Specifications typical at 25 °C. HV = +330 V. Current mode load = 700µH + 125 mΩ, equalized externally for eddy current losses. Load capacitance each side to ground 0.047 µF.

		Current Mode Output (± Apeak) Pulse Duration/ Off Time (ms)						
Model	Load Voltage	(DC)	500/500	100/100	10/20	170/1000	25/1000	4/100
262PN	±300V	85	106	120	142	142	177	177

PEAK CURRENT SHUTDOWN 190 A

VOLTAGE OUTPUT ±300 VDC, across output terminals with 142 A pulses
Slew Rate V/L A/s
where V = 300 V and L = load inductance

INPUT LIMITER Adjustable
Current Mode ±15 to ±177 A

SATURATION RESISTANCE 0.1 Ω

GAIN Adjustable with programmable span
Current Mode Adjustment Span 10 to 25 A/V

OUTPUT OFFSET
Amplifier Adjustment Span ±0.3 A
Factory Preset to 0 A

INPUT CHARACTERISTICS
Main Input 1 Differential
Impedance 50 kΩ each input to ground, 25 kΩ differential
Max Input Voltage ±18 V either input or differential
Common Mode Rejection 70 dB minimum, DC to 360 Hz
Input 2 Same as Input 1
Gain Programmable

DC OUTPUT RESISTANCE
Current Mode 4000 Ω

LOAD
Current Mode 700µH + 125 mΩ, load capacitance 0.047 µF each side to ground
Adaptable Range 60 µH to 8 H, 0.04 Ω to Open

CURRENT MODE RESPONSE
Small Signal Bandwidth –3 dB @ 3.5 kHz

RAMP SETTLING TIME
Time Reference End of input ramp
Input Ramp Slope ±142A/760µs
Ramp 0 to ±142 A 200 µs to within 1.4 A, 1%
350 µs to within 280mA, 0.2%
Ramp ±142 A to 0 A 200 µs to within 1.4 A, 1%
350 µs to within 280mA, 0.2%

TOTAL HARMONIC DISTORTION	
Current Mode	200 Hz, 85 A RMS, 0.2% max
Load	700µH + 250 mΩ
DC DRIFT	After 1 hour
Current Mode Offset, vs. Ambient	4 mA/°C
Self Heating Drift,	
0 to ±85 A	60 mA/10 minutes
Scale Factor, vs. Ambient	30 ppm/°C
SWITCHING FREQUENCY	51 kHz internal
Synchronization	Input or Output, 102 kHz
NOISE OUTPUT	No input signal. 700µH, 47 nF load
Current Mode:	
4 Hz to 40 Hz	<30 µA RMS/√Hz
50 Hz or 60 Hz	<60 µA RMS
10 Hz to 10 kHz	<5 mA RMS
RIPPLE NOISE OUTPUT	50 kHz
Current, Each Output Lead	<10 mA RMS, 0.047µF each lead to ground
DC POWER SUPPLY SENSITIVITY	
Current Mode	1.0 mA/V max
CURRENT MONITOR	Front BNC and Rear D Connector ±1 V/20 A ±1%
Source Resistance	0.1 Ω on rear D connector
VOLTAGE MONITOR	Display panel BNC and rear panel D connector ±1 V/40 V ±1%
Source Resistance	0.1 Ω on rear D connector
PROGRAMMING HEADER	Sets gain and response for specific load
Accessibility	Rear panel D connector
REMOTE SHUTDOWN	Switch closure enables output Selectable **Enable** or **Inhibit** Grounded or opto-isolated input Front panel **Inhibit** switch must be off
SWITCHES (on Display Panel)	**Inhibit**, with LED, Front Panel **Reset**, Front and Rear Panels
LOAD PROTECTION	
Voltage or Current	Adjustable input limiter Soft start
Shutdown	Current vs. time All four bridge arms open
Diode Clamps	To +HV and ground
AMPLIFIER PROTECTION	
Overload	Input limiter
Current vs. Time	Shutdown
Each Heat Sink Temp	Shutdown 87 °C
Overvoltage Shutdown	378 V
Undervoltage Shutdown	95 V
Fan Undervoltage Shutdown	22 V

FRONT PANEL LEDs	Fault is Low
Power	Amplifier operates if enabled
Normal/fault	Green: Amplifier is enabled and operating, Red: Inverse of Normal
Hot	Heat sink over-temperature
Over-current	Too much current for too long
Module 1	Module 1 fault
Module 2	Module 2 fault
REAR CONNECTORS	Iso-BNC for clock sync and input signal
POWER REQUIREMENTS	
Fan Supply	+28 VDC @ 2 A
High Voltage Power Supply	
Range of Normal Amplifier Operation	+100 V to +330 V
Current	See note 1
Quiescent Current	0.75 A
Internal Capacitance	11,200 µF
THERMAL REQUIREMENTS	
Power Dissipation at 85 A RMS	1200 W
Peak Dissipation at 170 A	2600 W
Panel Inlet Air Temperature	–20 °C to +35 °C
Storage	–30 °C to +85 °C
MECHANICAL	
Output & Power Connectors	Compression for AWG 6 or 4
Size	5.25" H x 19" W x 24" D; can be rack mounted 13.3 cm H x 48.3 cm W x 61 cm D
Weight	55 lbs.

Notes:

1. Current required to supply load I^2R losses plus amplifier losses.

Copley Controls Corp.
Corporate Offices: 20 Dan Road
Canton, MA 02021
Telephone: (781) 828-8090
Fax: (781) 828-6547
E-mail: sales@copleycontrols.com
www.copleycontrols.com