CAR3000 Series

3000 Watt 24 / 48V Front End

Features:

- Hot-swap N+1 Redundancy
- Single phase or Three phase Input
- Power Factor Correction
- Over Voltage, Over Current and Thermal Protection
- Visual LED Indicators
- 19” 3U High / 3-Bay Power Shelf
- International Safety Approvals

RoHS COMPLIANT

FEATURES	BENEFITS
No minimum load requirements	Eliminates the need for preload on system backplace
Modular design	Easy insertion and extraction during hot swap
Single phase or three phase inputs	One stop shopping, breadth of line
Constant current characteristics	Ideal for Network Bus Applications

KEY MARKET SEGMENTS & APPLICATIONS	
Distributed Power	Blade Servers
Mid-end servers	Network Equipment
Network Storage	Test Equipment
Storage Area Networks	

SPECIFICATIONS	CAR3010K1	CAR3010L1	CAR3030K1	CAR3030L1
Input Voltage Range	Single Phase Input / 180-264 VAC / 47-63 Hz		Three Phase Input / 180-264 VAC / 47-63 Hz	
Input Current	19Amax		11A per phase max.	
Inrush Current	50Amax		50A max (per phase)	
Input Fuse	Single Fuse 25A 3AG		Single Fuse per Phase 15A 3AG	
Power Factor	0.99		0.95	
Efficiency	90% Typical @ 230 VAC		90% Typical @ 230 VAC	
Output Voltage & Current	+24 VDC @ 125A	+48 VDC @ 62.5A	+24 VDC @ 125A	+48 VDC @ 62.5A
Adjust Range (Trim Pot)	21.6~26.4	43.2~52.8	21.6~26.4	43.2~52.8
Over Voltage Protection	29.5~30.5 VDC	58.5~59.5 VDC	29.5~30.5 VDC	58.5~59.5 VDC
OVP Protection Type	Recycle AC Input to Reset			
Standby Voltage	5VSB @ 500mA			
Line Regulation	0.5% using remote sense (5% on Stand-by Voltage)			
Load Regulation	0.5% using remote sense (5% on Stand-by Voltage)			
Output Ripple & Noise	<1% (pk-pk)			
Transient Response	3% max deviation 0.50ms recovery time for a 25% load change			
Start-up Time	2 seconds			
Hold-up Time	>20ms at low line			
Overshoot / Undershoot	1% at turn ON/OFF			
Temperature Coefficient	0.02% per °C			
Remote ON/OFF	Logic 1 (TTL High) or open enables unit (ON), Logic 0 (TTL Low) or short shuts unit down (OFF)			
Power Fail Signal	Signal goes low (TTL Low) 2ms before loss output regulation			
Over Current Protection	110-140% V1, 5VSB < 2.5A. Automatic recovery.			
Over Temperature Protection	Automatic shutdown with auto recovery. Thermal shutdown point @ 95°C			
MTBF	300,000 hrs per Bellcore standard			
Output Power Good	TTL High = Power Good, TTL Low = Output out of limits			
LED Indicators	DC Good: Green LED; Temperature OK: Green LED and AC Good: Amber LED			
Operating Temperature	0°C to 50°C at rated output power. Supply derates linearly from 50°C to 65°C at 2.2% per °C			
Cooling	Self contained ball bearing fan			
EMI/EMC	Meets EN61000-3-2, -3 CISPR22 and FCC Part 15 Class A, Bellcore GR-1089-CORE			
Dimensions	12.12 x 5.00 x 5.00” / 333.2 x 127 x 127mm (handle extends additional 1.00” / 25.4mm from faceplate)			
Weight	11.5 pounds / 5.23 kg			
Safety Approvals	UL1950, CSA 22.2 No. 650, TUV EN0950 & CE Mark			

rev 100506

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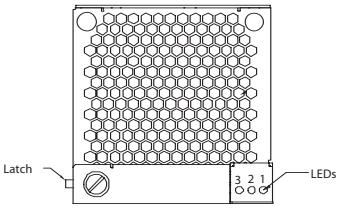
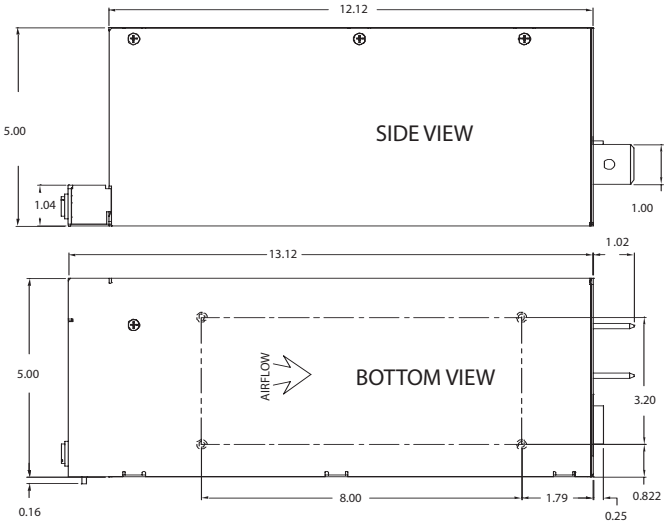
OUTLINE DRAWING:

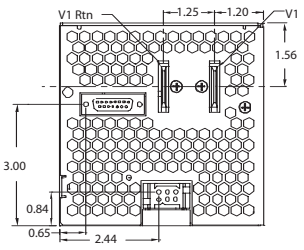
Side & Bottom Views are of
Bus Bar Output Connector Versions



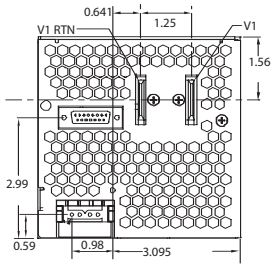


REAR PANEL CONNECTIONS:

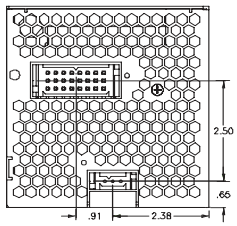
CAR3010x1
Single Phase Input with Bus Bar



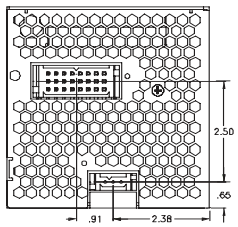
CAR3030x1
Three Phase Input with Bus Bar



CAR3010x1H
Single Phase Input with Positronic



CAR3030x1H
Three Phase Input with Positronic



15-PIN D-SUB CONNECTOR1 [1]	
1	5 VSB
2	5VSB RTN
3	MODULE PRESENT
4	POWER GOOD
5	ON/OFF
6	I SHARE
7	MOD-ENABLE
8	OVP TEST POINT
9	AC FAIL
10	V PROGRAM
11	+ REMOTE SENSE
12	CURRENT MONITOR
13	TEMPERATURE OK
14	- REMOTE SENSE
15	NO CONNECTION

THREE PHASE AC INPUT4 [4]	
1	LINE 1
2	LINE 2
3	LINE 3
4	GROUND

Positronic Output Connector [2]	
1	V1
2	V1
3	V1
4	V1
5	V1 RETURN
6	V1 RETURN
7	V1 RETURN
8	V1 RETURN
9	V1
10	5VSB RTN
11	MODULE PRESENT
12	MODULE ENABLE
13	CURRENT SHARE
14	ON/OFF
15	OVP
16	V1 RETURN
17	5VSB
18	POWER GOOD
19	AC FAIL
20	MARGIN 1
21	+ SENSE
22	TEMP OK
23	MARGIN 2
24	- SENSE

SINGLE PHASE AC INPUT [3]	
1	GROUND
2	LINE
3	NEUTRAL
4	GROUND
5	LINE
6	NEUTRAL

MATING CONNECTORS

1) AMP 205205-2 Housing with 205090-1 Pins

2) Positronics PLC24F4BN0A1/AA Housing with FC114N2 pins

3) Positronics PLB06F000 Housing with FC114N2 pins

4) Positronics PLA04F8000 Housing with FC114N2 pins

Output Bus Bars Mate with Elcon Part Number 538-17-00100

PART NUMBER DEFINITION GUIDE

CAR 30 xx xx x x x xx - 1A

- **Series**: 30=3000W
- **Power**
- **Input Phase**: 10 = 1Ø, 30 = 3Ø
- **Output V**: K1=24V, L1=48V
- **Type**: Blank = Front End, T = Rectifier
- **Polarity**: Blank = Positive, N = Negative
- **Output Connector**: Blank = Bus Bar, H = Positronic (front-end only)
- **RoHS Compliance**: Blank=Non-Compliant, Y0=5 of 6 Compliant, Z0=6 of 6 Compliant
- **Rev.**

Examples:

CAR3010L1-Z01A: 3000W / +48V Front End / Single Phase AC Input / 6 of 6 RoHS Compliant

CAR3030L1H-Z01A: 3000W / +48V Front End / 3-Phase AC Input / Positronic Connector / 6 of 6 RoHS Compliant

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