



Medical



Industrial



Test

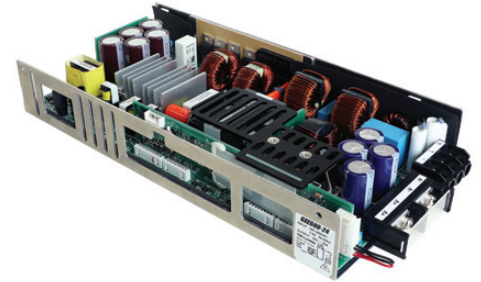


Comm



Broadcast

## Single Output 600W Programmable Medical & ITE Power Supplies



| Features                                    | Benefits                                     |
|---|--|
| • Convection Cooled                         | • Low Acoustic Noise and Vibration           |
| • Up to 95% Efficient                       | • Less Power Consumed                        |
| • Constant Voltage & Constant Current Modes | • Can be used as a Voltage or Current Source |
| • Monitoring & Programming Functions        | • Read/write Capability for Flexibility      |
| • Digital or Analog Programming             | • For use with RS-485 or an External Voltage |
| • Seven Year Warranty                       | • Low Cost of Ownership                      |

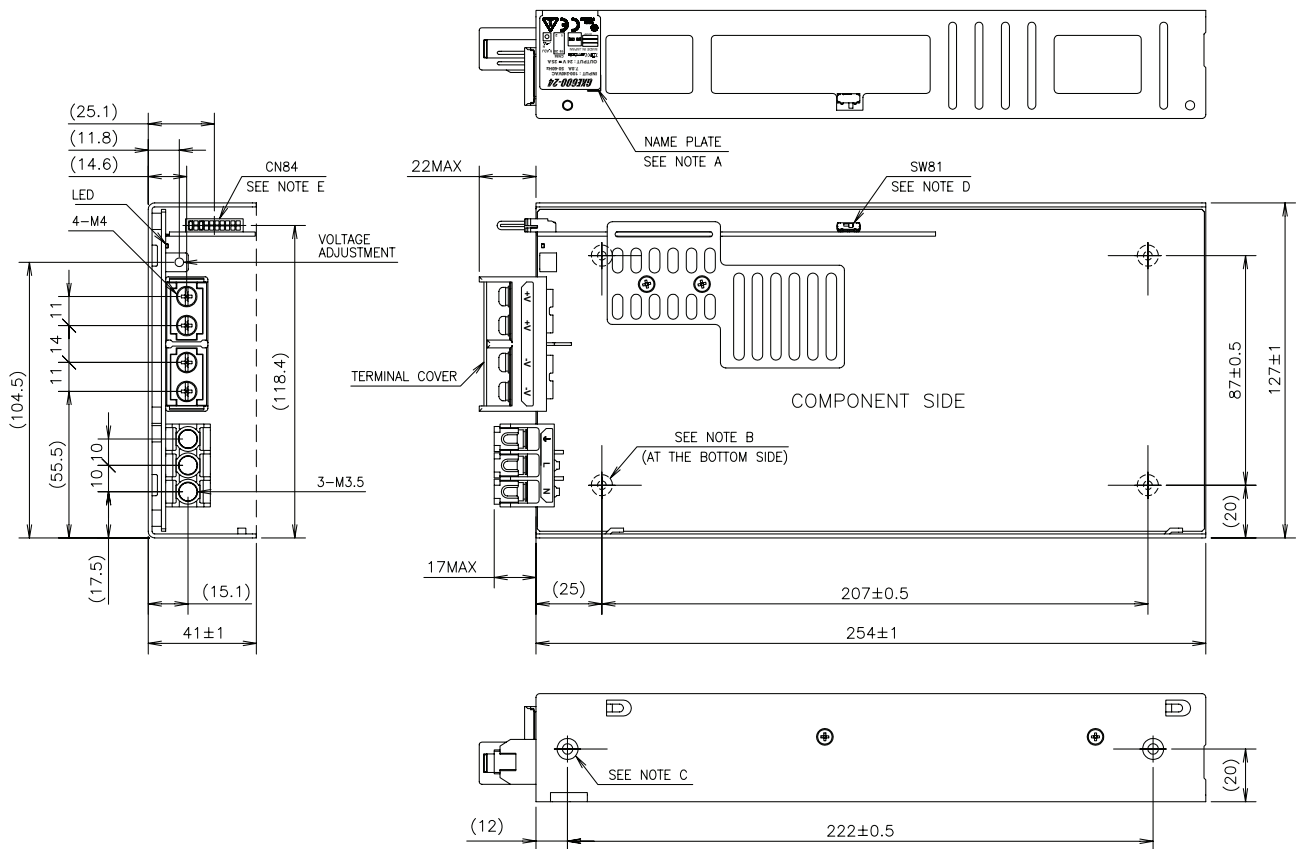
| Specification  |       | GXE600-24  | GXE600-48    |
|--|-------|--|--------------|
| AC Input Voltage range <sup>(1)</sup>                    | VAC   | 85 - 265VAC (47 - 63Hz). Withstands 300VAC for 5s  |              |
| Inrush Current (100 / 200VAC)                            | A     | 40 / 40A   |              |
| Power Factor (100 / 200VAC)                              | -     | Meets EN61000-3-2 (0.99 / 0.95)  |              |
| Input Current (115/230VAC) (Typ)                         | A     | 6.1 / 3.1A   |              |
| Nominal Output Voltage                                   | VDC   | 24V  | 48V          |
| Maximum Output Current                                   | A     | 25A  | 12.5A        |
| Output Voltage Range (Manual Adjust)                     | VDC   | 19.2 - 28.8V   | 38.4 - 57.6V |
| Output Voltage Range (Via Programming) <sup>(2)</sup>    | VDC   | 4.8 - 28.8V  | 9.6 - 57.6V  |
| Current Limit Set Point (Via Programming) <sup>(2)</sup> | A     | 5 - 28.8A  | 2.5 - 14.4A  |
| Temperature Coefficient                                  | %/°C  | <0.02%/°C  |              |
| Regulation   | -     | See Model Selector   |              |
| Overcurrent Protection <sup>(3)</sup>                    | -     | >27.5A   | >13.8A       |
| Overvoltage Protection <sup>(3)</sup>                    | V     | 28.8 - 31.2V   | 57.6 - 62.4V |
| Hold Up Time (Typ at 100% load)                          | ms    | 20ms   |              |
| Leakage Current (max)                                    | mA    | <0.3mA   |              |
| Standby Voltage Vsb)                                     | -     | 4.8V - 5.2V 1A   |              |
| Remote On/Off  | -     | Isolated opto-coupler. Unit off when current is flowing through the opto diode   |              |
| Power Fail Signal  | -     | Signal is high when the output voltage drops due to AC loss or OCP, OVP, OTP   |              |
| AC Fail Signal   | -     | Signal goes high when the AC input is not present  |              |
| Parallel Operation                                       | -     | Yes, up to five units  |              |
| Operating Temperature (-40°C start up)                   | °C    | Convection: -20°C to +70°C, derate linearly to 50% load from 50°C to 70°C <sup>(4)</sup>   |              |
| Storage Temperature                                      | °C    | -40°C to +85°C   |              |
| Operating Humidity (non condensing)                      | %RH   | 20 - 90%RH   |              |
| Storage Humidity (non condensing)                        | %RH   | 10 - 90%RH   |              |
| Cooling  | -     | Convection or forced air cooling   |              |
| Withstand Voltage  | VAC   | Input to Ground 2kVAC (1xMOPP), Input to Output 4kVAC (2xMOPP), Output to Ground 1.5kVAC (1xMOPP), Output to Signals 100VAC for 1 min.                       |              |
| Isolation Resistance                                     | MΩ    | >100MΩ at 25°C & 70%RH, Output to Ground 500VDC  |              |
| Vibration (non operating)                                | -     | 10 - 55Hz: 19.6m/s <sup>2</sup> (sweep 1 min) X, Y, Z for 1 hour<br>/HD version: Designed to meet MIL-STD-810G 514.7 Category 4, 10 < 196.1 m/s <sup>2</sup> |              |
| Shock  | -     | /HD version: Designed to meet MIL-STD-810G 516.7 Procedure I, VI   |              |
| Safety Agency Certifications                             | -     | UL/CSA60950-1, IEC/UL/CSA/EN62368-1, IEC/ES/CSA/EN60601-1, IEC/EN62477-1 (OVC III) CE Mark   |              |
| Line Dips  | -     | SEMI-F47 (200VAC input)  |              |
| Conducted & Radiated EMI                                 | -     | EN55011 / EN55032-B, FCC Class B, VCCI-B   |              |
| Immunity   | -     | IEC61000-4-2, -3, -4, -5, -6, -8, -11, IEC61000-6-2, IEC60601-1-2 Ed 4   |              |
| Weight (Typ)   | g     | 1300   |              |
| Size (WxHxD)   | mm    | U Channel: 127 x 41 x 254mm, /A version: 127.5 x 50 x 254mm  |              |
| MTBF - Telcordia SR-332 issue 3 <sup>(5)</sup>           | Hours | 511,677 hours  |              |
| Warranty   | Yrs   | 7  |              |

- Notes:**
- (1) 85Vac: 360W, 100 to <170Vac: 500W, 170V to 265Vac: 600W (Convection cooled). 600W when forced air is applied (see installation manual)
  - (2) Using RS-485 communications or external 1-6V voltage source. See installation manual for details
  - (3) Overcurrent & Overvoltage limits and recovery modes can be set using the RS-485 communications
  - (4) See installation manual for full derating curves
  - (5) 24V output model, 25°C ambient, full load, 230VAC input

| Model Selector |                    |                      |               |               |                   |                                   |
|----------------|--------------------|----------------------|---------------|---------------|-------------------|-----------------------------------|
| Model          | Output Voltage (V) | Max Output Power (W) | Load Reg (mV) | Line Reg (mV) | Ripple Noise (mV) | Efficiency (typ) %<br>115/230 VAC |
| GXE600-24      | 24                 | 600                  | 144           | 96            | 150               | 92 / 95                           |
| GXE600-48      | 48                 | 600                  | 288           | 192           | 350               | 92 / 95                           |

| Monitoring and Programming Functions  |   |  |
|---------------------------------------|---|--|
| Function                              | Digital (RS-485) Control  | Analog Control                                 |
| Output Voltage Monitor                | Read back   | No   |
| Output Current Monitor                | Read back   | No   |
| Output Voltage Programming            | Adjustable  | Adjustable, use a 1-6V external voltage source |
| Output Current Programming            | Adjustable  | Adjustable, use a 1-6V external voltage source |
| Over Voltage Protection Set Point     | Adjustable  | Fixed  |
| Over Voltage Recovery                 | Auto-recovery or manual settings  | Cycle AC input or use the remote on/off        |
| Over Current Set Point                | Adjustable  | Fixed  |
| Over Current Recovery                 | Auto recovery: Constant current, hiccup or foldback<br>Latching: Constant current or foldback | Constant current, auto-recovery                |
| Over Temperature Recovery             | Cycle AC input or use the remote on/off   | Cycle AC input or use the remote on/off        |
| Remote On/Off                         | Yes, enable or inhibit type   | Yes, enable or inhibit type                    |
| Internal Temperature Monitoring       | Yes, -20°C to +100°C  | No   |
| Operating Run Time Log                | Records more than 20 years of data  | No   |
| Remaining Electrolytic Capacitor Life | Indicates hours left  | No   |
| Alarm History                         | OCP, OVP, OTP, remote on/off, system error  | No   |
| Slew Rate (Rise-time) Control         | Voltage and current   | No   |
| Communication Configuration           | ID, Baud Rate, Parity   | Not applicable                                 |
| Product Information                   | Model #, serial #, lot #, firmware version  | Not applicable                                 |
| Power Fail Signal Threshold           | Adjustable for either output voltage or current   | Fixed (voltage only)                           |

## Outline Drawing GXE600 Series U-Channel



== NOTES ==

A : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT AND COUNTRY OF MANUFACTURE ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

NAME PLATE DETAILS

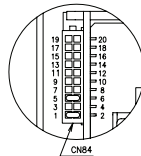


B : 4-M4 TAPPED & STANDOFF ARE FOR CUSTOMER'S CHASSIS MOUNTING. (SCREW PENETRATION DEPTH 4mm MAX.)

C : 2-M4 TAPPED & STANDOFF ARE FOR CUSTOMER'S CHASSIS MOUNTING. \*NOT ENSURED SPECIFICATION OF VIBRATION AND SHOCK. (SCREW PENETRATION DEPTH 4mm MAX.)

D : SW81 IS "EN" SIDE POSITION AT SHIPMENT.

E : SIGNAL CONNECTOR INFORMATION PIN CONFIGURATION AND FUNCTION OF CN84.



== SIGNAL CONNECTOR USED ==

| PART DESCRIPTION | PART NAME | MANUFACT |
|------------------|-----------|----------|
| PIN HEADER       | S208-PHDS | JST      |

== MATCHING HOUSINGS, PIN & TOOL ==

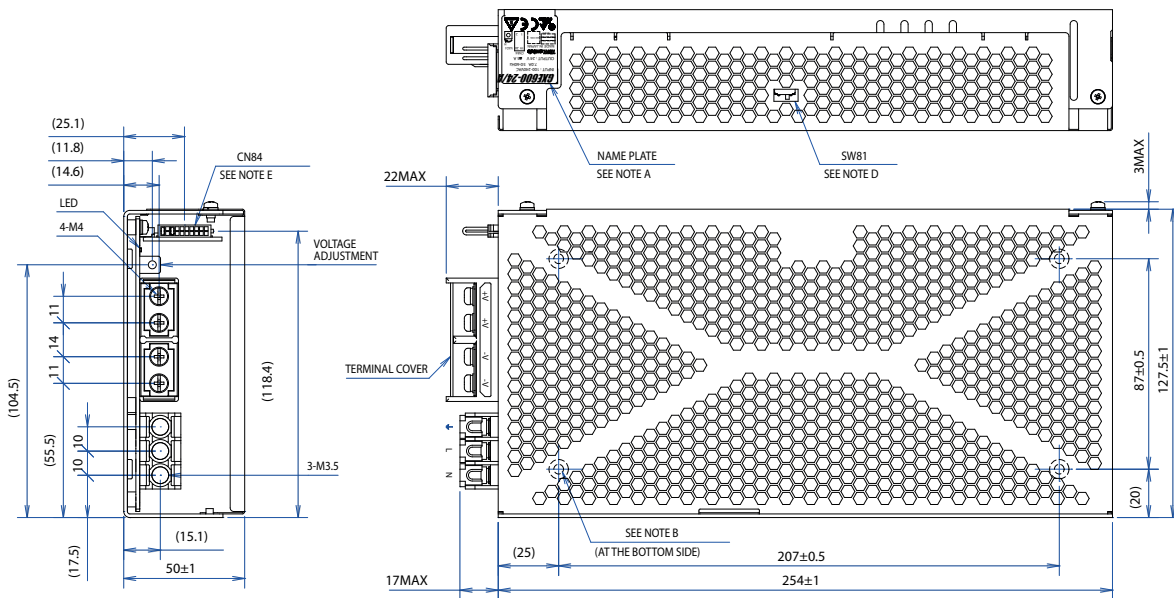
| PART DESCRIPTION   | PART NAME  | MANUFACT |
|--------------------|--|----------|
| SOCKET HOUSING     | PHDR-20VS  | JST      |
| TERMINAL PINS      | SPH0-002T-P0.5(AW28-24)<br>SPH0-001T-P0.5(AW28-22) | JST      |
| HAND CRIMPING TOOL | YS-620(SPH0-002T-P0.5)<br>YC-610R(SPH0-001T-P0.5)  | JST      |

== ACCESSORIES ==

- \* TERMINAL COVER (ATTACHED ON TERMINAL AT SHIPMENT)-----1
- \* SHORT PIECE +Vm---+S, -Vm---S (ATTACHED ON CN84 AT SHIPMENT)-----1

| PIN No. | CONFIGURATION | FUNCTION                                       |
|---------|---------------|--|
| 1       | +Vm           | OUTPUT MONITOR TERMINAL (+V)                   |
| 2       | +S            | REMOTE SENSING TERMINAL FOR +OUTPUT            |
| 3       | NC            | ---  |
| 4       | NC            | ---  |
| 5       | -Vm           | GND FOR OUTPUT MONITOR TERMINAL (-V)           |
| 6       | -S            | REMOTE SENSING TERMINAL FOR -OUTPUT            |
| 7       | PC            | CURRENT BALANCE TERMINAL                       |
| 8       | CC            | OUTPUT CURRENT EXTERNAL CONTROL TERMINAL       |
| 9       | PV            | OUTPUT VOLTAGE EXTERNAL CONTROL TERMINAL       |
| 10      | COM           | GND FOR CC AND PV AND PC SIGNAL                |
| 11      | PF            | POWER FAIL SIGNAL TERMINAL                     |
| 12      | AC FAIL       | AC FAIL (LOW AC) ALARM SIGNAL TERMINAL         |
| 13      | CNT 1         | REMOTE ON/OFF CONTROL TERMINAL (1)             |
| 14      | +STB          | STANDBY SUPPLY+ (SW1A)                         |
| 15      | CNT 2         | REMOTE ON/OFF CONTROL TERMINAL (2)             |
| 16      | -STB          | STANDBY SUPPLY- (CONNECTED TO TOG INTERNALLY)  |
| 17      | SG            | GND FOR +,-,DATA (CONNECTED TO TOG INTERNALLY) |
| 18      | TOG           | GND FOR CNT AND PF, AC FAIL SIGNALS            |
| 19      | +DATA         | RS485 +DATA (NON-INVERSION)                    |
| 20      | -DATA         | RS485 -DATA (INVERSION)                        |

## Outline Drawing GXE600 Series U-Channel with Cover



== NOTES ==

A : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT AND COUNTRY OF MANUFACTURE ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

B : 4-M4 TAPPED & STANDOFF ARE FOR CUSTOMER'S CHASSIS MOUNTING. (SCREW PENETRATION DEPTH 4mm MAX.)

C : 2-M4 TAPPED & STANDOFF ARE FOR CUSTOMER'S CHASSIS MOUNTING. \*NOT ENSURED SPECIFICATION OF VIBRATION AND SHOCK. (SCREW PENETRATION DEPTH 4mm MAX.)

D : SW81 IS "EN" SIDE POSITION AT SHIPMENT.

E : SIGNAL CONNECTOR INFORMATION PIN CONFIGURATION AND FUNCTION OF CN84.

== SIGNAL CONNECTOR USED ==

| PART DESCRIPTION | PART NAME  | MANUFACT |
|------------------|------------|----------|
| PIN HEADER       | S20B-PHD55 | JST      |

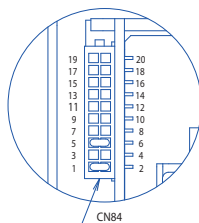
== MATCHING HOUSINGS, PIN & TOOL ==

| PART DESCRIPTION   | PART NAME  | MANUFACT |
|--------------------|--|----------|
| SOCKET HOUSING     | PHDR-20VS  | JST      |
| TERMINAL PINS      | SPHD-002T-P0.5(AWG28-24)<br>SPHD-001T-P0.5(AWG26-22) | JST      |
| HAND CRIMPING TOOL | YRS-620(SPHD-002T-P0.5)<br>YC-610R(SPHD-001T-P0.5)   | JST      |

== ACCESSORIES ==

\* TERMINAL COVER .....1  
(ATTACHED ON TERMINAL AT SHIPMENT)

\* SHORT PIECE .....1  
SHORTING +Vm +S→Vm -S  
(ATTACHED ON CN84 AT SHIPMENT)



| PIN No. | CONFIGURATION | FUNCTION                                       |
|---------|---------------|--|
| 1       | +Vm           | OUTPUT MONITOR TERMINAL (+V)                   |
| 2       | +S            | REMOTE SENSING TERMINAL FOR +OUTPUT            |
| 3       | NC            | -  |
| 4       | NC            | -  |
| 5       | -Vm           | GND FOR OUTPUT MONITOR TERMINAL (-V)           |
| 6       | -S            | REMOTE SENSING TERMINAL FOR -OUTPUT            |
| 7       | PC            | CURRENT BALANCE TERMINAL                       |
| 8       | CC            | OUTPUT CURRENT EXTERNAL CONTROL TERMINAL       |
| 9       | PV            | OUTPUT VOLTAGE EXTERNAL CONTROL TERMINAL       |
| 10      | COM           | GND FOR CC AND PV AND PC SIGNAL                |
| 11      | PF            | POWER FAIL SIGNAL TERMINAL                     |
| 12      | AC FAIL       | AC FAIL (LOW AC) ALARM SIGNAL TERMINAL         |
| 13      | CNT 1         | REMOTE ON/OFF CONTROL TERMINAL (1)             |
| 14      | +STB          | STANDBY SUPPLY+ (5V,1A)                        |
| 15      | CNT 2         | REMOTE ON/OFF CONTROL TERMINAL (2)             |
| 16      | -STB          | STANDBY SUPPLY- (CONNECTED TO TOG INTERNALLY)  |
| 17      | SG            | GND FOR +, -DATA (CONNECTED TO TOG INTERNALLY) |
| 18      | TOG           | GND FOR CNT AND PF, AC FAIL SIGNALS            |
| 19      | +DATA         | RS485 +DATA (NON-INVERSION)                    |
| 20      | -DATA         | RS485 -DATA (INVERSION)                        |

### Options

| Suffix | Description  |
|--------|--|
| Blank  | U channel chassis                                      |
| /A     | U channel chassis with cover                           |
| /HD    | U channel chassis, ruggedized & PCB coating            |
| /HDA   | U channel chassis with cover, ruggedized & PCB coating |



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