

## Ordering Information

| Model Number             | Output Voltage | Vout Adjust Range (-0% / +15%) | Minimum Load | Max. Continuous Load (Free Air) | Max. Peak Load (Free Air) <sup>1</sup> | Max. Continuous Load (Forced Air) <sup>2</sup> | Max. Peak Load (Forced Air) <sup>2</sup> | Regulation <sup>3</sup> | Ripple (p-p) <sup>4</sup> |
|--------------------------|----------------|--------------------------------|--------------|---------------------------------|--|--|--|-------------------------|---------------------------|
| CNS653-ME <sup>5,6</sup> | 12 V           | 12 - 13.8 V                    | 0 A          | 54.2 A                          | 62.5 A                                 | NA   | NA                                       | ±2%                     | 120 mV                    |
| CNS653-MF <sup>5</sup>   | 12 V           | 12 - 13.8 V                    | 0 A          | 30.8 A                          | 54.2 A                                 | 54.2 A   | 62.5 A                                   | ±2%                     | 120 mV                    |
| CNS653-MU                | 12 V           | 12 - 13.8 V                    | 0 A          | 33.3 A                          | 54.2 A                                 | 54.2 A   | 62.5 A                                   | ±2%                     | 120 mV                    |
| CNS655-MU                | 24 V           | 24 - 27.6 V                    | 0 A          | 16.7 A                          | 27.1 A                                 | 27.1 A   | 31.3 A                                   | ±2%                     | 240 mV                    |
| CNS658-MU                | 48 V           | 48 - 55.2 V                    | 0 A          | 8.3 A                           | 13.5 A                                 | 13.5 A   | 15.6 A                                   | ±2%                     | 480 mV                    |

<sup>1</sup> Peak load current not to exceed 10 seconds, Ta = 50 °C.

<sup>2</sup> Requires at least 400 LFM of airflow.

<sup>3</sup> At 25 °C including factory setpoint, line voltage and load current variations.

<sup>4</sup> Peak-to-peak ripple measured at the output terminal with 20 MHz bandwidth and 10 µF (tantalum capacitor) in parallel with 0.1 µF capacitor across the output.

<sup>5</sup> Optional suffix "-ME" (end-fan) and "-MF" (open-frame) available on the 12 V output.

<sup>6</sup> 80 PLUS certified.

## Input Connections (-MU and -MF Suffix)

| Pin | Function   | Power Supply Side                         | System Side                           |
|-----|------------|---|---------------------------------------|
| TB1 | PE         | Dinkle EHK762V-03P<br>Max Torque: 4kgf-cm | Recommended Wire Size: AWG #22 to #14 |
| TB2 | L2/Neutral |   |                                       |
| TB3 | L1/Line    |   |                                       |

## Input Connections (-ME Suffix)

| Pin       | Function | Power Supply Side    | System Side           |
|-----------|----------|----------------------|-----------------------|
| IEC Inlet | Input AC | IEC 60320 C14 (Male) | IEC Cord C13 (Female) |

## Output Connections

| Pin  | Function | Power Supply Side   | System Side  |
|------|----------|---|--|
| BAR1 | -Vout    | Output Terminal Screw:<br>M4X8 (4X)<br>Max Torque: 10kgf-cm | Molex 19099-0032 or<br>19141-0063 for AWG #16<br>to #14<br>Molex 19099-0048 or<br>19141-0083 for AWG #12<br>to #10 |
| BAR2 | -Vout    |   |  |
| BAR3 | +Vout    |   |  |
| BAR4 | +Vout    |   |  |

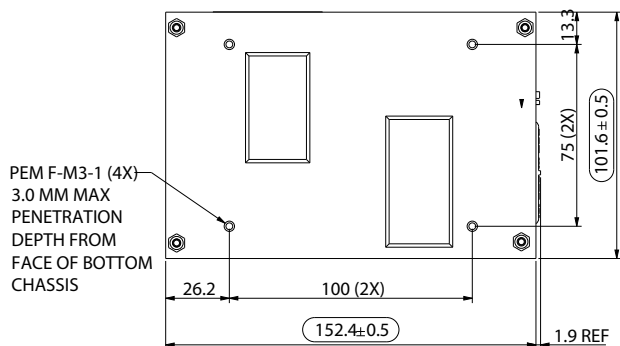
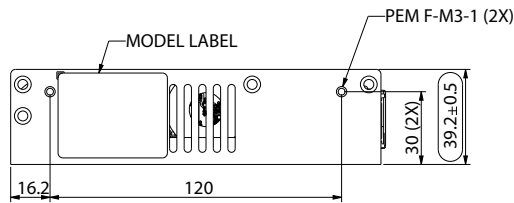
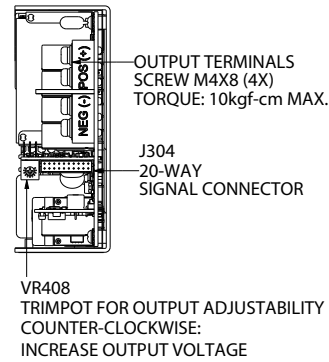
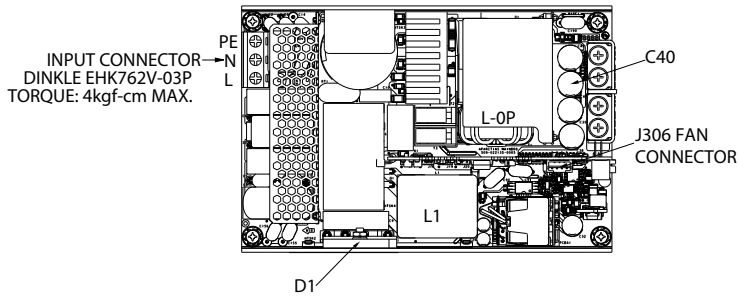
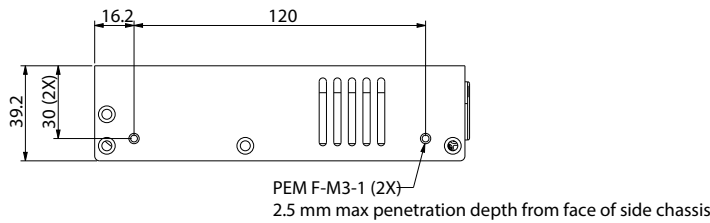
## Other Output and Control Connections (Connector J304)

| Pin | Designation    | Description                       |  |
|-----|----------------|-----------------------------------|--|
| 1   | 5VSB           | +5 V Standby Output               | <b>J304 20-Pin Connector (PSU Side):</b><br>Landwin: 2052P20008T or<br>CviLux: CI0120P1HD0-LF        |
| 2   | 5VSB           | +5 V Standby Output               |  |
| 3   | 5VSB_GND       | +5 V Standby Output Return/Ground |  |
| 4   | SCL            | Serial Clock Signal (I2C)         | <b>Recommended Mating Connectors:</b><br>CviLux: CI0120SD000 (housing)<br>CI01TD21PE0 (contact pins) |
| 5   | A0             | EEPROM Address                    |  |
| 6   | SDA            | Serial Data Signal (I2C)          | Landwin: 2050S2000 (housing)   |
| 7   | I_SHARE        | Active current share pin          | 2053T021V (contact pins)   |
| 8   | SYS_GND        | Return Ground for signals and I2C | JST: PHDR-20VS (housing)   |
| 9   | 12VFAN         | 12 V Fan Output                   | SPHD-001T-P0.5 (contact pins)  |
| 10  | REMOTE INHIBIT | Output Inhibit Pin (Main Output)  |  |
| 11  | FAN_RTN        | 12 V Fan Output Return/Ground     |  |
| 12  | VIN_GOOD       | Input Line OK Signal              |  |
| 13  | FAN_PWM1       | FAN PWM                           |  |
| 14  | PWOK           | Output Power OK Signal            | <b>See ACCESSORIES Section</b>   |
| 15  | FAN_TACH1      | Fan1 Tacho Signal                 |  |
| 16  | FAN_OVERRIDE   | External Fan Sensor for Override  |  |
| 17  | FAN_FAIL       | Fain Fail Signal                  |  |
| 18  | FAN_FAULT_EN   | FAN Fault Enable Due to low RPM   |  |
| 19  | REMOTE_SENSE+  | Positive Remote Sense             |  |
| 20  | REMOTE_SENSE-  | Remote Sense Return               |  |

Fan Output Connector for -MU, -MF Suffix (Connector J306)

| Pin | Function  | Description            |   |
|-----|-----------|------------------------|---|
| 1   | 12VFAN    | 12 V fan output        | <b>J306 4-Pin Connector (PSU Side):</b> |
| 2   | FAN_RTN   | 12 V fan return        | CviLux: CI0104P1HK0-LF                  |
| 3   | FAN_PWM1  | Fan PWM                | Landwin: 2003P0401V                     |
| 4   | FAN_TACH1 | Fan1 tachometer signal | <b>Recommended Mating Connectors:</b>   |
|     |           |                        | CviLux: CI0104S0000 (housing)           |
|     |           |                        | CviLux: CI01T01MPP0 (contact pins)      |
|     |           |                        | Landwin: 2001S0400 (housing)            |
|     |           |                        | Landwin: 2005T011R (contact pins)       |

Mechanical Drawings (“-MU” Suffix for U-Base Construction/12 V, 24 V and 48 V)



| Thermal Hot Spot Reference   |                         |
|--|-------------------------|
| Component  | Temperature Limit (-MU) |
| D1 (AC bridge diode)   | 105 °C                  |
| L1 (PFC choke)   | 115 °C                  |
| C40 (output cap)   | 100 °C                  |
| L-output (output choke)  | 125 °C                  |
| Do not exceed indicated temperature limits to ensure operation is within the component thermal derating limits. Measure the component temperatures using K type thermocouples. |                         |

Unit weight (-MU suffix): 800 g