



LED Driver/Controller Model 5000H Series



The 5000H Series is a digital LED driver/controller that provides high DC constant current up to 40A continuous and 50A pulsed. The driver/controller utilizes Modbus RS-485 serial protocol to support remote or automated operation. An additional 24VDC output operates cooling fans mounted to an LED illuminator. The compact device can be bench, panel, or DIN rail mounted. Two options support either common anode or common cathode LED arrays.

Table 1. Driver/Controller Options

Option	Array
DRV1	Common cathode
DRV2	Common anode

Available Accessory

DIN1 - DIN Rail Mount

Table 2. Operating Specifications

PARAMETER	SPECIFICATION	COMMENT
Type	1 Channel constant current, dimmable	Continuous or pulsed by external trigger
Output Voltage	Compliance voltage up to 7.0 VDC	Determined by the LED module
Output Current	2 to 40 ADC 50 ADC Max	Continuous Pulsed
Input Voltage	+24 VDC +/- 5%	240W up to 35A output drive current 300W for >35A output drive current
Efficiency	77% typical	at 40A output
Current Ripple	2% (P-P)	at 25ADC output current and 95W output power
Dimming	Analog Digital	Potentiometer (optional COMC2 accessory) via MODBUS
External Trigger	3.3V TTL 50 µsec min pulse width 250 Hz - 2 kHz switching frequency	user enabled with 1m long driver cable
LED Module I/O	Thermistor in LED module Fan power (24 VDC) and PWM	monitoring cooling, intelligent control
Connectivity	RS-485 (Modbus Protocol)	
Size and Weight	168.3 (W) X 142.0 (D) X 46.5 (H) mm, 1.0 kg	

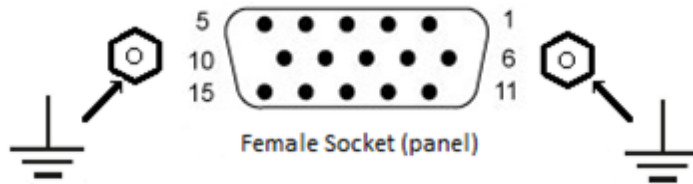


Figure 1. Front Panel Controls



USB	Bootloader access for firmware updates (USB Type B)
CONTROL	RS-485 communication (DB-15HD, Female)
PWR IN	+24 VDC, 200-250 W (D-SUB Combo Socket/Pin 12-14 AWG)
MODULE	40 ADC (Max CW), 50 ADC (Max Pulsed) output to LED Module (D-SUB 7W2)

Figure 2. and Table 3. CONTROL Pinout



PIN	FUNCTION	DIR
1	RS485+ (A)	I/O
2	TRIG+	I
3	GPIO +3.3V	O
4	GPIO AIN (POT)	I
5	RS485+ (A)	I/O
6	GND	
7	GND	
8	TRIG-	I
9	GND	
10	RS485 COM	
11	RS485-(B) I/O	I/O
12	GPIO +3.3V	O
13	GND	
14	/BOOT EN	I
15	RS485- (B)	I/O

Cables and Accessories

Table 4. LED Power Cable to Connect Driver to LED Light Engines (not shown)

Option	Description
LEDC1	7W2 D-Sub to 8-pin MaxiBridge w/ 4-pin for 24VDC fan

Table 5. Communication Control Cables (Optional, not shown)

Option	Description
COMC1	RS-485 (DB-15HD) to USB-A Converter Cable 1.8 meters
COMC2	RS-485 (DB-15HD) to USB-A Converter Box w/ Switch and Rotary Dimmer



Table 6. Power Cables to Connect Driver to 24VDC Supply (Optional, supply not included)

Option	Description
POWC1	24VDC Input Power Cable 1 meter
POWC2	24VDC Input Power Cable 2 meters



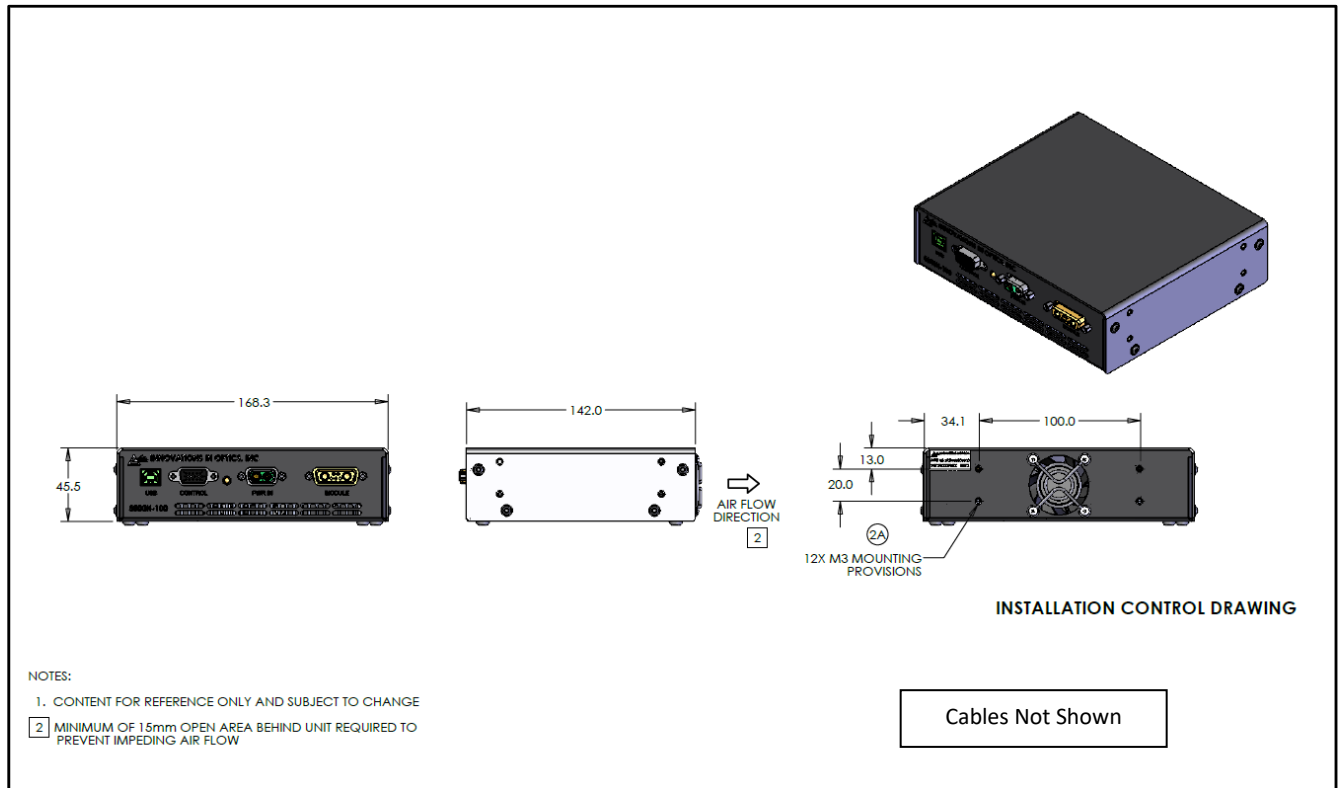
Table 7. External Power Adapters – Universal AC to 24 VDC, DOE VI Efficiency (Optional)

Option	Description
EXPA1	300W, Fan-less, IP41, Medical and ITE approvals
EXPA2	240W, Built-in PWM Fan



3-pole AC Inlet
IEC320-C14

Figure 3. Driver/Controller ICD



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