Технические характеристики на программируемые источники питания Genesys 1U

По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72 Брянск (4832)59-03-52 Вологда (8172)26-41-59 Иваново (4932)77-34-06 Калининград (4012)72-03-81 Киров (8332)68-02-04 Курск (4712)77-13-04 Москва (495)268-04-70 Нижний Новгород (831)429-08-12 Орел (4862)44-53-42 Пермь (342)205-81-47 Самара (846)206-03-16 Смоленск (4812)29-41-54 Тверь (4822)63-31-35 Тюмень (3452)66-21-18 Челябинск (351)202-03-61

Астана +7(7172)727-132 Владивосток (423)249-28-31 Воронеж (473)204-51-73 Ижевск (3412)26-03-58 Калуга (4842)92-23-67 Краснодар (861)203-40-90 Липецк (4742)52-20-81 Мурманск (8152)59-64-93 Новокузнецк (3843)20-46-81 Оренбург (3532)37-68-04 Ростов-на-Дону (863)308-18-15 Санкт-Петербург (812)309-46-40 Сочи (862)225-72-31 Томск (3822)98-41-53 Ульяновск (8422)24-23-59 Череповец (8202)49-02-64

Белгород (4722)40-23-64 Волгоград (844)278-03-48 Екатеринбург (343)384-55-89 Казань (843)206-01-48 Кемерово (3842)65-04-62 Красноярск (391)204-63-61 Магнитогорск (3519)55-03-13 Набережные Челны (8552)20-53-41 Новосибирск (383)227-86-73 Пенза (8412)22-31-16 Рязань (4912)46-61-64 Саратов (845)249-38-78 Ставрополь (8652)20-65-13 Тула (4872)74-02-29 Уфа (347)229-48-12 Ярославль (4852)69-52-93

Эл. почта: adm@nt-rt.ru || Сайт: http://lambda.nt-rt.ru/

Genesys™

Programmable DC Power Supplies 2.4kW in 1U Built in RS-232 & RS-485 Interface Advanced Parallel Operation Auxiliary Outputs 5V & 15V

Optional Interface:

LXI Compliant LAN
IEEE488.2 SCPI (GPIB) Multi-drop
Isolated Analog Programming



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 2.4kW in 1U
- Wide Range of popular worldwide AC inputs, 1ø (230VAC) & 3ø (208VAC)
- Active Power Factor Correction (Single-Phase & Three-Phase AC Input)
- Output Voltage up to 600V, Current up to 300A
- Auxillary Outputs 5V/0.2A; 15V/0.2A for increased system control functionality
- Built-in RS-232/RS-485 Interface Standard
- Global Commands for Serial RS-232/RS-485 Interface
- Auto-Re-Start / Safe-Start: user selectable
- Last-Setting Memory
- High Resolution 16 bit ADCs & DACs
- Low Ripple & Noise
- Front Panel Lock selectable from Front Panel or Software
- Reliable Encoders for Voltage and Current Adjustment
- Constant Voltage/Constant Current auto-crossover
- Parallel Operation with Active Current Sharing; up to four identical units.
- Advanced Parallel Master / Slave. Total Current is Programmed and Measured via the Master.
- Independent Remote ON/OFF and Remote Enable/Disable
- External Analog Programming and Monitoring (user selectable 0-5V & 0-10V)
- Reliable Modular and SMT Design
- 19" Rack Mount capability for ATE and OEM applications
- Optional Interfaces

IEEE 488.2 SCPI (GPIB) Multi-Drop

Compliant LAN

- LabView® and LabWindows® drivers
- Five Year Warranty

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





Applications

GenesysTM power supplies have been designed to meet the demands of a wide variety of applications.

System Designers will appreciate new, standard, remote programming features such as Global commands. Also, new high-speed status monitoring is available for the RS-485 bus.

Test Systems using the IEEE-488 bus may achieve significant cost savings by incorporating the Optional IEEE Multi-Drop Interface for a Master and up to 30 RS-485 Multi-Drop Slaves.

Higher power systems can be configured with up to four 2.4kW modules. Each module is 1U with zero space between them (zero stack).

Flexible configuration is provided by the complete GenesysTM Family: 1U 750W Half-Rack, 1U 750W and 1500W Full-Rack, 2U 3.3kW & 5kW. All are identical in Front Panel, Rear Panel Analog, and all Digital Interface Commands. A wide variety of outputs allows testing of many different devices.

OEM Designers have a wide variety of Inputs and Outputs from which to select depending on application and location.

Front Panel Description



- 1. ON/OFF Switch
- 2. Air Intake allows zero stacking for maximum system flexibility and power density.
- 3. Reliable encoder controls Output Voltage, Address, OVP and UVL settings.
- 4. Volt Display shows Output Voltage and directly displays OVP, UVL and Address settings.
- 5. Reliable encoder controls Output Current, sets baudrate and Advanced Parallel mode.
- 6. Current Display shows Output Current and displays Baud rate. Displays total current in Parallel Master/Slave Mode
- 7. Function/Status LEDs:
- Alarm Fine Control
- Preview Settings

- Foldback Mode
- Remote Mode
- Output On
- 8. Pushbuttons allow flexible user configuration
- 8. Pushbuttons allow flexible user configuration
 - Coarse and Fine adjustment of Output Voltage/Current and Advanced Parallel Master or Slave select.
 - Preview settings and set Voltage/Current with Output OFF, Front Panel Lock
 - Parallel Master/Slave
 - Set OVP and UVI Limits
 - Set Current Foldback Protection
 - Go to Local Mode and select Address and Baud rate
 - Output ON/OFF and Auto-Re-Start/Safe-Start Mode

Rear Panel Description



- 1. Remote/Local Output Voltage Sense Connections.
- 2. DIP Switches select 0-5V or 0-10V Programming and other functions.
- 3. DB25 (Female) connector allows (Non-isolated) Analog Program and Monitor and other functions.
- 4. RS-485 OUT to other Genesys™ Power Supplies.
- 5. RS-232/RS-485 IN Remote Serial Programming.
- 6. Output Connections: Rugged busbars (shown) for up to 100V Output; wire clamp connector for Outputs >100V.
- 7. Exit air assures reliable operation when zero stacked.
- 8. Input: 230VAC Single Phase (shown), 208 VAC Three Phase, 50/60 Hz AC Input Connector: Phoenix P/N: FRONT-4-H-7.62.
- 9. Optional Interface Position for IEEE 488.2 SCPI (shown) or Isolated Analog Interface or LAN Interface.
- 10. Auxiliary Output Voltage Connector. Phoenix P/N: IMC1.5/7-ST-3.81

Genesys ™ 2.4kW Specifications

1.0 MODEL MODEL	GEN	8-300	10-240	16-150	20-120	30-80	40-60	60-40	80-30	Specifica 100-24	150-16	due are ir 300-8	nprove 600-4
MODEL 1.Rated output voltage(*1)	GEN V	8-300	10-240	16-150	20-120	30-80	40-60	60-40	80-30	100-24	150-16	300-8	600-4
2.Rated Output Current(*2)	A	300	240	150	120	80	60	40	30	24	16	8	4
3.Rated Output Power	W	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
1.1 CONSTANT VOLTAGE MODE									- 40	- 40	1 47	22	
1.Max.line regulation (0.01% of rated Vo+2mV)(*6)		2.8	6.5	3.5 7.25	8	<u>5</u> 9.5	6 11	8 14	10 17	12 20	17 27.5	32 50	62 95
2.Max load regulation (0.015% of rated Vo+5mV)(*7) 3.Ripple and noise p-p 20MHz (*8)	mV	6.2 50	50	50	50	<u>9.5</u> 55	55	60	60	70	90	150	240
4.Ripple and noise p-p 20M 12 (6)	mV	6	6	6	6	6	6	6	7	10	20	45	60
5.Remote sense compensation/wire	V	2	2	2	2	5	5	5	5	5	5	5	5
6.Temp. coefficient	PPM/°C				voltage,f								
7.Temp. stability					hrs interva						oad & tem	p.	
8.Warm-up drift	C	Less than	0.05% of		out voltag	e+2mV ov					<u></u>	00	100
9.Up-prog. response time, 0~Vo Rated (*9) 10.Down-prog response Full-load (*9)	mS mS	10	10	15 20	20	20	20	30 30	40 50	40 50	60 80	80 100	100 100
time No-load (*10)	mS	500	500	500	500	600	700	1100	1200	1500	2500	3000	3000
					over within								
11.Transient response time	mS				se. Less th								
1.2 CONSTANT CURRENT MODE													
1.Max.line regulation (0.01% of rated Io+2mA)(*6)	mA	32	26	17	14	10	8	6	5	4.4	3.6	2.8	2.4
2. Max. load regulation (0.02% of rated lo+5mA)(*11)		65	53	35	29	21	17	13	11	9.8	8.2	6.6	5.8
3.Ripple r.m.s 5Hz~1MHz . (*12)	mA	700	500	400	250	150	90	60	40	30	12	10	5
4.Load regulation thermal drift 5.Temp. coefficient	PPM/°C				ut current o								
6.Temp. stability	11 W/ C				rs. interva					ant line lo	ad & temr	perature	
· · · · · · · · · · · · · · · · · · ·					.5% of rate							ociatare.	
7.Warm-up drift					±0.25% of								
1.3 PROTECTIVE FUNCTIONS													
1. OCP			Constant (617.	66.11	1				
2. OCP Foldback 3. OVP type					ver supply								_
4. OVP trip point					reset by A0 1~24V								
5. Output Under Voltage Limit					municatio							J330V	J0001
6. Over Temp. Protection					on-latched			aajast	.g route				
1.4 ANALOG PROGRAMMING AND MONITO	RING												
1.Vout Voltage Programming					select. Ac					ut.			
2.lout Voltage Programming (*13)					select. Ac					111			
3.Vout Resistor Programming 4.lout Resistor Programming (*13)		0~100%, 0~5/10Kohm full scale, user select., Accuracy and linearity: ±1% of rated Vout. 0~100%, 0~5/10Kohm full scale, user select. Accuracy and linearity: ±1.5% of rated lout.											
5.On/Off control (rear panel)					//2~15V,or					itea iout.			
6.Output Current monitor (*13)					% , user se		ict jaser se	icctable i	ogic.				
7.Output Voltage monitor					6 ,user sele								
8.Power Supply OK signal		TTL high (4~5V) -OK, 0V-Fail 500ohm series resistance.											
9. CV/CC Indicator		Open collector, CC mode: On, CV mode: Off, Maximum voltage: 30V, maximum sink current: 10mA											
10. Enable/Disable 11. Local/Remote analog control		Dry contact. Open:off , Short: on. Max. voltage at Enable/Disable in: 6V.											
12. Local/Remote analog control Indicator		By electrical signal or Open/Short: 0~0.6V or short: Remote, 2~15V or open: Local. Open collector, Local: Off, Remote: On. Maximum voltage: 30V, maximum sink current: 10mA.											
1.5 FRONT PANEL		Оренсов	iector, Loc	cai. Off, Ne	mote. On.	Maximu	ii voitage.	JUV, IIIANI	IIIUIII SIIIR	Current.	IUIIIA.		
		Vout/ Iou	t manual	adjust by:	separate e	ncoders (coarse and	d fine adju	stment se	electable).			
					olt. Adjust					·			
1.Control functions					art modes						cal control		
					(or currer		encoder. N	lumber of	addresse	s:31.			
					estart, safe 00,4800,96		200						
					0.05% of			age +1 co	ount.				
2.Display		Current: 4	4 digits, A	ccuracy:	0.2% of ra	ated out	out curre	nt ±1 cou	nt.				
3.Indications		Voltage, 0	Current, A	larm, Fine	, Preview,	Foldback,	Local, Ou	tput On, F	ront Pane	el Lock, CV	/CC.		
			32/DC-4	85 Or Op	tional G	PIB/LAN	Interfac	e Installe	ed				
1.6 Interface Specifications for the GENESY	S Series	with RS-2	-32/N3-4										
	S Series	with RS-2	10	15	20	30	40	60	80	100	150	300	600
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated)	V mV	8 0.16	10	0.3	0.4	0.6	0.8	1.2	1.6	2	3	6	12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit)	V	8	10										
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated)	V mV	8 0.16	10	0.3	0.4	0.6	0.8	1.2	1.6	2	3	6	12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated)	V mV mV	8 0.16 4	10 0.2 5	3.00	0.4 10 2.40	0.6 15	0.8 20	1.2 30	1.6 40 0.60	2 50	3 75 0.32	6 150 0.16	12 300 0.08
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit)	V mV mV	8 0.16 4	10 0.2 5	0.3	0.4	0.6 15	0.8	1.2 30	1.6 40	50	3 75	6 150	12 300
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.2% of Io Rated) 3. Readback Voltage	V mV mV	8 0.16 4 6 900	10 0.2 5 4.80 720	3.00 450	0.4 10 2.40 360	0.6 15 1.60 240	0.8 20 1.20 180	1.2 30 0.80 120	1.6 40 0.60 90	2 50 0.48 72	3 75 0.32 48	6 150 0.16 24	12 300 0.08 12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.2% of Io Rated) 3. Readback Voltage Resolution (% of Vo Rated)	V mV mV mA mA	8 0.16 4 6 900	10 0.2 5 4.80 720	3.00 450	0.4 10 2.40 360	0.6 15 1.60 240	0.8 20 1.20 180	1.2 30 0.80 120	1.6 40 0.60 90	2 50 0.48 72	3 75 0.32 48	0.16 24	12 300 0.08 12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated) County (0.2% of lo Rated) Resolution (% of Vo Rated) Resolution (% of Vo Rated) Resolution (Readback Voltage)	V mV mV mA mA	8 0.16 4 6 900 0.002 0.16	10 0.2 5 4.80 720	3.00 450 0.007 1.05	0.4 10 2.40 360 0.006 1.20	0.6 15 1.60 240 0.004 1.20	0.8 20 1.20 180 0.003 1.20	1.2 30 0.80 120 0.002 1.20	1.6 40 0.60 90 0.002 1.60	0.48 72 0.011 11.00	3 75 0.32 48 0.007 10.50	0.16 24 0.004 12.00	12 300 0.08 12 0.002 12.00
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.2% of Io Rated) 3. Readback Voltage Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated)	V mV mV mA mA	8 0.16 4 6 900	10 0.2 5 4.80 720	3.00 450	0.4 10 2.40 360	0.6 15 1.60 240	0.8 20 1.20 180	1.2 30 0.80 120	1.6 40 0.60 90	2 50 0.48 72	3 75 0.32 48	0.16 24	12 300 0.08 12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated) 3. Readback Voltage Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current	MV mV mA mA mA mV mV	8 0.16 4 6 900 0.002 0.16 4	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8	0.4 10 2.40 360 0.006 1.20 10	0.6 15 1.60 240 0.004 1.20 15	0.8 20 1.20 180 0.003 1.20 20	1.2 30 0.80 120 0.002 1.20 30	1.6 40 0.60 90 0.002 1.60 40	2 50 0.48 72 0.011 11.00 50	3 75 0.32 48 0.007 10.50 75	0.16 24 0.004 12.00 150	12 300 0.08 12 0.002 12.00 300
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.2% of Io Rated) Accuracy (0.2% of Io Rated) 3. Readback Voltage Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current Resolution (% of Io Rated)	MA mA mV mV mV	8 0.16 4 6 900 0.002 0.16 4	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8	0.4 10 2.40 360 0.006 1.20 10	0.6 15 1.60 240 0.004 1.20 15	0.8 20 1.20 180 0.003 1.20 20	1.2 30 0.80 120 0.002 1.20 30	1.6 40 0.60 90 0.002 1.60 40	2 50 0.48 72 0.011 11.00 50	3 75 0.32 48 0.007 10.50 75	0.16 24 0.004 12.00 150	12 300 0.08 12 0.002 12.00 300
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of Io Rated) Accuracy (0.2% of Io Rated) Accuracy (0.2% of Io Rated) Accuracy (0.2% of Io Rated) Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current Resolution (% of Io Rated) Resolution (% of Io Rated) Resolution (Readback Current)	W mV mV mA mA mA mV mV mV mV mV	8 0.16 4 6 900 0.002 0.16 4 0.004 12	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8 0.007 10.5	0.4 10 2.40 360 0.006 1.20 10	0.6 15 1.60 240 0.004 1.20 15 0.002 1.6	0.8 20 1.20 180 0.003 1.20 20 0.002	1.2 30 0.80 120 0.002 1.20 30 0.003 1.2	1.6 40 0.60 90 0.002 1.60 40 0.004 1.2	2 50 0.48 72 0.011 11.00 50 0.005 1.2	3 75 0.32 48 0.007 10.50 75 0.007 1.120	0.16 24 0.004 12.00 150 0.002 0.160	0.08 12 0.002 12.00 300 0.003 0.120
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated).% of lo Actual Output) (*13) 3. Readback Voltage Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current Resolution (% of lo Rated) Resolution (Readback Current) Accuracy (0.3% of lo Rated) (*13)	MA mA mV mV mV	8 0.16 4 6 900 0.002 0.16 4	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8	0.4 10 2.40 360 0.006 1.20 10	0.6 15 1.60 240 0.004 1.20 15	0.8 20 1.20 180 0.003 1.20 20	1.2 30 0.80 120 0.002 1.20 30	1.6 40 0.60 90 0.002 1.60 40	2 50 0.48 72 0.011 11.00 50	3 75 0.32 48 0.007 10.50 75	0.16 24 0.004 12.00 150	12 300 0.08 12 0.002 12.00 300
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated) Besolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current Resolution (% of lo Rated) Resolution (% of lo Rated) Accuracy (0.3% of lo Rated) Resolution (Readback Current) Accuracy (0.3% of lo Rated) (*13) 5. OVP/UVL Programming	W mV	8 0.16 4 6 900 0.002 0.16 4 0.004 12 900	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8 0.007 10.5 450	0.4 10 2.40 360 0.006 1.20 10 0.009 10.8 360	0.6 15 1.60 240 0.004 1.20 15 0.002 1.6 240	0.8 20 1.20 180 0.003 1.20 20 0.002 1.2	1.2 30 0.80 120 0.002 1.20 30 0.003 1.2	1.6 40 0.60 90 0.002 1.60 40 0.004 1.2 90	0.48 72 0.011 11.00 50 0.005 1.2 72	0.32 48 0.007 10.50 75 0.007 1.120 48	0.16 24 0.004 12.00 150 0.002 0.160 24	12 300 0.08 12 0.002 12.00 300 0.003 0.120 12
1.6 Interface Specifications for the GENESY 1. Remote Voltage Programming (16 bit) Resolution (0.002% of Vo Rated) Accuracy (0.05% of Vo Rated) (*14) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.2% of lo Rated) Accuracy (0.2% of lo Rated).% of lo Actual Output) (*13) 3. Readback Voltage Resolution (% of Vo Rated) Resolution (Readback Voltage) Accuracy (0.05% of Vo Rated) 4. Readback Current Resolution (% of lo Rated) Resolution (% of lo Rated) Resolution (% of lo Rated) Resolution (Readback Current) Accuracy (0.3% of lo Rated) (*13)	W mV mV mA mA mA mV mV mV mV mV	8 0.16 4 6 900 0.002 0.16 4 0.004 12	10 0.2 5 4.80 720 0.011 1.10 5	0.3 8 3.00 450 0.007 1.05 8 0.007 10.5	0.4 10 2.40 360 0.006 1.20 10	0.6 15 1.60 240 0.004 1.20 15 0.002 1.6	0.8 20 1.20 180 0.003 1.20 20 0.002	1.2 30 0.80 120 0.002 1.20 30 0.003 1.2	1.6 40 0.60 90 0.002 1.60 40 0.004 1.2	2 50 0.48 72 0.011 11.00 50 0.005 1.2	3 75 0.32 48 0.007 10.50 75 0.007 1.120	0.16 24 0.004 12.00 150 0.002 0.160	0.08 12 0.002 12.00 300 0.003 0.120

- *1: Minimum voltage is guaranteed to maximum 0.2% of rated output voltage.

 *2: Minimum current is guaranteed to maximum 0.4% of rated output current.

 *3: For cases where conformance to various safety standards (UL, IEC, etc.) is required, to be described as 190-240Vac (50/60Hz) for 3-Phase 208V models.

 *4: 3-Phase 208V models: At 208Vac input voltage. With rated output power.

 *5: Not including EMI filter inrush current, less than 0.2mSec.

 *6: 3-Phase 208V models: 170-265Vac, constant load.

- From No-Load to Full-Load, constant input voltage. Maximum drop in Remote Sense. For 8V~300V models: Measured with JEITA RC-9131A (1:1) probe. For 600V model: Measured From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated, resistive load with 10:1 probe.

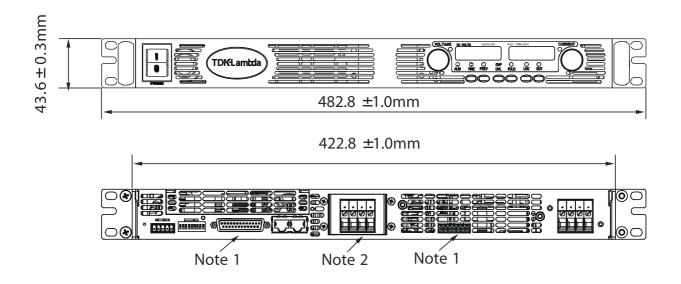
- *11: For load voltage change, equal to the unit voltage rating, constant input voltage.
 *12: For 8V~16V models the ripple is measured from 2V to rated output voltage and rated output current. For other models, the ripple is measured at 10~100% of rated output voltage and rated output current.
- *13: The Constant Current programming readback and monitoring accuracy does not include the warm-up and Load regulation thermal drift.
- *14: Measured at the sensing point.

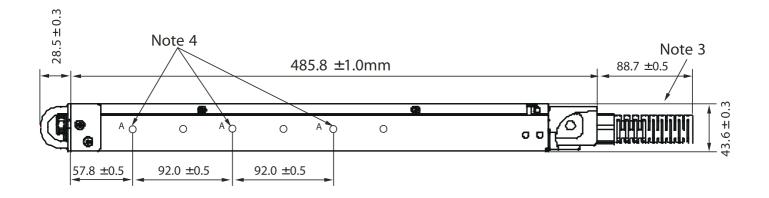
General Specifications Genesys™ 2.4kW

2.1 INPUT CHARACTERISTICS	GEN	8-300	10-240	16-150	20-120	30-80	40-60	60-40	80-30	100-24	150-16	300-8	600-4
	OZ.11)~265Vac,		1 .0 00	00 .0	0000	10021	130 10	300 0	000 1
1. Input voltage/freq. (*3)	VAC	-		-	5Vac, 47~6								
2. Maximum Single Phase 230V models:							166	16.6	16.6	166	16.6	16.6	16.6
2. Maximum Input current at 100% load Single Phase, 230V models: 3-Phase, 208V models:	Α	17.3	17.3 10.5	17.3 10.5	16.8 10.2	16.6 10.1	16.6 10.1	16.6 10.1	16.6 10.1	16.6 10.1	16.6 10.1	16.6 10.1	16.6 10.1
3. Power Factor (Typ))8Vac, rate			10.1
4. Efficiency (*4)	%	84	84	86	86	86	88	88	88	88	88	88	87
5. Inrush Current (*5)	A				V models:					1 00		- 00	<u> </u>
2.2 POWER SUPPLY CONFIGURATION													
1. Parallel Operation					er/slave me								
2. Series Operation		Up to 2 id	entical uni	its. with ex	ternal dio	des. 600V	Max to Cha	assis grour	ıd		-		
2.3 ENVIRONMENTAL CONDITIONS 1. Operating temp		0~50°C, 1	00% load								-		
2. Storage temp		-20~85°C	J0% 10au.										
3. Operating humidity		+	H (non-co	ndensing)									
4. Storage humidity				ndensing)									
5. Vibration		MIL-810F,	method 5	14.5 , The E	UT is fixed	d to the vib	orating sur	face.					
6. Shock					ec. Unit is								
7. Altitude		by 1°C/10	0m above	2000m. N	on operati	ng: 40000	ft (12000m		000m, Alte	rnatively, d	erate maxi	mum amb	ient temp
8. RoHS Compliance		Complies	with the re	equiremer	ts of RoHS	directive.							
2.4 EMC		T											
1.Applicable Standards: 2.ESD		IFC1000-/	-2 Air-dic	ch -8KV cc	ntact disc	h -4KV							
3.Fast transients		IEC1000-2		CIIOKV, CC	Jillact uisc	114KV							
4.Surge immunity				e to line, 2	KV line to	ground							
5.Conducted immunity		IEC1000-4											
6.Radiated immunity		IEC1000-4	-3, 3V/m										
7.Magnetic field immunity			4-8, 1A/m										
8.Voltage dips		EN61000-											
9.Conducted emission				15-A, VCC									
10. Radiated emission 2.5 SAFETY		EN55022F	, FCC part	15-A, VCC	I-A.								
1.Applicable standards:		UI 60950	1. CSA 22	2 No. 6095	0-1,IEC 60	950-1. FN 6	50950-1						
in ppredate standards								ntrol inter	faces: RS2	32/485, IEE	E, Isolated	Analog,L/	AN, Sense
		Remote P	rogrammi	ng and Mo	nitoring, 5	V d.c. aux	iliary outp	ut are SELV	1				
2.Interface classification		Models with 60V Vout 400V: Output is Hazardous, communication/control interfaces: RS232/485, IEEE, Isolated Analog, LAN Remote Programing and Monitoring (pins 1-3, pins14-16), 5V d.c. auxiliary output are SELV, Sense, Remote Programming and Monitoring (pins 8-13, pins 21-25), 15V auxiliary output are Hazardous.											
										terfaces-RS iary output			d Analog
										4242VDC 1 (SELV)-Gro		VDC 1min.	
3.Withstand voltage		60V Vout 100V models: Input-Output/15V d.c. auxiliary output/communication/control (Hazardous): 2600VDC 1min, Input-communication/control/5V d.c. auxiliary output (SELV): 4242VDC 1min, Output/15V d.c. auxiliary output/communication/control (Hazardous): -communication/control (Hazardous): -Ground: 1200VDC 1min,Input-Ground: 2828VDC 1min.											
		100V Vout 600V models: Input-Output/15V d.c. auxiliary output/communication/control (Hazardous): 4000VDC 1min, Input-communication/control/SV d.c. auxiliary output (SELV): 4242VDC 1min, Output/15V d.c. auxiliary output/communication/control (Hazardous): -communication/control (Hazardous): -communication/control (Hazardous): -Ground: 2670VDC 1min, Input-Ground: 2828VDC 1min, Input-Ground: 2828VDC 1min.											
3.Insulation resistance		More than	100Mohr	n at 25°C,	70% RH.								
2.6 MECHANICAL CONSTRUCTION		Fores de la	flour for	o from the	oor Ne	neilnei !	olos stali :	ton cultur	tom cftl	a chacata M	ariable fe	cnoo-l	
Cooling Dimensions (WxHxD)								top or bot oders, har		e chassis; Va	ariabie tan	speea.	
3. Weight		Less than	,	, <i>D.</i> 4411	IIII (EXCIU	anig confi	ددرناع, حاال	ouers, ridi	امادی, حال.)				
	- 1			nodels, Po	wer Combi	icon PC 6-	16/3-GF-10),16 series,	with Strair	n relief.			
4. AC Input connector (with Protective Cove	er)	3-Phase, 2	08V & 400	V models,	Power Co	mbicon PC	6-16/4-GI	-10,16 seri	es, with St	rain relief.			
5.Output connectors		8V to 100	/ models: I	Bus-bars (ł	nole Ø 10.5	mm). 150\	/ to 600V r	nodels: wii	re clamp co	onnector, F	hoenix P/I	N: FRONT-4	-H-7.62
2.7 AUXILARY OUTPUTS													
1. 15V Output (*8)										egative ou		tial.	
2.5V Output 2.8 RELIABILITY SPECS		5V±5%,0	.ZA Max Lo	oad, Ripple	& Noise 1	υ∪mVp-p.	reference	<u>a internally</u>	y to IF_COI	M potentia	l.		
1. Warranty		5 years.											
All specifications subject to change withou	t notice	Jo yeurs.											

All specifications subject to change without notice.

Outline Drawing Genesys™ 2.4kW Units





NOTE

- 1. ating plug supplied with power supply.
- 2. us bars for 8V to 100V models. See Detail
- 2. c cable strain relief supplied with power supply.
- 4. hassis slides mounting holes #10-32 marked "A". GENERAL DEVICES P/N: CC3001-00-5160 or equivalent.

Genesys™ Power Parallel and Series Configurations

Parallel operation - Master/Slave:

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



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

Series operation

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

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.









P/N: IEEE

Programming Options (Factory installed)

Digital Programming via IEEE Multi-Drop Interface

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

- Program Current
- Measure Current
- Current Foldback shutdown

Isolated Analog Programming

Four Channels to Program and Monitor Voltage and Current.

Isolation allows operation with floating references in harsh electrical environments.

Choose between programming with Voltage or Current.

Connection via removable terminal block: Phoenix MC1,5/8-ST-3.81.

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

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

P/N: IS510

P/N: IS420

LAN Interface LXI Compliant to Class C

- Meets all LXI-C Requirements
- Address Viewable on Front Panel
- Fixed and Dynamic Addressing
- Compatible with most standard Networks

P/N: LAN

- VISA & SCPI Compatible
- LAN Fault Indicators
- Auto-detects LAN Cross-over Cable
- Fast Startup

Power Supply Identification / Accessories How to order

GEN	8 -	300	-	<u>-</u>
			Factory Options:	Factory AC Input Options:
Series	Output	Output	Option: IEEE	1P230 (Single Phase 170~265VAC)
Name	Voltage	Current	IS510	3P208 (Three Phase 170~265VAC)
	(0~8V	(0~300A)	IS420	
			ΙΔΝ	

Models 2.4kW

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 8-300	0~8V	0~300	2400
GEN 10-240	0~10V	0~240	2400
GEN 16-150	0~16V	0~150	2400
GEN 20-120	0~20V	0~120	2400
GEN 30-80	0~30V	0~80	2400
GEN 40-60	0~40V	0~60	2400

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN 60-40	0~60V	0~40	2400
GEN 80-30	0~80V	0~30	2400
GEN 100-24	0~100V	0~24	2400
GEN 150-16	0~150V	0~16	2400
GEN 300-8	0~300V	0~8	2400
GEN 600-4	0~600V	0~4	2400

Factory option P/N RS-232/RS-485 Interface built-in Standard **GPIB** Interface **IEEE** Voltage Programming Isolated Analog Interface IS510 Current Programming Isolated Analog Interface IS420 LAN Interface (Complies with LX Class C) LAN

Accessories

1. Serial Communication cable

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

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

2. Serial link cable*

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

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

^{*} Included with power supply



Genesys™

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



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

Features include:

- · High Power Density: 1500W in 1U
- Wide Range Input (85 265Vac Continuous, single phase, 47/63Hz)
- Active Power Factor Correction (0.99 typical)
- Output Voltage up to 600V, Current up to 200A
- Built-in RS-232/RS-485 Interface Standard
- · Last-Setting Memory
- Global Commands for Serial RS-232/RS-485 Interface
- Front Panel Lock selectable from Front Panel or Software
- High Resolution 16 bit ADCs & DACs
- Reliable Encoders for Voltage and Current Adjustment
- Constant Voltage/Constant Current auto-crossover
- Advanced Parallel reports total current up to four identical units
- Independent Remote ON/OFF and Remote Enable/Disable
- External Analog Programming and Monitoring (user selectable 0-5V & 0-10V)
- Reliable Modular and SMT Design
- 19" Rack Mounted ATE and OEM applications
- Optional Interfaces

Isolated Analog Programming and Monitoring Interface (0-5V/0-10V & 4-20mA) IEEE 488.2 SCPI (GPIB) Multi-Drop

LXI Compliant LAN Interface

- LabWiew® and LabWindows® drivers
- Five Year Warranty

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





Applications

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

Common controls are shared all Genesys™ Series.

Test and Measurement

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

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

Semiconductor Burn-in

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

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

Component Test

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

Laser Diode

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

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

Heater Supplies

Smooth, reliable encoders enhance front panel control.

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

RF Amplifiers and Magnets

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

High linearity in voltage and current mode.

Front Panel Description



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

Rear Panel Description



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

Genesys ™ 750W/1500W Specifications

•										Specif	ication	in Plu	o aro im	proved	750W	1500W
1.0 MODEL	GEN	6-200	8-180	12.5-120		30-50	40-38	50-30	60-25					600-2.6	730W	X
1. Rated output voltage (*1)	V	6	8	12.5	20	30	40	50	60	80	100	150	300	600		X
2. Rated Output Current (*2) 3. Rated Output Power	A W	200 1200	180 1440	120 1500	76 1520	50 1500	38 1520	30 1500	25 1500	19 1520	15 1500	10 1500	1500	2.6 1560		X
4. Efficiency at 100/200Vac (*3)	%	77/79	78/81	82/85	83/86	83/86	84/88	84/88		84/88	84/88		84/88			X
1.0 MODEL	GEN	6-100	8-90	12.5-60	20-38	30-25	40-19		60-12.5	80-9.5	100-7.5	150-5	300-2.5	600-1.3	Х	
1. Rated output voltage (*1)	V	6	8	12.5	20	30	40		60	80	100	150	300	600	Χ	
2. Rated Output Current (*2)	A W	100 600	90 720	60 750	38 760	25 750	19 760		750	9.5 760	7.5 750	5 750	750	780	X	
3. Rated Output Power 4. Efficiency at 100/200Vac (*3)	- VV - %	76/78	77/80	81/84	82/85		83/87		83/87	83/87	83/87	83/87	83/87		X	
1.1 CONSTANT VOLTAGE MODE	70	170,70	177700	01/01	02/03	1 02/03	1 03/0/		1 03/0/	1 03/07	03/07	03/07	1 03/0/	1 03/07		
1. Max.line regulation (0.01% of Vo+ 2mV)(*4)	mV	2.6	2.8	3.3	4	5	6	7	8	10	12	17	32	62	Х	X
2. Max load regulation (0.01% of Vo+2mV)(*5)	mV	2.6	2.8	3.3	4	5	6	7	8	10	12	17	32	62	Х	X
3. Ripple and noise p-p 20MHz (*9)	mV	60	50	60	60	50	60	40	60	75	75	75	130	300	X	X
4. Ripple r.m.s 5Hz~1MHz (*9) 5. Remote sense compensation/line	mV V	8	1	7	7.5 1	1.5	2	5	3	7	- 8 - 5	5	20 5	5	X	X
6. Temp. coefficient		C 50PPM	/°C of rat	ed outp	ut volta										X	X
7. Temp. stability	%	0.01%	of rated	lout ov	er 8hrs					arm-up.					Χ	X
8. Up-prog. response time, 0~Vo Rated 9. Down-prog response time full-load	mS mS	80mS, 10	<u>N.L/F.L, r</u>	esistive 50	load			10		150mS,	N.L/F.L,	<u>resistiv</u> 50	e load	250 250	X	X
10. Down-prog response time No-load	mS	500	600	700	800	900	1000	1100	1100	1200	1500	2000	2500	4000	x	X
11. Transient response time (*8)	mS		an 1mSe										1 2500	1.000	X	X
12. Temp. drift	%	0.01%	of rated \	out ove	r 8hrs in	iterval fo	ollowing	30 min	utes war	m up. C	onstant	line, loa	d & tem	p.	Χ	X
1.2 CONSTANT CURRENT MODE		,													·	
1. Max.line regulation (0.01% of lo+ 2mA)(*4)	mA	12	11	8.0	5.8	4.5	3.9		3.25	2.95	2.75	2.5	2.25	2.13	X	
2. Max.load regulation (0.02% of lo+5mA)(*6) 3. Ripple r.m.s 5Hz~1MHz . (*7)	mA mA	25 190	23 160	17 110	12.6 50	10 45	8.8		7.5	6.9	6.5	6.0	5.5	5.26 4	X	\vdash
4. Max.line regulation (0.01% of lo+ 2mA)(*4)	mA	22	20	14	9.6	7.0	5.8	5	4.5	3.9	3.5	3.0	2.5	2.26		X
5. Max.load regulation (0.02% of Io+5mA)(*6)	mA	45	41	29	20.2	15	12.6	11	10	8.8	8.0	7.0	6.0	5.52		X
6. Ripple r.m.s 5Hz~1MHz .(*7) 7. Temp. coefficient	mA	350	300	210	120	60	65	60	60	40	20	15	15	7	Y	X
8. Temp. drift	PPIVI/ U		<u>/°C from</u> of rated \								onstant	line loa	d & tem	n	X	X
9. Warm up drift	%		an 0.1% r												X	X
1.3 PROTECTIVE FUNCTIONS											_					
1. OCP			6 Consta												Χ	X
2. OCP Foldback			shut do												X	X
3. OVP type 4. OVP trip point			r shut-do 0.5~10V												X	X
5. Over Temp Protection			lectable.					J-3/ V	J00V	J00V	J110V	J105V	133301	130004	X	X
1.4 ANALOG PROGRAMMING AND MONITORIN	ıG															•
1. Vout Voltage Programming		0~1000	6 0~5V	r 0≈10\		I A .		1.11								
			0,031	<u> </u>	, user se	elect. Ac	curacy a	<u>nd linea</u>	arity: +/-	0.5% of r	ated Vo	ut.			X	l X
2. lout Voltage Programming		0~1009	6, 0~5V c	or 0~10V	, user se	lect. Ac	curacy a	nd line	arity: +/-	1% of rat	ed lout.				X	X
3. Vout Resistor Programming		0~1009 0~1009	<mark>6, 0∼5V c</mark> 6, 0∼5/10	or 0~10V Kohm f	, user se ull scale	lect. Ac	curacy a lect., Ácc	nd linea uracy a	arity: +/- nd linea	<u>1% of rat</u> rity: +/-1	ed lout. % of rate	ed Vout	t		X X X	Х
3. Vout Resistor Programming		0~1009 0~1009 0~1009	6, 0~5V c	or 0~10V)Kohm f)Kohm f	, user se ull scale ull scale	lect. Ac ,user se ,user se	curacy a lect., Acc lect. Acc	nd linea uracy a uracy a	arity: +/- nd linear nd linear	1% of rat rity: +/-1 rity: +/-1.	ed lout. % of rate .5% of ra	ed Vout	t.		Х	
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor		0~1009 0~1009 0~1009 By elect	6, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V,	or 0~10V OKohm f OKohm f Itage: 0- accuracy	vuser se ull scale ull scale ~0.6V/2 y: 1%, us	user se user se user se ~15V, or ser selec	curacy a lect., Acc lect. Acc dry con table	nd linea uracy a uracy a	arity: +/- nd linear nd linear	1% of rat rity: +/-1 rity: +/-1.	ed lout. % of rate .5% of ra	ed Vout	t.		X	X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor		0~1009 0~1009 0~1009 By elect 0~5V o	6, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V,	or 0~10V OKohm f OKohm f Itage: 0- accuracy accuracy	/, user se ull scale ull scale ~0.6V/2 y: 1%, us y: 1%, us	lect. Ac ,user se ,user se ~15V, or ser selec ser selec	curacy a lect., Acc lect. Acc dry con table table	nd linea uracy a uracy a tact, use	arity: +/- nd linear nd linear	1% of rat rity: +/-1 rity: +/-1.	ed lout. % of rate .5% of ra	ed Vout	t.		X X X X	X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor		0~1009 0~1009 0~1009 By elect 0~5V o 0~5V o TTL hick	6, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V,	or 0~10V OKohm f OKohm f Itage: 0- accuracy accuracy -OK, 0V	, user se ull scale ull scale ~0.6V/2 y: 1%, us y: 1%, us /-Fail 500	elect. Ac ,user se ,user se ~15V, or ser selec ser selec Oohm se	curacy a lect., Acc lect. Acc dry con table table eries resi	nd linea uracy a uracy a tact, use stance	arity: +/- nd linear nd linear er selecta	I% of rat rity: +/-1' rity: +/-1. able logi	ed lout. % of rate 5% of ra c	ed Vout.	t.	mA	X X X X X	X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable		0~1009 0~1009 0~1009 By elect 0~5V o 0~5V o TTL hic Open c	%, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V, ih (4~5V) ollector, ntact. Op	or 0~10V OKohm f OKohm f Itage: 0- accuracy accuracy -OK, 0V CC mod en: off, 9	/, user se ull scale ull scale ~0.6V/2 [,] y: 1%, us y: 1%, us /-Fail 500 le: On, C Short: oi	elect. Ac ,user se ~15V, or ser select Ser select Oohm se V mode n. Max. v	curacy a lect., Acc lect. Acc dry con table table ries resi : Off, Ma voltage a	nd linea uracy a uracy a tact, use stance ximum at Enabl	arity: +/- nd linear nd linear er selecta voltage: e/Disabl	1% of rat rity: +/-1 rity: +/-1. able logi 30V, ma e in: 6V	ed lout. % of rate .5% of ra c ximum	ed Vout. ited Iou	t.	mA	X X X X X X	X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control		0~1009 0~1009 0~1009 By elect 0~5V of TTL hick Open cools By elect Dry cools	%, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V, th (4~5V) ollector, ntact. Op trical sig	or 0~10V DKohm f DKohm f Itage: 0- accurac accurac -OK, 0V CC mod en: off, ! nal or O	/, user se ull scale ull scale ~0.6V/2- y: 1%, us y: 1%, us /-Fail 500 le: On, C Short: or pen/Sho	elect. Ac ,user se ,user se ~15V, or ser select ser select Oohm se V mode n. Max. vort: 0~0.	curacy a lect., Acc lect. Acc dry con table table ries resi : Off, Ma voltage a 6V or sh	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer	arity: +/- nd linear nd linear er selecta voltage: e/Disabl note, 2~	1% of rat rity: +/-1 rity: +/-1. able logi 30V, ma e in: 6V	ed lout. % of rate 5% of rate c ximum	ed Vout sted lou sink cur al.	t. rent: 10	mA	X X X X X	X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator		0~1009 0~1009 0~1009 By elect 0~5V of TTL hick Open cools By elect Dry cools	%, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V, ih (4~5V) ollector, ntact. Op	or 0~10V DKohm f DKohm f Itage: 0- accurac accurac -OK, 0V CC mod en: off, ! nal or O	/, user se ull scale ull scale ~0.6V/2- y: 1%, us y: 1%, us /-Fail 500 le: On, C Short: or pen/Sho	elect. Ac ,user se ,user se ~15V, or ser select ser select Oohm se V mode n. Max. vort: 0~0.	curacy a lect., Acc lect. Acc dry con table table ries resi : Off, Ma voltage a 6V or sh	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer	arity: +/- nd linear nd linear er selecta voltage: e/Disabl note, 2~	1% of rat rity: +/-1 rity: +/-1. able logi 30V, ma e in: 6V	ed lout. % of rate 5% of rate c ximum	ed Vout sted lou sink cur al.	t. rent: 10	mA	X X X X X X	X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control		0~1009 0~1009 By elect 0~5V of	%, 0~5V c %, 0~5/10 %, 0~5/10 trical. Vo r 0~10V, r 0~10V, ih (4~5V) ollector, ntact. Op trical sig ollector,	or 0~10V OKohm f OKohm f Itage: 0- accuraci accuraci -OK, 0V CC mod en: off, 9 nal or O Local: 0	/, user secull scale ull scale ull scale ~0.6V/2/ y: 1%, us y: 1%, us /-Fail 500 le: On, C Short: or pen/Sho pen, Re	elect. Ac ,user sel ,user sel ~15V, or ser select ser select Oohm select V mode n. Max. Nort: 0~0. mote: O	curacy a lect., Acc lect. Acc dry con table table ries resi : Off, Ma voltage a 6V or sh n. Maxir	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo	voltage: e/Disabl note, 2~	1% of rat rity: +/-1! rity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir	ed lout. % of rate 5% of rate c ximum pen: Loc num sin	ed Vout sted lou sink cur al. k currer	t. rent: 10	mA	X X X X X X X X	X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o TTL hig Open c Dry cor By elec Open c	6, 0~5V c 6, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V, ollector, ttact. Op trical sig ollector, but manu/L manu/L manu	or 0~10V OKOHM f OKOHM f Itage: 0- accurac - OK, 0V CC mod en: off, 3 nal or 0 Local: 0	/, user se ull scale ull scale ull scale v=0.6V/2· y: 1%, us y: 1%, us y: 1%, os y: 1%, os Pen/Short: os pen/Short pen, Re t by sep t by Volt	elect. Ac ,user sel ,user sel ~15V, or ser selector ser selector Oohm selector V mode n. Max. vort: 0~0. mote: O	curacy a lectAcc lect. Acc dry con: table table: : Off, Ma voltage a 6V or sh n. Maxir acoders encoders	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo	arity: +/- nd linear nd linear r selecta voltage: e/Disabl note, 2~- ltage: 30 and fine	1% of rat rity: +/-1' rity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm	ed lout. % of rate 5% of rac c ximum pen: Loc num sin	ed Vout. sink cur al. k currer	rent: 10i		X X X X X X X X X X	X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator		0~1009 0~1009 0~1009 By elec 0~5V o TTL hig Open c Dry coi By elec Open c	6, 0~5V c 6, 0~5/1(6, 0~5/1(trical. Vo r 0~10V, r 0~10V, r 0~10V, th (4~5V) ollector, trical sig ollector, but manu /L manu off, Outp	or 0~10V OKOHM f OKOHM f Itage: 0- accuracy accuracy -OK, 0V CC mod en: off, s nal or 0 Local: 0	/, user se ull scale ull scale ull scale ve 1.6 v. us y: 1%, us y: 1%, us y: 16, us y: 16, us Pen/Short: on pen/Shorts pen, Re	elect. Ac, user selects, user selects, user selects are selects are selected and selected are se	curacy a lectAcc lect. Acc dry con- table table: : Off, Ma /oltage a 6V or sh n. Maxir encoders encode(es (auto,	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fo	arity: +/-' nd linear nd linear er selecta voltage: e/Disabl note, 2~' ltage: 30 and fine	1% of rat rity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm	ed lout. % of rate 5% of rac c ximum pen: Loc num sin ent sele	sink cur al. cctable)	rent: 10i		X X X X X X X X X	X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o TTL hic Open c Dry cor By elec Open c Vout/lc OVP/U/ AC on/ Addres	6, 0~5V c 6, 0~5/1(6, 0~5/1(6, 0~5/1(trical. Vo r 0~10V, r 0~10V, r 0~10V, ollector, ntact. Op trical sig ollector, but manu /L manu off, Outp s selectie	or 0~10V DKohm f DKohm f Itage: 0- accuracy accuracy -OK, 0V CC moden: off, so nal or O Local: O tal adjust ut on/of on by Vo	/, user se ull scale ull scale ~0.6V/2· y: 1%, us y: 1%, us y: 1%, ou y: 1%, ou pen/Sho pen/Sho pen/Re t by sep t by Volt ff, Re-sta	elect. Ac ,user se ,user se ,user selecter ,user selecter selecter ser selecter 00hm se V mode n. Max. v port: 0~0. mote: O	curacý a lect., Acc lect. Acc dry con table table eries resi : Off, Ma /oltage a 6V or sh n. Maxir encoders encoders (auto, t) adjust	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fo	arity: +/-' nd linear nd linear er selecta voltage: e/Disabl note, 2~' ltage: 30 and fine oldback er. Numb	1% of raticity: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad)	ed lout. % of rate 5% of rac c ximum pen: Loc num sin ent sele CV to Co dresses:	sink cur al. cctable)	rent: 10i		X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		0~1009 0~1009 0~1009 0~1009 0~5V o 0~5V o 0~5V o TTL hig Open c Dry col By elec Open c Vout/Ic OVP/U AC on/Addres RS232/ Baudra	6, 0~5V c 6, 0~5V c 6, 0~5/10 6, 0~5/10 trical. Vo r 0~10V, r 0~10V, r 0~10V, ollector, ntact. Op trical sig ollector, out manu //L manu off, Outp s selectif 485 and te select	or 0~10V DKOhm f DKOhm f DKOhm f Itage: 0- accurace -OK, 0V CC mod en: off, 9- nal or 0 Local: 0 tal adjust ut on/of on by Vo IEEE488 ion: 120	/, user se ull scale ull scale ~0.6V/2· y: 1%, us y: 1%, us /-Fail 500 le: On, C Short: on pen/Short: on pen/short pen, Re t by sep t by Volt ff, Re-sta oltage (o .2 select 0, 2400,	elect. Ac ,user se ,user se ,user se ,user selector ser selector obm selector obm selector omote: O omote:	curacý a lect., Acc lect. Acc dry con table table eries resi colt Maxim Maxim lecter e se colt e	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fi encode	arity: +/-' nd linear nd linear er selecta voltage: e/Disabl note, 2~' ltage: 30 and fine oldback er. Numb	1% of raticity: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad)	ed lout. % of rate 5% of rac c ximum pen: Loc num sin ent sele CV to Co dresses:	sink cur al. cctable)	rent: 10i		X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL		0~100° 0~100° 0~100° 0~100° 0~5V o 0~5V o 0~5V o TTL hic Open c Open c Vout/lc OVP/U AC on/ Addres RS232/ Baudra	6, 0~5V c 6, 0~5/10 6, 0~5/10 6, 0~5/10 trical. Vo or 0~10V, r 0~10V, h (4~5V) ollector, trical sig ollector, but manu- off, Outp s selectie 485 and te select	or 0~10V DKohm f DKohm f Itage: 0- accuracy accuracy -OK, 0V CC mode en: off, 5 nal or O Local: O mal adjust ut on/of on by Vo IEEE488 ion: 120	/, user se ull scale ull scale vo.6V/2· y: 1%, us y: 1%,	elect. Ac ,user sel ,user sel ,user sel -15V, or ser selec 00hm se V mode n. Max. v. ort: 0~0. mote: O marate er . Adjust art mode r curren ion by li 4800, 90	curacy a lect., Acc lect. Acc dry con- table table tries resi : Off, Ma voltage a 6V or sh n. Maxir ncoders encoders es (auto, t) adjust EEE enal 500 and	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fi encode	arity: +/-' nd linear nd linear er selecta voltage: e/Disabl note, 2~' ltage: 30 and fine oldback er. Numb	1% of raticity: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad)	ed lout. % of rate 5% of rac c ximum pen: Loc num sin ent sele CV to Co dresses:	sink cur al. cctable)	rent: 10i		X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions		0~100° 0~100° 0~100° By elec 0~5V o 0~5V o TTL hig Open c Open c Vout/Ic OVP/U AC on/Addres RS232/ Baudra Voltage Curren	6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5/10 (6, 0~5/10 (10 L))))) or 0~10V, r 0~10V, r 0~10V, r 10~10V,	or 0~10V DKohm f DKohm f Itage: 0- accurac; accurac; -OK, 0V CC mod en: off, s nal or O Local: O sal adjust ut on/of on by Vo IEEE488 ion: 120 , accurac; accurac;	/, user se ull scale ull scale vo.6V/2· y: 1%, us y: 1%,	elect. Ac ,user sel ,user sel ,user selector ,user selecto	curacy a lect., Accelect. Accelect. Accelect. Accelect. Accelect. Accelect able table tries resi:	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Ren num vo (coarse safe), Fi encodo le swit 19,200	voltage: e/Disable note, 2~ ltage: 30 and fine bldback er, Numb ch and D	1% of ratify: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad IP switch	ed lout. % of rations 5% of rations 5% of rations c ximum pen: Loc num sin eent sele CV to Co dresses:	ed Vout ited lou sink cur al. k currer ectable) C), Go to 31	rent: 10i		X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications	/ I AN In	0~100° 0~100° 0~100° By elec 0~5V o 0~5V o TTL hig Open c Open c Vout/lc OVP/U AC on/v Addres RS232/ Baudra Voltage Voltage	6, 0~5V c 6, 0~5/10 6, 0~5/10 6, 0~5/10 trical. Vo or 0~10V, r 0~10V, h (4~5V) ollector, trical sig ollector, but manu- off, Outp s selectie 485 and te select	or 0~10V DKohm f DKohm f Itage: 0- accurac; accurac; -OK, 0V CC mod en: off, s nal or O Local: O sal adjust ut on/of on by Vo IEEE488 ion: 120 , accurac; accurac;	/, user se ull scale ull scale vo.6V/2· y: 1%, us y: 1%,	elect. Ac ,user sel ,user sel ,user selector ,user selecto	curacy a lect., Accelect. Accelect. Accelect. Accelect. Accelect. Accelect able table tries resi:	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Ren num vo (coarse safe), Fi encodo le swit 19,200	voltage: e/Disable note, 2~ ltage: 30 and fine bldback er, Numb ch and D	1% of ratify: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad IP switch	ed lout. % of rations 5% of rations 5% of rations c ximum pen: Loc num sin eent sele CV to Co dresses:	ed Vout ited lou sink cur al. k currer ectable) C), Go to 31	rent: 10i		X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions	/LANIn	0~100° 0~100° 0~100° By elec 0~5V o 0~5V o TTL hig Open c Open c Vout/lc OVP/U AC on/v Addres RS232/ Baudra Voltage Voltage	6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5/10 (6, 0~5/10 (10 L))))) or 0~10V, r 0~10V, r 0~10V, r 10~10V,	or 0~10V DKohm f DKohm f Itage: 0- accurac; accurac; -OK, 0V CC mod en: off, s nal or O Local: O sal adjust ut on/of on by Vo IEEE488 ion: 120 , accurac; accurac;	/, user se ull scale ull scale vo.6V/2· y: 1%, us y: 1%,	elect. Ac ,user sel ,user sel ,user selector ,user selecto	curacy a lect., Accelect. Accelect. Accelect. Accelect. Accelect. Accelect able table tries resi:	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Ren num vo (coarse safe), Fi encodo le swit 19,200	voltage: e/Disable note, 2~ ltage: 30 and fine bldback er, Numb ch and D	1% of ratify: +/-1' ity: +/-1' ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad IP switch	ed lout. % of rations 5% of rations 5% of rations c ximum pen: Loc num sin eent sele CV to Co dresses:	ed Vout ited lou sink cur al. k currer ectable) C), Go to 31	rent: 10i		X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB		0~1009 0~1009 By elec 0~5V o 0~5V o 075V o TTL hig Open c Dry cor By elec Open c Vout/lc OVP/U/ AC on/ Addres RS232/ Baudra Voltage Curren Voltage terface	6, 0~5V (6, 0~5V) (6, 0~5/10 (6, 0~5/10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	or 0~10V Nohm f Nohm f Itage: 0 accurac accurac -OK, 0V CC mod en: off, 9 al adjust ut on/of pon by Vo IEEE488 ion: 120 accurac	/, user se ull scale ull scale ~0.6V/2· y: 1%, usy -Fail 500 e: On, C Short: on pen/Sho pen, Re tt by sep t by Volt ff, Re-sta oltage (o. 2. Select 0, 2400, cy: 0.05% cy: 0.2% , Fine, Pi	elect. Ac ,user select. ~15V, or ser select. olohm select. V mode n. Max. v. mote: O earate er . Adjust. art moder r currention by II 4800, 90 %+/-1 coureview, f	curacy a ect., Acceler, Accele	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fr encod ble swit 19,200	arity: +/- nd linean nd linean er selecta voltage: e/Disabl note, 2~ ltage: 30 and fine bldback er. Numb ch and D Output	1% of ratify: +/-1' ifty: +/-1' ifty: +/-1' ifty: +/-1' able logi 30V, ma e in: 6V 15V or op V, maxim adjustm control (per of ad IIP switcl	ed lout. % of rate 5% of race c ximum pen: Loc num sin ent sele CV to Co dresses: h	sink cur al. k currer ectable) C), Go to 31	rent: 10i	ontrol	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated)		0~1009 0~1009 By elec 0~5V o 0~5V o 075V o TTL hig Open c Dry cor By elec Open c Vout/lc OVP/U/ AC on/ Addres RS232/ Baudra Voltage Curren Voltage terface	6, 0~5V (6, 0~5V) (6, 0~5/10 (6, 0~5/10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	or 0~10V Nohm f Nohm f Itage: 0 accurac accurac -OK, 0V CC mod en: off, 9 al adjust ut on/of pon by Vo IEEE488 ion: 120 accurac	/, user se ull scale ull scale vull scale vull scale vull scale ~0.6V/2· y: 1%, us y: 1%, us y: 1%, us open/Sho pen/Sh	elect. Ac ,user select. ~15V, or ser select. olohm select. V mode n. Max. v. mote: O earate er . Adjust. art moder r currention by II 4800, 90 %+/-1 coureview, f	curacy a ect., Acceler, Accele	nd linea uracy a uracy a tact, use stance ximum at Enablo ort: Rer num vo (coarse safe), Fi encodole swit: 19,200	voltage: e/Disable note, 2~ ltage: 30 and fine and fine oldback er. Numb ch and D Output 60	19% of ratifity: +/-1: ity: +/-1: ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad IIP switcl On, Fron	ed lout. % of rate 5 % of rac ximum cen: Loc num sin cent sele CV to Co dresses: 1 100 2.0	sink cur al. k currer cctable) C), Go to 31	nt: 5mA.	600 12.0	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB (Model) 1. Remote Voltage Programming (16 bit)	V	0~1009 0~1009 0~1009 By elect 0~5V oo TTL hic Open c Dry coi By elect OVP/U/ AC on// Addres RS232/ Baudra Voltage terface 6	6, 0~5V (6, 0~5V) (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (1) trical. Vor 10~10V., r 0~10V., r 0~10V., th (4~5V) ollector, ritact. Op trical signollector, out manu/L manu/L manu/L manu (1) the select expected by t	or 0~10vkKohm f KKohm f KKohm f Itage: 0- accurac; accurac; -OK, 0V CC mod en: off,; nal or O Local: C tal adjust ut on/of on by Vo IEEE488 ion: 120 accurac; accurac; t, Alarm	/, user se ull scale ull scale ull scale vol. scale v: 1%, usy: 1%	elect. Ac user selected and se	curacy a ect. Acceler. Acceler	nd linea uracy a uracy a tact, use stance ximum at Enabl ort: Rer num vo (coarse safe), Fi encode ble swit 19,200	arity: +/- nd linear nd linear nd linear er selects voltage: e/Disabl note, 2~ ltage: 30 and fine bldback er. Numb ch and D Output	1% of ratifity: +/-1: ity: +/-1: ity: +/-1: ity: +/-1: ity: +/-1: able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad IP switcl On, Fron	ed lout. % of rate 5% of rac c ximum pen: Loc mum sin tent sele CV to CC dresses: h	sink cur al. k currer cctable) C), Go to 31	rent: 10i	ontrol	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit)	V mV	0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o Dry coi By elec Open c Vout/lc OVP/U Addres RS232/ Baudra Voltage Curren Voltage terface 0.12 3.0	6, 0~5V (6, 0~5V (6, 0~5V) (6, 0~5V) (6, 0~5V) (7, 0, 0~5V) (8, 0~	or O-10W Khohm fi Kohm	/, user se ull scale ull scale ull scale ull scale ull scale ~0.6V/2·y: 1%, us y: 1%,	user select. Ac user selects to ser selects conser	curacy a ect. Acc ect. Acc ect. Acc dry con table table tries resi : Off, Ma voltage a 6V or sh n. Maxir coders encode es (auto, t) adjust EEE enal 600 and bunt int	nd linea uracy a uracy a tact, use stance ximum at Enablo ort: Rer num vo (coarse safe), Fi encodole swit: 19,200	voltage: e/Disable note, 2~ ltage: 30 and fine oldback er. Numb ch and D Output 60 1.2 30	1% of ratifity: +/-1' ity: +/-1' ity: +/-1' ity: +/-1' ity: +/-1' able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad iP switcl On, Fron 80 1.6 40	ed lout. Wo fratt % of ratt Sys of rate c c c c c c c c c c c c c	ed Vout ted lou al. k currer cctable) 150 3.0 75	rent: 10a	600 12.0 300	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB (Model) 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Resolution (0.002% of lo Rated)	mV mV	0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o Dry coi By elec Open c	6, 0~5V (6,	or O-10W Kehm fi Rige: 0.0 Kehm fi Riage: 0.0 Kehm	/, user se ull scale ull scale will scale wi	Line	curacy a lectAcc le	nd line: uracy a control to the cont	voltage: e/Disable note, 2~ ltage: 30 and fine and fine output 60 1.2 30 0.25	1% of ratifity: +/-1: ity: +/-1: ity: +/-1: ity: +/-1. able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad dependent) 00n, Fron 1.6 40 0.19	ed lout. % of ratt % of ra	sink current al. k current cutable) Lock 150 3.0 75	300 6.0 150 0.05	600 12.0 300	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.002% of lo Rated) Accuracy (0.002% of lo Rated)	V mV mV mA mA mA mA mA	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o Dry col By elec Open c	6, 0~5V (6,	or O-10W Kehm fr KKohm fr KKoh	/, user se ull scale ull scale will scale wi	Lister Acquisers Services Acquisers	curacy a lectAccele	nd lines transport to the control of	voltage: e/Disable note, 2~ ltage: 30 and fine and fine and fine oldback er. Numb ch and D Output 1.2 30	% of ratifity: +/-1 ity: +/-1 ity: +/-1 ity: +/-1, able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad ilP switcl 0n, Fron 80 1.6 40 0.19 19	ed lout. When the selection of the selec	ed Vout ted lou al.	nt: 5mA. 300 6.0 150 5.0 5.0	600 12.0 300 0.03 2.6	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated) Accuracy (0.1% of lo Rated) Accuracy (0.1% of lo Rated) Accuracy (0.002% of lo Rated) Accuracy (0.1% of lo Rated)	V	0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o Dry coi By elec Open c	6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (10 V (or 0-10V Khohm f Khohm	/, user se ull scale ull scale will scale ull scale will scale wil	user select. Ac user selects of ser selects of selects	curacy a lectAcc lectA	nd lines uracy a stance stance sximum at Enablo ort: Rer num vo (coarse safe), Fi encodo le swit 19,200 1.0 25 1.0 0.60	voltage: e/Disable note, 2~ ltage: 30 and fine oldback er. Numb ch and D Output 60 1.2 30 0.25 25 0.50	% of rat ity: +/-1' ity: +/-1' ity: +/-1, able logi 30V, ma e in: 6V 5V or op V, maxir adjustm control (per of ad iP switcl On, Fron 80 0.19 19 0.38	ed lout. Wo fratt when the control of the control o	ed Vout ted lou al. k currer ctable) 150 150 0.10 0.20	300 6.0 150 5.0 0.010	600 12.0 300 0.03 2.6 0.05	X X X X X X X X X X X X X X X X X X X	X X X X X X X X X X X X X X X X X X X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated)	V	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0	6, 0~5V (6,	or O-10W Kehm fr KKohm fr KKoh	/, user se /, user se ull scale ull scale vol.64/2·y y: 1%, us y: 1%, us y: 1%, us y: 1%, us y: 18, us pen/Sho pen, Re t by sept t by sept t by tolt ff, Re-sts oltage (o. 0. 2400, y: 0.059 y: 0.2% y: 10.4 10	Lister Acquisers Services Acquisers	curacy a lectAccele	nd lines transport to the control of	voltage: e/Disable note, 2~ ltage: 30 and fine and fine and fine oldback er. Numb ch and D Output 1.2 30	% of ratifity: +/-1 ity: +/-1 ity: +/-1 ity: +/-1, able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad ilP switcl 0n, Fron 80 1.6 40 0.19 19	ed lout. When the selection of the selec	ed Vout ted lou al.	nt: 5mA. 300 6.0 150 5.0 5.0	600 12.0 300 0.03 2.6	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB/Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy (0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.0% of lo Rated) Accuracy (0.1% of lo Rated)	mV mV mA mA mA	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0~6V o 0/6V o 0	6, 0~5V (6, 0~5V) (6, 0~5V) (6, 0~5V) (6, 0~5V) (6, 0~5V) (7, 0~10V) (7, 0~10	or O-10W Kehm fi Kohm fi Kage: 0. Kehm f	/, user se ull scale ull scale will scale so will scale	Line	curacy as lectAcc l	nd lines uracy a trace t	voltage: e/Disable note, 2~ Itage: 30 and fine output 60 1.2 30 0.25 25 0.50 50	% of ratification 1% of rat	ed lout. % of ratt % of ratt % of ratt pen: Loc c ximum ben: Loc CV to C(dresses: 1 100 100 50 0.15 15 0.30 30	sink current state of the state	300 6.0 150 0.10 10 10 10 10 10 10	0.03 2.6 0.05 5.2	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB/Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution of lo Rated) Accuracy (0.1% of lo Rated)	V	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0	6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (6, 0~5V (10 V (or 0-100 Kehm fi flage: 0. Which m fi flage: 0. Which m fi flage: 0. CC mod en: off in all or 0. Local: 0 lal adjust all adjust all adjust ut on/of on by Vo flage: 0. CC mod en: off in all or 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0. Local: 0 lal adjust ut on/of on by Vo flage: 0 lal adjust ut on/of on by	/, user se ull scale ull scale will scale wi	user select. Ac user selects of ser selects of selects	curacy a lectAcc le	nd lines stance stance stance six mum vo coarse safe), Frencode switting 10 s solution 1.0 s sol	voltage: e/Disable note, 2~ ltage: 30 and fine oldback er. Numb ch and D Output 60 1.2 30 0.25 25 0.50	% of rat ity: +/-1' ity: +/-1' ity: +/-1, able logi 30V, ma e in: 6V 5V or op V, maxir adjustm control (per of ad iP switcl On, Fron 80 0.19 19 0.38	ed lout. % of rate % of ra	ed Vout ted lou al. k currer ctable) 150 150 0.10 0.20	300 6.0 150 0.010 10 11 12 12	600 12.0 300 0.03 2.6 0.05 5.2	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 11. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05% Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution of vo Rated) Resolution of Vo Rated Resolution of Vo Rated Accuracy 0.05% Vo Rated Accuracy 0.05% Vo Rated	mV mV mA mA mA	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o Dry coi By elec Open c Open c Open c Open c Open c Open c 0 open c	6, 0~5V (6,	or O-10W Kehm fi Kohm fi Kage: 0. Kehm f	/, user se ull scale ull scale will scale so will scale	Lect. Ac.	curacy as lectAcc l	nd lines uracy a trace t	voltage: e/Disable note, 2~ ltage: 30 and fine bldbacker. Number and Disable fine fine fine fine fine fine fine fin	1% of ratifity: +/-1: ity: +/-1: ity: +/-1: ity: +/-1: able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (eer of ad IP switcl 00, Fron 1.6 40 0.19 19 0.38 38	ed lout. % of ratt % of ratt % of ratt pen: Loc c ximum ben: Loc CV to C(dresses: 1 100 100 50 0.15 15 0.30 30	Sink currer	300 6.0 150 0.10 10 10 10 10 10 10	0.03 2.6 0.05 5.2	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05% Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution of Vo Rated) Accuracy 0.05% Vo Rated Accuracy 0.05% Vo Rated	mV mV mV mA mA mA mA mV mV	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o TTL hic Open c Dry coi By elec Open c Open	6, 0~5V (6, 0~5V (6, 0~5/10 (6, 0~5) (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5	or 0-100 Kehm fi hage: 0 Kehm	/, user se ull scale ull scale will scale wi	elect. Ac user se 15V, or or or or or or or or 	curacy a lectAcc le	nd lines stance stance stance six mum you have so stance six mum at Enable ort. Ref enough to the stance safe), Fr. encodo le switt lines so	voltage: e/Disable of the polytage of the poly	% of ratifity: +/-1: ity: +/-1:	ed lout. % of rature of the control	Sink currer	300 6.0 150 10.10 12 150 150	600 12.0 300 0.03 2.6 0.05 5.2	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated)-0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated)-0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.05% Vo Rated)	V	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0 pen c Dry col By elec 0Open c Open c Open c Vout/lc Open c Vout/lc Open c 0 pen c 0 p	6, 0~5V (6,	or 0-100 kKohm fi Nage: 0 kKohm fi Nage:	/, user se ull scale ull scale will scale wi	Lect. Ac.	curacy a lectAccele	nd lines uracy a trace t	voltage: e/Disable of the property of the prop	% of ratifity: +/-1 ity: +/-1 30V, max adjustm control (per of ad d) ilp switcl 0.0, Front 80 0.19 19 19 19 0.38 38 38 1.60 40 0.19	ed lout. % of rat % o	10.50 10.50 10.50 10.50 10.50 10.15 10.1	300 6.0 150 10 10 10 10 10 10	600 12.0 300 0.03 2.6 0.05 5.2 12 300	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution of lo Rated) Accuracy 0.05%Vo Rated 4. Readback Voltage Resolution of Vo Rated 4. Readback Current Resolution of lo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated	mV mV mV mA mA mA mA mV mV	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o TTL hic Open c Dry coi By elec Open c Open	6, 0~5V (6, 0~5V (6, 0~5/10 (6, 0~5) (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5/10 (6, 0~5	or 0-100 Kehm fi hage: 0 Kehm	/, user se ull scale ull scale will scale wi	elect. Ac user se 15V, or or or or or or or or 	curacy a lectAcc le	nd lines stance stance stance six mum you have so stance six mum at Enable ort. Ref enough to the stance safe), Fr. encodo le switt lines so	voltage: e/Disable of the polytage of the poly	% of rat ity: +/-1' ity: +/-1' ity: +/-1, able logi 30V, ma e in: 6V 15V or op V, maxir adjustm control (per of ad ilP switcl) 1.6 40 0.19 19 0.38 38 1.60 40 0.19 28.50 1.14	ed lout. % of rature of the control	Sink cur	300 6.0 150 10.10 12 150 150	600 12.0 300 0.03 2.6 0.05 5.2	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control indicator 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB/Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy (0.0% of lo Rated) Accuracy (0.1% of lo Rated) Accuracy (0.05% Vo Rated Accuracy (0.05% Vo Rated Accuracy (0.05% Content) Resolution of lo Rated Accuracy (0.3% of lo Rated) Accuracy (0.3% of lo Rated Accuracy (0.3% of lo Rated)	V	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0~5V o 0~6V o 0	6, 0~5V (6,	or 0-100 Kehm fi hage: 0 Kehm fi hage fi had or 0 Kehm fi had or	/, user se ull scale ull scale will scale wi	Lect. Ac userse Lect. Ac u	curacy a lect. Acc lect. A	nd lines uracy a uracy a stance stance sximum st Enablo ort: Rer safe), Fr encod 10, 25 10, 25 11, 0 10,	voltage: e/Disable note, 2~ Itage: 30 and fine oldback er, Numb ch and D 0.25 25 0.25 0.50 50 1.2 30	% of ratifity: +/-1 ity: +/-1 30V, maxin adjustm control (per of addity) in the second of t	ed lout. % of rats % of ra	Sink currer	300 0.05 5.0 0.10 12 150 0.13 7.50	0.03 2.6 0.05 5.2 12 300	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 3. Readback Voltage Resolution of Vo Rated 4. Readback Current Resolution of Io Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated (*10) S. OVP/UVL Programming	mV mV mA mA mA mA mA	0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0~6V o 0/6V o 0	6, 0~5V (6,	or 0-100 kehm fr 200 kehm fr 2	/, user se ull scale ull scale will scale wi	Lect. Ac.	curacy a lectAcc le	nd lines	voltage: e/Disable note, 2~ Itage: 30 and fine output 60 1.2 30 0.25 25 0.50 50 1.13 37.50 1.25 75	% of ratify: +/-1 ity: +/-1 30V, maxin adjustm control (per of ad iller) iller switcl 0.0, Front 80 0.19 19 19 0.19 19 0.19 19 0.19 19 0.19 19 0.19 28.50 1.14 57	ed lout. % of rate % of ra	sink current al. k current al.	300 6.0 150 10 12 150 15 15 15 15 15 15 1	0.00 12.0 300 0.03 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB/Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05% Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution of Vo Rated Accuracy 0.05% Vo Rated 4. Readback Voltage Resolution of Vo Rated 4. Readback Current Resolution of lo Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated output Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated (*10) Resolution of lo Rated (*10) Resolution (0.1% of Vo Rated)	mV mV mA mA mA mA mA mA	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0~5V o 0~6V o 0	6, 0~5V (6,	or 0-100 Kehm fi hage: 0. Kehm fi hage: 0. Kehm fi hage: 0. Kehm fi hage: 0. CC mod en: off.: inal or 0. Cc mod en: off.: inal or 0. Cc mod en: off.: inal or 0. cc. inal o	/, user se ull scale ull scale ull scale will scale ull scale will	Lect. Ac userse Lect. Ac u	Curacy a Ect., Acc Ect	nd lines	voltage: e/Disable note, 2~ ltage: 30 and fine and linear selection of the property of the pro	% of ratifity: +/-1: ity: +/-1:	ed lout. % of rate % of ra	Sink currer al. k currer ctable	300 150 12 150 150 151	0.03 0.03 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8	X X X X X X X X X X X X X X X X X X X	X
3. Vout Resistor Programming 4. lout Resistor Programming 5. On/Off control (rear panel) 6. Output Current monitor 7. Output Voltage monitor 8. Power Supply OK signal 9. CV/CC indicator 10. Enable/Disable 11. Local/Remote analog control 12. Local/Remote analog control indicator 1.5 FRONT PANEL 1. Control functions 2. Display 3. Indications 1.6 Interface RS-232&RS-485 or Optional GPIB, Model 1. Remote Voltage Programming (16 bit) Resolution (0.02% of Vo Rated) Accuracy 0.05%Vo Rated Output Voltage (*11) 2. Remote Current Programming (16 bit) Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 Resolution (0.002% of lo Rated) Accuracy (0.1% of lo Rated+0.1% of lo Actual Output)(*10 3. Readback Voltage Resolution of Vo Rated 4. Readback Current Resolution of Io Rated Accuracy 0.3% of lo Rated (*10) Resolution of lo Rated (*10) S. OVP/UVL Programming	mV m	0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 0~1009 By elec 0~5V o 0~5V o 0~5V o 0~5V o 0~5V o 0~6V o 0	6, 0~5V (6,	or 0-100 kehm fr 200 kehm fr 2	/, user se ull scale ull scale ull scale will scale ull scale will	Lect. Ac userse Lect. Ac u	Curacy a Ect. Acc Ect. Enal Ect.	nd lines	voltage: e/Disable note, 2~ ltage: 30 and fine and linear selection of the policy of t	% of ratifity: +/-1: ity: +/-1:	ed lout. % of rate % of ra	Sink curral Accept Accep	300 0.05 15 15 15 15 15 15 15	0.00 12.0 300 0.03 2.6 0.05 5.2 12 300 0.12 3.90 0.10 7.8	X X X X X X X X X X X X X X	X

^{*1:} Minimum voltage is guaranteed to maximum 0.2% of Vo Rated.
*2: Minimum current is guaranteed to maximum 0.4% of Io Rated.
*3: At maximum output power.
*4: 85~132Vac or 170~265Vac, constant load.

 ^{*4:88~132}VaC or 170~265VaC, constant load.
 *5: From No-load to Full-load, constant input voltage.
 *6: For load voltage change, equal to the unit voltage rating, constant input voltage.
 *7: For 6V models the ripple is measured at 2~6V output voltage and full output current. For other models, the ripple is measured at 10~100% output voltage and full output current.

^{*8:} Time for the output voltage to recover within 0.5% of its rated for a load change 10~90% of rated output, Output set-point:10~100%.
*9: For 6V~300V models: measured with JEITA RC-9131A 1:1 probe. For 600V model: measured with 10:1 probe Accuracy -Values have been calculated at Vo Rated & Io Rated.
*10: The Constant Current programming readback and monitoring accuracy does not include the

warm-up and Load regulation thermal drift. *11: Measured at the sense point.

General Specifications Genesys™ 750W/1500W

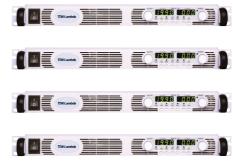
2.1 INPUT CHARACTERISTICS	05 255/4
. Input voltage/freq. (*1)	85~265Vac continuous, 47~63Hz, single phase
. Power Factor	0.99 @100/200Vac, rated output power.
.EN61000-3-2,3 compliance	Complies with EN61000-3-2 class A and EN61000-3-3 at 20~100% output power.
Input current 100/200Vac	750W:10.5A / 5A, 1500W:21A / 11A
Inrush current 100/200Vac	750W :Less than 25A, 1500W :Less than 50A
. Hold-up time	More than 20mS, 100Vac, at 100% load.
.2 POWER SUPPLY CONFIGURATION	
. Parallel Operation	Up to 4 units in master/slave mode with single wire current balance connection
. Series Operation	Up to 2 units. with external diodes. 600V Max to Chassis ground
.3 ENVIRONMENTAL CONDITIONS	
Operating temp	0~50°C, 100% load.
Storage temp	-20~70°C
Operating humidity	30~90% RH (non-condensing).
Storage humidity	10~95% RH (non-condensing).
Vibration	MIL-810E, method 514.4, test cond. I-3.3.1. The EUT is fixed to the vibrating surface.
Shock	Less than 20G, half sine, 11mSec. Unit is unpacked.
Altitude	Operating: 10000ft (3000m), Derat output current by 2%/100m above 2000m, Non operating: 40000ft (12000m).
4 EMC	
Applicable Standards:	
ESD	IEC1000-4-2. Air-disch8KV, contact disch4KV
Fast transients	IEC1000-4-4. 2KV
Surge immunity	IEC1000-4-5. 1KV line to line, 2KV line to ground
Conducted immunity	IEC1000-4-6, 3V
Radiated immunity	IEC1000-4-3, 3V/m
Conducted emission	EN55022B, FCC part 15J-B, VCCI-B.
Radiated emission	EN55022A, FCC part 15-A, VCCI-A.
Voltage dips	EN61000-4-11
0. Conducted emission	EN55022B, FCC part 15-B, VCCI-B.
I. Radiated emission	EN55022A, FCC part 15-A, VCCI-A.
.5 SAFETY	
Applicable standards:	UL 60950-1, CSA22.2 No.60950-1, IEC 60950-1, EN 60950-1
	Models with Vout 50V: Output is SELV, all communication/control interfaces (RS232/485, IEEE, Isolated Analog,
	LAN, Sense, Remote Programming and Monitoring) are SELV. Models with 60V Vout 400V: Output is Hazardous, communication/control interfaces: RS232/485, IEEE,
Interfere desification	Models with 60V Yout 400V: Output is Hazardous, communication/control interfaces: RS232/485, IEEE,
Interface classification	Isolated Analog, LAN, Remote Programing and Monitoring (pins 1-3, pins14-16) are SELV, Sense, Remote
	Programming and Monitoring (pins 8-13, pins 21-25) are Hazardous. Models with 400V Vout 600V: Output is Hazardous, all communication/control interfaces (RS232/485, IEEE,
	Inducts with 400 your door. Output is nazardous, an offiniting and Manitoring and
	Isolated Analog, LAN, Sense, Remote Programming and Monitoring) are Hazardous. Vout 50V models: Input-Output (SELV): 4242VDC 1min, Input-communication/control (SELV): 4242VDC 1min,
	Input-Ground: 2828VDC 1min.
	Input-Ground: 2828VDC 1min, 60V Yout 150V models: Input-Output (Hazardous): 3425VDC 1min, Input-communication/control (SELV):
Withstand voltage	4242VDC Imin, Output(Hazardous)-SELV: 230/VDC Imin, Output(Hazardous)-Ground: 1414VDC Imin,
.Withstand voltage	Input-Ground: 2828VDC 1min.
	300V Vout 600V models: Input-Output(Hazardous): 3490VDC 1min, Input-communication/control (SELV):
	4242VDC 1min, Hazardous, Output-communication/control(SELV): 4242VDC 1min,
	Output(Hazardous)-Ground: 2738VDC 1min, Input-Ground: 2828VDC 1min.
Insulation resistance	More than 100Mohm at 25°C, 70% RH.
.6 MECHANICAL CONSTRUCTION	
Cooling	Forced air flow: from front to rear. No ventilation holes at the top or bottom of the chassis; Variable fan speed.
Dimensions (WxHxD)	W: 422.8mm, H: 43.6mm, D: 432.8mm (excluding connectors, encoders, handles, etc.)
Weight	750W: 7Kg (15 Lbs) 1500W: 8.5Kg (18 Lbs)
-	750W: IEC320 AC Inlet.
. AC Input connector	1500W: Screw terminal block, Phoenix P/N: FRONT-4-H-7.62, with strain relief
. Output connectors	6V to 60V models: Bus-bars (hole Ø 8.5mm). 80V to 600V models: wire clamp connector, Phoenix P/N: FRONT-4-H-7.62
.7 RELIABILITY SPECS	
., HELHIDIEII I JI ECJ	

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

Genesys[™] Power Parallel and Series Configurations

Parallel operation - Master/Slave:

Active current sharing allows up to four identical units to be connected in an auto-parallel configuration for four times the output power. In Advanced Parallel Master/Slave Mode, total current is programmed and reported by the Master, Up to four supplies act as one.



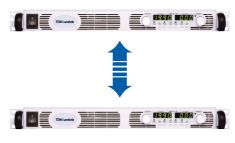
Series operation

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

Remote Programming via RS-232 & RS-485 Interface

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





P/N: IEEE

P/N: IS510

Programming Options (Factory installed)

Digital Programming via IEEE Multi-Drop Interface

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

- Program Current
- Measure Current
- Current Foldback shutdown

Isolated Analog Programming

Four Channels to Program and Monitor Voltage and Current.
Isolation allows operation with floating references in harsh electrical environments.
Choose between programming with Voltage or Current.

Connection via removable terminal block: Phoenix MC1,5/8-ST-3.81.

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

Current Programming with 4-20mA signal.

P/N: IS420

Power supply Voltage and Current Programming Accuracy +1%

Power supply Voltage and Current Programming Accuracy $\pm 1\%$ Power supply Voltage and Current Monitoring Accuracy $\pm 1.5\%$

LAN Interface L' Compliant to Class C P/N: LAN

- Meets all LXI-C Requirements
- Address Viewable on Front Panel
- Fixed and Dynamic Addressing
- Compatible with most standard Networks
- VISA & SCPI Compatible
- LAN Fault Indicators
- Auto-detects LAN Cross-over Cable
- Fast Startup

Power Supply Identification / Accessories How to order

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

Models 750/1500W

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

Model	Output Voltage VDC	Output Current (A)	Output Power (W)
GEN50-30	0~50V	0~30	1500
GEN60-12.5	0~60V	0~12.5	750
GEN60-25	U~60V	0~25	1500
GEN80-9.5	0~80V	0~9.5	760
GEN80-19	U~80V	0~19	1520
GEN100-7.5	0~100V	0~7.5	750
GEN100-15	0~1000	0~15	1500
GEN150-5	0 1501/	0~5	750
GEN150-10	0~150V	0~10	1500
GEN300-2.5	0. 2001/	0~2.5	750
GEN300-5	0~300V	0~5	1500
GEN600-1.3	0 6001/	0~1.3	780
GEN600-2.6	0~600V	0~2.6	1560

Factory option

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

AC Cords sets (750W only)

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

P/N

IEEE

IS510

IS420

LAN

Accessories

1. Communication cable

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

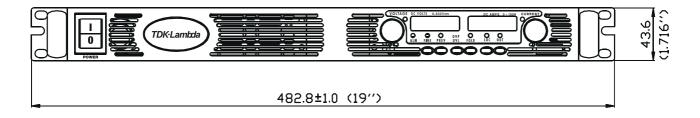
Mode	RS-485	RS-232	RS-232
PC Connector	DB-9F	DB-9F	DB-25F
Communication Cable	Shield Ground L=2m	Shield Ground L=2m	Shield Ground L=2m
Power Supply Connector	EIA/TIA-568A (RJ-45)	EIA/TIA-568A (RJ-45)	EIA/TIA-568A (RJ-45)
P/N	GEN/485-9	GEN/232-9	GEN/232-25

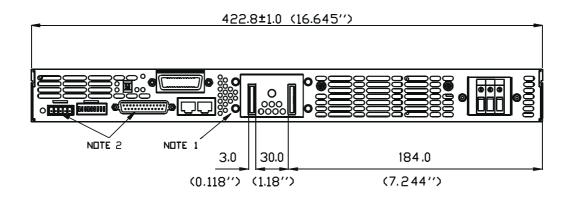
2. Serial link cable*

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

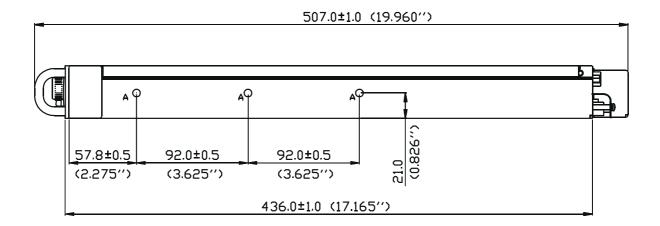
Mode	Power Supply Connector	Communication Cable	P/N
RS-485	EIA/TIA-568A (RJ-45)	Shield Ground L=50cm	GEN/RJ45

^{*} Included with power supply









NOTE

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

По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72 Брянск (4832)59-03-52 Вологда (8172)26-41-59 Иваново (4932)77-34-06 Калининград (4012)72-03-81 Киров (8332)68-02-04 Курск (4712)77-13-04 Москва (495)268-04-70 Нижний Новгород (831)429-08-12 Орел (4862)44-53-42 Пермь (342)205-81-47 Самара (846)206-03-16 Смоленск (4812)29-41-54 Тверь (4822)63-31-35 Тюмень (3452)66-21-18 Челябинск (351)202-03-61

Астана +7(7172)727-132 Владивосток (423)249-28-31 Воронеж (473)204-51-73 Ижевск (3412)26-03-58 Калуга (4842)92-23-67 Краснодар (861)203-40-90 Липецк (4742)52-20-81 Мурманск (8152)59-64-93 Новокузнецк (3843)20-46-81 Оренбург (3532)37-68-04 Ростов-на-Дону (863)308-18-15 Санкт-Петербург (812)309-46-40 Сочи (862)225-72-31 Томск (3822)98-41-53 Ульяновск (8422)24-23-59 Череповец (8202)49-02-64

Белгород (4722)40-23-64 Волгоград (844)278-03-48 Екатеринбург (343)384-55-89 Казань (843)206-01-48 Кемерово (3842)65-04-62 Красноярск (391)204-63-61 Магнитогорск (3519)55-03-13 Набережные Челны (8552)20-53-41 Новосибирск (383)227-86-73 Пенза (8412)22-31-16 Рязань (4912)46-61-64 Саратов (845)249-38-78 Ставрополь (8652)20-65-13 Тула (4872)74-02-29 Уфа (347)229-48-12 Ярославль (4852)69-52-93

Эл. почта: adm@nt-rt.ru || Сайт: http://lambda.nt-rt.ru/