

Genesys™

Programmable DC Power Supplies
750W/1500W in 1U
Built in RS-232 & RS-485 Interface
Advanced Parallel Operation
Optional Interface:
LXI Compliant LAN
IEEE488.2 SCPI (GPIB) Multi-drop
Isolated Analog Programming



Genesys™ Family GenH 750W Half Rack Gen1U 750/1500W Full Rack Gen2U 3.3/5kW

TDK-Lambda



The GenesysTM family of programmable power supplies sets a new standard for flexible, reliable, AC/DC power systems in OEM, Industrial and Laboratory applications.

Features include:

- High Power Density: 1500W in 1U
- Wide Range Input (85 265Vac Continuous, single phase, 47/63Hz)
- Active Power Factor Correction (0.99 typical)
- Output Voltage up to 600V, Current up to 200A
- Built-in RS-232/RS-485 Interface Standard
- Last-Setting Memory
- Global Commands for Serial RS-232/RS-485 Interface
- Front Panel Lock selectable from Front Panel or Software
- High Resolution 16 bit ADCs & DACs
- Reliable Encoders for Voltage and Current Adjustment

Constant Voltage/Constant Current auto-crossover

Advanced Parallel reports total current up to four identical units

- Independent Remote ON/OFF and Remote Enable/Disable
- External Analog Programming and Monitoring (user selectable 0-5V & 0-10V)
- Reliable Modular and SMT Design
- 19" Rack Mounted ATE and OEM applications
- Optional Interfaces

Isolated Analog Programming and Monitoring Interface (0-5V/0-10V $\&\,4\text{-}20\text{mA})$

IEEE 488.2 SCPI (GPIB) Multi-Drop

LXI Compliant LAN Interface

- LabView® and LabWindows® drivers
- Five Year Warranty

Worldwide Safety Agency Approvals; CE Mark for LVD and EMC Regulation





Applications

Genesys[™] power supplies have been designed to meet the demands of a wide variety of applications.

Common controls are shared all Genesys™ Series.

Test and Measurement

Last-Setting memory simplifies test design and requires no battery backup.

Built-in RS-232/RS-485 gives maximum system flexibility along with 0-5V and 0-10V, selectable analog programming. Wide range of available inputs allows testing of many different devices.

Semiconductor Burn-in

Safe-Start may be ENABLED to re-start at Output OFF to protect load.

Wide range input (85-265Vac) with Active Power Factor correction rides through input transients easily.

Component Test

High power density, zero stacking and single wire parallel operation give maximum system flexibility.

Laser Diode

OVP is directly set on Voltage Display, assuring accurate protection settings.

Current Limit Fold Back assures load is protected from current surges.

Heater Supplies

Smooth, reliable encoders enhance front panel control.

Remote analog programming is user selectable 0-5V or 0-10V.

RF Amplifiers and Magnets

Robust design assures stable operation under a wide variety of loads.

High linearity in voltage and current mode.



Front Panel Description



- 1. AC ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable encoder controls Output Voltage and sets Address.
- 4. Volt Display shows Output Voltage and directly displays OVP, UVL and Address settings.
- 5. Reliable encoder controls Output Current, sets baudrate and Advanced Parallel mode.
- 6. Current Display shows Output Current and displays baudrate.
- 7. Function/Status LEDs:
- Alarm Foldback Mode
- Fine Control Remote Mode
- Output On Preview Settings
- 8. Pushbuttons allow flexible user configuration
 - Coarse and Fine adjustment of Output Voltage/Current and Advanced Parallel Master or Slave
 - Preview settings and set Voltage/Current with Output OFF, Front Panel Lockout
 - Set OVP and UVL Limits
 - Set Current Foldback
 - Local/Remote Mode and select Address and Baudrate
 - Output ON/OFF and Auto-Start/Safe-Start Mode

Rear Panel Description



- 1. Remote/Local Output Voltage Sense Connections.
- 2. DIP Switches select 0-5V or 0-10V Programming and other functions.
- 3. DB25 (Female) connector allows (Non-isolated) Analog Program and Monitor and other functions.
- 4. RS-485 OUT to other Genesys™ Power Supplies.
- 5. RS-232/RS-485 IN Remote Serial Programming.
- 6. Output Connections: Rugged busbars for up to 60V Output; wire clamp connector for Outputs >60V.
- 7. Exit air assures reliable operation when zero stacked.
- 8. Wide-Range Input 85-265VAC continuous, 47/63Hz with Active Power Factor Correction (0.99 typical). AC Input Connector: 750W (IEC320), 1500W (screw terminal-shown).
- 9. Optional Interface Position for IEEE 488.2 SCPI (shown) or Isolated Analog Interface or LAN Interface.



Genesys ™ 750W/1500W Specifications

| • | • | | | | | | | | | Specif | ications | in Blue | are imr | roved. | 750W1 | 500W |
|--|---|-------------------------------------|--|--|---|--|---|-------------------------|--|---|--|---|---|---|---------------------------|------------------|
| 1.0 MODEL | GEN | 6-200 | | | | | | | | 80-19 | 100-151 | 50-103 | 00-560 |)-2.6 | , 5011 | X |
| 1. Rated output voltage (*1) 2. Rated Output Current (*2) | V A | 200 | 180 | 12.52 1207 | | 30 50 | 40 38 | 50 30 | 60 25 | 80 19 | 100 | 150 10 | 300 5 | 600 2.6 | | X |
| 3. Rated Output Power | W | 1200 | 1440 | 15005 | 20 | 1500 | 1520 | 1500 | 1500 | 1520 | 1500 | 1500 | 1500 | 1560 | | Х |
| 4. Efficiency at 100/200Vac (*3) | % | 77/79 | | 82/ 83 / | | | 84/88 | 84/88 | | | 84/88 | | | | | X |
| 1.0 MODEL | GEN | 6-100 | | 12.5-60 | | | | | 60-12.5 | 80-9.5 | 100-7.5 | 150-530 | 0-2.560 300 | | X | |
| 1. Rated output voltage (*1) 2. Rated Output Current (*2) | V A | 100 | 90 | 12.5 60 | 20 38 | 30 25 | 40 19 | | 60 12.5 | 80 9.5 | 7.5 | 150 5 | 2.5 | 600 1.3 | X | |
| 3. Rated Output Power | A W | 600 | 720 | 750 | 760 | 750 | 760 | | 750 | 760 | 750 | 750 | 750 | 780 | X | |
| 4. Efficiency at 100/200Vac (*3) | % | 76/78 | 77/80 | 81/84 | 82/85 | 82/85 | 83/87 | | 83/87 | 83/87 | 83/87 | 83/87 | 83/87 | 83/87 | Х | |
| 1.1 CONSTANT VOLTAGE MODE | V V | 2.6 | 2.0 | 2.2 | 4 | | | 7 | 0 | 10 | 12 | 17 | 22 | () | V | V |
| 1. Max.line regulation (0.01% of Vo+ 2mV)(*4) 2. Max load regulation (0.01% of Vo+2mV)(*5) |) mV 5) mV | 2.6 | 2.8 | 3.3 | 4 | 5 | 6 | 7 | 8 | 10 10 | 12 12 | 17 17 | 32 32 | 62 62 | Ŷ | Ŷ |
| 3. Ripple and noise p-p 20MHz (*9) | mV | 60 | 50 | 60 | 60 | 50 | 60 | 40 | 60 | 75 | 75 | 75 | 130 | 300 | X | X |
| 4. Ripple r.m.s 5Hz~1MHz (*9) 5. Remote sense compensation/line | mV V | 8 | 6 | 1 | 7.5 1 | 1.5 | 2 | 5 2 | 3 | 4 | 8 5 | 8 5 | 20 5 | 60 5 | X | X |
| 6. Temp. coefficient ' | | C50PPN | 1/°C of r | ated ou | itput v | | | 1 | _ | | | | | | - X | X − |
| 7. Temp. stability 8. Up-prog. response time, 0~Vo Rated | % | 0.01% | of rated | l lout ov | er 8hrs | | | | | s warm | -up. Coi | | | | ıp. X | X |
| 9. Down-prog response time full-load | mS mS | 80mS, | N.L/F.L, | resistiv 50 | e load | | c | 30 | | 150mS | 5, N.L/F.I | L, resisti 50 | ve load | 250 250 | X | - X |
| 10. Down-prog response time No-load 11. Transient response time (*8) | mS | 500 | 600 | 700 | 800 | 900 | | | 1100 | 1200 | 1500 | | 2500 | | - X | X |
| 12. Temp. drift | mS | | | | | | | | | | models | | | | Ŷ | Ŷ |
| 1.2 CONSTANT CURRENT MODE | % | 0.01% | of rated | l Vout o | ver 8hr | s interv | al follo | wing 30 | minute | es warn | n up. Co | nstant | line, loa | d & ten | ήp. | |
| 1. Max.line regulation (0.01% of lo+ 2mA)(*4) | | 12 | 11 | 8.0 | 5.8 | 4.5 | 3.9 | | 3.25 | 2.95 | 2.75 | 2.5 | 2.25 | 2.13 | X | T |
| 2. Max.load regulation (0.02% of lo+5mA)(*6) 3. Ripple r.m.s 5Hz~1MHz . (*7) | mA mA | 25 | 23 | 17 | 12.6 | 10 | 8.8 | | 7.5 | 6.9 | 6.5 | 6.0 | 5.5 | 5.26 | X | |
| 4. Max.line regulation (0.01% of lo+ 2mA)(*4) | mA | 190 | 160 | 110 | 50 | 45 | 30 | | 15 | 10 | 10 | 8 | 6 | 4 | X | L |
| 5. Max.load regulation (0.02% of lo+5mA)(*6) 6. Ripple r.m.s 5Hz~1MHz .(*7) | mA mA | 22 45 | 20 41 | 14 29 | 9.6 20.2 | 7.0 15 | 5.8 12.6 | 5 11 | 4.5 10 | 3.9 8.8 | 3.5 8.0 | 3.0 7.0 | 2.5 6.0 | 2.26 5.52 | | X |
| 7. Temp. coefficient | mA | 350 | 300 | 210 | 120 | 60 | 65 | 60 | 60 | 40 | 20 | 15 | 15 | 7 | | X |
| 8. Temp. drift 9. Warm up drift | | 70PPN | | | | | | | | | | · | | 10. | X | X |
| 1.3 PROTECTIVE FUNCTIONS | % % | Less th | of rated an 0.1% | 6 rated | ver 8hi output | current | over 3 | wing 30 0 min fo | ollowing | es warr a powe | n up. Co | onstant output | voltage | d & te | mp.X ent <i>i</i> thai | |
| 1. OCP | ,,, | | | o ratea | оперис | carrerr | | 0 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 9 00 | | оигрис | ronage | , сап. | , it criai | 190 |
| 2. OCP Foldback | | 0~1059 | % Const | tant Cur | rent | | | | | | | | | | X | X |
| 3. OVP type | | Output | t shut d | own wh | nen po | wer sup | ply cha | inge fro | m CV to | o CC. U | ser sele button | ctable. | - 100 HO ! ! ! | ication | X | X |
| 4. OVP trip point 5. Over Temp Protection | | 0.5~7.5 | V0.5~1 | 0₩1, 11 | 1 1 ~ 24\ | 1 2~36V | 7 2~111 | 1 5~57V | 5 = 66V | 5~.88\ | 15~110 | 1/5~165 | 1/5~.330 | 11/5~66 | nv X | X |
| 1.4 ANALOG PROGRAMMING AND MONITO | DRING | User se | lectabl | e, latch | ed or n | on later | led T | 1 3 37 V | J-00V | 3 001 | ∤ 5~110 | V 5 103 | V 3 - 330 | 745 00 | X | X |
| 1 Vout Voltage Programming | | | | | | | | | | | | | | | | |
| Lout Voltage Programming Vout Resistor Programming Lout Resistor Programming Lout Resistor Programming Con/Off control (rear panel) | | 0~100 | %, 0~5\ | or 0~1 | 0V, use | r select | . Accura | acy and | linearit | y: +/-0 | .5% of r | ated Vo | ut. | | X | X |
| 4. lout Resistor Programming | | 0~100 | %, 0~5√ %, 0~5/ | 7010~1 10Kohn | n full so | ale,use | r select | "Accura | acy and | lineari | % of rat | % of rat | ed Vout | | Ŷ | - x |
| 5. On/Off control (rear panel) 6. Output Current monitor | | 0~100 | 70, 0~37 | , UKOIIII | n un sc | aie,use | Select | . Accura | icy and | illieari | Ly. +/- i : | 370 01 10 | ateu iot | it. | X | X |
| 7 Outnut Voltage monitor | | 0~5V o | or 0~10\ | √, accur | acy: 1% | , user s | electab | le | i, user | Selecta | bie logi | | | | - X | ⊢ Ŷ |
| 8. Power Supply OK signal 9. CV/CC indicator | | 0~5V o | or 0~10\ ab (4~5) | /, accur | acy: 1% W-Fail | o, user s | electab n series | le recista | nce | | | | | | X | X |
| 10. Enable/Disable | | Open c | ollecto | r, CC m | ode: Or | n, CV mo | ode: Off | , Maxim | num vol | tage: 3 | OV, max | dimum s | ink cur | ent: 10 | mAX | - ŝ |
| 11. Local/Remote analog control 12. Local/Remote analog control indicator | | Dry cor | ntact. O trical si | pen: of | t, Short Open/ | : on. Ma Short: 0 | ax. volta ~0 6V o | age at E | nable/l Remot | Disable e 2∼15 | in: 6V | en·Loc | al | | X | X |
| 1.5 FRONT PANEL | | Open o | ollecto | r, Local: | Open, | Remot | e: On. N | laximu | m volta | ge: 30\ | V or op , maxin | num sin | k curre | nt: 5m/ | ۱. X | X |
| | | | | | | | | | | | | | | | | |
| | | Vout/I | out mar | nual adj ual adju | ust by | separat | e enco | ders (co | arse an | d fine a | adjustm | ent sele | ectable) | | X | X |
| 1. Control functions | | AC on/ | off, Out | tput on | off, Re | -start m | iodes (a | iuto, saf | fe), Folc | lback c | ontrol (| CV to C | C), Go t | o local | conXrol | X |
| | | RS232/ | ss seieci 485 and | d IEEE48 | voitage 38.2 se | e (or cui lection | rrent) a | ajust en enable | switch | and DI | er of add P switch | aresses: | 31 | | X | X |
| | | | | | | | | and 19, | | | | | | | X | X |
| 2. Display | | Voltage | e 4 digi | ts, accu | racy: 0. | 05%+/- | 1 count | t | | | | | | | X | X |
| 3. Indications | | Voltage | <u>t 4 digi</u> e. Curre | ts, accui nt. Alar | <u>racy: 0.</u> m. Fine | <u>2%+/-1</u> 2. Previe | count w. Folc | lback. L | ocal. O | utput C | n, Fron | t Panel | Lock | | X | X |
| 1.6 Interface RS-232&RS-485 or Optional GF | PIB / LA | | | , | , | , | , | | | | , | | | | 750W | 1500W |
| Model | V | 6 | 8 | 12.5 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 300 | 600 | X | Х |
| 1. Remote Voltage Programming (16 bit) | | | | | | | | | | | | | | | | |
| Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11 | mV | 0.12 | 0.16 | 0.25 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 3.0 | 6.0 | 12.0 | X | X |
| | l) mV | 3.0 | 4.0 | 6.3 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 75 | 150 | 300 | X | |
| 2. Remote Current Programming (16 bit) | | | | | | | | | | | | | | | | |
| Resolution (0.002% of lo Rated) | mΔ | 2 00 | 1 20 | 1 20 | 0.76 | 0.50 | U 38 | | 0.25 | 0.10 | 0.15 | 0.10 | 0.05 | UUS | V | _ |
| Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual | mA O vitpu t | 2.00 | 1.80 180 | 1.20 120 | 0.76 76 | 0.50 50 | 0.38 38 | | 0.25 25 | 0.19 19 | 0.15 15 | 0.10 | 0.05 5.0 | 0.03 2.6 | X | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual | mA Output mA | 2.00 (*200)(*4.0 | 180 3.60 | 120 2.40 | 76 1.52 | 50 1.0 | 38 0.76 | 0.60 | 25 0.50 | 19 0.38 | 15 0.30 | 10 0.20 | 5.0 0.10 | 2.6 0.05 | | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual | mA Ouffput Ouffput | 2.00)(*200)(*400)(*400 | 180 | 120 | 76 | 50 | 38 | | 25 | 19 | 15 | 10 | 5.0 | 2.6 | | X |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual | mA O utpu t |)(*400)(*4000 | 180 3.60 360 | 120 2.40 240 | 76 1.52 152 | 50 1.0 100 | 38 0.76 76 | 0.60 60 | 25 0.50 50 | 19 0.38 38 | 15 0.30 30 | 10 0.20 20 | 5.0 0.10 10 | 2.6 0.05 5.2 | | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage | Our put | 4.0)(*400 0.12 | 180 3.60 360 0.16 | 120 2.40 240 1.125 | 76 1.52 152 | 50 1.0 100 | 38 0.76 76 | 0.60 60 | 25 0.50 50 | 19 0.38 38 | 15 0.30 30 | 10 0.20 20 10.50 | 5.0 0.10 10 | 2.6 0.05 5.2 | X | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated | mA O utpu t |)(*400)(*4000 | 180 3.60 360 | 120 2.40 240 | 76 1.52 152 | 50 1.0 100 | 38 0.76 76 | 0.60 60 | 25 0.50 50 | 19 0.38 38 | 15 0.30 30 | 10 0.20 20 | 5.0 0.10 10 | 2.6 0.05 5.2 | | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated | mA Output mV mV | 0.12 3 | 3.60 360 360 | 120 2.40 240 1.125 6.3 | 76 1.52 152 1.20 10 | 50 1.0 100 1.20 1.5 | 38 0.76 76 1.2 20 | 0.60 60 1.5 25 | 25 0.50 50 1.2 30 | 19 0.38 38 1.60 40 | 15 0.30 30 11.0 50 | 10 0.20 20 10.50 75 | 5.0 0.10 10 | 2.6 0.05 5.2 12 300 | X | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated)+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated Accuracy 0.3% of lo Rated (*10) | mA Output mV mV | 0.12 | 180 3.60 360 0.16 4 | 120 2.40 240 1.125 6.3 | 76 1.52 152 1.20 10 | 50 1.0 100 1.20 1.25 | 38 0.76 76 1.2 20 | 0.60 60 | 25 0.50 50 1.2 30 | 19 0.38 38 1.60 40 | 15 0.30 30 11.0 50 | 10 0.20 20 10.50 75 | 5.0 0.10 10 12 150 | 2.6 0.05 5.2 12 300 | X | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated output | mV mV mV | 0.12 3 11 300 12 | 180 3.60 360 0.16 4 1.80 270 10.80 | 120 2.40 240 1.125 6.3 1.20 180 10.80 | 76 1.52 152 1.20 10 1.14 1.14 1.52 | 1.20 1.25 75 1.50 | 38 0.76 76 1.2 20 1.14 57 1.14 | 1.5 25 | 25 0.50 50 1.2 30 | 19 0.38 38 1.60 40 0.19 28.50 1.14 | 15 0.30 30 11.0 50 0.15 22.50 1.05 | 10 0.20 20 10.50 75 0.15 15 1.10 | 5.0 0.10 10 | 2.6 0.05 5.2 12 300 0.12 3.90 0.10 | X | |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated+0.1% of lo Actual Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated output Accuracy 0.3% of lo Rated (*10) | mV mV mV | 0.12 | 180 3.60 360 0.16 4 | 120 2.40 240 1.125 6.3 1.20 180 | 76 1.52 152 1.20 10 | 1.20 1.25 75 | 38 0.76 76 1.2 20 | 1.5 25 | 25 0.50 50 1.2 30 | 19 0.38 38 1.60 40 0.19 28.50 | 15 0.30 30 11.0 50 0.15 22.50 | 10 0.20 20 10.50 75 | 5.0 0.10 10 12 150 0.13 7.50 | 2.6 0.05 5.2 12 300 0.12 3.90 | X | XXX |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated output Accuracy 0.3% of lo Rated (*10) 5. OVP/UVL Programming Resolution (0.1% of Vo Rated) | mA Outiput mV mV mA mA mA mA | 0.12 3 11 300 12 600 | 180 3.60 360 0.16 4 1.80 270 10.80 540 | 1.125 6.3 1.20 180 10.80 360 | 76 1.52 152 1.20 10 1.14 1.14 1.52 228 | 1.20 1.5 1.25 75 1.50 | 38 0.76 76 1.2 20 1.14 57 1.14 114 | 1.5 25 1.20 90 | 25 0.50 50 1.2 30 1.13 37.50 1.25 75 | 19 0.38 38 1.60 40 0.19 28.50 1.14 57 | 15 0.30 30 111.0 50 0.15 22.50 1.05 45 | 10 0.20 20 10.50 75 0.15 1.10 30 | 5.0 0.10 10 12 150 0.13 7.50 0.15 15 | 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8 | X X X | X X X |
| Accuracy (0.1% of lo Rated+0.1% of lo Actual Resolution (0.002% of lo Rated)+0.1% of lo Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) S. OVP/UVL Programming | mA Output | 0.12 3 11 300 12 600 | 180 3.60 360 0.16 4 1.80 270 10.80 540 | 1.125 6.3 1.20 180 10.80 360 | 76 1.52 152 1.20 10 1.14 1.14 1.52 228 | 1.20 1.25 75 1.50 150 | 38 0.76 76 1.2 20 1.14 57 1.14 114 | 1.5 25 1.20 90 | 25 0.50 50 1.2 30 1.13 37.50 1.25 75 | 19 0.38 38 1.60 40 0.19 28.50 1.14 57 | 15 0.30 30 111.0 50 0.15 22.50 1.05 45 | 10 0.20 20 10.50 75 0.15 1.10 30 | 5.0 0.10 10 12 150 0.13 7.50 0.15 15 | 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8 | X X X | X X X |
| Accuracy (0.1% of to Rated+0.1% of to Actual Resolution (0.002% of to Rated) Accuracy (0.1% of to Rated+0.1% of to Actual 3. Readback Voltage Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Current Resolution of to Rated Accuracy 0.3% of to Rated (*10) Resolution of lo Rated output Accuracy 0.3% of lo Rated (*10) 5. OVP/UVL Programming Resolution (0.1% of Vo Rated) | mA Output | 11 300 12 600 | 180 3.60 360 0.16 4 1.80 270 10.80 540 | 1.125 6.3 1.20 180 10.80 360 | 76 1.52 152 1.20 10 1.14 1.14 1.52 228 20 200 | 1.20 1.50 1.50 1.50 1.50 1.50 1.50 1.50 | 38 0.76 76 1.2 20 1.14 57 1.14 114 40 400 | 1.5 25 1.20 90 | 25 0.50 50 1.2 30 1.13 37.50 1.25 75 | 19 0.38 38 1.60 40 0.19 28.50 1.14 57 | 15 0.30 30 111.0 50 0.15 22.50 1.05 45 | 10 0.20 20 10.50 75 0.15 1.10 30 | 5.0 0.10 10 12 150 0.13 7.50 0.15 15 300 3000 | 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8 600 6000 | X X X X | X X X |

^{*1:} Minimum voltage is guaranteed to maximum 0.2% of Vo Rated.

*2: Minimum current is guaranteed to maximum 0.4% of lo Rated.

*3: At maximum output power.

*4: 85-132Vac or 170~265Vac, constant load.

*5: From No-load to Full-load, constant input voltage.

*6: For load voltage change, equal to the unit voltage rating, constant input voltage and full output current. For own doels the ripple is measured at 2~6V output voltage and full output current. For own doels, measured at 10-100%.

*5: From No-load to Full-load, constant input voltage.

*7: For 6V models the ripple is measured at 2~6V output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output voltage and full output current. For own doels the ripple is measured with 10-100% output voltage and full output current. For own doels the ripple is measured at 10-100% output output



General Specifications Genesys™ 750W/1500W

| 2.1 INPUT CHARACTERISTICS | |
|---|--|
| 1. Input voltage/freg. (*1) | 85~265Vac continuous, 47~63Hz, single phase |
| 2. Power Factor | 0.99@100/200Vac, rated output power. |
| 3. EN61000-3-2,3 compliance | Complies with EN61000-3-2 class A and EN61000-3-3 at 20~100% output power. |
| 4. Input current 100/200Vac | 750W:10.5A / 5A. 1500W:21A / 11A |
| 5. Inrush current 100/200Vac | 750W :Less than 25A, 1500W :Less than 50A |
| 6. Hold-up time | More than 20mS. 100% at 100% load. |
| 2.2 POWER SUPPLY CONFIGURATION | iniore than 20ms, 100vac, at 100% load. |
| | |
| 1. Parallel Operation | Up to 4 units in master/slave mode with single wire current balance connection |
| 2. Series Operation | Up to 2 units. with external diodes. 600V Max to Chassis ground |
| 2.3 ENVIRONMENTAL CONDITIONS | op to 2 units. With external alloads. Good max to chassis ground |
| 1. Operating temp | |
| 2. Storage temp | 0~50°C, 100% load. |
| 3. Operating humidity | -20~70°C |
| 4. Storage humidity | 30~90% RH (non-condensing). |
| 5. Vibration | 10~95% RH (non-condensing). |
| 6. Shock | MIL-810E, method 514.4, test cond. I-3.3.1. The EUT is fixed to the vibrating surface. |
| 7. Altitude | Less than 20G, half sine, 11mSec. Unit is unpacked. |
| | Operating: 10000ft (3000m), Derat output current by 2%/100m above 2000m, Non operating: 40000ft (12000m). |
| 12.4 EMC | |
| 1. Applicable Standards: | |
| | |
| 3. Fast transients | IEC1000-4-2. Air-disch8KV, contact disch4KV |
| 4. Surge immunity 5. Conducted immunity | IEC1000-4-4. 2KV |
| | IECT000-4-5. 1KV line to line, 2KV line to ground |
| 6. Radiated immunity | IEC1000-4-6, 3V |
| 7. Conducted emission | IEC1000-4-3, 3V/m |
| 8. Radiated emission | EN55022B, FCC part 15J-B, VCCI-B. |
| 9. Voltage dips | EN35022A, FCC part 15-A, VCCI-A. |
| 10. Conducted emission | EN61000-4-11 |
| 11. Radiated emission | FN55022B, FCC part 15-B, VCCI-B. |
| 2.5 SAFETY | |
| 1.Applicable standards: | EN55022A, FCC part 15-A, VCCI-A. |
| | UL 60950-1, CSA22.2 No.60950-1, IEC 60950-1, EN 60950-1 |
| | |
| | Models with Yout 50V: Output is SELV, all communication/control interfaces (RS232/485, IEEE, Isolated Analog, |
| | LAN, Sense, Remote Programming and Monitoring) are SELV. Models with 60V Vout 400V: Output is Hazardous, communication/control interfaces: RS232/485, IEEE, |
| | Models With 60V Your 400V: Output is razziraous, communication/Control interfaces: N323/463, IEEE, |
| 2 late for a description | Isolated Analog, LAN, Remote Programing and Monitoring (pins 1-3, pins 14-16) are SELV, Sense, Remote Programming and Monitoring (pins 8-13, pins 21-25) are Hazardous. Models with 400V Vout 600V: Output is Hazardous, all communication/control interfaces (RS232/485, IEEE, |
| 2.Interface classification | Models with 400V/Vous 600V/Outstand 1 Argandous all communication /control interfaces (PS222/405 IEEE |
| | Industry With 400V Vote 600V. Output is nazaraous, an communication/control interfaces (n3232/463, IEEE, |
| | Isolated Analog, LAN, Sense, Remote Programming and Monitoring) are Hazardous. Vout 50V models: Input-Output (SELV): 4242VDC 1min, Input-communication/control (SELV): 4242VDC 1min, |
| | linput-Ground: 2828VDC 1min, http://doi.org/10.1001/10 |
| | 60V Void 150V models Input-Output (Hazardous): 3425VDC 1min Input-communication/control (SELV): |
| | 60V Vout 150V models: Input-Output (Hazardous): 3425VDC 1min, Input-communication/control (SELV): 4242VDC 1min, Output(Hazardous)-SELV: 2307VDC 1min, Output(Hazardous)-Ground: 1414VDC 1min, |
| | Input-Ground: 2828VDC 1min. |
| 3 Withstand valtage | Input-ground: 2528/DC Trilli. 300V Yout 600V models: Input-Output(Hazardous): 3490VDC 1min, Input-communication/control (SELV): |
| 3.Withstand voltage | 4242VDC 1min, Hazardous. Output-communication/control(SELV): 4242VDC 1min, |
| | Output(Hazardous)-Ground: 2738VDC 1min, Input-Ground: 2828VDC 1min. |
| | More than 100Mohm at 25°C, 70% RH. |
| A Insulation resistance | , |
| 4.Insulation resistance | |
| 2.6 MECHANICAL CONSTRUCTION | |
| 1. Cooling | Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed. |
| 2. Dimensions (WxHxD) | W: 422.8mm, H: 43.6mm, D: 432.8mm (excluding connectors, encoders, handles, etc.) |
| 3. Weight | 750W: 7Kg (15 Lbs) 1500W: 8.5Kg (18 Lbs) |
| J. Weight | 750W: IEC320 AC Inlet. |
| 4. AC Input connector | |
| 5. Output connectors | 1500W: Screw terminal block, Phoenix P/N: FRONT-4-H-7.62, with strain relief |
| | 6V to 60V models: Bus-bars (hole Ø 8.5mm). 80V to 600V models: wire clamp connector, Phoenix P/N: FRONT-4-H-7. |
| 2.7 RELIABILITY SPECS | |
| 1. Warranty | 5 years. |

^{*1:} For cases where conformance to various safety standards (UL, IEC etc.) is required, to be described as 100-240Vac (50/60Hz). All specifications subject to change without notice.



Genesys[™] Power Parallel and Series Configurations

Parallel operation - Master/Slave:

Active current sharing allows up to four identical units to be connected in an auto-parallel configuration for four times the output power.

In Advanced Parallel Master/Slave Mode, total current is programmed and reported by the Master, Up to four supplies act as one.

Series operation

Up to two units may be connected in series to increase the output voltage or to provide bipolar output. (Max 600V to Chassis Ground).



P/N: IEEE

P/N: LAN

Remote Programming via RS-232 & RS-485 Interface

Standard Serial Interface allows chain control of up to 31 power supplied on the same bus with built-in RS-232 & RS-485 Interface.



Programming Options (Factory installed)

Digital Programming via IEEE Multi-Drop Interface

- Allows IEEE Master to control up to 30 slaves over RS-485 daisy-chain
- Only the Master needs be equipped with IEEE Interface
- IEEE 488.2 SCPI Compliant
- Program Voltage
- Measure Voltage
- Over Voltage setting and shutdown
- Error and Status Messages

- Program Current
- Measure Current
- Current Foldback shutdown

Isolated Analog Programming

Four Channels to Program and Monitor Voltage and Current. Isolation allows operation with floating references in harsh electrical environments. Choose between programming with Voltage or Current. Connection via removable terminal block: Phoenix MC1,5/8-ST-3.81.

Voltage Programming, user-selectable 0-5V or 0-10V signal.
 Power supply Voltage and Current Programming Accuracy ±1%
 Power supply Voltage and Current Monitoring Accuracy ±1.5%

Current Programming with 4-20mA signal.
 Power supply Voltage and Current Programming Accuracy ±1%
 Power supply Voltage and Current Monitoring Accuracy ±1.5%

LAN Interface

• Meets all LXI-C Requirements

• Address Viewable on Front Panel

Fixed and Dynamic Addressing

Compatible with most standard Networks

LXXI Compliant to Class C

VISA & SCPI Compatible

LAN Fault Indicators

• Auto-detects LAN Cross-over Cable

• Fast Startup



Power Supply Identification / Accessories How to order

| GEN | 600 | - 2.6 | - | - |
|--------|----------|------------|-----------------|------------------------------|
| | | | Factory Options | AC Cable option is 750W only |
| Series | Output | Output | Option: IEEE | Region: E - Europe |
| Name | Voltage | Current | IS510 | GB - United Kingdom |
| | (0~600V) | (0~2.6A) | IS420 | J - Japan |
| | (0 0001) | (0 2.07.1) | LAN | I - Middle East |
| | | | | U- North America |

Models 750/1500W

| Model | Output Voltage VDC | Output Current (A) | Output Power (W) |
|-------------|--------------------------|--------------------------|------------------------|
| GEN6-100 | 0~6V | 0~100 | 600 |
| GEN6-200 | 0 00 | 0 ~20 0 | 1200 |
| GEN8-90 | 0~8V | 0~90 | 720 |
| GEN8-180 | U~8V | 0~180 | 1440 |
| GEN12.5-60 | 0 12 5)/ | 0~60 | 750 |
| GEN12.5-120 | 0~12.5V | 0~120 | 1500 |
| GEN20 -38 | 0 201/ | 0~38 0~76 | 760 |
| GEN20 -76 | 0 ~20V | 0~76 | 750 750 |
| GEN30 -25 | 0 201/ | 0~25 | 1500 |
| GEN30 -50 | 0 ~30V | 0~19 | 760 |
| GEN40-19 | 0 40)/ | 0~38 | 1520 |
| GEN40-38 | 0~40V | 0 30 | 1320 |

| Model | Output Voltage VDC | Output Current (A) | Output Power (W) |
|---------------|--------------------------|--------------------------|------------------------|
| GEN50 -30 | 0 ~50V | 0~30 | 1500 |
| GEN60-12.5 | 0~60V | 0~12.5 | 750 |
| GEN60 -25 | 0 000 | 0~25 | 1500 |
| GEN80-9.5 | | 0~9.5 | 760 |
| GEN80 -19 | 0~80V | 0~19 | 1520 |
| GEN100-7.5 | | 0 ~7.5 | 750 |
| GEN1007.5 | 0~100V | 0~15 | 1500 |
| GEN150-5 | | 0~5 | 750 |
| G E N15 0 -10 | 0~150V | 0~10 | 1500 |
| | | 0~2.5 | 750 |
| GEN300-2.5 | 0 ~30 0V | 0~5 | 1500 |
| GEN30 0 -5 | 0 3000 | 0 ~1.3 | 780 |
| GEN600-1.3 | 0.6001/ | 0~2.6 | 1560 |
| GEN600-2.6 | 0~600V | | |

Factory option

RS-232/RS-485 Interface built-in Standard **GPIB** Interface Voltage Programming Isolated Analog Interface Current Programming Isolated Analog Interface LAN Interface (Complies with Class C)

P/N

IEEE IS 510 IS420 LAN

AC Cords sets (750W only)

| Region | Europe | United Kingdom | Japan | Middle East | North America |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Output Power | 750W | 750W | 750W | 750W | 750W |
| AC Cords | 10A/250Vac L=2m | 10A/250Vac L=2m | 13A/125Vac L=2m | 10A/250Vac L=2m | 13A/125Vac L=2m |
| Wall Plug | INT'L 7/VII | BS1363 | IEC320 - C13 | SI -32 | NEMA 5-15P |
| Power Supply Connector | IEC320 - C13 | IEC320 - C13 | ILC320 - C13 | IEC320 - C13 | IEC320 - C13 |
| Connector | | | | | |
| Part Number | P/N: GEN/E | P/N: GEN/GB | P/N: GEN/J | P/N: GEN/I | P/N:GEN/U |

Accessories

1. Communication cable

RS-232/RS-485 Cable is used to connect the power supply to the PC Controller.

| Mode | RS-485 | RS-232 | RS-232 |
|--|---|---|--|
| PC Connector Communication Cable Power Supply Connecto | DB-9F Shield Ground L=2m r EIA/TIA-568A (RJ-45) | DB-9F Shield Ground L=2m EIA/TIA-568A (RJ-45) | DB-25F Shield Ground L=2m EIA/TIA-568A (RJ-45) |
| P/N | GEN/485-9 | GEN/232-9 | GEN/232-25 |

2. Serial link cable*

Daisy-chain up to 31 Genesys[™] power supplies.

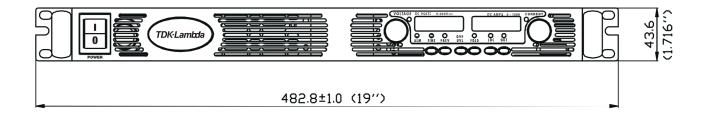
| Mode | Power Supply Connecto | Communication Cable | P/N |
|--------|-----------------------|----------------------|----------|
| RS-485 | EIA/TIA-568A (RJ-45) | Shield Ground L=50cm | GEN/RJ45 |

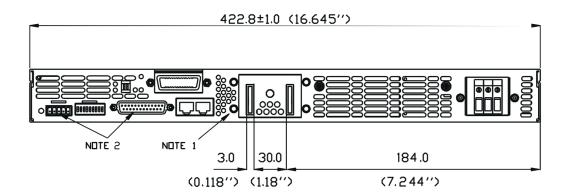
^{*} Included with power supply



TDK-Lambda

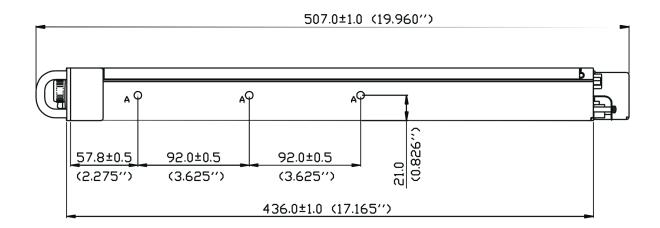
Outline Drawing Genesys™ 750W/1500W Units







TDK·Lambda



NOTE

- 1. Bus bars for 6v to 60v models (shown) Wire clamp connector for 80V to 600V models
- 2. Plug connectors included with the power supply
- 3. Chassis slides mounting holes #10-32 marked "A" GENERAL DEVICES P/N: C-300-S-116 or equivalent



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