# Genesys

Vout from 7.5V to 1500V (TOKIV and T5KV AC Inputs include 3-Phase 208VAC, 400VAC and 480VAC Programmable DC Power Supplies Full-Rack 10kW/15kW in 3U Height Built in RS-232 & RS-485 Interface Parallel Operation (Basic or Advanced)

> **Optional Interfaces:** LAN ( LX 1.5 compliant w/ Multi-Drop) IEEE (488.2 & SCPI compliant w/ Multi-Drop) USB (2.0 w/ Multi-Drop) Isolated Analog (5V/10V or 4-20mA Pgm/Mon)



**GenesysTM Family GENH-1U 750W Half-Rack** GEN-1U 750W-1.5kW-2.4kW Full-Rack GEN-2U 3.3kW-5.0kW Full-Rack GEN-3U 10kW-15kW Full-Rack

bmf

system parts



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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 10kW/15kW in Full-Rack 3U package
- High Output Current (up to 1000ADC)
- Popular worldwide 3Φ AC inputs, (208VAC, 400VAC, 480VAC)
- Power Factor 0.88 (Passive PFC on all 3Φ AC Inputs)
- Output Voltage from 7.5V (1000A) to 1500V (10A)
- Built-in RS-232/RS-485 Serial Interface (standard)
- Last Setting Memory, Safe/Auto-ReStart, Front Panel Lock/Unlock
- "Advanced Parallel" configuration reports total system current (up to four identical units)
- Global Commands for RS-232/RS-485 Serial Interface
- Continuous Encoders for Voltage and Current Adjustment (COARSE & FINE mode)
- Independent Remote SHUTOFF and Remote ENABLE/DISABLE
- 19" Rack Mounted for ATE and OEM Applications; zero-stack capability
- Optional Interfaces

LX 1.5 compliant LAN w/ Multi-Drop capability: option for all models IEEE (488.2 & SCPI compliant) w/ Multi-Drop capability: option for all models USB (2.0) w/ Multi-Drop capability: option for all models Isolated Analog Programming and Monitoring Interface 0-5V/0-10V: option for models with Vout < 600V, standard for models with Vout > 800V

- Worldwide Safety Agency Approvals: UL/cUL/EN 61010-1 (20V < Vout < 1500V); UL/cUL/EN 60950-1 (Vout < 20V)
- Five Year Warranty

## Applications

Genesys<sup>™</sup> power supplies are designed for demanding applications.

Test & Measurement systems using GPIB control save significant costs by incorporating the optional IEEE Drop Interface (IEMD) in the Master unit. This allows up to 30 Slave units to be used with the standard RS-485 Multi-Drop Serial interface.

Automated System designers will appreciate new, standard, remote programming features such as Global mands. Also, new high-speed status monitoring is available for the standard RS-485 and optional LAN (LXI compliant) Interface.

Industrial & Military high power systems can be configured with up to four identical units in parallel (up to 60 No space is required above or below each power supply (zero-stack). The Master unit can be configured by the user to report the total Output current of the combined system. Applications include Heaters, Magnets and Laser Diodes.

Aerospace & Satellite Testing systems use the complete Genesys<sup>™</sup> Family: 1U-750W Half-Rack, 1U-750V 1.5kW/2.4kW Full-Rack, <u>2U</u>-3.3kW/5kW Full-Rack and <u>3U</u>-10kW/15kW Full-Rack. All are identical in Front Panel, Rear Panel Analog and Digital Interface commands. A wide variety of Outputs (voltage and current) allows testing of many different user configurations.

Component Device Testing is simplified because of the many user-friendly control options in the Analog an

Digital interfaces. Lamps, capacitors, motors and actuators are typical devices tested.

Medical Imaging and Treatment systems require reliable power. Modular construction, SMT and thoroughly

proven designs assure continuous performance at full rated power.

Semiconductor Processing & Burn-in equipment designers appreciate the wide variety of worldwide AC

Inputs and DC Outputs from which to select, depending on application. Selectable Safe-Start and Auto Re-Start protects loads and process integrity. Typical applications include Magnets, Filaments and Heaters.

## 1 Genesys ™ 3U 10/15kW

## Front Panel Description (7.5V $\leq$ Vout $\leq$ 20V)



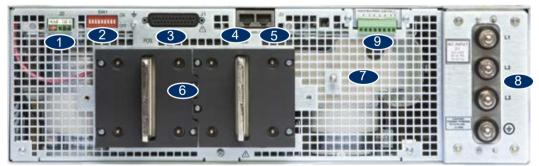
- 1. AC ON/OFF Switch (circuit breaker for Vout < 20V; rocker switch for Vout > 20V models)
- 2. Air Intake allows zero-stacking for maximum system flexibility and power density.
- 3. Continuous encoder controls Output Voltage, Address, OVP and UVL settings.
- 4. Voltage Display shows Output Voltage and directly displays OVP, UVL and Address settings.
- 5. Continuous encoder controls Output Current, sets Baud rate and Advanced Parallel mode.
- 6. Current Display shows Output Current and displays Baud rate. Displays total current in Parallel Master/Slave Mode.
- 7. Function/Status LEDs:
  - Alarm
  - Foldback Mode

- Preview Settings
- Remote Mode
- Output On
- 8. Pushbuttons allow flexible user configuration
  - Coarse and Fine adjustment of Output Voltage/Output Current and Advanced Paralle
    Preview Settings and set Voltage/Current with Output OFF, Front Panel Lock/Unlock
    Parallel Master/Slave (Basic and Advanced).
    Set Output OVP and UVL Limits.
    Set Output Current Foldback Protection.

Fine Control

- Go to Local Mode and select unit Address and Baud rate.
- Output ON/OFF and Safe-Start/Auto Re-Start mode.

## Rear Panel Description (7.5V < Vout < 20V)



- 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 Analog Program and Monitor (non-isolated) and other functions.
- 4. RS-485 OUT to other Genesys<sup>™</sup> Power Supplies.
- 5. RS-232/RS-485 IN Remote Serial Programming.
- 6. Output Connectors: Rugged 2 hole busbars (shown) for models where Vout < 20V,

single hole busbars for 20V < Vout < 300V Output, and threaded-stud terminals for models where Vout > 300V.

- 7. Exit air assures reliable operation when zero-stacked.
- 8. Input Terminals L1, L2, L3, and Ground (threaded studs).
- 9. Optional location for LAN (LXI 1.5), IEEE (488.2 & SCPI compliant), USB (2.0) or Isolated Analog Interface.



## Genesvs<sup>™</sup> 3U 10kW Specifications

Conv. co.Sh Golv - Var - (1500)         If No         7.3         10         7.4         2.0	1.0 MODEL	GEN		10-10001			25-400	30-333	40-250	50-200	60-167	80-125	100-100	125-80	
States Object Power         W         7/2         10/2															
4Efficiency (min) at low A6 (min, 40%); Rate Load:         N         P2         Contract Factory for other models           11 CONSTANT VOLTAGE MODE (V)         Contract Factory for other models         Contract Factory for other models           11 CONSTANT VOLTAGE MODE (V)         NN         20         22         23         24         28	•														
Locks Teal         Contact Federal of an object           1. Max. Line Reg () 1% - Vor 4 = 500°         RW         7.5         18         12.5         2.0 <td></td> <td></td> <td></td> <td>10.0</td> <td></td>				10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
11 CONSTANT VOLTAGE MODE (V)       INV	4.Lfficiency (min) at low AC line, 100% Rated Load	%	77												
Hask_Der Reg (0, 1%; Vor 30%) (0, 5%; 30% (0, 5%; 30% (20))         MW         7.5         18         12.5         2.0	1.1 CONSTANT VOLTAGE MODE (CV)					C	ontact Fa	ctory for o	ther mod	els					
Z. Max. Coals Reg (00.1% for Your V vort (1)         mV         20         2	1. Max. Line Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor <	<u> </u>													Т
e800% 0.1% for 600 + Vor < 100 + 100 (100 (11)         mV         60 model         60 model         60 model         60 model         60 model         75 model         75 model         100 (100 (100 model)           4 Output Notes, pp (200 ME), CV model, (11)          1         1         1         1         1         1         1         1         1         5         5           6 Output Notes, model         minite         Harmole Selection Compression (110 model)         minite         4         5         5           10 model         minite         Harmole Selection Compression (110 model)         minite         400         1         50           10 model         minite         Harmole Selection (110 model)         1         00         1	600V; 0.05% - 600V < Vor < 1500V)	₩¥													
3 Cuppel Regin m: (He-10H4); CV mode; (*)	2. Max. Load Reg (0.1% for Vor ≤ 30V; 0.05% for 30V < Vor	mV	20	20	20	20	20	20	20	20	20	25	25	25	
4 Output Noise, pp (20MHz), UV mode, (*)            5. Temporalizer Stability         min           7. Temporalizer Stability         min           8. Up Prog. Response Time, U - Vomax, full-toal         min           8. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min           9. Up Prog. Response Time, U - Vomax, full-toal         min	< 600V; 0.1% for 600V < Vor < 1500V)	mV	60	60	60	60	60	60	60	75	75	100	100	125	
S Remote Sense Compensation / Wire         ppm //C	3. Output Ripple, rms (5Hz~1MHz), CV mode; (*1)	V	1	1	1	1	1	1.5	2	3	3	4	5	5	
1. Emperature Stability         ms         1.005/ref Vor(rated) over 8 hours after 20 minute warm up (constant Line, Load & Temperature)           7. Emperature Constraint         100         ms         2.00 (± 0.02%) of Vor(rated)) / °C           8. Up-Frog Response Time (UV mode)         ms         100         ms         100           7. Constraint Constraint Response Time (UV mode)         ms         100         ms         100           7. Additional Response Time (UV mode)         ms         1000         0.00         80.5         62.5         50         40           7. Additional Response Time (UV mode)         ms         1000         0.00         80.5         62.5         50         40           7. Additional Response Time (UV mode)         ms         1000         0.00         80.5         60.2         50         40         333         185         125         94         75         60         32         42         Stable Response R	4. Output Noise, p-p (20MHz), CV mode; (*1)														
1 - Tomparature Coefficient         ms         2.00 (± 0.02% of Vo(max)) /*C         100           9 Up-Frog. Response Time, 0 - Vomax, IniTioad         ms         9.0           9 Up-Frog. Response Time, 0 - Vomax, IniTioad         ms         9.0           11 consent Response Time, 0 - Vomax, IniTioad         mA         100         100           12 consent response Time, 0 - Vomax, IniTioad         mA         1000         100         80.5           12 consent response Time, 0 - Vomax, IniTioad Volts (1/k + Initioad)         mA         1000         1000         80.5         62.5         50         40           12 consent response Time, 0 - Vomax, Initioad Volts (1/k + Initioad)         mA         1000         1000         80.5         60.4         400         333         188         160         125         64         75         60           333A (1/k + Initioad)         mA         1000         1000         600         500         400         333         188         160         125         64         75         60           334A (1/k + Initioad)         mA         1000         1000         600         500         400         333         128         160         12.5         64         75         60         12.5         160	5.Remote Sense Compensation / Wire	ppm / °C													1
1. Temperature Coefficient         ms         2.00 (± 0.02% of Vo(reled))/*C         100           10. Up+Trog Response Time, U = Vomax, INHold         ms         90           10. Up+Trog Response Time, U = Vomax, INHold         60           11. Transient Response Time (U = Vomax, INHold)         100           12. CORSTANT CORRENT MODE (CC)         100           13. Coll Visit, Int and X354, 007/31: TTA + U         mA           10.00         1000         500         400         333         125         100         53.5         62.5         50         40           12. CORSTANT CORRENT MODE (CC)         mA         1000         1000         500         400         333         188         150         22.5         60         40         233           13. Coll Xies (Visit Int and Xies (Visit I	6. Temperature Stability	ms	± 0.05%	6 of Vo(ra	ted) over	8 hours a	fter 30 mi	nute warm	nup (con	stant Lin	e. Load &	Temperat	ture)		
0. Up-Pior, Response Time, U - Vomax, NulField         ms         10           10. Transmit Response Time (U mode); ("2); ("3)         Less than 3           12. CONSTANT CURRENT MODE (CC)         mA         1000         80.0         50.0           1. Name Reg (U mode); ("2); ("3)         mA         1000         80.0         50.0         40.0           3.20, 15%, Ior (Tar Line - 333A, 0.05%) = TAX - tor         mA         1000         1000         80.0         50.0         40.0         33.3         188         150.1         125.0         40.7         60.0           3.20, 40, 27%, Ior (Tar Line - 333A, 0.05%) = TAX - tor         mA         1000         1000         80.0         50.0         40.0         33.3         188         150.1         126.0         40.0         33.3         188         150.1         126.0         40.0         33.3         188         150.1         126.0         40.0         33.3         188         150.1         126.0         40.0         33.0         160.03         126.0         40.0         33.0         160.03         126.0         40.0         33.0         160.03         126.0         126.0         126.0         126.0         126.0         126.0         126.0         126.0         126.0         150.0         1	7. Temperature Coefficient	ms			,				- F (						+
0 Up-Programming Accounce         00           10 Up-Programming Accounce         00           12 CONSTANT CURRENT MODE (CC)         1           13 PROTICE (CC)         1           14 Constant Current         1           1 COP         1         0.05% of foriginator) // C           1 COP         1         0.05% of foriginator) // C           2 COP brag         1         0.00% foriginator (2C) // Marc 2S // CP // Marc 2S // CP // C           2 COP brag         1         0.00% foriginator (2C) // Marc 2S // CP // Marc 2S // CP // C           2 COP brag         1         0.00% foriginator // Marc 2S // CP // Marc 2S // CP // Marc 2S // CP	8. Up-Prog. Response Time, 0 ~ Vomax, full-load	ms				-,,, -		1	00						+
10.         Instant Response Time (CV mode); ("2); ("3)         Less than 3           12.         CONSTANT CURRENT MODE (CC)         mA         1000         1000         800         500         400         333         125         100         835.         625.         50         40           2.         Add (CV)         (CV)         mA         1000         1000         800         500         400         333         1188         150         125.         94         75         60         333         318         150         125.         94         75         60         320         4000         2560         1000         640         444         280         450         67.         60         32         41         333         188         150         125.         94         75         60         32         41         3200 (± 0.03% of log/add)) / °C         10.05         32         41         333         100         333         188         150         125.         90         40         32         10.02         333         100         1000         1000         1000         100         100         125.         100         125.         100         10.02         10.02         10.02 <td></td> <td>-</td> <td colspan="7"></td> <td>+</td>		-								+					
12 CONSTANT CURRENT MODE (CC)       1       1       1000															+
3334, 0.15%, - Ior < 17A)	1.2 CONSTANT CURRENT MODE (CC)							L63	s than 5						_
2 Max. Loval Reg (1: 1% - 1k - 3334, 0.67%) - 17A - to			1000	1000	800	500	400	222	105	100	00 F	60 F	50	40	T
333A, 12%, Ior C 17A)         -         -         mA         1000         800         500         400         333, 128         150         125         94         75         60           4. Tangeature Stability, Condicant         mA         ± 0.05% of loc/ated) over 8 hours, after 30 minute warm up (constant Line, Load & Temperature)         ± 3           1. Streparature Condiciont         ± 0.05% of loc/ated) over 8 hours, after 30 minute warm up (constant Line, Load & Temperature)         ± 3         5         5         0         3           1. ORD         -         Constant current         ± 300 (± 0.05% of loc/ated) over 8 hours, after 30 minute warm up (constant Line, Load & Temperature)         ± 3         5         5         5         0         12         0.02 PLose         5         5         5         10         10         10         10         10         10         10         10         10         10         12         35         10		mA	1000	1000	800	500	400	333	125	100	83.5	¢2.5	50	40	
2. Output Replete, mer, (Stat-1Mkb), CC-mode         mA         Favor 4000         2600         414         210         410         67         For any antice stability, and any and any and any and any and any		m^	1000	1000	800	500	400	333	189	150	125	04	75	60	
4. Toregonaus Catalities         porce         ± 0.05% of log(rated) over 8 hours, after 30 minute warm up (constant Line, Load & Temperature)           1.3 FROTECTIVE FUNCTIONS         ± 30.05% of log(rated))/*C           1.3 Cold hype         0         0           2. COR hype         0         0           3. Foldback Protection FOLD0		mA						444				• ·			
5 Tampeature Coefficient         pmm         # 0.05% of lo(rated) over 8 hours, after 30 minute warm up (constant Line, Load & Temperature)           1:3 PROTECTIVE FUNCTIONS         1.0CP           1:0CP         3.00 (±0.03% of lo(rated))/1°C           2.0CP topic         %           3. Foldback Response Time					2000		0.0		200					02	Τ
1.3 PROTECTIVE FUNCTIONS       1: 200 (2: 0.03% of loc(rated)) /*C         1. OCD       0: 0         2. OCD type       0: 0         2. OCD type       0: 0         3. Foldback Production (FOLD)		nnm/°C	± 0.05%	6 of Io(rate	ed) over 8	hours, at	fter 30 mii	nute warm	up (con	stant Line	e, Load &	Temperat	ure)		
1 OCD         %         0 ~ 100           2 OCD type         %         0 ~ 100           3 Foldback Protection (FDLD)          Constant current           4 Foldback Protection (FDLD)          Constant current           5. OVP programming Accuracy          Invertershuld down; Manual reset by AC On/OI recycle, OUT button, Remote Analog or Digital communication           6. OVP Programming Accuracy          Invertershuld down; Manual reset by AC On/OI recycle, OUT button, Remote Analog or Digital communication           7. OVP Top Point         %         5% to 105% of Vo(rated) for Vor 6 600V; 10% to 105% of Vo(rated) for 800V            10. Over Temperature Protection (OTP)         The         Less than 10 (for Output to begin to drop) for 800V            11. Phase-Loss Protection         s         Shut down; Hinsmal temps in drop) for 800V          Vor < 1500V			± 300 (:	± 0.03% o	of lo(rated)	)) / °C									
2. OCP tope         %         0 ~ 100           S. Foldback Topection (EDLD)          Constant current           4. Foldback Topection (EDLD)          Output shutdown; Manual reset by front panel OUT button or Digital communication, user-selectable           5. OVP hype         s.         Less than 1 (Mn = 0.25 / Msz = 25 / DEfault = 0.25); Settable vis a PED command           6. OVP hype         s.         Inverter shut-down; Manual reset by AC On/Off recycle; OUT button, Remote Analog or Digital communication           7. OVE Trip Point         %         ± 5% of Vo(rated) for Vor < 600V; 10%, to 105% of Vo(rated) for 600V < Vor < 1500V															
A. Collaback         Constant current           J. Foldback Response Time		%	0~100												Т
A robusk Protection     A robusk Protection     A robusk Protection     A robusk Response Time     A robusk Response     A robusk Response Time     A r															+
SOVP bype       s       Less than 1 (Mn = 0.25 / Max = 25) Default = 0.25): Settable via "=BUC command         6. OVP programming Accuracy					· Manual i	reset hv fi	ont nane	OUT buff	on or Dic	nital com	nunicatio	n user-se	lectable		+
2. Our programming Accuracy															+
2.007       Trigotiming       1								, .					al commuir	ration	╋
Z. OVP. Trip Point       V       5% to 105% of Vo(rated) for Vor < 600V; 10% to 105% of Vo(rated) for 600V < Vor < 1500V	6. OVP Programming Accuracy	1				in reset by	A0 01/0	in recycle,	001.00					ication	
8. OVP Response Time         Shall always be greater than 105% of Vo(setting). Default = 105% of Vo(rated)           10. Over-Temperature Protection (OTP)         ms         Less than 2.0 (for Output to begin to drop) for Vor < 600V	7. OVP Trip Point														╀
10. Over-Temperature Protection (OTP)       ms       Less than 10 (for Output to begin to drop) for Vor ≤ 600V         11. Phase-Loss Protection       s       7.4 (for ALC OutOT suite) to hegin to drop) for Vor ≤ 600V         14. REMOTE ANALOS - CONTROLS & SIGNALS 1. Vot       7.7 (for ALC OutOT suite) thum On)       7.7 (for ALC OutOT Suite) thum On)         Voltage Programming 4. tout Voltage Programming 5. Stud- Outlage Monamming 4. tout Resistor Programming 5. Stud- Off (SO). Control. (rear-panel) 6. Output Current Monitor 7.       Shut down if internal temperature exceeds safe operating levels (Latched: Safe./Lunathed: Auto.Restart)         0. (f) (SO). Control. (rear-panel) 6. Output Current Monitor 7.       7.0 (for 0 - 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC Signal 10. Enable/Disable 11. Remotel.cost 0-100%, 0 - 5/10 kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)       10.5 (SO). Control. (rear panel)         9. CV/CC Signal 10. Enable/Disable 11. Remotel.cost 0-100%, 0 - 5/10 kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of lo(rated)       10.5 (SO). Control. (rear panel)         1. Gentrel Functiona       0 - 10V, Accuracy: ±1% of lo(rated), user-selectable       10.5 (SV or 0 - 10V, Accuracy: ±1% of lo(rated)         1. Sented Loss 0       0 - SV or 0 - 10V, Accuracy: ±1% of lo(rated), user-selectable       10.5 (SV or 0 - 10V, Accuracy: ±1% of lo(rated)         1. Control. Functiona       0 - SV or 0 - 10V, Accuracy: ±1% of lo(rated), user-selectable       10.5 (SV or 0 - 10V, Accuracy: ±1% of lo(rated), user-selectable<	0. OV/D Development Time 0. Marc OV/D Development		5% to 1	05% of Vo	o(rated) fo	or Vor $\leq 6$	00V; 10%	to 105%	of Vo(rat	ed) for 60	)0V < Vor	r ≤ 1500V			
10. Uver-1emperature Protection (OTP)       Less than 10 (0f Output to begin to dop) for 800 V Vor ± 1500V         11. Phase-Loss Protection       7. (from AcC On/Off switch tum On)       7. Stout 4000 V Vor ± 1500V         14. REMOTE ANALOG CONTROLS & SIGNALS 1. Voit		ms								% 01 VO(I	aled)				+
1.4 REMOTE ANALOG CONTROLS & SIGNALS 1: Vot       7 (from AC On/Off switch turn On)         Votage Programming 2: lout Votage Programming 3: Vot       Shut down if internal temperature exceeds safe operating levels (Latched: Safe / Unlatched: Auto. Resistor Programming 5: Shut         Resistor Programming 4: lout Resistor Programming 5: Shut       Yes, power supply shutdown (Latched: Safe-Start / Unlatched: Auto. Restart)         Of (SO). Control (rear panel) 6. Output Current Monitor 7.       Output Voltage Monitor 8. Power Supply OK (PS OK) Signal (D=100%, 0 = 5V or 0 = 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC: Signal 10. Enable/Disable 11. Remote/Local (D=100%, 0 = 5V or 0 = 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC: Signal 10. Enable/Disable 11. Remote/Local (D=100%, 0 = 5V or 0 = 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         1.6 Enable/Disable 11. Remote/Local (D=100%, 0 = 5V or 0 = 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         1.6 Entrol Functions       0 = 100%, accuracy: ±1% of Vo(rated), user-selectable         1.7 Control (Functions)       0 = 5V or 0 = 10V, Accuracy: ±1% of Vo(rated), user-selectable         0 = 5V or 0 = 10V, Accuracy: ±1% of Vo(rated), user-selectable       0 = 5V or 0 = 10V, Accuracy: ±1% of Vo(rated)         1.6 Entrol Functions       0 = 5V or 0 = 10V, Accuracy: ±1% of Vo(rated)       0 = 0.4V), Max sink current = 10mA         0 = 5V or 0 = 10V, Accuracy: ±1% of Vo(rated)       0 = 0.4V), Max sink current = 10mA       0 = 0.4V), Max sink current = 10mA </td <td></td> <td>1115</td> <td>1</td> <td>,</td> <td>•</td> <td>-</td> <td>• •</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		1115	1	,	•	-	• •								
1.1. Chamber Andors & Store & S	11. Phase-Loss Protection	<u> </u>	Less the	an 2.0 (foi	r Output to	o begin to	drop) for	600V < V	or < 1500	)V					+
Voltage Programming 2. tout Voltage Programming 5. Volt	1.4 REMOTE ANALOG CONTROLS & SIGNALS 1. Vo	at	7 (from	AC On/Of	ff switch to	urn On)									+
Resistor Programming 4. lout Resistor Programming 5. Shul       I Yes, power supply shutdown (Latched: Safe-Start / Unlatched: Auto-Restart)         Off (SO) Control (rear panel) 6. Output Current Monitor 7         Output Voltage Monitor 8. Power Supply OK (PS OK) Signal 0~100%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ±1% of Io(rated)         9. CV/CC. Signal 10. Enable/Disable 11. Remote/Local 0~100%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ±1% of Io(rated)         Selection 12. Remote/Local Signal       0~100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of Io(rated)         1.5 FRONT PANEL       By Voltage: 0.6V = DIS, 2-15V = ENA (default) or by Dry Contact: Open = ENA, Short = DIS (user-selectable logic)         1. Centrel Functions       0 ~ 10V, Accuracy: ±1% of Io(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)       0         1. Centrel Functions       0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)       0         1. Centrel Functions       0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)       0         1. Centrel Function       0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)       0         1. Centrel Function       0 ~ 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated)         1. Centrel Function       0 ~ 5V or 0 ~ 10V, Accuracy: ±0 VO (Tace T); Maximum v		at	Shut do	wn if inter	nal tempe	erature ex	ceeds sa	fe operatir	ng levels	(Latched	: Safe / U	Inlatched:	Auto)		+
Off. (SD) Control. (rear_panel). 6. Output Current Monitor 7.         Output Voltage Monitor 8. Power. Supply OK (PS. OK) Signal 0-100%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC. Signal 10. Enable/Disable 11. Remote/Local 0-100%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC. Signal 10. Enable/Disable 11. Remote/Local 0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         9. CV/CC. Signal 10. Enable/Disable 11. Remote/Local 0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         1.6 FRONT PANEL       0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ±1% of Vo(rated)         1.6 FRONT PANEL       0-5V or 0 ~ 10V, Accuracy: ±1% of Io(rated), user-selectable         0 5V or 0 ~ 10V, Accuracy: ±1% of Io(rated), user-selectable       0         0 5V or 0 ~ 10V, Accuracy: ±1% of Vo(rated), user-selectable       0         Vest. TL High 4 - 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA       0         Dry contact: Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V       0         Signals operating mode; Open collector: Local / 2 ~ 15V = Remote       Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Volt/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)       OV/P/UVL manual adjust by separate encoders (COARSE and FINE adjustenctable)		-	L <sub>Yes, po</sub>	wer suppl	ly shutdov	vn (Latche	ed: Safe-S	Start / Unla	atched: A	uto-Rest	art)				
Output Voltage Monitor 8. Power Supply OK (PS OK) Signal 0~10%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)           9. CV/CC Signal 10. Enable/Disable 11. Remote/Local 0~10%, 0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)           Selection 12. Remote/Local Signal         0~100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)           1.5 FRONT PANEL         0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)           1.6 ontrol Functions         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable           0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0           0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0           1. Control Functions         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable           1. Control Functions         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable           1. Vort 0 vort 0 v 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0           1. Vort 0 vort 0 v 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0           1. Vort 0 vort 0 v 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0           1. Vort 0 vort 0 v 10V, Accuracy: ± 1% of Vo(rated)         0.4V), Max sink current = 10mA           1. Dry contact: Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15	Off (SO) Control (rear panel) 6 Output Current Monitor	7													
9. CV/CC_Signal_10. Enable/Disable_11. Remote/Local_0-100%, 0 - 5V or 0 - 100%, user-selectable, Accuracy & Linearity: ± 1% of lo(rated)         Selection 12. Remote/Local Signal       0-100%, 0 - 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of lo(rated)         1.5 FRONT PANEL       0-100%, 0 - 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of lo(rated)         1.Control Functions       0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)         1.Control Functions       0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)       0 - 6V or 0 - 10V, Accuracy: ± 1%         1.Control Functions       0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)       0 - 6V or 0 - 10V, Accuracy: ± 1%         0 - 5V or 0 - 10V, Accuracy: ± 1% of lo(rated)       0 - 6V or 0 - 10V, Accuracy: ± 1%         0 - 5V or 0 - 10V, Accuracy: ± 0       0 - 70V, Max sink current = 10mA         0 - 5V or 0 - 10V, Accuracy: ± 0       0 - 6V or 0.4V), Max sink current = 10mA         0 - 5V or 0 - 10V       Selects Remote or Local operation	Output Voltage Monitor 8, Power Supply OK (PS OK) Sign	<mark> </mark> 0~100%,	0 ~ 5V or	0~10V,	user-sele	ctable., A	ccuracy 8	Linearity	: ±1% of	Vo(rated	)				
Selection 12, Remote/Local Signal       0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)         1.5 FRONT PANEL       0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of Io(rated)         1.Control Functions       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Io(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Io(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Io(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Io(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated)         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable       0 ~ 0.4V), Max sink current = 10mA         Dry contact: Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V       Signals operating mode: Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)       OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel			0 ~ 5V or	0~10V,	user-sele	ctable, Ac	curacy &	Linearity:	± 1% of	lo(rated)					
0-100%, 0 ~ 5/10kohm full-scale, user-selectable, Accuracy & Linearity: ± 1% of lo(rated)         1.5 FRONT PANEL         By Voltage: 0.6V = DIS, 2-15V = ENA (default) or by Dry Contact: Open = ENA, Short = DIS (user-selectable logic)         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         Ves. TTL High = OK, OV = Fail (500chm series impedance)         CV: TTL High (4 ~ 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA         Dry contact; Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Voutage: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter display voltage at power supply (Local sense) or at load (Remote sense)         Care L E/DIN       Digits, Accuracy: ± 0.5% of lo(rated) ±1 count		0~100%,	0~5/10k	ohm full-s	cale, use	r-selectab	le, Accura	acy & Line	earity: ± 1	% of Vo	rated)				T
1.5 FHOW FPANEL       By Voltage: 0.6V = DIS, 2-15V = ENA (default) or by Dry Contact: Open = ENA, Short = DIS (user-selectable logic)         1.Control Functions       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         Yes. TTL High = OK, 0V = Fail (5000hm series impedance)         CV: TTL High = OK, 0V = Fail (5000hm series impedance)         CV: TTL High = OK, 0V = Fail (5000hm series impedance)         CV: TTL High = OK, 0V = Fail (5000hm series impedance)         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         Rs-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave units(s)         Voltage: a digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter digits, Accuracy: ± 0.5% of voltereo; provide po	•														
1. Control Functions       0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of lo(rated), user-selectable         0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         Ves. TTL High = OK, 0V = Fail (500chm series impedance)         CV: TTL High = OK, 0V = Fail (500chm series impedance)         CV: TTL High = OK, 0V = Fail (500chm series impedance)         CV: TTL High (4 ~ 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA         Dry contact; Open = OFF, Short = ON: Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Corene LFOR: DEPLYENT OCH ONE (CHI CON COTE) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td>,</td> <td>user-selec</td> <td>table logic)</td> <td></td> <td></td>								-			,	user-selec	table logic)		
0 ~ 5V or 0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable         Yes. TTL High = 0K, 0V = Fail (500ohm series impedance)         CV: TTL High (4 ~ 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA         Dry contact; Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Votage: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Carent 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 co	1.Control Functions								opon 2						-
Yes. TTL High = OK, 0V = Fail (500ohm series impedance)         CV: TTL High (4 ~ 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA         Dry contact; Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by vOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: H x = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Vottage: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         CUTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Contract: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)															+
CV: TTL High (4 ~ 5V), Max source current = 10mA; CC: TTL Low (0 ~ 0.4V), Max sink current = 10mA         Dry contact; Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Vottage: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Current: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)															-
Dry contact; Open = OFF, Short = ON; Maximum voltage across Enable/Disable contacts = 6V         Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Voltage: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Carnet I: EDIT: DEDITION COLL ON ONE SUPPORT (CURRENT Adjust of CURRENT Adjust of the parallel Master (Slave U) = 0000000000000000000000000000000000			-				<u> </u>	<u>,</u>	(0 0 4)	A Max a	al auron	4 - 10m A			+
Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 ~ 15V = Remote         Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Votage: 4 otgits, Accuracy: ± 0.5% of vo(rated) ±1 count         CULTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Career 1 Editar DBCH///WL COLD_REMU/COL UNERON CURRENT Adjust encoder															_
Signals operating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)         Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Fort Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Fort Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Fort Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Fort Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder. Fort Panel Lock/Unlock         Advaced Panel Lock/Unlock         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Vortage: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Careet Editar DRD/WUM COLL OUE ON/CEE									. =	-	iacts = 6\	v			+
Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable)         OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Voitage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voitage at power supply (Local sense) or at load (Remote sense)         Career displays voitage at power supply (Local sense) or at load (Remote sense)															╇
OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         2.Display         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter of tisplays voltage at power supply (Local sense) or at load (Remote sense)         Careed Foir DRD/UFW COULD COURD		Signals o	perating r	node; Ope	en collecto	or: Local =	= Open (N	/lax voltag	e = 30V)	, Remote	= On (Ma	ax sink cui	rrent = 10m	A)	
OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock         Address selection by VOLTAGE Adjust encoder, # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         2.Display         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter of tisplays voltage at power supply (Local sense) or at load (Remote sense)         Careed Foir DRD/UFW COULD COURD		Mandelland									-4-1-1-)				-
Address selection by VOLTAGE Adjust encoder. # of Addresses = 31         AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Careet Elbiar, DRD/WUM, COUP, CMW, COUP, CM											ctable)				
AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local         RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         Votage: 4 digits, Accuracy: ± 0.5% of vo(rated) ±1 count         CULTAGE meter of tisplays voltage at power supply (Local sense) or at load (Remote sense)         Camera (EDIar DED/UML, EOL D, DED/UML, EOL O, DED/UCEE, OU/COE, EN/E										nlock					
RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch         Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         2.Display         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Careat - Epirar DRD/UEW, EOLD, DRDP/UEW, COLL ON USE ON					,					0.4. 5					_
Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)         Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         2.Display         Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)         Carget (E)::::::::::::::::::::::::::::::::::::											;), Go-to-l	Local			
Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), S = Slave unit(s)         2.Display         Voitage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count         Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count         VOLTAGE meter of tisplays voltage at power supply (Local sense) or at load (Remote sense)         Carrent: For a DED (UNCES ON COLL ON															
2.Display Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)												,	ncoder)		
Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)		Advanced	d Parallel	Master/SI	ave: Hx =	Master u	nit, where	e x = # of S	Slave uni	ts (0 to 4	), S = Slav	ve unit(s)			
Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)	2.Display														-
Create LED'AN DEFINIENT FOLD DEFAIL OCAL OUT ON/OFF OV/CC FINE		Current: 4	4 digits, A	ccuracy: ±	± 0.5% of	lo(rated)	±1 count								
Create LED'AN DEFINIENT FOLD DEFAIL OCAL OUT ON/OFF OV/CC FINE		VOLTAG	E meter d	lisplays vo	oltage at p	ower sup	ply (Local	l sense) o	r at load (	(Remote	sense)				$\vdash$
	3.Indications														+

	Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count	~
	VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense)	×
	Green LED's: PREVIEW, FOLD, REM/LOCAL, OUT ON/OFF, CV/CC, FINE	
3.Indications	Red LED: ALARM (OVP, OTP, FOLD, AC FAIL, ENA, SO)	Х
1.6 DIGITAL PROGRAMMING & READBACK		
1. Vout Programming Accuracy	± 0.5% of Vo(rated)	Х

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1. Volt Frogramming Accuracy	± 0.5% 01 V0(lated)	^
2. lout Programming Accuracy	$\pm$ 0.5% of lo(rated) for units with lo < 187.5A; $\pm$ 0.7% of lo(rated) for lo $\geq$ 187.5A	X
3. Vout Programming Resolution	0.02% of Vo(rated)	X
4. lout Programming Resolution	0.04% of lo(rated)	X
5. Vout Readback Accuracy	± (0.1% of Vo(actual) + 0.2% of Vo(rated))	X
6. lout Readback Accuracy	$\pm$ (0.1% of lo(actual) + 0.4% of lo(rated))	X
7. Vout Readback Resolution	0.02% of Vo(rated)	X
8. lout Readback Resolution	0.02% of lo(rated)	×
9. OV Response Time	20ms maximum (between Vout exceeding IEEE Limit and supply Inhibit turning On)	×
10. Other Functions	Set OVP/UVL limits; Set Local/Remote, Operating parameters and Status, Get Identity	X

\*1 Ripple and Noise at Vo(rated) and rated Load, Ta = +25C and nominal AC Input per EIJ R900A.
 \*2. Time for the Output voltage to recover within 2% of rating for a load current change of 50-100% or 100-50% of lo(rated).
 \*3. Operating with a load that continuously pulses the current (or voltage) can reduce the operating life of the Power Supply. Please contact TDK-Lambda Sales/Technical Support to discuss the application in detail.
 All specifications subject to change without notice.

## Genesvs<sup>™</sup> 3U 10kW Specifications

1.0 MODEL	GEN	150-66	200-502	250-40	300-33	400-25	500-20	600-178	00-12.510	00-10	1250-8	1500-6.7	
1.Rated Output Voltage	VDC	150	200	250	300	400	500	600	800	1000	1250	1500	
2.Rated Output Current	ADC	66	50	40	33	25	20	17	12.5	10	8.0	6.7	
3.Rated Output Power	kW	9.9	10.0	10.0	9.9	10.0	10.0	10.2	10.0	10.0	10.0	10.0	
4.Efficiency (min) at low AC line, 100% Rated Load	%				83			-	1		93.5		
1.1 CONSTANT VOLTAGE MODE (CV)					Con	tact Facto	ry for othe	er models					
1. Max. Line Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor <		1											=
600V; 0.05% - 600V < Vor < 1500V) 2. Max. Load Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor <	mV	75	100	125	150	200	250	300	400	500	625	750	
2. Max. Load Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor < 600V; 0.1% - 600V < Vor < 1500V)	mV	75	100	125	150	200	250	300	800	1000	1250	1500	
3. Output Ripple, rms (5Hz~1MHz), CV mode; (*1)	mV mV	25								100	120	140	
4. Output Noise, p-p (20MHz), CV mode; (*1)	<mark>  mV</mark>	150	<del>175</del>	200	200			350	700	800	1000	1400	⊢
5.Remote Sense Compensation / Wire	V V	5	5	5	5	5	5	5	5	5	5		┢
6. Temperature Stability		+ 0.050	/ of Vo(ra	tod) ava	r 8 hours	oftor 30 m	inuto war		etant Line	Lood &	Temperatur	<i>io</i> )	┢
7. Temperature Coefficient	ppm / °C		0.02% of			alter 30 fi				e, Luau a	remperatur	e)	╀
8. Up-Prog. Response Time, 0~Vomax, full-load	ms	1200(	0.02 /0 01	v o(ratea	100				1		17		┢
9. Up-Prog. Response Time, 0~Vomax, no load	ms												
10. Transient Response Time (CV mode); (*2), (*3)	ms				Less thar	3					than 1		┢
1.2 CONSTANT CURRENT MODE (CC)										Less			L
1. Max. Line Reg. (0.1% - lor > 333A: 0.050% - 17A < lor <													
333A; 0.15% - lor < 17A)	mA	33	25	20	17	13	10	9	19	15	12	10	
2. Max. Load Reg (0.1% - lor > 333A; 0.075% - 17A < lor <													
333A; 0.2% - lor < 17A)	mA	50	38	30	25	19	15	13	25	20	15	14	
<ol><li>Output Ripple, rms (5Hz~1MHz), CC mode</li></ol>	mA	26	20	16	13	10	8	7	15	10	6	4	
4. Temperature Stability													
5. Temperature Coefficient	ppm / °C	± 0.05%	6 of Io Ra	ted over	8 hours a	fter 30 mi	nute warr	n up (con	stant Line	, Load & T	emperature	e)	
1.3 PROTECTIVE FUNCTIONS		± 300 (	0.03% of	lo(rated)	)/°C								1
1. OCP	•												
2. OCP type	%	0~100											T
3. Foldback Protection (FOLD)			nt current					_					┼─
4. Foldback Response Time					l rooot by	front non		utton or D	igital com	munication	n, user-sele	otoblo	
5. OVP type											i, user-sele	clapie	
6. OVP Programming Accuracy	s								a "FBD" c				
					ial reset b	y AC On/	Jff recycl	e, OUT bi	utton, Rem	note Analo	g or Digital	comm.	
7. OVP Trip Point	%	± 5% o	f Vo(rated	)									
8. OVP response time	V								ated) - 60 5% of Vo(r	0V < Vor < ated)	= 1500V		
9. Max. OVP reset time	ms	Less th	an 10 (for	Output t	to begin to	o drop) for	Vor < 60	0V					Γ
10. Over-Temperature Protection (OTP)	s		<del>an 2.0 (fo</del>			<del>o drop) fo</del>	<del>r 600V &lt;</del>	Vor < 150	0∨				$\vdash$
11. Phase-Loss Protection			AC On/O		,								$\vdash$
1.4 REMOTE ANALOG CONTROLS & SIGNALS		Shut do	wn if inte	rnal temp	<del>oerature c</del>	xceeds sa	afe opera	ting levels	. (Latchee	I: Safe / Ui	nlatched: A	uto) —	┢
1. Vout Voltage Programming		Yes, po	wer supp	ly shutdo	wn (Latcl	ned: Safe-	Start / Ur	latched: /	Auto-Resta	art)			
2. lout Voltage Programming													
3. Vout resistor programming									Vo(rated)				
4. lout Resistor Programming	1		r 0 ~ 10V,			,	-		. ,				
5. Shut-Off (SO) Control (rear panel)									% of Vo(ra				
6. Output Current Monitor							-	-	% of Io(rate	,			
7. Output Voltage Monitor					•			pen = EN	A, Short =	DIS (user	r-selectable	logic)	
8. Power Supply OK (PS_OK) Signal	1		Accuracy		, ,								
9. CV/CC Signal	0 ~ 5V or		-		,								$\square$
10. Enable/Disable	1	-	K, 0V = Fa			•	,						t
11. Remote/Local Selection										nk current	= 10mA		+
12. Remote/Local Signal						-			sable cont	acts = 6V			$\vdash$
1.5 FRONT PANEL			Local ope										$\vdash$
	Signals d	perating I	<del>node; Op</del>	en collec	tor: Local	= Open (	Max volta	<del>ge = 30V</del>	<del>), Remote</del>	= On (Ma:	<del>x sink curre</del>	<del>nt = 10mA)</del>	⊢
Control Functions													

	Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable) OVP/UVL manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock Address selection by Voltage Adjust encoder. # of Addresses = 31 AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear-panel DIP-switch	X X X X
	Baud rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder) Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4), Slave = Slave unit(s)	× ×
2.Display	Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count Current: 4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense) Green LED:: PBEVLEW_FOLD_BEM/LOCAL_OLT_ON/OFE_CV/CC_FINE	
3.Indications	Red LED: ALARM (OVP, OTP, FOLD, AC FAIL, ENA, SO)	х

1.6 DIGITAL PROGRAMMING & READBACK ± 0.5% of Vo(rated) 1. Vout Programming Accuracy 2. lout Programming Accuracy 3. Vout Programming Resolution ± 0.5% of lo(rated) for units with Io < 187.5A; ± 0.7% of lo(rated) for Io ≥187.5A Х 0.02% of Vo(rated) Х 4. lout Programming Resolution 5. Vout Readback Accuracy 0.04% of lo(rated) X ± (0.1% of Vo(actual) + 0.2% of Vo(rated)) х 6. lout Readback Accuracy ± (0.1% of lo(actual) + 0.4% of lo(rated)) x Vout Readback Resolution 0.02% of Vo(rated) 8. lout Readback Resolution 0.02% of lo(rated) 9. OV Response Time 20ms maximum (between Vout exceeding IEEE Limit and supply Inhibit turning On) 10. Other Functions Set OVP/UVL limits; Set Local/Remote, Operating Parameters and Status; Get Identity ×

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All specifications subject to change without notice.



## Genesys<sup>™</sup> 3U 15kW Specifications

1.0 MODEL	GEN	N/A	N/A	N/A	N/A	N/A	30-500 4	40-375 50	)-300	60-250 8	30-187.5 1	00-150	125-120	
I.Rated Output Voltage	VDC						30	40	50	60	80	100	125	Т
Rated Output Current	ADC						500	375	300	250	187.5	150	120	Т
B.Rated Output Power	kW						15.0	15.0	15.0	15.0	15.0	15.0	15.0	Т
Efficiency (min) at low AC line, 100% Rated Load	%									88				Т
					C	ontact Fa	actory for o	ther mod	els					T
.1 CONSTANT VOLTAGE MODE (CV)														
I. Max. Line Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor ≤ 500V; 0.05% - 600V < Vor ≤ 1500V)	mV						30	20	25	30	40	50	62.5	
2. Max. Load Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor ≤ 500V; 0.1% - 600V < Vor ≤ 1500V)	mV						30	20	25	30	40	50	62.5	
<ol> <li>Output Ripple, rms (5Hz~1MHz), CV mode; (*1) 4. Outp</li> </ol>							20	20	20	20	25	25	25	Τ
loise, p-p (20MHz), CV mode; (*1)	mV						60	60	75	75	100	100	125	Т
Remote Sense Compensation / Wire	T V						1.5	2	3	3	4	5	5	Т
. Temperature Stability 7. Temperature Coefficient 8. U	100					fter 30 m	inute warn	n up (con	stant Lin	e, Load &	Temperat	ure)		Т
Prog. Response Time, 0 ~ Vomax, full-load 9. Up-Pro	-	± 200 (:	± 0.02% o	f Vo(rateo	d)) / °C									Т
Response Time, 0~Vomax, no load 10. Transient Respons								100						Т
Time (CV mode); (*2), (*3)	ms							50						Т
1.2 CONSTANT CURRENT MODE (CC)	ms						Les	s than 3						T
. Max. Line Reg. (0.1% - Ior ≥ 333A; 0.050% - Ior < 333A)														
2. Max. Load Reg (0.1% - lor 2 333A; 0.075% - 25A < lor <	mA						500	375	334	125	94	75	60	Т
<del>33A, 0.2% - lor &lt; 25A)</del>	1													t
<ol> <li>Ripple, rms (5Hz~1MHz), CC mode</li> </ol>	mA						500	375	334	188	141	113	90	
. Temperature Stability	mA						350	200	150	100	100	100	50	T
. Temperature Coefficient		± 0.05%	6 of lo(rate	ed) over 8	hours aft	er 30 mi	nute warm	up (cons	tant Line	e, Load & T	Femperatu	ire)		T
.3 PROTECTIVE FUNCTIONS 1. OCP 2. OCP type	3 ppm/°C	± 300 (:	± 0.03% o	f lo(rated)	)) / °C							,		Ť
oldback Protection (FOLD) 4. Foldback Response Time														-
OVP type 6. OVP Programming Accuracy	%	0~100												Т
. OVP Trip Point 8. OVP Response Time			nt current											╈
				Manual	rocot by fr	ont pand	I OUT but		nital com	munication	a usor sol	octablo		+
. Max. OVP Reset Time	s						= 0.25); Se				1, 0361-361	ectable		╋
0. Over-temperature Protection (OTP)							Off recycle				a or Digit		nicotion	+
1. Phase-Loss Protection					rieset by	AC OI/		, 001 bu	lion, Rei	note Analo			nication	+
			Vo(rotod)					<u> </u>	(+	600V ~ V	ar < 1500	7		╋
	%		Vo(rated		for Vor	< 600\/-	10% to 10							
I.4 REMOTE ANALOG CONTROLS & SIGNALS	%	5% to to	o 105% of	Vo(rated	) - for Vor an 105% c	<_600V;	10% to 10 ting): Defa	5% of Vo ult = 1059	(rated) - % of Vo(	rated)				+
.4 REMOTE ANALOG CONTROLS & SIGNALS . Vout Voltage Programming	V	5% to to Shall al Less the	o 105% of ways be g an 10 (for	Vo(rated reater the Output to	an 105% of begin to	of Vo(set drop) for	ting); Defa Vor < 600	ult = 1059 V	% of Vo(	rated)				
.4 REMOTE ANALOG CONTROLS & SIGNALS . Vout Voltage Programming 2. lout Voltage Programming		5% to to Shall al Less the Less the	o 105% of ways be g an 10 (for an 2.0 (for	Vo(rated reater that Output to Output to	an 105% of begin to begin to begin to	of Vo(set drop) for	ting); Defa	ult = 1059 V	% of Vo(	rated)				
.4 REMOTE ANALOG CONTROLS & SIGNALS . Vout Voltage Programming 2. Iout Voltage Programming 8. Vout Resistor Programming 4. Iout Resistor Programming	V	5% to to Shall al Less the Less the 7 (from	o 105% of ways be g an 10 (for an 2.0 (for AC On/Of	Vo(rated reater tha Output to Output to f switch to	an 105% of begin to begin to urn On)	of Vo(set drop) for drop) fo	ting); Defa Vor < 600 r 600⊽ < V	ult = 1059 V for < 1500	% of Vo() )V	rated)				$\frac{1}{1}$
A REMOTE ANALOG CONTROLS & SIGNALS     Vout Voltage Programming     lout Voltage Programming     Vout Resistor Programming     lout Resistor Programming     Solut Resistor Programming     Shut-Off (SO) Control (rear panel)	V ms	5% to to Shall al Less tha Less tha 7 (from Shut do	o 105% of ways be g an 10 (for an 2.0 (for AC On/O wn if inter	Vo(rated reater that Output to Output to f switch to nal tempo	an 105% of begin to begin to urn On) erature ex	of Vo(set drop) for drop) for ceeds sa	ting); Defa Vor < 600 r 600⊽ < V afe operatio	ult = 1059 V for < 1500	% of Vo() )V (Latcheo	rated) 1: Safe / U	niatched: 7			╞
A REMOTE ANALOG CONTROLS & SIGNALS     Vout Voltage Programming     lout Voltage Programming     Vout Resistor Programming     lout Resistor Programming     Shut-Off (SO) Control (rear panel)     Output Current Monitor	V ms s	5% to to Shall al Less tha Less tha 7 (from Shut do	o 105% of ways be g an 10 (for an 2.0 (for AC On/O wn if inter	Vo(rated reater that Output to Output to f switch to nal tempo	an 105% of begin to begin to urn On) erature ex	of Vo(set drop) for drop) for ceeds sa	ting); Defa Vor < 600 r 600⊽ < V	ult = 1059 V for < 1500	% of Vo() )V (Latcheo	rated) 1: Safe / U	nlatched: /			
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Iout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor	V ms s	5% to to Shall al Less tha Less tha 7 (from Shut do	o 105% of ways be g an 10 (for an 2.0 (for AC On/O wn if inter	Vo(rated reater that Output to Output to f switch to nal tempo	an 105% of begin to begin to urn On) erature ex	of Vo(set drop) for drop) for ceeds sa	ting); Defa Vor < 600 r 600⊽ < V afe operatio	ult = 1059 V for < 1500	% of Vo() )V (Latcheo	rated) 1: Safe / U	niatched: /			
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . lout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Pewer Supply OK (PS_OK) Signal	V ms 	5% to to Shall al Less tha Zess that 7 (from Shut do <del>Yes, po</del>	o 105% of ways be g an 10 (for an 2.0 (for AC On/Ot won if inter wer suppl	Vo(rated reater tha Output to Output to f switch ti nal tempo y shutdow	an 105% of begin to begin to urn On) erature ex vn (Latche	of Vo(set drop) for drop) fo ceeds sa ed: Safe-	ting); Defa Vor < 600 r 600⊽ < ∨ afe operatii Start / Uni	ult = 105 <sup>4</sup> V for < 1500 ng levels atched: A	% of Vo( )V (Latcheo uto-Res	rated) I: Safe / Ui tart)	nlatched: 7			
.4 REMOTE ANALOG CONTROLS & SIGNALS . Vout Voltage Programming . lout Voltage Programming 9. Vout Resistor Programming . lout Resistor Programming 5. Shut-Off (SO) Control (rear panel) 6. Output Current Monitor 7. Output Voltage Monitor 1. Power Supply OK (PS_OK) Signal 0. CV/CC. Signal	V ms s  	5% to to Shall al Less the Less the 7 (from Shut do Yes, po 0 ~ 5V or	0 105% of ways be g an 10 (for an 2.0 (for AC On/Or won if inter wer suppl	Vo(rated reater tha Output to Output to f switch to nal tempo y shutdow	an 105% of begin to begin to begin to urn On) erature ex vn (Latche ctable., A	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy a	ting); Defa Vor < 600 r 600⊽ < V afe operatii Start / Unl & Linearity	ult = 105 <sup>4</sup> V for < 1500 mg levels atched: A	% of Vo( )V (Latcheo uto-Resi	rated) f: Safe / Ur tart)	nlatched: 7			
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Vout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Pewer Supply OK (PS_OK) Signal     . CV/CC. Signal     . CV/CC. Signal     . Enable/Disable	V ms s   0~100%, 0~100%,	5% to to Shall al Less that 7 (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or	0 - 105% of ways be g an 10 (for an 2.0 (for AC On/Or wor if inter wer suppl 0 ~ 10V, 0 ~ 10V,	Vo(rated reater tha Output to Output to f switch to nal tempo y shutdow user-sele user-sele	an 105% of begin to begin to begin to urn On) erature ex vn (Latche ctable., A ctable, Ac	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy &	ting); Defa Vor < $600$ r $600\overline{V}$ < V afe operatin Start / Uni- & Linearity Linearity:	ult = $105^{\circ}$ V for $\leq 1500^{\circ}$ mg levels atched: A : $\pm 1\%$ of $\pm 1\%$ of	% of Vo( )V (Latcheo uto-Rest Vo(rated lo(rated)	rated) f: Safe / Ur tart)	nlatched: 7			
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     . lout Voltage Programming     . Vout Resistor Programming     . lout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Pewer Supply OK (PS_OK) Signal     . CV/CC Signal     0. Enable/Disable     1. Remote/Local Selection	V ms s   0~100%, 0~100%, 0~100%,	5% to to Shall al Less that 7 (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k	0 - 105% of ways be g an 10 (for an 2.0 (for AC On/Or worn if inter wer suppl 0 ~ 10V, 0 ~ 10V, ohm full-s	Vo(rated reater tha Output to Output to f switch to nal tempe y shutdow user-sele user-sele cale, use	an 105% of begin to begin to begin to urn On) erature ex vn (Latche ctable., A ctable, Ac r-selectab	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy & le, Accur	ting); Defa Vor < 600 r 600V < V afe operation Start / Unit & Linearity & Linearity: racy & Line	ult = $105^{\circ}$ V for $\leq 1500^{\circ}$ ng levels atched: A : $\pm 1\%$ of $\frac{1}{2}$ $\pm 1\%$ of earity: $\pm 1$	% of Vo() )V (Latcheo uto-Res Vo(rated lo(rated) % of Vo	rated) f: Safe / Un tart) )) (rated)	nlatched: 7			
A REMOTE ANALOG CONTROLS & SIGNALS     Vout Voltage Programming     lout Voltage Programming     lout Resistor Programming     lout Resistor Programming     Shut-Off (SO) Control (rear panel)     Output Current Monitor     Output Voltage Monitor     Pewer Supply OK (PS_OK) Signal     CV/CC Signal     O. Enable/Disable     Remote/Local Selection	V ms s   0~100%, 0~100%, 0~100%, 0~100%,	5% to to Shall al Less the C (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5/ 10k 0 ~ 5/10k	to 105% of ways be g an 10 (for an 2.0 (for AC On/Of wwn if inter wer suppled $0 \sim 10V$ , $0 \sim 10V$ , tohm full-s	Vo(rated reater tha Output to Output to f switch ti nal tempe y shutdow user-sele user-sele cale, use cale, use	an 105% of begin to begin to begin to brature ex vn (Latche ctable., A ctable, Ao r-selectab	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy & le, Accur le, Accur	ting); Defa Vor < 600 r 600V < V afe operation Start / Unit & Linearity & Linearity: racy & Line racy & Line	ult = $105^{\circ}$ V or $\leq 1500$ mg levels atched: A : $\pm 1\%$ of $\pm 1\%$ of earity: $\pm 1$ earity: $\pm 1$	Vo(rated lo(rated) % of Vo % of Vo % of lo(rated)	rated) f: Safe / Un tart) (rated) rated)		Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     . lout Voltage Programming     . Vout Resistor Programming     . lout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Power Supply OK (PS_OK) Signal     . CV/CC Signal     0. Enable/Disable     1. Remote/Local Selection     2. Remote/Local Signal	∨           ms           s                 0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           by Voltage	5% to to Shall all Less that Common the set of the set Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k 0 ~ 5/10k 0 ~ 5/10k	0 - 105% of ways be g an 10 (for an 2.0 (for AC On/Or way if inter wer suppl 0 ~ 10V, 0 ~ 10V, ohm full-s ohm full-s DIS, 2-15	Vo(rated reater tha Output to Output to f switch ti nal tempe y shutdow user-sele cale, use cale, use cale, use	an 105% of begin to begin to begin to begin to begin to prature ex- vn (Latche vn (Latche) vn (Latche vn (Latche) vn	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy & le, Accur le, Accur or Dry Co	ting); Defa Vor < 600 r 600V < V afe operation Start / Unit & Linearity & Linearity: racy & Line racy & Line ontact: Operation	ult = $105^{\circ}$ V or $\leq 1500$ mg levels atched: A : $\pm 1\%$ of $\pm 1\%$ of earity: $\pm 1$ earity: $\pm 1$	Vo(rated lo(rated) % of Vo % of Vo % of lo(rated)	rated) f: Safe / Un tart) (rated) rated)		Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Vout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Power Supply OK (PS_OK) Signal     . CV/CC Signal     . C. Analogical     . Remote/Local Selection     . Remote/Local Signal     . FRONT PANEL	∨           ms           s                 0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~100%,	5% to to Shall all Less thi Less thi 7 (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k 0 ~ 5/10k 0 ~ 5/10k e: 0.6V = 0 ~ 10V,	0 105% of ways be g an 10 (for an 2.0 (for AC On/O' with inter wer suppl 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, DIS, 2-15 Accuracy	Vo(rated reater tha Output to Output to f switch ti nal tempe y shutdow user-sele cale, use cale, use cale, use cale, use to = ENA to f to f to f to f to f to f to f to f	an 105% of begin to begin to b	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & le, Accur le, Accur or Dry Co user-sele	ting); Defa Vor < 600 r 600V < V afe operatii Start / Uni- & Linearity: racy & Line racy & Line racy & Line ntact: Opectable	ult = $105^{\circ}$ V or $\leq 1500$ mg levels atched: A : $\pm 1\%$ of $\pm 1\%$ of earity: $\pm 1$ earity: $\pm 1$	Vo(rated lo(rated) % of Vo % of Vo % of lo(rated)	rated) f: Safe / Un tart) (rated) rated)		Auto)		
4 REMOTE ANALOG CONTROLS & SIGNALS . Vout Voltage Programming . lout Resistor Programming . lout Resistor Programming . lout Resistor Programming . Shut-Off (SO) Control (rear panel) . Output Current Monitor . Output Voltage Monitor . Power Supply OK (PS_OK) Signal . CVI/CC Signal 0. Enable/Disable 1. Remote/Local Selection 2. Remote/Local Signal .5 FRONT PANEL	∨           ms           s              0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~5V or           0~5V or	5% to to Shall all Less that Less that T (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k 0 ~ 5/10k 0 ~ 5/10k e: 0.6V = 0 ~ 10V, 0 ~ 10V,	0         105% of ways be g an 10 (for an 2.0	Vo(rated reater tha Output to Output to f switch ti nal tempe y shutdow user-sele cale, use cale, use cale, use cale, use to a log of the to a log of the top of top of top of the top of top of top of the top of top of top of top of the top of to	an 105% of begin to begin to begin to prature examples of the second second ctable., A ctable, A ctable, A ctable, A cr-selectable (default) lo(rated), Vo(rated)	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy & de, Accur de, Accur or Dry Co user-sele , user-sele	ting); Defa Vor < 600 r 600V < V afe operatii Start / Uni- & Linearity: racy & Linearity: racy & Linearity: racy & Linearity: nacy & Linearity: hontact: Opp ectable lectable	ult = $105^{\circ}$ V or $\leq 1500$ mg levels atched: A : $\pm 1\%$ of $\pm 1\%$ of earity: $\pm 1$ earity: $\pm 1$	Vo(rated lo(rated) % of Vo % of Vo % of lo(rated)	rated) f: Safe / Un tart) (rated) rated)		Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Vout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Power Supply OK (PS_OK) Signal     . CV/CC Signal     . C. Analogical     . Remote/Local Selection     . Remote/Local Signal     . FRONT PANEL	∨           ms           s              0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~5V or           0~5V or           Yes. TTL	5% to tc Shall al Less that Less that Less that I can be also to all Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k pe: 0.6V = 0 ~ 10V, High = 0	0 105% of ways be g an 10 (for an 2.0 (foo AC On/O wm if inter wer suppl 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, D ~ 10V, A couracy K, 0V = F	Vo(rated reater tha Output to Output to Output to To volution to solve the solve the solve the vertice the vertic	n 105% of begin to begin to begin to unr On) arature ex- vn (Latche- ctable., A ctable.,	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & de, Accur de, Accur or Dry Co user-sel , user-se impedan	ting); Defa Vor < 600 r 600V < V afe operatii Start / Unit & Linearity: racy & Line racy & Line contact: Ope ectable lectable ce)	ult = 105° V (or < 1500 mg levels atched: A : ±1% of ± 1% of earity: ± 1 earity: ± 1 en = ENA	% of Vo( )V (Latchec uto-Rest Vo(rated) lo(rated) % of Vo % of Io( a, Short =	rated) :: Safe / Ui :art) (rated) :rated) := DIS (usei	r-selectabl	Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Vout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Power Supply OK (PS_OK) Signal     . CV/CC Signal     . C. Analogical     . Remote/Local Selection     . Remote/Local Signal     . FRONT PANEL	∨           ms           s              0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~5V or           Voitag           0~5V or           Ves. TTL	5% to tc Shall all Less that Less that Less that Less that T (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k 0 ~ 5/10k le: 0.6V = 0 ~ 10V, 0 ~ 10V, High = 0 High (4 ~	o 105% of ways be g an 10 (for an 2.0 (foo AC On/O wm if inter wer suppl 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, ohm full-s DIS,2-15 Accuracy Accuracy K, 0V = F 5V), Max	Vo(rated reater tha Output to Output to Output to Toutput to Touto	an 105% of begin to begin to begin to begin to um On) erature ex- vn (Latche ctable., A ctable, Ac r-selectab r-selectab r-selectab (default) lo(rated), Vo(rated) m series urrent = 10	of Vo(set drop) for drop) for ceeds sa ed: Safe- ccuracy & ccuracy & le, Accur or Dry Cc user-set impedan 0mA; CC	ting); Defa Vor < 600 r 600V < V afe operatii Start / Unit & Linearity: racy & Line racy &	ult = 105° V (or < 1500 mg levels atched: A : ±1% of ± 1% of earity: ± 1 earity: ± 1 en = ENA (0 ~ 0.4V	% of Vo( )V (Latchec uto-Resi Vo(rated lo(rated) % of Vo % of lo( i, Short =	rated) d: Safe / Ui tart) (rated) (rated) e DIS (usei ink current	r-selectabl t = 10mA	Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     Vout Voltage Programming     lout Voltage Programming     Vout Resistor Programming     lout Resistor Programming     Solut Resistor Programming     Shut-Off (SO) Control (rear panel)	V           ms           S                 0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~5V or           Yes. TTL           CV: TTL           Dry conta	5% to tc Shall all Less that 7 (from Shur do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k 0 ~ 5/10k 0 ~ 5/10k 0 ~ 10V, 0 ~ 10V, 10gh (4 ~ High (4 ~ tc; Open	$_{0}$ 105% of ways be g an 10 (for an 2.0 (for AC on/Or win if inter wer suppl 0 ~ 10V, 0 ~	Vo(rated reater than Output to Voltput to Switch ti nal tempe y shutdow user-sele cale, use cale, use V = ENA $\pm 1\%$ of $\pm 1\%$ of ail (5000ch nort = ON	an 105% of begin to begin to begin to particular of the second second catable, Ac trable, Ac trable	of Vo(set drop) for drop) for ceeds sa <del>certa safe- certa safe- ce</del>	ting): Defa Vor < 600 r 600V < V afe operatin Start / Uni- & Linearity: a Linearity: racy & Line racy & Line pontact: Opp ectable lectable ce) : TTL Low e across E	ult = 105° V ior $\leq$ 1500° ing levels atched: A : ±1% of ± 1% of earity: ± 1 earity: ± 1 earity: ± 1 (0 ~ 0.4V nable/Dis	% of Vo( )V (Latchec uto-Resi Vo(rated lo(rated) % of Vo % of Io( , Short = ), Max s able cor	rated) d: Safe / Ui tart) (rated) (rated) e DIS (usei ink current	r-selectabl t = 10mA	Auto)		
A REMOTE ANALOG CONTROLS & SIGNALS     . Vout Voltage Programming     lout Voltage Programming     . Vout Resistor Programming     . Vout Resistor Programming     . Shut-Off (SO) Control (rear panel)     . Output Current Monitor     . Output Voltage Monitor     . Power Supply OK (PS_OK) Signal     . CV/CC Signal     . C. Analogical     . Remote/Local Selection     . Remote/Local Signal     . FRONT PANEL	V           ms           s                 0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~100%,           0~5V or           0~5V or           0~5V or           0~5V or           0~5V or           0~5V or           Selects F	5% to tc Shall ali Less thi Less thi Less thi T (from Shut do Yes, po 0 ~ 5V or 0 ~ 5V or 0 ~ 5V or 0 ~ 5/10k je: 0.6V = 0 ~ 10V, 0 ~ 10V, High 4 ~ ict; Open termote or	$\sim$ 105% of ways be g an 10 (for an 2.0 (for AC On/Or win if inter wer suppl 0 ~ 10V, 0 ~ 10V, 0 ~ 10V, ohm full-so DIS, 2-15 Accuracy K, 0V = Fi 5V), Max = OFF, SI Local ope	Vo(rated reater tha Output to Output to The switch to rait tempo y shutdow user-sele cale, use cale, use cale, use cale, use to all the switch to switch to the switch to switch to the switch to swit	an 105% of begin to begin to begin to to begin to the top begin to the top begin top begin top begin top top begin call of the transformation top	of Vo(set drop) for drop) for ceeds sa d: Safe- ccuracy & de, Accur de, Accu	ting); Defa Vor < 600 r 600V < V afe operatii Start / Unit & Linearity: racy & Line racy &	ult = 105° V or < 1500 ng levels atched: A : ±1% of i ± 1% of parity: ± 1 parity: ± 1 en = ENA (0 ~ 0.4V nable/Dis - 15V = F	% of Vo( )V (Latchec uto-Rest lo(rated) (o(rated) % of Vo % of lo(i , Short = 	rated) f: Safe / Un tart) (rated) rated) = DIS (usen ink current tacts = 6V	r-selectabl t = 10mA	Auto) le logic)		

	Vout/ lout manual adjust by separate encoders (COARSE and FINE adjustment selectable) OVP/UVL manual	Х
	adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock Address selection by VOLTAGE Adjust	Х
	encoder. # of Addresses = 31 AC ON/OFF, Output On/Off, Restart Modes (Auto/Safe), Foldback Control (CV	Х
	to CC), Go-to-Local RS-232/RS-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch Baud	Х
	rate selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by Current Adjust encoder)	Х
	Advanced Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4); S = Slave unit(s)	Х
	Voltage: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count Current: 4 digits, Accuracy: ± 0.5% of Vo(rated) ±1	Х
2.Display	count VOLTAGE meter displays voltage at power supply (Local sense) or at load (Remote sense) Green	Х
	LED'S: PREVIEW, FOLD, REM./LOCAL, OUT ON/OFF, CV/CC, FINE	Х
	Red LED:.ALARM (OVP, OTP, FOLD, AC FAIL, ENA, SO)	Х
3.Indications		×
		1

1.6 DIGITAL PROGRAMMING & READBACK		
1. Vout Programming Accuracy	± 0.5% of Vo(rated)	X
2. lout Programming Accuracy	± 0.5% of lo(rated) for units with lo < 187.5A; ± 0.7% of lo(rated) for lo ≥187.5A	Х
3. Vout Programming Resolution	0.02% of Vo(rated)	X
4. lout Programming Resolution	0.04% of lo(rated)	Х
5. Vout Readback Accuracy	± (0.1% of Vo(actual) + 0.2% of Vo(rated))	Х
6. lout Readback Accuracy	$\pm$ (0.1% of lo(actual) + 0.4% of lo(rated))	Х
7. Vout Readback Resolution	0.02% of Vo(rated)	Х
8. lout Readback Resolution	0.02% of lo(rated)	Х
9. OV Response Time	20ms maximum (between Vout exceeding IEEE Limit and supply Inhibit turning On)	Х
10. Other Functions	Set OVP/UVL limits, Set Local/Remote, Operating parameters and Status, Get Identity	

\*1. Ripple and Noise at Vo(rated) and rated Load, Ta = 25C and nominal AC input, per EIJ R9002A.
\*2. Time for the Output voltage to recover within 2% of rating for a load current change of 50~100% or 100-50% of rated Output.
\*3. Operating with a load that continuously pulses the current (or voltage) can reduce the operating life of the Power Supply. Please contact TDK-Lambda Sales/Technical Support to discuss the application in detail.
All specifications subject to change without notice.

## Genesys<sup>™</sup> 3U 15kW Specifications

Genesys <sup>1</sup> 3U 15kW Spe	CITIC	atio	ns										15kW
1.0 MODEL 1.Rated Output Voltage 2.Rated Output Current		150-100		250-60	300-50 4	400-37.5 5	00-30	600-25	300-18.8 1	000-15	1250-12	1500-10	X
3.Rated Output Power 4.Efficiency (min) at low AC line, 100%	VDC	150	200	250	300	400	500	600	800	1000	1250	1500	X
Rated Load	ADC	100	75	60	50	37.5	30	25	18.8	15	12	10	X
1.1 CONSTANT VOLTAGE MODE (CV)	kW	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.04	15.0	15.0	15.0	X
1. Max. Line Reg (0.1% - Vor < 30V; 0.05% - 30V < Vor <	%				88						93.5		X
600 <del>√; 0.05% - 600∨ &lt; Vor &lt; 1500∨)</del>					Con	tact Factor	y for othe	er models					X
2. Max. Load Reg (0.1% - Vor ≤ 30V; 0.05% - 30V < Vor < 600V; 0.1% - 600V < Vor < 1500V)	mV	75	100	125	150	200	250	300	400	500	625	750	
3. Output Ripple, rms (5Hz~1MHz), CV mode; (*1)	IIIV	15	100	125	150	200	250	300	400	500	025	750	
4. Output Noise, p-p (20MHz), CV mode; (*1)	mV	75	100	125	150	200	250	300	800	1000	1250	1500	X
6. Temperature Stability	mV	25	35	35	60	60	60	60	80	100	120	140	
7. Temperature Coefficient	mV	150	175	200	200	300	350	350	700	800	1000	1400	L Û
<ol><li>Up-Prog. Response Time, 0~Vomax, full-load</li></ol>	V	5	5	5	5	5	5	5	5	5	5	5	X
9. Up-Prog. Response Time, 0~Vomax, no load				,		after 30 m	inute wa	rm up, co	nstant Lin	e, Load &	Temperatur	е	X
10. Transient Response Time (CV mode); (*2), (*3)	ppm / °C	200 (0.0	02% of V	o(rated))	/ °C								X
1.2 CONSTANT CURRENT MODE (CC)	ms				100						17		X
1. Max. Line Reg (0.1% - Ior ≥ 333A; 0.050% - Ior < 333A)	ms ms				50						7		X
2. Max. Load Reg (0.1% - lor ≥ 333A; 0.075% - 25A < lor <	1115				Less thar	n 3				Less	than 1		
333A; 0.2% - lor < 25A)													
3. Output Ripple, rms (5Hz~1MHz), CC mode	mA	50	38	30	25	19	15	13	28	23	18	15	Х
4. Temperature Stability	mA	75	57	45	38	28	23	19	38	30	24	20	х
5. Temperature Coefficient				-		-		-				-	
1.3 ROTECTIVE FUNCTIONS 1. OCP 2. OCP type 3. Foldback	mA	50	20	20	20	10	10	10	15	10	6	4	X
Protection 4. Foldback Response Time 5. OVP type 6. OVP						after 30 mir	nute warr	n up (con	stant Line,	Load & T	emperature)	)	X
Programming Accuracy	ppm / °C	± 300 (±	E 0.03% d	of lo(rate	d)) / °C								Х

<sup>7.</sup> OVP Trip Point

P Trip Point							
	%	0 ~ 100	X				
		Constant current	X				
		Output shut down; Manual reset by front panel OUT button or DIgital communication, user-selectable	X				
	s	Less than 1 (Min = 0.25 / Max = 25 / Default = 0.25); Settable via "FBD" command	X				
		Inverter shut-down; Manual reset by On/Off recycle, OUT button, Remote Analog or Digital communication	X				
	%	± 5% of Vo(rated)	X				
	V	5% to to 105% of Vo(rated) - for Vor < 600V; 10% to 105% of Vo(rated) - 600V < Vor < 1500V Shall always be greater than 105% of Vo(setting); Default = 105% of Vo(rated)	x				
8. OVP response time	ms	Less than 10 (for Output to begin to drop) for Vor < 600V Less than 2.0 (for Output to begin to drop) for 600V < Vor < 1500V	x				
9. Max. OVP reset time	s	7 (from AC On/Off switch turn On)	X				
10. Over temperature Protection		Shut down if internal temperature exceeds safe operating levels (Latched: Safe / Unlatched: Auto)	X				
11. Phase Loss Protection		Yes, power supply shutdown (Latched: Safe-Start / Unlatched: Auto-Restart)	X				
1.4 REMOTE ANALOG CONTROLS & SIGNALS			<u> </u>				
1. Vout Voltage Programming	0-100%	0 ~ 5V or 0 ~ 10V, user-selectable, Accuracy & Linearity: ± 1% of Vo(rated)	Х				
2. lout Voltage Programming		5, 0~5V or 0 ~ 10V, user-selectable, Accuracy & Linearity ± 1% or Vo(rated)	X				
3. Vout resistor programming		0~5/10kohm full-scale, user-selectable. Accuracy & Linearity ± 1% of Vo(rated)	$-\hat{\mathbf{x}}$				
4. lout Resistor Programming		0~100%, 0~5/10kohm full-scale, user-selectable. Accuracy & Linearity ± 1% of Vo(rated)					
5. Shut-Off (SO) Control (rear panel)		te: 0.6V = DIS, 2-15V = ENA (default) or Dry Contact: Open = ENA, Short-DIS (user-selectable logic)	— × — ×				
6. Output Current Monitor		0 ~ 10V, Accuracy: ± 1% of lo(rated), user selectable	ý				
7. Output Voltage Monitor		0 ~ 10V, Accuracy: ± 1% of Vo(rated), user-selectable	ý				
8. Power Supply OK (PS_OK) Signal		High = OK_0V = Fail (500ohm series impedance)	X				
9. CV/CC Signal		CV: TTL High (4 ~ 5V). Max source current = 10mA; CC: TTL Low (0 ~ 0.4V). Max sink current = 10mA					
10. Enable/Disable		Dry contact; Open = OFF, Short = ON; Max. voltage across Enable/Disable contacts = 6V					
11. Remote/Local Selection		Selects Remote or Local operation by voltage: 0 ~ 0.6V = Local / 2 - 15V = Remote					
12. Remote/Local Signal		perating mode; Open collector: Local = Open (Max voltage = 30V), Remote = On (Max sink current = 10mA)	Х				
1.5 FRONT PANEL							
1.Control Functions	Vout/ Iou	t manual adjust by separate encoders (COARSE and FINE adjustment selectable)	Х				
		_ manual adjust by VOLTAGE Adjust encoder, Front Panel Lock/Unlock	X				
			X				
		selection by VOLTAGE Adjust encoder. # of Addresses = 31					
		PFF, Output On/Onn, Restart Modes (Auto/Safe), Foldback Control (CV to CC), Go-to-Local	Х				
		S-485, LAN, IEEE (IEMD) and USB selection by rear panel DIP-switch	X				
		e selection (RS-232/RS-485 only): 1200, 2400, 4800, 9600 and 19,200 (by CURRENT Adjust encoder)	X				
	Advance	d Parallel Master/Slave: Hx = Master unit, where x = # of Slave units (0 to 4); S = Slave unit(s)	X				
2.Display	Voltage:	4 digits, Accuracy: ± 0.5% of Vo(rated) ±1 count	X				
	Current:	4 digits, Accuracy: ± 0.5% of lo(rated) ±1 count	Х				
	VOLTAG	E meter displays Voltage at power supply (Local sense) or at load (Remote sense)	Х				
3.Indications		D'S: PREVIEW, FOLD, REM./LOCAL, OUT ON/OFF, CV/CC, FINE :.ALARM (OVP, OTP, FOLD, AC FAIL, ENA, SO)	Х				
1.6 DIGITAL PROGRAMMING & READBACK							
1. Vout Programming Accuracy	± 0.5% o	f Vo(rated)	X				
2. lout Programming Accuracy		f lo(rated) for units with lo < 187.5A; +/-0.7% of lo(rated) for lo ≥187.5A	X				
3. Vout Programming Resolution		Vo(rated)	X				
4. lout Programming Resolution	0.02 % of		$\rightarrow$				
5. Vout Readback Accuracy		of Vo(actual) + 0.2% of Vo(rated))					
			X				
6. lout Readback Accuracy 7. Vout Readback Resolution		of lo(actual) + 0.4% of lo(rated))					
		Vo(rated)	Х				
8. lout Readback Resolution	0.02% of	lo(rated)	>				

10. Other Functions Set OVP/UVL limits, Set Local/Remote, Operating parameters and Status, Get Identity

\*1. Ripple and Noise at Vo(rated) and rated Load, Ta = 25C and nominal AC input, per EIJ R9002A.
\*2. Time for the Output voltage to recover within 2% of rating for a load current change of 50-100% or 100-50% of rated Output.
\*3. Operating with a load that continuously pulses the current (or voltage) can reduce the operating life of the Power Supply. Please contact TDK-Lambda Sales/Technical Support to discuss the application in detail.
All specifications subject to change without notice.

20ms maximum (between Vout exceeding OVP Limit and supply inhibit turning On)

9. OV Response Time



Х

## General Specifications, Genesys<sup>™</sup> 3U 10kW/15kW

1. Input Voltage / Frequency (range)	208VAC (180-253), 400VAC (342-440 for Vout > 30V; 360-440 for Vout < 30V), 480VAC (432-528); 47-63Hz (all) 3-
2. No. of phases	Phase (Wye or Delta) 4 wire total (3 phases and 1 Protective Earth (PE) ground) 180 / (342/360) / 432 10kW - 45/23/20
3. Dropout Voltage	V (Vout < 600V); 40/23/20 (800V < Vout < 1500V) - at full rated Output power
4. Input Current (180VAC/342VAC or 360 <sub>AC/432VAC</sub>	
5. Inrush Current	A Volt < 600V: 0.88 (passive), 10kW/15kW (208VAC, 400VAC, 480VAC) Vout > 600V: 0.90/0.93 - 10kW/15kW (208VAC),
6. Power Factor, passive (typical)	0.89/0.92         10kW/15kW (400VAC), 0.84/0.88         10kW/15kW (480VAC)            3.5 maximum (EN60950) Circuit breaker: 208VAC, (Vout < 30V); Line fuse: 208VAC (Vout > 30V) and 400VAC/480VAC
7. Leakage Current	mA (all models) ≤ 5% on three-phase Input
8. Input Protection	
10. Phase Imbalance	%
2.2 POWER SUPPLY CONFIGURATION	· · ·
1 Parallel Operation; (*4)	Up to four (4) identical units may be connected in Master/Slave Mode with Single-Wire/Two-Wire connection. In "Advanced-Parallel", the current of Master unit multiplied by number of units connected in parallel is available via digital interface and displayed on the front panel display of the Master unit. Remote Analog current monitor of Master unit is scaled to the Output current of the Master unit (only)
2. Series Operation (*4)	Possible (with external diodes); Up to two identical units with total Output voltage not to exceed ± 600V from Chassis ground (for Vor < 600 or not to exceed ± 1500V from Chassis ground (for 600V < Vor < 1500V)
2.3 ENVIRONMENTAL CONDITIONS	
1. Operating Temperature	0 to +50°C, 100% load -20 to +70°C 20 to 80% RH (non-condensing) 10 to 90% RH (non-condensing)
2. Storage Temperature	
3. Operating Humidity	ASTM D4169, Standard Practice for Performance Testing of Shipping Containers and Systems, Shipping Unit: Single Package Assurance Level: Level II; Acceptance Criteria: Criterion 1 - No product damage Criterion 2 - Packaging is intact, Distribution Cycle: 12 -
4. Storage Humidity	Assurance Level is acceptance chiefland in the product damage chiefland 2 - Packaging is intact, Distribution Cycle. 12 - Air (intercity) and motor freight (local), unitized is used.
5. Vibration & Shock	Operating: +50°C up to 6552ft (2000m), Derate lout 2%/100m up to 3000m or 1°C/100m up to 3000m, Non-Operating 40,000ft (12,000 70dBA at lo(rated) (measured 1m from front panel) for Vout < 30V; 65dBA at lo(rated) (measured 1m from front panel) for Vout > 30V
6. Altitude	<u> </u>
7. Audible Noise	
2.4 EMC	
208VAC Input (all models)	T
1. ESD	ENG1000.4.2.//EC.204.2): Air diopharao + 9k// Control diopharao + 4k//
	EN61000-4-2 (IEC 801-2): Air-discharge ± 8kV, Contact-discharge ± 4kV
2. Fast Transients	EN61000-4-4 (IEC 1000-4-3); +/-2kV: AC Power, 2kV: DC Output
3. Surge Immunity	EN61000-4-5 (IEC 1000-4-5); 1kV line-to-line, 2kV line-to-ground
4. Conducted Immunity	EN61000-4-6 (IEC 1000-4-6); 10Vrms EN61000-4-3 (IEC 1000-4-3);
5. Radiated Immunity	10V/m EN61000-4-8; 30A/m EN55011A, FCC part 15J-A EN55011A, FCC
6. Power Frequency Magnetic Field	part 15J-A
7. Conducted Emissions	
8. Radiated Emissions	
400VAC (all models) /480VAC Input (Vout > 20V)	
1. ESD	
2. Fast Transients	EN61000-4-2 (IEC 801-2): Air-discharge ± 8kV, Contact-discharge ± 4kV
3. Surge Immunity	EN61000-4-4 (IEC 1000-4-3); +/-2KV: AC Power, 2kV: DC Output
4. Conducted Immunity	EN61000-4-5 (IEC 1000-4-5); 1kV line-to-line, 2kV line-to-ground
5. Radiated Immunity	EN61000-4-6 (IEC 1000-4-6); 10Vrms EN61000-4-3 (IEC 1000-4-3); 10V/m
6. Power Frequency Magnetic Field	ENGINE 4.8: 30 Am
7. Voltage Dips, Short Interruptions and Voltage Variations Immunity Test (400VAC Only)	
8. Conducted Emissions 9. Radiated Emissions	EN55011A, FCC part 15J-A
	EN55011A_ECC part 15J-A
2.5 SAFETY	EN55011A, FCC part 15J-A
2:5 SAFETY 1.Applicable Standards	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V) 7.5V ≤ Vout < 400V: Output is Hazardous; LAN/IEEE/USB/Isolated Analog are SELV 400V < Vout < 600V: Output is Hazardous; LAN/IEEE/USB/Isolated Analog are not SELV 600V < Vout ≤ 1500V: Output is Hazardous; LAN/IEEE/USB/Isolated Analog are SELV
2.5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5)	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2.5 SAFETY 1.Applicable Standards 2. Withstand Voltage:	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance 2.6 MECHANICAL CONSTRUCTION	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance 2.6 MECHANICAL CONSTRUCTION 1. Cooling	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance 2.6 MECHANICAL CONSTRUCTION 1. Cooling	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1. Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3. Insulation Resistance 2.6 MECHANICAL CONSTRUCTION 1. Cooling 2. Dimensions (W x H x D)	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance 2.6 MECHANICAL CONSTRUCTION 1. Cooling 2. Dimensions (W x H x D) 3. Weight	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1. Applicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3. Insulation Resistance 2.6 MECHANICAL CONSTRUCTION 1. Cooling 2. Dimensions (W x H x D) 3. Weight 4. AC Input connector (with Protective Cover)	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1. Applicable Standards 2: Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3. Insulation Resistance 2:6 MECHANICAL CONSTRUCTION 1: Cooling 2: Dimensions (W x H x D) 3: Weight 4. AC Input connector (with Protective Cover) 5: Output Connectors (busbar)	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1. Applicable Standards 2: Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3. Insulation Resistance 2:6 MECHANICAL CONSTRUCTION 1. Cooling 2. Dimensions (W x H x D) 3. Weight 4. AC Input connector (with Protective Cover) 5. Output Connectors (busbar) 6. Control Connectors	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Applicable Standards 2: Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5) 3.Insulation Resistance 2:6 MECHANICAL CONSTRUCTION 1: Cooling 2: Dimensions (W x H x D) 3: Weight 4: AC Input connector (with Protective Cover) 5: Output Connectors (busbar) 6: Control Connectors 7: Mounting Method	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)
2:5 SAFETY 1.Aoplicable Standards 2. Withstand Voltage: (208VAC/400VAC/480VAC; for 60 seconds); (*5)	IEC/EN/UL 61010-1, CSA 22.2 No. 61010-1 (20V ≤ Vout ≤ 1500V); UL/cUL 60950-1, EN60950-1 recognized, CB Scheme (Vout < 20V)

\*4. Please contact TDK-Lambda Sales/Technical Support to discuss your Parallel or Series application in more detail.
 \*5 Please contact TDK-Lambda Sales/Technical Support to discuss your System-Level Withstand Voltage requirements in more detail.
 All specifications subject to change without notice.



## Genesys<sup>™</sup> Power Parallel and Series Configurations

#### Parallel Operation - Master/Slave(\*4)

Active current sharing allows up to four identical units to be connected in an Auto-parallel configuration for the Output power. In Advanced Parallel Master/Slave Mode, total current is pro-grammed and reported by the Master, Up to four 10kW/15kW Power Supplies in parallel act as one 40kW/60kW Power Supply.



#### Series Operation(\*4)

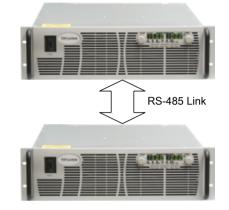
Up to two units may be connected in series to increase the Output voltage or to provide bipolar output. (Max 600V to Chassis GND for Vor < 600V; Max 1500V to Chassis GND for 600V < Vor < 1500V).

### Remote Programming via RS-232 & RS-485 Interface

Standard Serial Interface allows daisy-chain control of up to 31 power supplies on the same communication bus with built-in RS-232 & RS-485 Interface or optional LAN, USB or IEEE Interface.



RS-232, RS-485 LAN, IEEE or USB



## Programming Options (Factory installed)

#### Standard RS-232/RS-485 (Multi-Drop) Interface

P/N<sup>.</sup> "-----" Standard Units are equipped with the RS-485 Multi-Drop function Allows RS-232 or RS-485 Master unit to control up to 30 (standard) Slave units using RS-485 daisy-chain link

#### LAN Interface ( **LXI** 1.5 Compliant w/ Multi-Drop)

- Meets all LXI 1.5 Requirements Address Viewable on Front Panel
- Fixed and Dynamic Addressing
- Fast Startup

VISA & SCPI Compatible LAN Fault Indicators

Program/Measure Current

· Current Foldback shutdown

Auto-detects LAN Cross-over Cable Compatible with most standard Networks

P/N: IEMD (for all models)

P/N: USB (for all models)

P/N: LAN (for all models)

IEEE (Multi-Drop) Interface IEEÈ 488.2 & SCPI compliant

- Allows IEEE Master to control up to 30 (standard) Slave units using RS-485 daisy-chain
- Program/Measure Voltage
- Over-Voltage setting and shutdown Error and Status Messages

#### USB (Multi-Drop) Interface

- USB 2.0 compliant
- Allows serial connection to computer USB port •
- Allows USB Master to control up to 30 (standard) Slaves using RS-485 daisy-chain Uses same command set as standard RS-232/RS-485 interface

#### Isolated Analog Programming

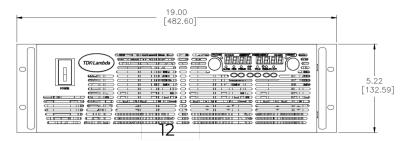
- Option for models with Vout ≤ 600V (IS510 & IS420); IS510 built-in for models where 800V ≤ Vout ≤ 1500V
- Four Channels total (Two channels to Program Voltage and Current; Two channels to Monitor Voltage and Current)
- Isolation allows operation with floating references in harsh electrical environments
- 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: ±1.0% Power supply Voltage and Current Monitoring Accuracy: ±1.5%
- Current Programming with 4-20mA signal Power supply Voltage and Current Programming Accuracy: ±1.0% Power supply Voltage and Current Monitoring Accuracy: ±1.5%

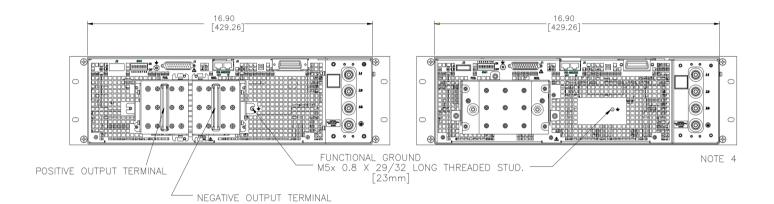
P/N: IS510 (for Vout  $\leq$  600V)

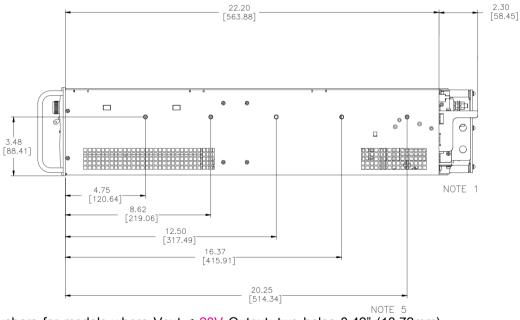
P/N: IS420 (for all models)



#### Outline Drawing: Genesys™ 10kW (7.5V to 12.5V - 208VAC/400VAC/480VAC)



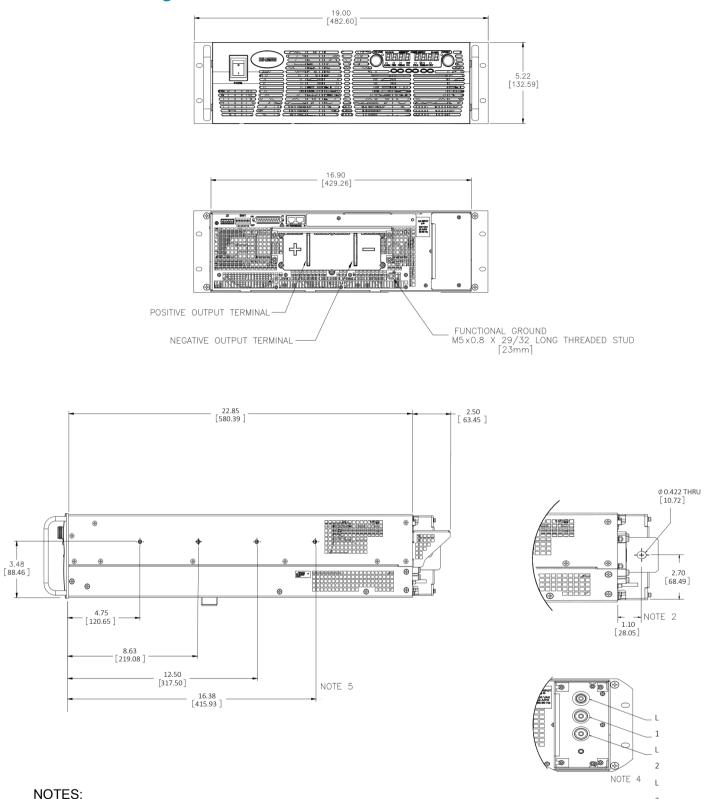




NOTES: 1. Busbars for models where Vout < 20V Output: two holes 0.42" (10.72mm) diameter. 2. N/A 3. N/A 4. Input Terminals: M6 x 1" (Qty = 3); Ground Terminal: M5 x 1" (Qty = 2) 5. Mounting for Slide Mounts (not included).

Recommend: General Devices, Chassis Trak P/N C230-S-122; Verify requirements with slide manufacturer. Secure with pan head screw: M5 x 0.8-8mm long (max).

### Outline Drawing: Genesys<sup>TM</sup> 10kW/15kW (20V to 300V - 208VAC/400VAC/480VAC)



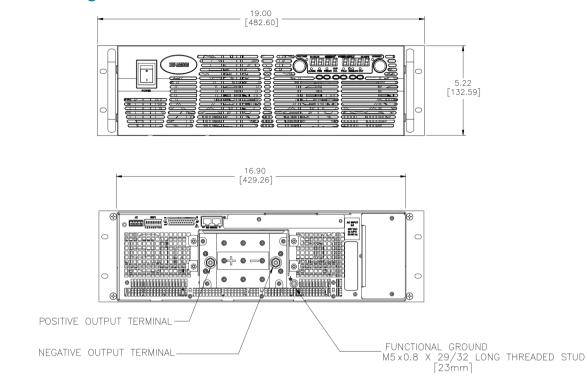
- 1. N/A
- 2. Bus bars for models 20V < Vout < 300V (10kW/15kW): one hole 0.42" (10.72mm) diameter.
- 3. N/A
- 4. Input Terminals: M6 x 1" (Qty = 3) + Ground M5 x 1" (Qty = 2)
- 5. Mounting for Slide Mounts (not included).

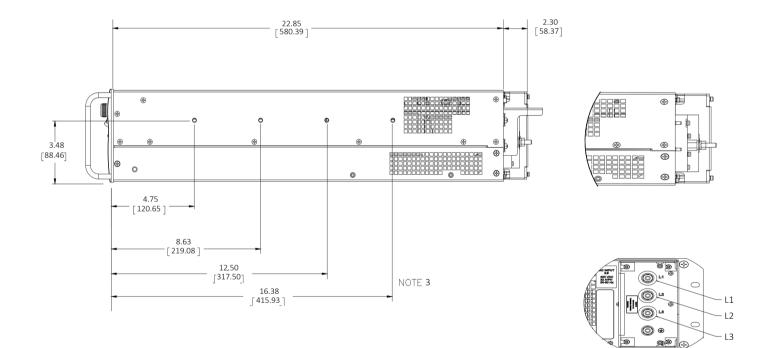
Recommend General Devices, Chassis Trak P/N C230-S-122; Verify requirements with slide manufacturer. Secure with pan head screw: M5 x 0.8-8mm long (max).



3

### Outline Drawing: Genesys™ 10kW/15kW (400V to 600V - 208VAC/400VAC/480VAC)

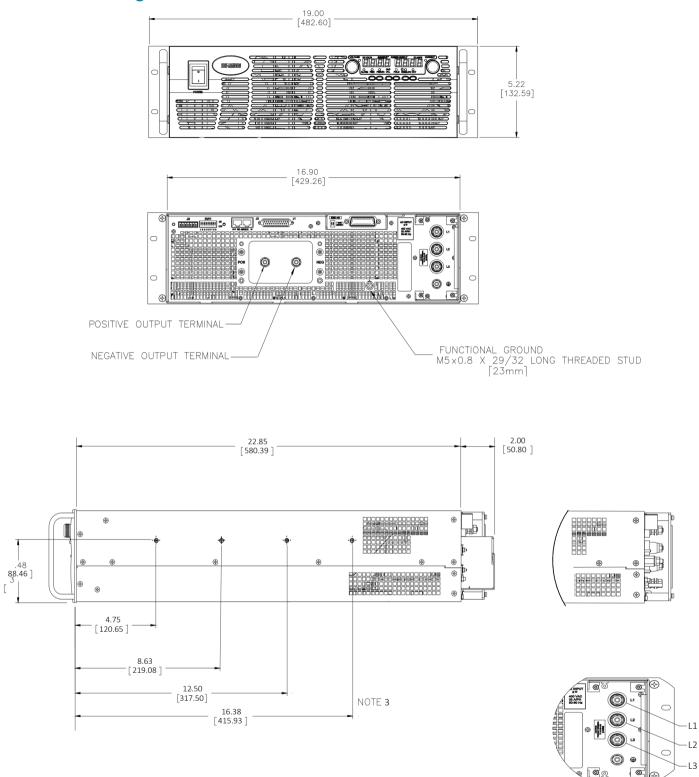




NOTES: 1. N/A 2. N/A 3. Threaded-stud terminals for models with 400V < Vout < 600V (M5 x 1"). 4. Input Terminals M6 x 1" (Qty = 3) + Ground M5 x 1" (Qty = 2) 5. Mounting for Slide Mounts (not included).

Recommend General Devices, Chassis Trak P/N C230-S-122; Verify requirements with slide manufacturer. Secure with pan head screw: M5 x 0.8-8mm long (max).

#### Outline Drawing: Genesys™ 10kW/15kW (800V to 1500V - 208VAC/400VAC/480VAC)



NOTES: 1. N/A 2. N/A 3. Threaded stud terminals for models with 800V < Vout < 1500V Output (M5 x 1"). 4. Input Terminals M6 x 1" (Qty = 3) + Ground M5 x 1" (Qty = 2) 5. Mounting for Slide Mounts (not included).

Recommend General Devices, Chassis Trak P/N C230-S-122; Verify requirements with slide manufacturer. Secure with pan head screw M5 x 0.8-8mm long (max).



## Power Supply Identification / Accessories (Genesys<sup>™</sup> 3U 10kW/15kW) How to Order:

LAN

LAN

IEMD USB IS510 IS420

Factory Options

Option:

GEN	10
Series	Outpu
Name	Voltag

utput oltage (0~10V)

Output Current (0~1000A)

- 1000

3P208

AC Input Options 3P208 (Three-Phase 208VAC) 3P400 (Three-Phase 400VAC) 3P480 (Three-Phase 480VAC)

Model	Output Voltage (Vdc)	Output Current (Adc)	Output Power (kW)	
GEN 7 5-1000	0~7.5	0~1000	7.5	
GEN 10-1000	0~10	0~1000	10	
GEN 12.5-800	0~12.5	0~800	10	
GEN 20-500	0~20	0~500	10	
GEN 25-400	0~25	0~400	10	
GEN 30-333	0 20	0~333	10	
GEN 30-500	0~30	0~500	10	
GEN 40-250		0~250	15	
GEN 40-375	0~40	0~230	10	
GEN 50-200		0~375	10	
GEN 50-300	0~50	0~200	10	
GEN 60-167		0~300 0~167	10	
	0~60			
GEN 60-250	0 00	0~250	15	
GEN 80-125	0~80	0~125	10	
GEN 80-187.5	0~80	0~187.5	15	
GEN 100-100	0,400	0-100	10	
GEN 100-150	0~100	0~150	15	
GEN 125-80	0, 105	0~80	10	
GEN 125-120	0~125	0~120	15	
GEN 150-66		0~66	10	
GEN 150-100	0~150	0~100	15	

#### **Factory options**

RS-232/RS-485 Multi-Drop Interface (built-in standard) LAN Interface ( **LXI** 1.5 compliant w/ Multi-Drop) GPIB (488.2 w/ Multi-Drop) Interface USB (2.0 w/ Multi-Drop) Interface Isolated Analog Interface (Voltage Program/Monitor) Isolated Analog Interface (Current Program/Monitor)

#### Accessories

#### 1. Serial Communication cable (optional)

RS-232/RS-485 cable is used to connect the power supply to the Host PC.

Model	Output Voltage (Vdc)	Output Current (Adc)	Output Power (kW)
GEN 200-50	0~200	0~50	10
GEN 200-75		0~75	15
GEN 250-40	0.050	0~40	10
GEN 250-60	0~250	0~60	15
GEN 300-33	0.000	0~33	10
GEN 300-50	0~300	0~50	15
GEN 400-25		0~25	10
GEN 400-37.5	0~400	0~37.5	15
GEN 500-20		0~20	10
GEN 500-30	0~500	0~30	15
GEN 600-17		0~17	10
GEN 600-25	0~600	0~25	15
*GEN 800-12.5		0~12.5	10
*GEN 800-18.8	0~800	0~18.8	15
*GEN 1000-10		0~10	10
*GEN 1000-15	0~1000	0~15	
*GEN 1250-8		0-8	10
*GEN 1250-12	0~1250	<u>0~12</u>	
*GEN 1500-6.7		0~6.7	
*GEN 1500-10	0~1500	0~10	15

#### P/N

LAN IEMD USB IS510 \*(built-in standard on 800V-1500V models) IS420

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

#### 2. Serial Link cable (optional)

Daisy-chain up to 31 Genesys<sup>™</sup> power supplies.

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

## Genesys<sup>™</sup> Family - Output Voltage / Output Current

Model	GENH		GEN-1U		GEN-2U		GEN 3U	
Rated Power	750W	750W	1.5kW	2.4kW	3.3kW	5.0kW	10kW	15kW
Voltage Range				Output	Current Rang	e		
0~6V	0~100A	0~100A	0~200A					
0~7.5V							0~1000A	
0~8V	0~90A	0~90A	0~180A	0~300A	0~400A	0~600A		
0~10V				0~240A	0~330A	0~500A	0~1000A	
0~12.5V	0~60A	0~60A	0~120A				0~800A	
0~15V					0~220A			
0~16V				0~150A		0~310A		
0~20V	0~38A	0~38A	0~76A	0~120A	0~165A	0~250A	0~500A	
0~25V							0~400A	
0~30V	0~25A	0~25A	0~50A	0~80A	0~110A	0~170A	0~333A	0~500A
0~40V	0~19A	0~19A	0~38A	0~60A	0~85A	0~125A	0~250A	0~375A
0~50V			0~30A				0~200A	0~300A
0~60V	0~12.5	0~12.5A	0~25A	0~40A	0~55A	0~85A	0~167A	0~250A
0~80V	0~9.5A	0~9.5A	0~19A	0~30A	0~42A	0~65A	0~125A	0~187.5A
0~100V	0~7.5A	0~7.5A	0~15A	0~24A	0~33A	0~50A	0~100A	0~150A
0~125V							0~80A	0~120A
0~150V	0~5A	0~5A	0~10A	0~16A	0~22A	0~34A	0~66A	0~100A
0~200V					0~16.5A	0~25A	0~50A	0~75A
0~250V							0~40A	0~60A
0~300V	0~2.5A	0~2.5A	0~5A	0~8A	0~11A	0~17A	0~33A	0~50A
0~400V						0~12.5A	0~25A	0~37.5A
0~500V						0~10A	0~20A	0~30A
0~600V	0~1.3A	0~1.3A	0~2.6A	0~4A	0~5.5A	0~8.5A	0~17A	0~25A
0~800V							0~12.5A (5)	0~18.8A (5
0~1000V							0~10A (5)	0~15A (5)
0~1250V							0~8A (5)	0~12A (5)
0~1500V							0~6.7A (5)	0~10A (5)
Weight (kg/lb)	4.5 / 9.9	7.0 / 15.0	8.5 / 18.0	10 .0 / 22.0	13.0 / 29.0	16.0 / 35.0	43.0 / 97.0	43.0 / 97.0 32.0 / 70.0 (6)

(6) 800V - 1500V models only (10kW/15kW)

### **AC Inputs**

85-265Vac, 1Ø	• (1)	• (1)	• (1)					
230Vac, 1Ø				• (1	• (1)			
208Vac, 3Ø				• (1	• (1)	• (1)	• (3)	• (3)
400Vac, 3Ø					• (1)	• (1)	• (3)	• (3)
480Vac, 3Ø					• (2)	• (2)	• (3), (4)	• (3), (4)

(1) UL/IEC/EN/CSA22.2 No. 61010-1; CE Mark; (2) UL/IEC/EN/CSA22.2 No. 61010-1, RoHS; (3) UL/IEC/EN/CSA22.2 No. 61010-1, CE Mark - (Vout ≥ 20V); 4) UL/cUL/EN 60950-1 Recognized, RoHS - (Vout < 20V)

#### **Options (All Models)**

""	Standard RS-232/RS-485 Master with RS-485 Multi-Drop capability installed					
LAN	LXI 1.5 Compliant LAN Interface with RS-485 Multi-Drop capability installed					
IEMD	IEEE Master (IEEE 488.2 & SCPI compliant) with RS-485 Multi-Drop capability installed					
USB	USB (2.0) Master with RS-485 Multi-Drop capability installed					
IS510	Isolated Analog Program/Monitor (0-5V or 0-10V, user-selectable) for 6V-600V models; *(5)	ev. M				
IS420	Isolated Analog Program/Monitor (4-20mA)	01, R				
All "Options" are factory installed and limited to one "option" per power supply *(5) Isolated 5V/10V (IS510) Interface is built-in standard for 800V-1500V models All specifications are subject to change without notice						



## Contactgegevens

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