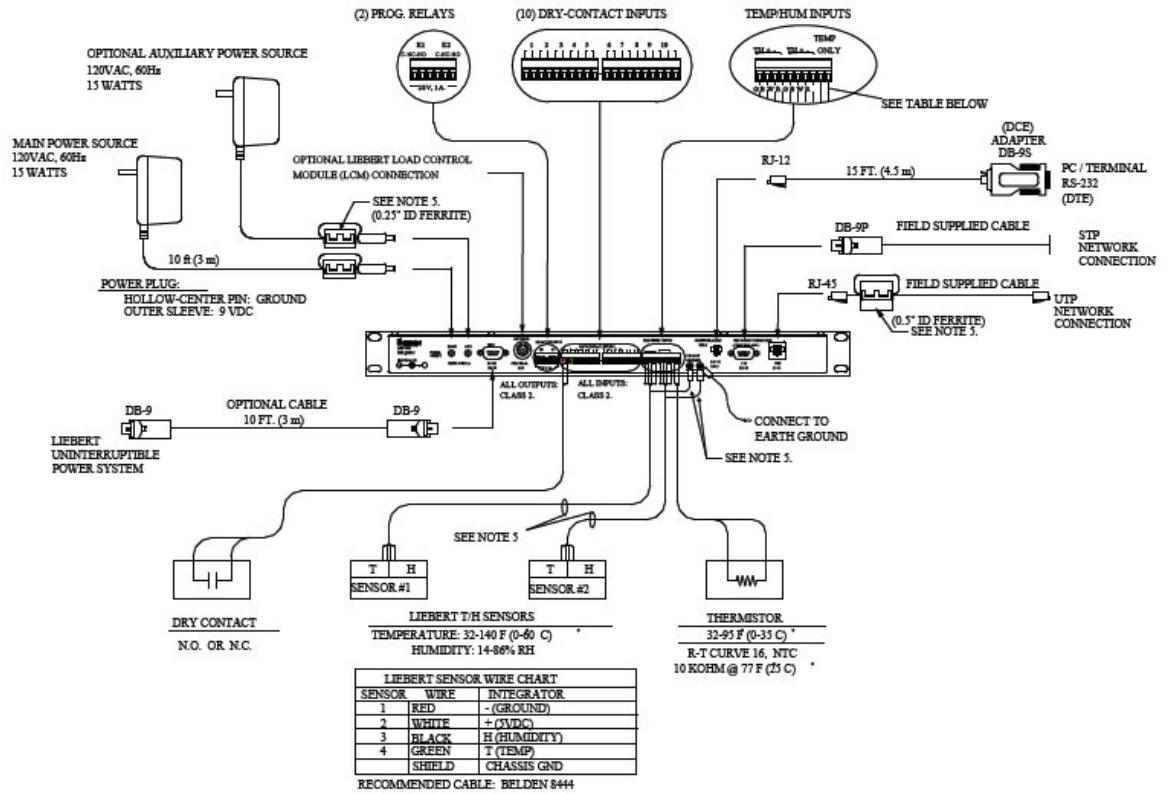
6. Electrical Schematics Economizer



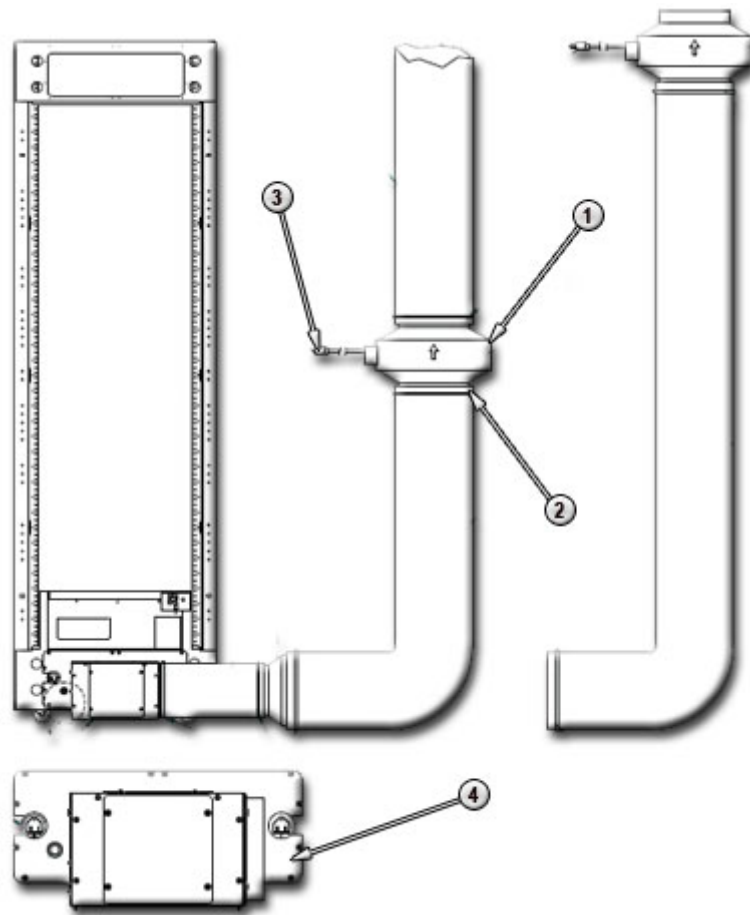
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7. SiteNet Integrator Wiring Program

Liebert Sitenet Integrator Wiring Diagram - Rear View

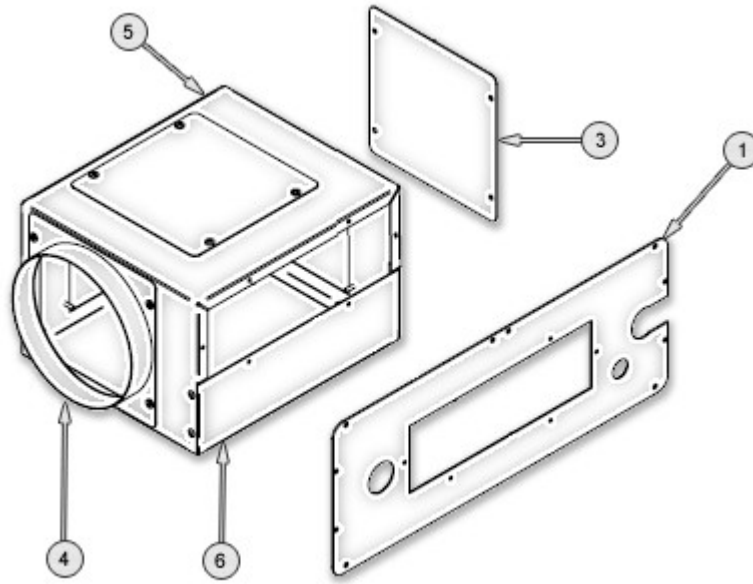


8. Heat Rejection Duct



Item	Part Number	Description	Quantity
1	141425P1	FAN 120V 60HZ HEAT REJ DUCT	1
2	141429P1	CLAMP STRAP CLOSET VENT	1
3	141624P1	CORD ASY PWR W/PLUG 16/3	1
4	-	HEAT REJECTION DUCT ASSEMBLY	1













8.1. Heat Rejection Duct Assembly



Item	Part Number	Description	Quantity
1	168702P1	PLATE DUCT HEAT REJECT	1
3	168704P1	PLATE COVER DUCT HEAT REJECT	3
4	168705G1	DUCT COLLAR 6" ASSY FOUNDATION	1
5	168707P1	ENCL TOP HEAT REJECT DUCT	1
6	168708P1	ENCL BOTTOM HEAT REJECT DUCT	1

9. Parts Gallery







Environmental Control Module

			
138490 P 2	141927 P 1	163631 P 1	163640 P 1
			
163693 G 1	163776 P 3	163993 G 1	163994 G 11
			
163998 G 1	168634 P 1	168781 G 1	E-011B

Backup Cooling Module

			
5C10877P 1	140953 P 6	159463 P 3	163983 P 1
			
163990 P 1	176170 P 1	E-0130	E-276C

Heat Rejection Duct

			
<p>141425 P 1</p>	<p>168702 P 1</p>	<p>168704 P 1</p>	<p>168705 G 1</p>
			
<p>168707 P 1</p>	<p>168708 P 1</p>		

10. Revision Page

Revision Date	Modification	Details
12/2011	Layout conversion	
	Heat Rejection	Added Heat Rejection Assembly