

10-958

ACM™ - 600

+24 VDC, 600 Amp Power Plant, PDS 4100



C&D TECHNOLOGIES' POWERCOM DIVISION'S ACM-600 POWER PLANT

offers compact, reliable power for +24 Volt telecommunication needs. The power plant combines high power factor and highly efficient modular rectifiers, plug-in circuit breaker distribution, plant monitoring and alarm functions all into one system. Its flexible design can accommodate your current and future system needs with up to 360 Amperes utilizing 60 Amp rectifiers and up to 600 Amperes with 150 Amp rectifiers. This advanced system is the optimal solution for small to medium telecommunication sites where space is limited.

- **State-of-the-Art Rectifiers:** C&D Powercom advanced 24 Volt, 60 Ampere and 150 Ampere modular rectifiers feature high efficiency, near unity power factor, and compact size. These hot-swappable modules can be easily installed without tools and without interrupting system operation.
- **Front Accessibility:** All distribution and battery connections are front accessible, making this plant ideal for confined locations. The ACM-600 can be placed against a wall or in a confined area while still maintaining easy access to vital plant connections.
- **Distribution Features:** The +24 Volt distribution section will accommodate up to a maximum 24 plug-in circuit breakers ranging from 5 to 100 Amperes. Circuit breakers 50 Amperes and less require one breaker position, circuit breakers 60 to 100 Amperes require two breaker positions, and 125 Ampere circuit breakers require three breaker positions.
- **Digital Metering:** A 4½ digital ammeter/voltmeter is provided for fast and accurate system monitoring. An on-line test and calibration circuit utilizes the digital meter to set up and test alarm functions with no service interruptions.
- **Power Plant LEDs/Alarms:** Standard power plant LEDs include: Power on, float/equalize status, major-minor alarms, high-low DC Voltage alarms, rectifier failure, LVD status, fuse alarms for +24 and -48 volt distribution, CFA alarm for converter failure, and optional high temperature alarm. Standard alarm form "C" contacts include: major (2 sets), minor, high DC Voltage, low DC Voltage, load circuit breaker trip, LVD status and optional high temperature.
- **Optional Low Voltage Disconnect:** The optional low Voltage Disconnect protects the load from low Voltage and the system batteries from damage due to over discharge.
- **Optional Temperature Compensation and High Temperature Alarm:** High temperature can damage and shorten the battery life. This option will automatically monitor and adjust the rectifier output Voltage to compensate for variations in battery temperature.
- **Optional DC-DC Converters:** Up to five, 3-ampere modular converters are easily installed for low cost growth for -48 volt DC needs.
- **Space Saving Design:** The ACM-600 Power Plant can be configured for mounting directly on top of C&D Powercom Liberty® Series 2000 VRLA batteries to save valuable floor space.

STANDARD FEATURES

- 600 Ampere rated distribution module with positions for 24 plug-in circuit breakers
- Digital meter and alarm
- One 360 Ampere or 600 Ampere power shelf
- Front accessible power plant
- 4 1/2 digit ammeter/voltmeter
- Compatible with all C&D Powercom Liberty Series 1000 and 2000 VRLA or flooded batteries

Note: The switchmode rectifiers, relay racks and circuit breakers are not included in the plant and must be ordered separately.

OPTIONAL FEATURES

- Various relay racks, both floor mounted and battery mounting
- Low Voltage disconnect (List 2 or 4)
- Battery temperature compensation and high temperature alarm
- Front access AC power wiring options (List 1 or 2 only — 24V/150A)
- DC-DC converter option
- Distribution expansion cabinet



PLANT SPECIFICATIONS

Temperature:	+32 to 120F (0 to 50C)
Humidity:	0 to 95% non-condensing
Height:	600A shelf (150 Amp rectifiers) 24 1/2" (62.23 cm) 360A shelf (60 Amp rectifiers) 21" (53.3 cm)
Depth:	16.9 inches (42.93 cm)
Width:	23" rack mounting (58.4 cm)
Weight:	Approximately 225 lbs (102 kgs) with four 150 Amp rectifiers mounted in a 7' rack Approximately 220 lbs (99.8 kgs) with six 60 Amp rectifiers mounted in a 7' rack
Heat dissipation, full load:	7,540 Btu/hr e/w four 150 Amp rectifiers 4,524 Btu/hr e/w six 60 Amp rectifiers
Audible Noise:	Less than 55 dBA as measured 5 feet up and 2 feet from rectifier

ORDERING GUIDE

Part Number	Descriptions	Comments
110-4100-L1	Basic power plant with one 600 Ampere power shelf for 150 Amp rectifier system, 24 breaker positions, without LVD	For up to four 150 Amp rectifiers. Rectifiers, relay racks and circuit breakers must be ordered separately.
110-4100-L2	Basic power plant with one 600 Ampere power shelf for 150 Amp rectifier system, 24 breaker positions, with LVD	For up to four 150 Amp rectifiers. Rectifiers, relay racks and circuit breakers must be ordered separately.
110-4100-L3	Basic power plant with one 360 Ampere power shelf for 60 Amp rectifier system, 24 breaker positions, without LVD	For up to six 60 Amp rectifiers. Rectifiers, relay racks and circuit breakers must be ordered separately.
110-4100-L4	Basic power plant with one 360 Ampere power shelf for 60 Amp rectifier system, 24 breaker positions, with LVD	For up to six 60 Amp rectifiers. Rectifiers, relay racks and circuit breakers must be ordered separately.
100-7500-00	HFM24BC150, 24 Volt, 150 Amp rectifiers	Maximum four
100-7560-24	HFM24AC60, 24 Volt, 60 Amp rectifiers	Maximum six
385-5687-00	Battery temperature compensation and high temperature alarm kit	Includes one ambient and three battery temperature sensors and one high temperature alarm relay
385-5676-00	Front access AC wiring option kit for one — 150 Amp rectifier shelf	For basic 110-4100-L1/L2 plant
385-5692-00	Expanded -48 Distribution with 10 Additional GMT Fuses	
106-4070-00	+24 VDC to -48 VDC, 3A DC to DC Converter Module (List 1 or 2)	
106-4080-00	+24 VDC to -48 VDC, 3A DC to DC Converter Module Fan Cooled (List 3 or 4)	
111-3840-00	Distribution Expansion Cabinet e/w additional 24 +24 VDC Circuit Breaker Positions	
271-0161-00	5 Amp load circuit breaker	Takes one breaker position
271-0162-00	10 Amp load circuit breaker	Takes one breaker position
271-0163-00	20 Amp load circuit breaker	Takes one breaker position
271-0160-00	25 Amp load circuit breaker	Takes one breaker position
271-0164-00	30 Amp load circuit breaker	Takes one breaker position
271-0165-00	40 Amp load circuit breaker	Takes one breaker position
271-0166-00	50 Amp load circuit breaker	Takes one breaker position
274-3796-60	60 Amp load circuit breaker	Takes two breaker positions
274-3796-70	70 Amp load circuit breaker	Takes two breaker positions
274-3796-80	80 Amp load circuit breaker	Takes two breaker positions
274-3796-90	90 Amp load circuit breaker	Takes two breaker positions
274-3796-100	100 Amp load circuit breaker	Takes two breaker positions
274-3796-125	125 Amp load circuit breaker	Takes three breaker positions

HFM24BC150, 24 Volt, 150 Amp
(Brochure #10-342)**HFM24AC60, 24 Volt, 60 AMP**
(Brochure #10-344)

Rectifier Input Voltage	208/220/240 VAC, single-phase, 50/60 Hz	120/208/220/240 VAC, single-phase, 50/60 Hz
Rectifier Input Current	23.7/22.4/20.0 Amps AC nominal	16.1/9.3/8.8/7.6 Amps AC nominal
Rectifier recommended branch AC circuit breaker	40 Amps	30 Amps at 120 Volts/ 20 Amps at 208/220/240 Volts
Rectifier Heat Dissipation	1885 Btu/hr at 27 Volts	754 Btu/hr at 27 Volts
Power Factor	0.99	0.99
Efficiency	87%	88%
Input Protection	Two pole AC circuit breaker	Dual AC fuses with on-off switch
Output Adjustment	Float/Equalize adjustment 24 to 30 Volts	Float/Equalize adjustment 24 to 30 Volts
Regulation	Output Voltage remains within $\pm 0.5\%$ for any load current (no load to full load) within the specified input Voltage and frequency ranges.	Output Voltage remains within $\pm 0.5\%$ for any load current (no load to full load) within the specified input Voltage and frequency ranges.
Filtering	Voice band: less than 32 dBnC Wide band noise: less than 250 mV, peak-to-peak, with 20 MHz bandwidth	Voice band: less than 32 dBnC Wide band noise: less than 250 mV, peak-to-peak, with 20 MHz bandwidth
Output Protection	Circuit breaker	Fuse
Turn-on	Soft start	Soft start
Load Share	Rectifiers will share within $\pm 10\%$ from 10 to 100% rectifier capacity	Rectifiers will share within $\pm 10\%$ from 10 to 100% rectifier capacity
EMI	Complies with FCC Part 15, Subpart J for class A equipment VDE-0875, Class N	Complies with FCC Part 15, Subpart J for class A equipment VDE-0875, Class N
Weight	25 lbs (11.34 kg)	15 lbs (6.8 kg)

STANDARD 23" FLOOR MOUNTING RELAY RACK

Rack Part Number	Rack Height	1.75" Mounting Space
170-0029-10	4'0"	23
170-0024-10	5'0"	30
170-0025-10	6'0"	37
170-0023-10	7'0"	44
170-0022-10	7'6"	47

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