# **2**+ Series

Programmable DC Power Supplies 200W/400W/600W/800W in 2U Built-in USB, RS-232 & RS-485 Interface

Optional Interface:

LXI Compliant LAN

IEEE488.2 SCPI (GPIB) Multi-Drop

Isolated Analog Programming



TDK-Lambda

### TDK·Lambda

### **Features Include:**

- High Power Density 200W/400W/600W/800W in 2U: 3.5 Inch (89mm) height
- Wide Range Input (85-265Vac continuous)
- Active Power Factor Correction (0.99 typical)
- Output Voltage up to 100V, Current up to 72A
- Constant Voltage (CV)/(CC) Constant Current auto-crossover
- 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
- · Parallel Operation with Active Current Sharing, for up to six identical units
- Advanced Parallel Master / Slave. Total Current is programmed and measured via the Master
- 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

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

LX Compliant LAN

LabView® and LabWindows® drivers

• Arbitrary functions for:

Automotive or laser simulation / 4 Pre-Programmed Functions

- · Fast Command Processing Time
- · Output Sequencing
- Four-cell Memory Settings
- User Programmable Signal Pins
- · Five Year Warranty
- Worldwide Safety Agency Approvals; CE Mark for LVD and EMC regulations





2

# **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 power supply setting.
- 4. Volt Display shows Output Voltage and directly displays and power supply settings.
- 5. Reliable encoder controls Output Current, and power supply setting.
- 6. Current Display shows Output Current and power supply setting.
- 7. Function/Status LEDs:
- AlarmFine ControlPreview SettingsFoldback ModeRemote ModeOutput 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, UVP, UVL Limits
- Set Current Foldback
- Local/Remote Mode and select Address and Baud Rate
- Output ON/OFF and Auto-Start/Safe-Start Mode
- Menu
- 9. Optional Output Jacks for modules up to 60V: 24A Max

<sup>\*</sup> Zero stacking - side-by-side mounting of 6 units in a 19" Rack

# **Rear Panel Description**





- 1. Connector allows (Non-isolated) Analog Program and Monitor and other functions.
- 2. Remote/Local Output Voltage Sense Connections.
- 3. Signal Connector
- 4. RS-232/RS-485 INPUT Remote Serial Programming.
- 5. RS-485 OUTPUT to other Z<sup>+</sup> Power Supplies.
- 6. USB Interface
- 7. Wide-Range Input 85-265VAC continuous, 47/63Hz with Active Power Factor Correction (0.99 typical) AC Input Connector: IEC320 -C16.
- 8. Exhaust air exits at the back. Allows vertical stacking of units without any separation between units
- 9. Output Connections: Rugged Busbars for 6V up to 100V.
- 10. Optional Interface Position for LAN Interface.
- 11. Optional Interface Position for GPIB Interface (shown) or Isolated Analog Interface.

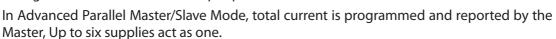


## **\*** Power Benchtop Parallel and Series Configurations

### **Benchtop Power Supply**

Parallel operation - Master/Slave:

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





### **Series operation**

Up to two units may be connected in series to increase the output voltage or to provide bipolar output.

### Remote Programming via Built-in USB, RS-232 & RS-485 Interface

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

### **Optional Interface:** LAN & IEEE488.2 SCPI (GPIB)

### Multi-Drop

Allows LAN/IEEE Master to control up to 31 slaves over RS-485 daisy-chain Only the Master needs be equipped with LAN/IEEE Interface













### **Applications**

 $Z^{+}$  series power supplies have been designed to meet the demands of a wide variety of applications.

### **Test and Measurement**

Built-in Last-Setting memory based on Flash Memory no battery or capacitor backup. Simplifies test design and requirements.

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 mode 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.

Fast Constant Current response, no over shoot. Current Limit Fold Back assures load is protected from current surges.

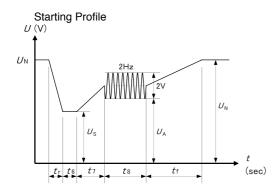
### **Heater Supplies**

Smooth, reliable encoders enhance front panel control. Remote analog programming is user selectable 0-5V or 0-10V.

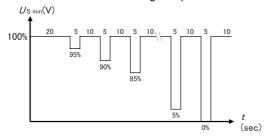
### **RF Amplifiers and Magnets**

Robust design assures stable operation under a wide variety of loads. High linearity in Voltage & Current mode.

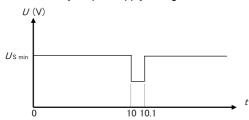
## **Z**<sup>+</sup> Series Sequence Programming Applications: ISO 16750-2



### Reset behaviour at voltage drop



### Discontinuities in supply voltage Momentary drop in supply voltage



### **Options: (200W/400W/600W/800W)**

### **Front Panel Output Jacks**

Up to 60V Output Module

P/N: Z\_\_--\_L



Up to 24A Output Current via Front Panel Jacks

### **Z**<sup>+</sup> Assemblies

Dual Output Housing (for 105mm) 200W/400W/600W/800W Triple Output Housing (for 70mm) 200W/400W/600W/800W P/N: Z-NL200 (same p/n for both Dual & Triple Output Housing)





### 19" Rack Mounted to 4.8kW

Six units (70mm) can be assembled into 19-Inch rack/2U high Four units (105mm) can be assembled into 19-Inch rack/2U high to meet your configuration requirements.

In cases where the entire rack is not occupied with power units,

P/N: Z-BP for 70mm, P/N: Z-WBP for 105mm blank panels can be installed:

P/N: Z-NL100





### **Power Modules Table**

Module Type	200W	400W	600W	800W
0~10V	20A	40A	60A	72A
0~20V	10A	20A	30A	40A
0~36V	6A	12A	18A	24A
0~60V	3.5A	7A	10A	14A
0~100V	2A	4A	6A	8A
19" rack width	1/6 width	1/6 width	1/6 width	1/6 width
19" rack width	1/4 width	1/4 width	1/4 width	1/4 width





### **Programming Options (Factory Installed)**

### **Digital Programming via 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

P/N: IEEE

P/N: IS510

P/N: IS420

- Multi-Drop
- Allows IEEE Master to control up to 31 slaves over RS-485 daisy-chain
- Only the Master needs be equipped with IEEE Interface

### **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%

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
- TCP / UDP Socket Programming
- VISA & SCPI Compatible
- LAN Fault Indicators
- Auto-detects LAN Cross-over Cable
- Fast Startup

### **AC Cord**

**LAN Interface** 

Region	Europe	Japan	North America	Israel
Output Power	850W	850W	850W	850W
AC Cords	10A/250Vac L=2m	15A/125Vac L=2m	13A/125Vac L=2m	10A/250Vac L=2m
Wall Plug	INT'L 7/VII	JIS C8303	NEMA 5-15P	SI-32
Power Supply	IEC320-C15	IEC320-C15	IEC320-C15	IEC320-C15
Connector				
Part Number	P/N: Z-E	P/N: Z-J	P/N : Z-U	P/N: Z-I

### **Communication Cable**

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

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

### Serial Link Cable\*

Daisy-chain up to 31 Z<sup>+</sup> Series power supplies.

Mode	Power Supply Connector	Communication Cable	P/N
RS-485	EIA/TIA-568A (RJ-45)	Shield Ground	Z/RJ45

<sup>\*</sup> Included with power supply

# Power Supply Identification / Accessories How to order

Z	10 -	40-	-		
Series	Output Voltage	Output Current	Factory	Output	AC cord Options:
Name	(0~10V)	(0~40A)	Options:	Jacks	Region :
			IEEE		E - Europe
			LAN		J - Japan
			IS510	L	U - North America
			IS420		I - Middle East

Factory option

USB Interface built-in Standard

RS-232/RS-485 Interface built-in Standard

GPIB Interface

Voltage Programming Isolated Analog Interface

Current Programming Isolated Analog Interface

LAN Interface (Complies with LA Class C)

Front Panel Output Jacks (60V or 24A max)

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Model	Output Voltage (VDC)	Output Current (A)	Output Power (W)	
Z10-20		0~20	200	Available
Z10-40	0~10 VDC	0~40	400	Available
Z10-60	0~10 VDC	0~60	600	Coming Coon
Z10-72		0~72	720	Coming Soon
Z20-10		0~10	200	Available
Z20-20	0.30,400	0~20	400	Available
Z20-30	0~20 VDC	0~30	600	Coming Coon
Z20-40		0~40	800	Coming Soon
Z36-6		0~6	216	Available
Z36-12	0~36 VDC	0~12	432	Available
Z36-18	0~36 VDC	0~18	648	Coming Coon
Z36-24		0~24	864	Coming Soon
Z60-3.5		0~3.5	210	Available
Z60-7	0~60 VDC	0~7	420	Available
Z60-10	0~60 VDC	0~10	600	Coming Coon
Z60-14		0~14	840	Coming Soon
Z100-2		0~2	200	Available
Z100-4	0~100VDC	0~4	400	Available
Z100-6	U~100VDC	0~6	600	Coming Coop
Z100-8		0~8	800	Coming Soon



DEL ated output voltage(*1) ated output current (*2) ated output power  NSTANT VOLTAGE MODE lax. Line regulation (*6) lax. Load regulation (*7) ipple and noise (p-p, 20MHz) (*8) ipple r.m.s. 5Hz~1MHz emperature coefficient emperature stability //arm-up drift emote sense compensation/wire p-prog. Response time, 0~Vomax.(*9)	Z V A					
ated output current (*2) ated output power  NSTANT VOLTAGE MODE lax. Line regulation (*6) lax. Load regulation (*7) ipple and noise (p-p, 20MHz) (*8) ipple r.m.s. 5Hz~1 MHz emperature coefficient emperature stability farm-up drift emote sense compensation/wire		10-20	20-10	36-6	60-3.5	100-2
ated output power  NSTANT VOLTAGE MODE  lax. Line regulation (*6)  lax. Load regulation (*7)  ipple and noise (p-p, 20MHz) (*8)  ipple r.m.s. 5Hz~1 MHz  emperature coefficient  emperature stability  farm-up drift  emote sense compensation/wire	A	10	20	36	60	100
NSTANT VOLTAGE MODE  lax. Line regulation (*6)  lax. Load regulation (*7)  ipple and noise (p-p, 20MHz) (*8)  ipple r.m.s. 5Hz~1MHz  imperature coefficient  emperature stability  farm-up drift  emote sense compensation/wire		20	10	6	3.5	2
lax. Line regulation (*6) lax. Load regulation (*7) ipple and noise (p-p, 20MHz) (*8) ipple r.m.s. 5Hz~1 MHz emperature coefficient emperature stability //arm-up drift emote sense compensation/wire	W	200	200	216	210	200
lax. Line regulation (*6) lax. Load regulation (*7) ipple and noise (p-p, 20MHz) (*8) ipple r.m.s. 5Hz~1 MHz emperature coefficient emperature stability //arm-up drift emote sense compensation/wire	V	10-20	20-10	36-6	60-3.5	100-2
lax. Load regulation (*7) ipple and noise (p-p, 20MHz) (*8) ipple r.ms. 5Hz~1 MHz emperature coefficient emperature stability farm-up drift emote sense compensation/wire		0.01% of rated output vo		30 0	00 3.5	1002
ipple r.m.s. 5Hz~1MHz emperature coefficient emperature stability farm-up drift emote sense compensation/wire		0.01% of rated output vo				
emperature coefficient emperature stability /arm-up drift emote sense compensation/wire	mV	50	50	50	50	80
emperature stability /arm-up drift emote sense compensation/wire	mV	5	6	6	7	8
/arm-up drift emote sense compensation/wire	PPM/°C		put voltage, following 30 mi			
emote sense compensation/wire			8hrs. interval following 30 m			
	 V		output voltage+2mV over 30			
p-prog. nesponse time, o-vomax.( )	mS	1 15	30	2 30	3 50	5 50
Down-prog.response time: Full load (*9)	mS	10	25	30	40	50
Time delay (*17)		210	250	320	380	1200
No load (*10) (*15)(*17)		40	65	85	100	250
No load (*10) (*16)(*17)		200	200	290	310	1100
			o recover within 0.5% of its		nge 10~90% of rated	
Transient response time	mS		et-point: 10~100%, Local ser	ise		
Hold-up time		15mSec Typical.	s up to and including 100V 16mSec Typical. Rated out	must marries		
ioia-ap time		romsec typical.	Tomsec Typical. Rated out	.put power		-
NSTANT CURRENT MODE	V	10-20	20-10	36-6	60-3.5	100-2
lax. Line regulation (*6)		0.01% of rated output cu				
lax. Load regulation (*11)		0.01% of rated output cu				
oad regulation thermal drift		Less than 0.05% of rated	output current over 30 minu	tes following load change		
ipple r.m.s. 5Hz~1MHz (*12)	mA	25	15	8	4	3
emperature coefficient	PPM/°C		tput current, following 30 m			
emperature stability			Bhrs. interval following 30 m		line, load & temperature.	
/arm-up drift		Less than +/-0.1% of rate	d output current over 30 mir	nutes following power on.		
OTECTIVE FUNCTIONS	V	10-20	20-10	36-6	60-3.5	100-2
			power supply change mode			
oldback protection			in autostart mode or by OU			ion port.
ver-voltage protection (OVP)			od. Reset by AC input recycl	e in autostart mode or by	OUT button or by rear pane	ENABLE, or by
		communication port.	1		1	
ver -voltage trip point	V	0.5-12	1~24	2~40	5~66	5~110
utput under voltage limit (UVL)			ommunication port. Prevent n power supply output volta			
utput under voltage protection (UVP)			ar panel ENABLE, or by com		mming. Reset by AC input	recycle in autostart mo
ver temperature protection		User selectable, latched of	<u> </u>	mameation port		
		,				
ALOG PROGRAMMING AND MONITORING						
out voltage programming		0~100%, 0~5V or 0~10V,	user selectable. Accuracy an	d linearity: +/-0.5% of rate	d Vout.	
out voltage programming (*13)		0~100%, 0~5V or 0~10V,	user selectable. Accuracy an	d linearity: +/-1% of rated	lout.	
out resistor programming			ll scale, user selectable. Accu			
out resistor programming (*13)			II scale, user selectable. Accu		of rated lout.	
hut-off (SO) control			.6V/2~15V or dry contact, us	er selectable logic.		
utput current monitor (*13) utput voltage monitor		0~5V or 0~10V, user selection 0~5V or 0~				
ower supply OK signal		4~5V-OK, 0V-Fail. 500oh				
arallel operation (*19)			aster/slave mode with single	wire current balance connec	tion	
Series operation		2 identical units (with ext		The current bullines connec		
CV/CC indicator			: On, CV mode: Off. Maximu	m voltage: 30V, maximum	sink current: 10mA	
Interlock (ILC) control		Enables/Disables the PS outp	ut by dry contact (Short: On, Oper	n: Off, Source current: less than	0.5mA). Ena/Dis is activated by fi	ront panel.
Local/Remote mode Control			en/Short: 0~0.6V or short: Re			
Local/Remote mode Indicator			by 36V zener). On (0~0.6V, 1			
rigger out			ut = 0.8V, Minimum high lev			
			voltage = 0.8V,minimum hi		V, Maximum sink current =	8mA, possitive edge
rigger in		- 55	m. TpLH,TpHL=1 us maximur n voltage 25V,maximum sink		hy 271/ zenorl	
rigger in			n voltage 25 v,maximum sink n voltage 25 V,maximum sink			
rigger in Programmed signal 1		1- peri concetor, maximur	Jitage 23 vimaximum Silik	J	_, _,	
rigger in						
rigger in Programmed signal 1						
rigger in Programmed signal 1 Programmed signal 2		Multiple options with 2 E	ncoders			
rigger in Programmed signal 1 Programmed signal 2		Vout/lout manual adjust				
rigger in Programmed signal 1 Programmed signal 2		Vout/lout manual adjust OVP/UVL/UVP manual ac	just	NT CO		
rigger in Programmed signal 1 Programmed signal 2		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - OV	just /P, UVL,UVP, Foldback, OCP, II			
rigger in Programmed signal 1 Programmed signal 2  ONT PANEL		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - OV Communication Function	just /P, UVL,UVP, Foldback, OCP, II is - Selection of LAN,IEEE,RS.	232,RS485,USB		
rigger in Programmed signal 1 Programmed signal 2  ONT PANEL		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - Ov Communication Function Communication Function	just /P, UVL,UVP, Foldback, OCP, II Is - Selection of LAN,IEEE,RS. Is - Selection of Baud Rate, A	232,RS485,USB ddress	5/10K programming	
rigger in Programmed signal 1 Programmed signal 2  ONT PANEL		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - Ov Communication Function Communication Function Analog Control Function	just /P, UVL,UVP, Foldback, OCP, II is - Selection of LAN,IEEE,RS.	232,RS485,USB .ddress e programming, 5V/10V, 5H		ock.
rigger in Programmed signal 1 Programmed signal 2  INT PANEL  ontrol functions		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - OV Communication Function Communication Function Analog Control Function Analog Control Function	just /P, UVL,UVP, Foldback, OCP, II Is - Selection of LAN,IEEE,RS; Is - Selection of Baud Rate, A s - Selection Voltage/resistive	232,RS485,USB ddress e programming, 5V/10V, Shent Monitoring 5V/10V, Ou		ock.
rigger in Programmed signal 1 Programmed signal 2  ONT PANEL		Vout/lout manual adjust OVP/VIVL/UVP manual ac Protection Functions - OV Communication Function Communication Function Analog Control Function Analog Control Function Yout: 4 digits, accuracy: C lout: 4 digits, accuracy: C	just //P, UVL,UVP, Foldback, OCP, II ss - Selection of LAN,IEEE,RS2 ss - Selection of Baud Rate, A ss - Selection Voltage/resistive ss - Selection of Voltage/curse ss of rated output voltage. S% of rated output current-	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count.		ock.
rigger in Programmed signal 1 Programmed signal 2  INT PANEL  ontrol functions		Vout/lout manual adjust OVP/VIV_L/UVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: G GREEN LED's: FINE, MENU	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, A  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  s - Sw of rated output voltage  b, S% of rated output current-  l, PREV, PROT, REM/LOC,OUT	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count.		ock.
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rigger in  Programmed signal 1  Programmed signal 2  ONT PANEL  ontrol functions  isplay adications  unction buttons		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C IGREEN LED's: FINE, MENU, RED LED's: ALRM (OVP, U' FINE, MENU, PREV, PROT,	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, A  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  5.5% of rated output voltage  5% of rated output current-  J, PREV, PROT, REM/LOC,OUT  /P,OTP, FOLD, AC FAIL).	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count.		ock.
rigger in  Programmed signal 1  Programmed signal 2  ONT PANEL  ontrol functions  isplay  dications  unction buttons  OGRAMMING AND READBACK (RS232/485,USB, Opense)		Vout/lout manual adjust OVP/VIV_IVIVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C GREEN LED's: FINE, MENL RED LED's: ALRM (OVP, U' FINE, MENU, PREV, PROT, E, LAN)	just /P, UVL,UVP, Foldback, OCP, II /P, UVL,UVP, Foldback, OCP, II /P, UVL,UVP, Foldback, OCP, II /S - Selection of LAN,IEEE,RS; /S - Selection of Baud Rate, A /S - Selection of Voltage/Curre, /S% of rated output voltage /S% of rated output current- /, PREV, PROT, REM/LOC,OUT /P,OTP, FOLD, AC FAIL). REM/LOC, OUT ON/OFF	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count.		ock.
rigger in  Programmed signal 1  Programmed signal 2  ONT PANEL  ontrol functions  isplay adications  unction buttons		Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C IGREEN LED's: FINE, MENU, RED LED's: ALRM (OVP, U' FINE, MENU, PREV, PROT,	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, A  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  .5% of rated output voltage-  y, PREV, PROT, REM/LOC,OUT  /P,OTP, FOLD, AC FAIL).  REM/LOC, OUT ON/OFF	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count. -/-1 count.		ock.
rigger in  Programmed signal 1  Programmed signal 2  INT PANEL  ontrol functions  isplay idications unction buttons  OGRAMMING AND READBACK (RS232/485,USB, Opout programming accuracy		Vout/lout manual adjust OVP/VIV_/UVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C Iout: 4 digits, accuracy: C GREEN LED's: FINE, MENU RED LED's: ALRM (OVP, U' FINE, MENU, PREV, PROT, E, LAN) 0.05% of rated output vo	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, A  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  .5% of rated output voltage-  y, PREV, PROT, REM/LOC,OUT  /P,OTP, FOLD, AC FAIL).  REM/LOC, OUT ON/OFF	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count. -/-1 count.		ock.
rigger in  Programmed signal 1  Programmed signal 2  ONT PANEL  ontrol functions  isplay  dications  unction buttons  OGRAMMING AND READBACK (RS232/485,USB, Ogout programming accuracy out programming accuracy out programming accuracy out programming resolution  but programming resolution  unt programming resolution		Vout/lout manual adjust OVP/VIV/L/UP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C Identify Securacy: C Identify Securacy	just /P, UVL,UVP, Foldback, OCP, II /P, UVL,UVP, Foldback, OCP, II /P, UVL,UVP, Foldback, OCP, II /P, Se - Selection of LAN,IEEE, RS; /P, Selection of Baud Rate, A /P, Selection of Voltage/Curre /P, Selection of Voltage/Curre /P, PROT, REM/LOC,OUT /P, OTP, FOLD, AC FAIL). /P, COUT ON/OFF  Itage  ated output current	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count. -/-1 count.		ock.
Programmed signal 1 Programmed signal 2 Programmed signal 2  INT PANEL  Ontrol functions  isplay Indications  unction buttons  OGRAMMING AND READBACK (RS232/485,USB, Open programming accuracy (*13) but programming accuracy (*13) but programming resolution but programming resolution but programming resolution but programming resolution but readback accuracy		Vout/lout manual adjust OVP/VIV_/UVP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C Iout: 4 Hights, accuracy: C Iout: 5 HINE, MENU RED LED'S: FINE, MENU RED LED'S: ALRM (OVP, U' FINE, MENU, PREV, PROT, E, LAN)  0.05% of rated output vo 0.19% of full scale 0.012% of full scale 0.015% of full scale	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, As  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  .5% of rated output voltage  .5% of rated output current  , PREV, PROT, REM/LOC,OUT  /POTP, FOLD, AC FAIL).  REM/LOC, OUT ON/OFF  Itage  ated output current	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count. -/-1 count.		ock.
rigger in  Programmed signal 1  Programmed signal 2  ONT PANEL  ontrol functions  isplay  dications  unction buttons  OGRAMMING AND READBACK (RS232/485,USB, Ogout programming accuracy out programming accuracy out programming accuracy out programming resolution  but programming resolution  unt programming resolution	otional: IEE	Vout/lout manual adjust OVP/VIV/L/UP manual ac Protection Functions - ON Communication Function Communication Function Analog Control Function Analog Control Function Vout: 4 digits, accuracy: C lout: 4 digits, accuracy: C Identify Securacy: C Identify Securacy	just  /P, UVL,UVP, Foldback, OCP, II  /P, UVL,UVP, Foldback, OCP, II  s - Selection of LAN,IEEE,RS;  s - Selection of Baud Rate, As  s - Selection Voltage/resistive  s - Selection of Voltage/Curre  .5% of rated output voltage  .5% of rated output current  , PREV, PROT, REM/LOC,OUT  /POTP, FOLD, AC FAIL).  REM/LOC, OUT ON/OFF  Itage  ated output current	232,RS485,USB cddress programming, 5V/10V, 5H ent Monitoring 5V/10V, Ou +/-1 count. -/-1 count.		ock.



### **Z**<sup>+</sup>200 SERIES SPECIFICATIONS

INPUT CHARACTERISTICS	V	10-20	20-10	36-6	60-3.5	100-2
1. Input voltage/freq. (*3)			85~265Va	ac continuous, 47~63Hz, sin	gle phase	
2. Maximum Input current 100/200VAC (*18)		2.65/1.30	2.61/1.28	2.71/1.34	2.68/1.32	2.54/1.26
3. Power Factor (Typ)			>0.99 at	t 100Vac, >0.98 at 200Vac,10	00% load	
4. Efficiency (Typ) 100/200VAC (*4) (*18)	%	76/78	77/79	80/82	79/81	79/81
5. Inrush current (*5)				Less than 15A/30A		

ENVIRONMENTAL CONDITIONS		
1. Operating temperature		0~50°C, 100% load.
2. Storage temperature		-20~85°C
3. Operating humidity	%	20~90% RH (no condensation).
4. Storage humidity	%	10~95% RH (no condensation).
5. Altitude		Maximum 3000m. Derate ambient temp above 2000m.  Operating: Maximum ambient temperature, From 2000m up to 3000m Ambient temperature 40°C.

SAFETY/EMC		
Applicable standards:	Safety	 UL61010-1, EN61010-1, IEC61010-1. Design to meet UL60950-1, EN60950-1 10V≤Vout≤60V: Output,J1,J2,J3,J4,USB,LAN,IEEE/ISOLATED Analog are Non Hazardous Vout=100V:Output,J1,J2 are Hazardous J3,J4,USB, IEEE/ISOLATED Analog ,LAN are Non Hazardous
	EMC	 IEC61326-1 (Built to meet EN55022/EN55024)
2. Withstand voltage		 10sVouts36V models: Input-Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG-Ground: 1000VDC/1min. 60V,100V models: Input-Output&J1,J2: 4242VDC/1min; Input-J3,J4,USB,LAN/IEEE/ISOLATED Analog: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2-J3,J4,USB,LAN/IEEE/ISOLATED Analog: 4242VDC/1min; Input-Ground: 2828VDC/1min. J3, J4, USB/LAN/IEEE/ISOLATED ANALOG : 1910VDC/1min; Output&J1,J2-Ground: 1380VDC/1min. J3, J4, USB/LAN/IEEE/ISOLATED ANALOG - Ground: 1000VDC/1min;
3. Insulation resistance		 More than 100Mohm at 25°C, 70%RH.
4. Conducted emission		 IEC/EN61326-1 Industrial Location - B, FCC part 15-B, VCCI-B
5. Radiated emission		 IEC/EN61326-1 Industrial Location - A, FCC part 15-A, VCCI-A

MECHANICAL			
1. Cooling			Forced air cooling by internal fan.
2. Weight	STANDARD	Kg	Less than 1.9Kg.
	WIDE BODY	Kg	Less than 2.4Kg. Wide body with Isolated analog or Binding post or IEEE.
3. Dimensions (WxHxD)	STANDARD	mm	H: 83, W: 70, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).
	WIDE BODY	mm	H: 83, W: 105, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).
4. Vibration	·		According to: IEC60068-2-64
5. Shock			Less than 20G, half sine, 11mS. Unit is unpacked. According to: IEC600068-2-27

### NOTES:

- \*1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- \*2: Minimum current is guaranteed to maximum 0.2% of rated output current.

  \*3: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 100-240Vac (50/60Hz).
- \*4: Ta=25°C with rated output power.

- \*5: Not including EMI filter inrush current, less than 0.2mSec at cold start Ta=25°C
  \*6: At 85~132Vac or 170~265VAC, constant load.
  \*7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- \*8: Measured with JETA RC-9131A (1:1) probe.

  \*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated resistive load.
- \*10: From 90% to 10% of Rated Output Voltage.
- \*11: For load voltage change, equal to the unit voltage rating, constant input voltage.
  \*12: For 10V model the ripple is measured at 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 do not include the warm-up and Load regulation thermal drift.

  \*14: Measured with JEITA RC-9131A (1:1) probe.

  \*15: For cases where the time interval between each down programming is longer than Td (time delay).

- \*16: For cases where the time interval between each down programming is shorter than Td (time delay).

  \*17: Td typical (±20%) Minimum time between consecutive down programming cycles.

  \*18: PS with isolated analog option decreases efficiency by 1.5% and increases input current by 1.5%

- \*19: For Parallel operation more than 2 units 5% of toatal output current is requierd.



Z*400 SERIES SPECIFICATIONS	7	10.40	20.20	26.12	60.7	100.4
ODEL Pated output voltage(*1)	Z V	10-40 10	20-20	36-12 36	60-7 60	100-4
Rated output voltage(*1) Rated output current (*2)	A	40	20	12	7	4
Rated output current ( 2)	W	400	400	432	420	400
ONSTANT VOLTAGE MODE	V	10-40	20-20	36-12	60-7	100-4
Max. Line regulation (*6)		0.01% of rated output vo	ltage+2mV			
Max. Load regulation (*7)		0.01% of rated output vo				
Ripple and noise (p-p, 20MHz) (*8)	mV	50	50	50	50	80
Ripple r.m.s. 5Hz~1MHz	mV	5	6	6	7	8
. Temperature coefficient	PPM/°C		put voltage, following 30 m		line lead 0 temp	
Temperature stability Warm-up drift			8hrs. interval following 30 r output voltage+2mV over 3			
Remote sense compensation/wire	V	1	1	2	3	5
Up-prog. Response time, 0~Vomax.(*9)	mS	15	30	30	50	50
D. Down-prog.response time: Full load (*9)	mS	10	10	15	30	50
Time delay (*17)		210	250	320	380	1200
No load (*10) (*15) (*17)		40	65	85	100	250
No load (*10) (*16) (*17)		200	200	290	310	1100
			to recover within 0.5% of its		nge 10~90% of rated	
1. Transient response time	mS		et-point: 10~100%, Local se	nse.		
			ls up to and including 100V			
2. Hold-up time		15mSec Typical.	16mSec Typical. Rated ou	tput power.		
ONSTANT CURRENT MODE	V	10-40	20-20	36-12	60-7	100-4
Max. Line regulation (*6)		0.01% of rated output cu		JU-12	00-7	100-4
Max. Load regulation (*1)		0.01% of rated output cu				
. Load regulation thermal drift			output current over 30 min	utes following load change.		
. Ripple r.m.s. 5Hz~1MHz (*12)	mA	70	40	15	8	3
. Temperature coefficient	PPM/°C		tput current, following 30 r	ninutes warm-up.		
. Temperature stability			8hrs. interval following 30 m		ine, load & temperature.	
. Warm-up drift		Less than +/-0.1% of rate	d output current over 30 mi	nutes following power on.		
DOTECTIVE ELINICIANS		****				
ROTECTIVE FUNCTIONS	V	10-40	20-20	36-12	60-7	100-4
. Foldback protection			power supply change mod			tion nort
· · · · · · · · · · · · · · · · · · ·			e in autostart mode or by Ol nod. Reset by AC input recyc			
Over-voltage protection (OVP)		or by communication po		ie in autostart mode or by t	DO I button or by rear pan	iei enable,
. Over - voltage trip point	V	0.5-12	1~24	2~40	5~66	5~110
Output under voltage limit (UVL)			ommunication port. Preven			_
			power supply output volta			31 3
. Output under voltage protection (UVP)		Reset by AC input recycle	in autostart mode or by Ol	JT button or by rear panel E	NABLE, or by communica	tion port."
Over temperature protection		User Selectable. Latched	or non latched			
NALOG PROGRAMMING AND MONITORING						
. Vout voltage programming			user selectable. Accuracy ar user selectable. Accuracy ar			
		0~100%, 0~5V or 0~10V,		nd linearity: +/-1% of rated	out.	
. Vout voltage programming . lout voltage programming (*13)		0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu	user selectable. Accuracy ar	nd linearity: +/-1% of rated uracy and linearity: +/-1% of	out. f rated Vout.	
. Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout resistor programming (*13) . Shut-off (SO) control	 	0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0	user selectable. Accuracy ar ill scale, user selectable. Acc ill scale, user selectable. Acc .6V/2~15V or dry contact, u	nd linearity: +/-1% of rated l uracy and linearity: +/-1% o uracy and linearity: +/-1.5%	out. f rated Vout.	
.Vout voltage programming .lout voltage programming (*13) .Vout resistor programming .lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13)	  	0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selec	user selectable. Accuracy ar ill scale, user selectable. Acc ill scale, user selectable. Acc .6V/2~15V or dry contact, u ctable. Accuracy: +/-1%.	nd linearity: +/-1% of rated l uracy and linearity: +/-1% o uracy and linearity: +/-1.5%	out. f rated Vout.	
. Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout resistor programming (*13) . Sout-off (SO) control . Output current monitor (*13) . Output voltage monitor	  	0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selections or 0~10V, user selections or 0~10V, user selections of 0~5V or 0~10V or	user selectable. Accuracy ar Ill scale, user selectable. Acc Ill scale, user selectable. Acc .6V/2~15V or dry contact, u ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%.	nd linearity: +/-1% of rated l uracy and linearity: +/-1% o uracy and linearity: +/-1.5%	out. f rated Vout.	
.Vout voltage programming .lout voltage programming (*13) .Vout resistor programming .lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal	   	0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohi	user selectable. Accuracy ar Ill scale, user selectable. Acc Ill scale, user selectable. Acc .6V/2~15V or dry contact, u ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance.	nd linearity: +/-1% of rated luracy and linearity: +/-1% of uracy and linearity: +/-1.5% ser selectable logic.	out. f rated Vout. of rated lout.	
Vout voltage programming .lout voltage programming (*13) .Vout resistor programming (*13) .lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal .Parallel operation (*19)		0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in	user selectable. Accuracy and scale, user selectable. Acc lill scale, user selectable. Acc lill scale, user selectable. Acc lill scale, user selectable. Acc however, and the scale lill sc	nd linearity: +/-1% of rated luracy and linearity: +/-1% of uracy and linearity: +/-1.5% ser selectable logic.	out. f rated Vout. of rated lout.	
.Vout voltage programming .lout voltage programming (*13) .Vout resistor programming .Lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal .Parallel operation (*19) 0. Series operation	   	0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user seled 0~5V or 0~10V, user seled 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 1 2 identical units (with ext	user selectable. Accuracy and scale, user selectable. Acculi scale, user selectable. Accol. 6V/2-15V or dry contact, uctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sinternal diodes).	nd linearity: +/-1% of rated uracy and linearity: +/-1% of uracy and linearity: +/-1.5% of uracy and linearity: +/-1.5% of uracy and linearity: +/-1.5% of uracy and linearity: -/-1.5% of uracy and uracy a	out. f rated Vout. of rated lout.	
Vout voltage programming Lout voltage programming (*13) Vout resistor programming Lout resistor programming (*13) Shut-off (SO) control Output current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) O. Series operation LOV/CC indicator		0–100%, 0–5V or 0–10V, 0–100%, 0–5/10Kohm fu 0–100%, 0–5/10Kohm fu By electrical Voltage: 0–0 0–5V or 0–10V, user seled 0–5V or 0–10V, user seled 4–5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in 2 identical units (with ext Open collector. CC mode	user selectable. Accuracy and scale, user selectable. Acc lill scale, user selectable. Acc lill scale, user selectable. Acc lill scale, user selectable. Acc however, and the scale lill sc	nd linearity: +/-1% of rated uracy and linearity: +/-1% or uracy and linearity: +/-1.5% or uracy and linearity: +/-1.5% ser selectable logic.  gle wire current balance could be used to be used to be used to be used to be uracy and uracy	out. f rated Vout. of rated lout.	s activated by front oa
Vout voltage programming Lout voltage programming (*13) Vout resistor programming Lout resistor programming (*13) Shut-off (SO) control Output current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control		0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohi Possible, up to 6 units in 1 2 identical units (with ext Open collector. CC mode Enables/Disables the PS ou	user selectable. Accuracy and scale, user selectable. Acculi scale, user selectable. Acculi scale, user selectable. Acculi scale selectable. Acculi scale selectable. Acculi scale selectable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sinternal diodes).  : On, CV mode: Off. Maximu.	nd linearity: +/-1% of rated uracy and linearity: +/-1% or uracy and linearity: +/-1.5% ser selectable logic.  gle wire current balance could be used to be uracy of the course of the course of the course un voltage: 30V, maximum or un, Open: Off, Source current:	out. f rated Vout. of rated lout.  nnection. sink current: 10mA less than 0.5mA). Ena/Dis is	s activated by front pa
.Vout voltage programming .lout voltage programming (*13) .Vout resistor programming .Lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal .Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control		0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selet 0~5V or 0~10V, user selet 4~5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in: 2 identical units (with ext Open collector. CC mode Enables/Disables the PS or By electrical signal or Op- Open collector (Shunted	user selectable. Accuracy and scale, user selectable. Acculi scale, user selectable. Acculi scale, user selectable. Acculi scale sca	nd linearity: +/-1% of rated uracy and linearity: +/-1% of uracy and linearity: +/-1.5% of uracy and linearity: +/-1.5% ser selectable logic.  gle wire current balance column voltage: 30V, maximum voltage: 30V, maximum voltage: 30V, or open: Local OmA sink current max.)-Rei	out. f rated Vout. of rated lout.  nnection. sink current: 10mA less than 0.5mA). Ena/Dis is all note. Off-Local (30V max.)	).
.Vout voltage programming .lout voltage programming (*13) .Vout resistor programming .Lout resistor programming (*13) .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal .Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator		0–100%, 0–5V or 0–10V, 0–100%, 0–5/10Kohm fu 0–100%, 0–5/10Kohm fu Develorical Voltage: 0–0 0–5V or 0–10V, user select 0–5V or 0–10V, user select 4–5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in 2 identical units (with ext Open collector. CC mode Enables/Disables the PS or By electrical signal or Op-0 open collector (shunted Maximum low level outs 1	user selectable. Accuracy at all scale, user selectable. Acc 1ll scale, user selectable. Acc 1.6V/2~15V or dry contact, utable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sinternal diodes).  1: On, CV mode: Off. Maximultuput by dry contact (Short: Cen/Short: 0~0.6V or short: R by 36V zener). On (0~0.6V, 1 ut = 0.8V, Minimum high lev	nd linearity: +/-1% of rated uracy and linearity: +/-1% of uracy and linearity: +/-1% of uracy and linearity: +/-1.5% ser selectable logic.  gle wire current balance could be uracy and u	out. f rated Vout. of rated lout.  nnection. sink current: 10mA less than 0.5mA). Ena/Dis is al mote. Off-Local (30V max.) source current = 8mA, pul	). Ise =20us Typical.
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Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output voltage monitor  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  O. Series operation  I. CV/CC indicator  I. Interlock (ILC) control  J. Local/Remote mode Control  J. Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, Op  Vout programming accuracy		0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu 0~100%, 0~5/10Kohm fu By electrical Voltage: 0~0 0~5V or 0~10V, user selet 0~5V or 0~10V, user selet 0~5V or 0~10V, user selet 4~5V-0K, 0V-Fail. S00ohn possible, up to 6 units in 1 2 identical units (with ext Open collector. CC mode Enables/Disables the PS ot By electrical signal or 0pp Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimu Open collector, maximun Open colle	user selectable. Accuracy at all scale, user selectable. Acc lll scale, user selectable. Acc lls scale, user selectable. Acc 1.6V/2~15V or dry contact, uctable. Accuracy: +/-1%. totable. Accuracy: +/-1%. totable. Accuracy: +/-1%. mseries resistance. master/slave mode with sinternal diodes).  10 c V mode: Off. Maximutput by dry contact (Short: Control of Maximum high level to voltage = 0.8V, Minimum high level to voltage 25V, maximum sin voltage 25V, maximum	nd linearity: +/-1% of rated uracy and linearity: +/-1% of uracy and linearity: +/-1% of uracy and linearity: +/-1.5% ser selectable logic.  gle wire current balance column voltage: 30V, maximum: in, Open: Off, Source current: emote, 2~15V or open: Localoma Sink current max.)-Reviet output = 2V, maximum: glip level input votage = 2.0 m., ik current 100mA. (Shunted in input votage) in input votage = 2.0 m.  INIT, SO 232,RS485,USB address is programming, 5V/10V, Skent Monitoring 5V/10V, Outst-V-1 count.	out. f rated Vout. of rated lout.  fnated lout.  nnection. sink current: 10mA less than 0.5mA). Ena/Dis is all mote. Off-Local (30V max.) source current = 8mA, pul V, Maximum sink current: by 27V zener) by 27V zener)	). Ise =20us Typical. = 8mA, possitive edge
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- 12 -



Z <sup>+</sup> 400 SERIES SPECIFICATIONS						
INPUT CHARACTERISTICS	V	10-40	20-20	36-12	60-7	100-4
1. Input voltage/freq. (*3)			85~265Va	ac continuous, 47~63Hz, sin	gle phase	
2. Maximum Input current 100/200VAC (*18)		5.05/2.47	4.98/2.45	5.25/2.57	5.10/2.50	4.80/2.37
3. Power Factor (Typ)			0	.99 at 100/200Vac, 100% loa	nd	
4. Efficiency (Typ) 100/200VAC (*4) (*18)	%	80/82	81/83	83/85	83/85	84/86
5. Inrush current (*5)				Less than 25A		

ENVIRONMENTAL CONDITIONS		
Operating temperature		0~50°C, 100% load.
2. Storage temperature		-20~85°C
3. Operating humidity	%	20~90% RH (no condensation).
4. Storage humidity	%	10~95% RH (no condensation).
5. Altitude		Maximum 3000m. Derate ambient temp above 2000m.  Operating: Maximum ambient temperature, From 2000m up to 3000m Ambient temperature 40°C.

SAFETY/EMC		
Applicable standards:	Safety	 UL61010-1, EN61010-1, IEC61010-1. Design to meet UL60950-1, EN60950-1 10V≤Vout≤60V: Output,J1,J2,J3,J4,USB,LAN,IEEE/ISOLATED Analog are Non Hazardous Vout=100V:Output,J1,J2 are Hazardous J3,J4,USB, IEEE/ISOLATED Analog ,LAN are Non Hazardous
	EMC	 IECG1326-1 (Built to meet EN55022/EN55024)
2. Withstand voltage		 10≤Vout≤36V models: Input-Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG-Ground: 1000VDC/1min. 60V,100V models: Input-Output&J1,J2: 4242VDC/1min; Input-J3,J4,USB,LAN/IEEE/ISOLATED Analog: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2: J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 1910VDC/1min; Output&J1,J2-Ground: 1380VDC/1min. J3, J4, USB/LAN/IEEE/ISOLATED ANALOG - Ground: 1000VDC/1min;
3. Insulation resistance		 More than 100Mohm at 25°C, 70%RH.
4. Conducted emission		 IEC/EN61326-1 Industrial Location - B, FCC part 15-B, VCCI-B
5. Radiated emission		 IEC/EN61326-1 Industrial Location - A, FCC part 15-A, VCCI-A

MECHANICAL			
1. Cooling			Forced air cooling by internal fan
2. Weight	STANDARD	Kg	Less than 1.9Kg.
	WIDE BODY	Kg	Less than 2.4Kg. Wide body with Isolated analog or Binding post or IEEE
3. Dimensions (WxHxD)	STANDARD	mm	H: 83, W: 70, D: 350 (excluding bus bars, handles). (Refer to Outline drawing)
	WIDE BODY	mm	H: 83, W: 105, D: 350 (excluding bus bars, handles). (Refer to Outline drawing)
4. Vibration			According to: IEC60068-2-64
5. Shock			Less than 20G, half sine, 11mS. Unit is unpacked. According to: IEC600068-2-27

- NOTES: \*1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- \*2: Minimum current is guaranteed to maximum 0.2% of rated output current.
- \*3: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 100-240Vac (50/60Hz).
- \*4: Ta=25°C with rated output power.
- \*5: Not including EMI filter inrush current, less than 0.2mSec.
- \*6: At 85~132Vac or 170~265VAC, constant load.
  \*7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- \*8: Measured with JEITA RC-9131A (1:1) probe.
- \*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated resistive load.
  \*10: From 90% to 10% of Rated Output Voltage.
  \*11: For load voltage change, equal to the unit voltage rating, constant input voltage.

- \*12: For 10V model the ripple is measured at 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 do not include the warm-up and Load regulation thermal drift.
- \*14: Measured with JEITA RC-9131A (1:1) probe.
  \*15: For cases where the time interval between each down programming is longer than Td (time delay).
- \*16: For cases where the time interval between each down programming is shorter than Td (Time delay).
- 17: Td typical (±20%) Minimum time between consecutive down programming cycles.
  \*18: PS with isolated analog option decreases efficiency by 0.5% and increases input current by 0.5%
- \*19: For Parallel operation more than 2 units 5% of toatal output current is requierd.



Z <sup>†</sup> 600 SERIES SPECIFICATIONS						
IODEL	Z	10-60	20-30	36-18	60-10	100-6
Rated output voltage(*1)	V	10	20	36	60	100
Rated output current (*2)	A	60	30	18	10	6
Rated output power	W	600	600	648	600	600
DNSTANT VOLTAGE MODE	V	10-60	20-30	26 10	60-10	100-6
Max. Line regulation (*6)		0.01% of rated output vol		36-18	00-10	100-6
Max. Load regulation (*7)		0.01% of rated output vol				
Ripple and noise (p-p, 20MHz) (*8)	mV	75	75	75	75	100
Ripple r.m.s. 5Hz~1MHz	mV	6.25	6.25	6.25	6.25	10
. Temperature coefficient	PPM/°C	30PPM/°C from rated out	out voltage, following 30 mi	nutes warm-up.	'	'
. Temperature stability		0.02% of rated Vout over	Bhrs. interval following 30 m	inutes warm-up. Constant	t line, load & temp.	
. Warm-up drift		Less than 0.05% of rated of	output voltage+2mV over 30	minutes following powe	r on.	
. Remote sense compensation/wire	V	1	1	2	3	5
. Up-prog. Response time, 0~Vomax.(*9)	mS	50	50	50	50	100
0. Down-prog.response time: Full load (*9)	mS	25	25	25	25	80
Time delay (*17) No load (*10) (*15) (*17)		285 65	422 110	432 155	570 175	1370
No load (*10) (*15) (*17)	mS	320	330	420	540	375 1900
[NO load (*10) (*16) (*17)			o recover within 0.5% of its r			1900
1. Transient response time	mS		et-point: 10~100%, Local sen		inge 10~30% of fated	
1. Hunstelle response time	"""		s up to and including 100V	JC.		
2. Hold-up time		16mSec Typical. Rated ou				
<u> </u>		71				
ONSTANT CURRENT MODE	V	10-60	20-30	36-18	60-10	100-6
. Max. Line regulation (*6)		0.01% of rated output cur	rent+2mA			
. Max. Load regulation (*11)		0.01% of rated output cur				
Load regulation thermal drift			output current over 30 minu			
. Ripple r.m.s. 5Hz~1MHz (*12)	mA	75	45	22	12	4.5
. Temperature coefficient	PPM/°C		tput current, following 30 m		the stand of the standard stan	
. Temperature stability			hrs. interval following 30 mi		iine, ioaα & temperature.	
. Warm-up drift		Less tridii +/-U.1% OF rated	d output current over 30 mir	iutes ioliowing power on.		
ROTECTIVE FUNCTIONS	V	10-60	20-30	36-18	60-10	100-6
			power supply change mode			100-0
. Foldback protection			in autostart mode or by OU			ion port.
			od. Reset by AC input recycle			
. Over-voltage protection (OVP)		or by communication por		e in autostare mode or by	oo i battoii oi by icai pait	
. Over -voltage trip point	V	0.5-12	1~24	2~40	5~66	5~110
. Output under voltage limit (UVL)		Preset by front panel or co	ommunication port. Prevent	s from adjusting Vout belo		analog programmin
		Output shut-down when	power supply output voltag	e goes below UVP progra	ow limit. Does not affect in mming.	
. Output under voltage limit (UVL)  . Output under voltage protection (UVP)		Output shut-down when Reset by AC input recycle	power supply output voltag in autostart mode or by OU	e goes below UVP progra	ow limit. Does not affect in mming.	
. Output under voltage protection (UVP)		Output shut-down when	power supply output voltag in autostart mode or by OU	e goes below UVP progra	ow limit. Does not affect in mming.	
. Output under voltage protection (UVP) . Over temperature protection		Output shut-down when Reset by AC input recycle	power supply output voltag in autostart mode or by OU	e goes below UVP progra	ow limit. Does not affect in mming.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING		Output shut-down when Reset by AC input recycle User selectable, latched o	power supply output voltag in autostart mode or by OU r non latched.	e goes below UVP progra T button or by rear panel	ow limit. Does not affect in mming. ENABLE, or by communicat	
. Output under voltage protection (UVP) . Over temperature protection  INALOG PROGRAMMING AND MONITORING . Vout voltage programming		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V,	power supply output voltag in autostart mode or by OU r non latched. user selectable. Accuracy an	e goes below UVP progra T button or by rear panel l d linearity: +/-0.5% of rate	w limit. Does not affect in mming. ENABLE, or by communicat d Vout.	
. Output under voltage protection (UVP) . Over temperature protection  ANALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13)		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V,	power supply output voltag in autostart mode or by OU r non latched. user selectable. Accuracy an user selectable. Accuracy an	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rated d linearity: +/-1% of rated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout.	
. Output under voltage protection (UVP) . Over temperature protection  INALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming		Output shut-down when Reset by AC input recycle User selectable, latched of 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful	power supply output voltag in autostart mode or by OU r non latched. user selectable. Accuracy an user selectable. Accuracy an Il scale, user selectable. Accu	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-1%	ow limit. Does not affect in mming. ENABLE, or by communicat devices the communicat devote. I lout. I of rated Vout.	
•		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful	power supply output voltag in autostart mode or by OU r non latched. user selectable. Accuracy an user selectable. Accuracy an Il scale, user selectable. Accu Il scale, user selectable. Accu	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-15% tracy and linearity: +/-1.5%	ow limit. Does not affect in mming. ENABLE, or by communicat devices the communicat devote. I lout. I of rated Vout.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout vesistor programming (*13)		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy al I scale, user selectable. Accuracy an I scale, user selectable. Accuracy an I scale, user selectable. Accuracy and I scale, user selectable.	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-15% tracy and linearity: +/-1.5%	ow limit. Does not affect in mming. ENABLE, or by communicat devices the communicat devote. I lout. I of rated Vout.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming (*13) . lout resistor programming (*13) . Shut-off (SO) control		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~10%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an I scale, user selectable. Accu i scale, user selectable. Accu 6V/2~15V or dry contact, us table. Accuracy: +/-1%.	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-15% tracy and linearity: +/-1.5%	ow limit. Does not affect in mming. ENABLE, or by communicat devices the communicat devote. I lout. I of rated Vout.	
. Output under voltage protection (UVP) . Over temperature protection  INALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful By electrical Voltage: 0~0~5V or 0~10V, user selec	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an alser selectable. Accuracy an alser selectable. Accuracy and scale, user selectable. Accu Is cale, user selectable. Accuracy: +/-15V or dry contact, us table. Accuracy: +/-1%.	e goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-15% tracy and linearity: +/-1.5%	ow limit. Does not affect in mming. ENABLE, or by communicat devices the communicat devote. I lout. I of rated Vout.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming . lout vistor programming . lout resistor programming . lout resistor programming . lout resistor programming . vout resistor programming . lout resistor programming . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohr	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an alser selectable. Accuracy an alser selectable. Accuracy and scale, user selectable. Accu Is cale, user selectable. Accuracy: +/-15V or dry contact, us table. Accuracy: +/-1%.	le goes below UVP progra T button or by rear panel i d linearity: +/-0.5% of rate d linearity: +/-1% of rated tracy and linearity: +/-1.5% er selectable logic.	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~10%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful By electrical Voltage: 0~0.0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. S00ohr Possible, up to 6 units in 1 2 identical units (with ext	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an Il scale, user selectable. Accuracy an Il scale, user selectable. Accu 6V/2~15V or dry contact, us table. Accuracy: +/-1%. table. Accuracy: +/-1%. en series resistance.  naster/slave mode with singernal diodes).	d linearity: +/-0.5% of rated linearity: +/-1.5% of rated linearity: +/-1.5% of rated racy and linearity: +/-1.5% er selectable logic.	ow limit. Does not affect in mming. ENABLE, or by communicat devout. lout. of rated Vout. 6 of rated lout.	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V~OK, 0V-Fail. S00ohr Possible, up to 6 units in r 2 identical units (with ext. Open collector. CC mode:	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an liscale, user selectable. Accuracy an liscale, user selectable. Accuracy an liscale, user selectable. Accuracy: 1/-15V or dry contact, us table. Accuracy: +/-166. table. Accuracy: +/-1766. n series resistance. naster/slave mode with singernal diodes).  On, CV mode: Off. Maximui	le goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated dracy and linearity: +/-1% uracy and linearity: +/-1.5% er selectable logic. lle wire current balance co	ow limit. Does not affect in mming. ENABLE, or by communicat devote. lout. lout. of rated Vout. 6 of rated lout. ennection. sink current: 10mA	
. Output under voltage protection (UVP) . Over temperature protection  INALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout resistor programming (*13) . Shut-off (50) control . Output current monitor (*13)		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext. Open collector. CC mode: Enables/Disables the PS of Enables/Disables the PS	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accu il scale, user selectable. Accuratable. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singematorial diodes).  On, CV mode: Off. Maximumutuput by dry contact (Short	le goes below UVP progra T button or by rear panel I d linearity: +/-0.5% of rate d linearity: +/-1% of rated dracy and linearity: +/-1% uracy and linearity: +/-1.5% er selectable logic. lle wire current balance co	ow limit. Does not affect in mming. ENABLE, or by communicat devote. lout. lout. of rated Vout. 6 of rated lout. ennection. sink current: 10mA	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . Iout voltage programming (*13) . Vout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful By electrical Voltage: 0~0.0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the P5 c Enables/Disables the P5 c Enables/Disables the P5 c Ena/Dis is activated by fro	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an Is cale, user selectable. Accuracy is cale, user selectable. Accuracy: 1 scale, user selectable. Accuracy an user selectable. Accuracy and user selectable. Accuracy: 1 scale, user selectable. Accura	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ille wire current balance community to the community	ow limit. Does not affect in mming. ENABLE, or by communicated Vout. lout. of rated Vout. for frated lout. sink current: 10mA rrent: less than 0.5mA).	
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy and I scale, user selectable. Accu I scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes).  On, CV mode: Off. Maximul utput by dry contact (Short int panel.  m/Short: 0~0.6V or short: Re	d linearity: +/-0.5% of rated linearity: +/-1.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.	ow limit. Does not affect in mining. ENABLE, or by communicat devout. lout. of rated Vout. for frated lout.  onnection. sink current: 10mA rent: less than 0.5mA).	ion port.
. Output under voltage protection (UVP) . Over temperature protection  INALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming . lout voltage programming . lout resistor programming . lout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10W, 0~5V or 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~5V or 0~10V, user selec 0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. S00ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS c Ena/Dis is activated by frc By electrical signal or Ope Open collector (shunted I	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accur act also accuracy: Accuracy: Accuracy: Accuracy: Accuracy: 4/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. in series resistance. master/slave mode with singernal diodes).  On, CV mode: Off. Maximun untput by dry contact (Short int panel. in: NShort: O-0.6V or short: Reput Soy 36V zener). On (0-0.6V, 16)	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance come voltage: 30V, maximum: 0n, Open: Off, Source current,	ow limit. Does not affect in mming. ENABLE, or by communicat devote. Iout. Iout. Iout. Iout. Iour. Iou	ion port.
. Output under voltage protection (UVP) . Over temperature protection  . NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming . lout voltage programming . lout resistor programming . lout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~5V	power supply output voltage in autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accur il scale, user il scale, user selectable. Accur il scale, user il scale, us	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated varzey and linearity: +/-15% er selectable logic.  We wire current balance commontage: 30V, maximum on, Open: Off, Source currents, 2-15V or open: Locom A sink current max.)-Reel output = 2V, maximum el output el output = 2V, maximum el output el output = 2V, maximum el output	wilmit. Does not affect in mming. ENABLE, or by communicated Vout. lout. for fated Vout. for fated Vout. for fated lout.  sink current: 10mA rent: less than 0.5mA). al mote. Off-Local (30V max.), source current = 8mA, puls	ion port.
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming . lout vesistor programming . lout resistor programming . lout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output current monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out 6. Trigger in		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS o Ena/Dis is activated by frc Bayles in activated by frc Bay	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accu Il scale, user selectable. Accu Il scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance. master/slave mode with singernal diodes).  On, CV mode: Off. Maximum tutput by dry contact (Short int panel. en/Short: 0~-0.6V or short: Re by 36V zener). On (0~-0.6V, 10 ut = 0.8V, Minimum high lew voltage = 0.8V, Minimum high lew Toll-H.DHL=I us maximum.	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  In woltage: 30V, maximum of On, Open: Off, Source cure county of the linearity: +/-1.5% er selectable logic.	w limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout. sink current: 10mA rrent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls V, Maximum sink current =	ion port.
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming Lout resistor programming Vout resistor programming Lout resistor programming Lout resistor programming Voutput current monitor (*13) Coutput voltage monitor Power supply OK signal Parallel operation (*19) D. Series operation LCV/CC indicator  LINT/CC indicator  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  6. Trigger in  7. Programmed signal 1		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, user selectable, latched of 0~5V or 0~10V, user selectable, up to 6 units in r 2 identical units (with ext. Open collector. CC mode: Enables/Disables the PS of Ena/Dis is activated by from By electrical signal or Open collector. (Shunted I Maximum low level output Maximum low level input trigger: tw=10us minimut Open collector, maximum Open collector, maximum	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accu il scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes).  On, CV mode: Off. Maximum utput by dry contact (Short int panel. en/Short: 0~0.6V or short: Re by 36V zener). On (0~0.6V, 10 at = 0.8V, Minimum high lev voltage = 0.8V, Minimum high lev voltage = 0.8V, minimum him. TpH.H.TpHL=1us maximum voltage 25V, maximum sinl	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated racy and linearity: +/-15% er selectable logic.    wire current balance commonts of the linearity in the linear	w limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. 6 of rated lout. sink current: 10mA rent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls V, Maximum sink current =	ion port.
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming Lout voltage programming Lout resistor programming Vout resistor programming Lout resistor programming Voutput current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) D. Series operation LOV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger out  6. Trigger in  7. Programmed signal 1  8. Programmed signal 2		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, user selectable, latched of 0~5V or 0~10V, user selectable, up to 6 units in r 2 identical units (with ext. Open collector. CC mode: Enables/Disables the PS of Ena/Dis is activated by from By electrical signal or Open collector. (Shunted I Maximum low level output Maximum low level input trigger: tw=10us minimut Open collector, maximum Open collector, maximum	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accu Il scale, user selectable. Accu Il scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. in series resistance. master/slave mode with singernal diodes).  On, CV mode: Off. Maximum tutput by dry contact (Short int panel. en/Short: 0~-0.6V or short: Re by 36V zener). On (0~-0.6V, 10 ut = 0.8V, Minimum high lew voltage = 0.8V, Minimum high lew Toll-H.DHL=I us maximum.	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated racy and linearity: +/-15% er selectable logic.    wire current balance commonts of the linearity in the linear	w limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. 6 of rated lout. sink current: 10mA rent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls V, Maximum sink current =	ion port.
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming Lout voltage programming Lout resistor programming Vout resistor programming Lout resistor programming Voutput current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) D. Series operation LOV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger out  6. Trigger in  7. Programmed signal 1  8. Programmed signal 2		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, user selectable, latched of 0~5V or 0~10V, user selectable, up to 6 units in r 2 identical units (with ext. Open collector. CC mode: Enables/Disables the PS of Ena/Dis is activated by from By electrical signal or Open collector. (Shunted I Maximum low level output Maximum low level input trigger: tw=10us minimut Open collector, maximum Open collector, maximum	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accu il scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes).  On, CV mode: Off. Maximum utput by dry contact (Short int panel. en/Short: 0~0.6V or short: Re by 36V zener). On (0~0.6V, 10 at = 0.8V, Minimum high lev voltage = 0.8V, Minimum high lev voltage = 0.8V, minimum him. TpH.H.TpHL=1us maximum voltage 25V, maximum sinl	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated racy and linearity: +/-15% er selectable logic.    wire current balance commonts of the linearity in the linear	w limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. 6 of rated lout. sink current: 10mA rent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls V, Maximum sink current =	ion port.
Output under voltage protection (UVP) Over temperature protection  NALOG PROGRAMMING AND MONITORING Vout voltage programming Lout voltage programming Lout voltage programming Lout resistor programming Lout resistor programming Lout resistor programming Vout resistor programming Lout resistor programming Lout resistor programming Vout resistor programming Lout resistor programming Vout resistor programming Voutput current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) O. Series operation L. CV/CC indicator  Interior (ILC) control Loutput Current mode Control Local/Remote mode Control Local/Remote mode Indicator S. Trigger out C. Trigger in Programmed signal 1 Reprogrammed signal 2 RONT PANEL		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~5V or 0~10V, user selec 1~5V~0K, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS or Ena/Dis is activated by from By electrical signal or Ope Open collector (shunted I Maximum low level input trigger: tw=10us minimu Open collector, maximum Open collector, maximum Open collector, maximum	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accur il scale, user il scale, user selectable. Accur il scale, user	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated racy and linearity: +/-15% er selectable logic.    wire current balance commonts of the linearity in the linear	w limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. 6 of rated lout. sink current: 10mA rent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls V, Maximum sink current =	ion port.
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Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout voltage programming lout resistor programming lout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  L. CV/CC indicator  Interlock (ILC) control  Local/Remote mode Control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful by electrical Voltage: 0~0.0~5V or 0~10V, user selec 4~5V-OK, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS of Ena/Dis is activated by fro By electrical signal or Ope Open collector (shunted I Maximum low level output Maximum low level output Maximum low level input trigger: tw=10us minimum Open collector, maximum Op	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an li scale, user selectable. Accuracy an li scale, user selectable. Accuracy: Acc	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated racy and linearity: +/-1% er selectable logic.  Ide wire current balance community: +/-1.5% er selectable logic.  In voltage: 30V, maximum: On, Open: Off, Source current max.)-Reel output = 2V, maximum gh level input votage = 2.0 m. sc current 100mA. (Shunted Current 100mA. (Shunte	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. for rated lout. for rated lout.  sink current: 10mA rrent: less than 0.5mA). al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout voltage programming lout resistor programming lout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  L. CV/CC indicator  Interlock (ILC) control  Local/Remote mode Control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		Output shut-down when Reset by AC input recycle User selectable, latched on the property of th	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an il scale, user selectable. Accuracy an il scale, user selectable. Accuracy and il scale, user selectable. Accuracy: 4/-15V or dry contact, ustable. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance. master/slave mode with singernal diodes).  On, CV mode: Off. Maximum utput by dry contact (Short int panel. en/Short: 0~-0.6V or short: Re by 36V zener). On (0~-0.6V, 10 at = 0.8V, Minimum high lev voltage = 0.8V, minimum high lev voltage = 0.8V, minimum high lev voltage = 0.8V, minimum sind to voltage 25V, maximum sind voltage 2	d linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-15% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common linearity: +/-1.5% er selectable logic.  The wire current balance common logic log	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
Output under voltage protection (UVP) Over temperature protection  NALOG PROGRAMMING AND MONITORING Vout voltage programming Lout voltage programming Lout voltage programming Lout resistor programming Voutput voltage monitor Power supply OK signal Parallel operation (*19) O. Series operation LOV/CC indicator  I. CV/CC indicator  I. Interlock (ILC) control  J. Local/Remote mode Control Local/Remote mode Indicator  T. Programmed signal 1 B. Programmed signal 2  RONT PANEL Control functions		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~5V or 0~10V, user selec 1~5V~0K, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS or Ena/Dis is activated by from By electrical signal or Ope Open collector, shunted I Maximum low level input trigger: tw=10us minimu Open collector, maximum Open collector, maximum Open collector, maximum Copen collector,	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes). On, CV mode: Off. Maximum utput by dry contact (Short int panel	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-15% er selectable logic.  Ide wire current balance community: 4/-1.5% er selectable logic.  In voltage: 30V, maximum: On, Open: Off, Source current logic.  In voltage: 30V, maximum linearity: 4/-1.5% ource current logic.  In current logic. Source current logic. Source current logic.  In current logic. Source current logic. Sourc	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
Output under voltage protection (UVP) Over temperature protection  NALOG PROGRAMMING AND MONITORING Vout voltage programming Lout voltage programming Lout voltage programming Lout resistor programming Voutput voltage monitor Power supply OK signal Parallel operation (*19) O. Series operation LOV/CC indicator  I. CV/CC indicator  I. Interlock (ILC) control  J. Local/Remote mode Control Local/Remote mode Indicator  T. Programmed signal 1 B. Programmed signal 2  RONT PANEL Control functions		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, user select 0~1	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an li scale, user selectable. Accuracy an li scale, user selectable. Accuracy: Ar-15V or dry contact, us table. Accuracy: +/-196. table. Accuracy: +/-196. table. Accuracy: +/-196. n series resistance.  naster/slave mode with singernal diodes).  On, CV mode: Off. Maximunutput by dry contact (Short unt panel.  en/Short: 0~0.6V or short: Re by 36V zener). On (0~0.6V, 10 at = 0.8V, Minimum high lew voltage = 0.8V, Minimum high lew voltage = 0.8V, minimum sind in voltage 25V, maximum sind in voltage 25V, maximum sind	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% erselectable logic.  Ide wire current balance commodified linearity: +/-1.5% er selectable logic.  Ide wire current balance commodified linearity: +/-1.5% erselectable logic.  Ide wire current balance commodified linearity: +/-1.5% erselectable logic.  In collapse: 30V, maximum commodified linearity: -/-15V or open: Locommodified lin	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
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Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Iout voltage programming Iout voltage programming Iout resistor programmi		Output shut-down when Reset by AC input recycle User selectable, latched on 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, user selectable, latched on 0~5V or 0~10V, user selectable, up to 6 units in recommendation of the selectable of the select	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an li scale, user selectable. Accuracy an li scale, user selectable. Accuracy and li scale, user selectable. Accuracy: 4/-15V or dry contact, ustable. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance. master/slave mode with singernal diodes).  On, CV mode: Off. Maximum utput by dry contact (Short int panel. en/Short: 0~-0.6V or short: Re by 36V zener). On (0~-0.6V, 10 at = 0.8V, Minimum high lev voltage = 0.8V, minimum high lev voltage = 0.8V, minimum high lev voltage = 0.8V, minimum sind to voltage 25V, maximum sind to voltage 25V, maximum sind voltag	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% or open: Logical linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  O. Series operation  1. CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger out  6. Trigger in  7. Programmed signal 1  8. Programmed signal 2  RONT PANEL  Control functions  Display  Indications		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~5V or 0~10V, user selec 1~5V~0K, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS of Ena/Dis is activated by from the proper collector (shunted I Maximum low level input trigger: tw=10us minimu Open collector, maximum Open collector, maxi	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes). On, CV mode: Off. Maximum utput by dry contact (Short int panel	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% or open: Logical linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. of rated Vout. 6 of rated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
Output under voltage protection (UVP)  Over temperature protection  NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  Series operation  LOV/CC indicator  Interlock (ILC) control  Local/Remote mode Control  Corrigger out  6. Trigger out  6. Trigger in  7. Programmed signal 1  8. Programmed signal 2  RONT PANEL  Control functions  Display  Indications  Function buttons		Output shut-down when Reset by AC input recycle User selectable, latched o User selectable, latched o 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~5V or 0~10V, user selec 1~5V~0K, 0V-Fail. 500ohr Possible, up to 6 units in r 2 identical units (with ext Open collector. CC mode: Enables/Disables the PS o Ena/Dis is activated by from the proper collector (shunted I Maximum low level input trigger: tw=10us minimu Open collector, maximum Open collector, max	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy and I scale, user selectable. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. n series resistance.  master/slave mode with singernal diodes). On, CV mode: Off. Maximum utput by dry contact (Short int panel	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% or open: Logical linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. for frated Vout. for frated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  8mA, possitive edg
. Output under voltage protection (UVP) . Over temperature protection . NALOG PROGRAMMING AND MONITORING . Vout voltage programming . Iout voltage programming . Iout voltage programming . Iout resistor programming . Iout put current monitor . Ioutput voltage monitor . Power supply OK signal . Parallel operation (*19) . Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5.Trigger out 6.Trigger in 7. Programmed signal 1 8. Programmed signal 2 RONT PANEL . Control functions . Display . Indications . Function buttons ROGRAMMING AND READBACK (RS232/485,USB, Operation)		Output shut-down when Reset by AC input recycle User selectable, latched or 0~100%, 0~5V or 0~10V, user selectors of the property	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an li scale, user selectable. Accuracy an li scale, user selectable. Accuracy: Art St. or dry contact, us table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. in series resistance. inaster/slave mode with singernal diodes).  On, CV mode: Off. Maximunutput by dry contact (Short unt panel. en/Short: 0~0.6V or short: Reby 36V zener). On (0~0.6V, 10 at = 0.8V, Minimum high lew voltage = 0.8V, minimum sind voltage 25V, maximum si	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% or open: Logical linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. for frated Vout. for frated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  8mA, possitive edg
. Output under voltage protection (UVP) . Over temperature protection  NALOG PROGRAMMING AND MONITORING . Vout voltage programming . lout voltage programming . lout voltage programming . lout resistor programming . lout resistor programming . lout resistor programming (*13) . Shut-off (SO) control . Output current monitor (*13) . Output voltage monitor . Power supply OK signal . Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out 6. Trigger in 7. Programmed signal 1 8. Programmed signal 1 8. Programmed signal 2  RONT PANEL . Control functions  Display . Indications . Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O) . Vout programming accuracy		Output shut-down when Reset by AC input recycle User selectable, latched o 0~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~100%, 0~5V or 0~10V, 10~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~100%, 0~5/10Kohm ful 0~10V, user selec 10~5V or 0~10V is 10×10V is	power supply output voltagin autostart mode or by OU r non latched.  user selectable. Accuracy an user selectable. Accuracy an li scale, user selectable. Accuracy an li scale, user selectable. Accuracy: Acc	d linearity: +/-0.5% of rated linearity: +/-0.5% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1% of rated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% er selectable logic.  Ide wire current balance commodated linearity: +/-1.5% or open: Logical linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated linearity: -/-1.5% er selectable logic.  Ide wire current balance commodated	ow limit. Does not affect in mming. ENABLE, or by communicat d Vout. lout. lout. of rated Vout. for frated Vout. for frated lout.  sink current: 10mA rent: less than 0.5mA).  al mote. Off-Local (30V max.). source current = 8mA, puls DV, Maximum sink current = d by 27V zener) d by 27V zener)	ion port.  See = 20us Typical.  SemA, possitive edg
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Z <sup>+</sup> 600 SERIES SPECIFICATION	NS .					
INPUT CHARACTERISTICS	V	10-60	20-30	36-18	60-10	100-6
1. Input voltage/freq. (*3)			85~265Va	ac continuous, 47~63Hz, sir	gle phase	
2. Maximum Input current 100/200VAC		7.4/3.6	7.24/3.53	7.73/3.77	7.15/3.50	7.15/3.50
3. Power Factor (Typ)			0	.99 at 100/200Vac, 100% lo	ad	
4. Efficiency (Typ) 100/200VAC (*4)	%	82/84	84/86	85/87	85/87	85/87
5. Inrush current (*5)				Less than 25A		

ENVIRONMENTAL CONDITIONS			
1. Operating temperature		0~50°C, 100% load.	
2. Storage temperature		-20~85°C	
3. Operating humidity	%	20~90% RH (no condensation).	
4. Storage humidity	%	10~95% RH (no condensation).	
5. Altitude		Maximum 3000m. Derate ambient temp above 2000m.  Operating: Maximum ambient temperature, From 2000m up to 3000m Ambient temperature 40°C.	

SAFETY/EMC		
Applicable standards:	Safety	 UL61010-1, EN61010-1, IEC61010-1. Design to meet UL60950-1, EN60950-1 10V≤Vout≤60V: Output,J1,J2,J3,J4,USB,LAN,IEEE/ISOLATED Analog are Non Hazardous Vout=100V:Output,J1,J2 are Hazardous J3,J4,USB, IEEE/ISOLATED Analog ,LAN are Non Hazardous
	EMC	 IEC61326-1 (Built to meet EN55022/EN55024)
2. Withstand voltage		 10≤Vout≤36V models: Input-Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG-Ground: 1000VDC/1min. 60V,100V models: Input-Output&J1,J2: 4242VDC/1min; Input-J3,J4,USB,LAN/IEEE/ISOLATED Analog: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2-J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 1910VDC/1min; Output&J1,J2-Ground: 1380VDC/1min. J3, J4, USB/LAN/IEEE/ISOLATED ANALOG - Ground: 1000VDC/1min; in;
3. Insulation resistance		 More than 100Mohm at 25°C, 70%RH.
4. Conducted emission		 IEC/EN61326-1 Industrial Location - B, FCC part 15-B, VCCI-B
5. Radiated emission		 IEC/EN61326-1 Industrial Location - A, FCC part 15-A, VCCI-A

MECHANICAL					
1. Cooling			orced air cooling by internal fan.		
2 14/	STANDARD	Kg	Less than 2.5Kg.		
2. Weight WIDE BO		Kg	Less than 3.0Kg. Wide body with Isolated analog or Binding post or IEEE.		
3. Dimensions (WxHxD)	STANDARD	mm	H: 83, W: 70, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).		
5. Diffierisions (WXHXD)	WIDE BODY	mm	H: 83, W: 105, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).		
4. Vibration			According to: IEC60068-2-64		
5. Shock			Less than 20G, half sine, 11mS. Unit is unpacked. According to: IEC600068-2-27		

### NOTES:

- \*1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
- \*2: Minimum current is guaranteed to maximum 0.2% of rated output current.
  \*3: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 100-240Vac (50/60Hz).
- \*4: Ta=25°C with rated output power.
- \*5: Not including EMI filter inrush current, less than 0.2mSec. \*6: At 85~132Vac or 170~265VAC, constant load.
- \*7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.
- \*8: Measured with JEITA RC-9131A (1:1) probe.
  \*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated resistive load.
- \*10: From 90% to 10% of Rated Output Voltage.
- \*11: For load voltage change, equal to the unit voltage rating, constant input voltage.

  \*12: For 10V model the ripple is measured at 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 do not include the warm-up and Load regulation thermal drift.
  \*14: Measured with JEITA RC-9131A (1:1) probe.
- \*15: For cases where the time interval between each down programming is longer than Td (Time delay).
- \*16: For cases where the time interval between each down programming is shorter than Td (Time delay). \*17: Td typical (±20%) Minimum time between consecutive down programming cycles.
- \*18: PS with isolated analog option decreases efficiency by 0.5% and increases input current by 0.5%
- \*19: For Parallel operation more than 2 units 5% of toatal output current is requierd.



Z <sup>†</sup> 800 SERIES SPECIFICATIONS						
MODEL	Z	10-72	20-40	36-24	60-14	100-8
. Rated output voltage(*1)	V	10	20	36	60	100
. Rated output current ≥ 100VAC (*2)	Α	72	40	24	14	8
Rated output current < 100VAC (*2)	Α	66	36	20	12.5	7.5
Rated output power ≥ 100VAC	W	720	800	864	840	800
Rated output power < 100VAC	W	660	720	720	750	750
ONSTANT VOLTAGE MODE						
Max. Line regulation (*6)			0.019	% of rated output voltage	+2mV	
Max. Load regulation (*7)				6 of rated output voltage		
Ripple and noise (p-p, 20MHz) (*8)	mV	50	50	50	50	80
Ripple r.m.s. 5Hz~1MHz	mV	5	5	5	12	15
Temperature coefficient	PPM/°C		put voltage, following 30			
Temperature stability			8hrs interval following 30		tant line load & temp	
Warm-up drift			output voltage+2mV ove			
Remote sense compensation/wire	V	1	1	2	3	5
. Up-prog. Response time, 0~Vomax.(*9)	mS	50	50	50	50	100
0. Down-prog.response time: Full load (*4)	mS	25	25	25	25	80
Time delay (*17)	1113	285	422	432	570	1370
No load (*10) (*15) (*17)	mS	65	110	155	175	375
No load (*10) (*15) (*17)	1113	320	330	420	540	1900
No load ( 10) ( 10) ( 17)						
I. Transient response time	mS	output current. Output s	to recover within 0.5% of et-point: 10~100%, Local Is up to and including 100	sense.	i change 10~90% of face	eu
2. Hold-up time		16mSec Typical. Rated o				
•	-	,				
ONSTANT CURRENT MODE	1	0.010/ -f				
Max. Line regulation (*6)		0.01% of rated output cu				
Max. Load regulation (*11)		0.01% of rated output cu		inutes fall	200	
Load regulation thermal drift			output current over 30 m			
Ripple r.m.s. 5Hz~1MHz (*12)	mA	75	45	22	12	4.5
Temperature coefficient	PPM/°C		utput current, following 3			
Temperature stability			8hrs. interval following 30			ature.
Warm-up drift		Less than +/-0.1% of rate	d output current over 30	minutes following power	on.	
ROTECTIVE FUNCTIONS						
5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Output shut-down when	power supply change me	ode from CV to CC or CC	to CV. User presetable.	
Foldback protection			in autostart mode or by			nunication port.
Over-voltage protection (OVP)			eset by AC input recycle in autos			
Over -voltage trip point	V	0.5-12	1~24	2~40	5~66	5~110
Output under voltage limit (UVL)		Preset by front panel or con	nmunication port. Prevents f	rom adjusting Vout below I	mit. Does not affect in ana	log programming.
•		<u> </u>				<u> </u>
Output under voltage protection (UVP)		Output shut-down when power supply output voltage goes below UVP programming.  Reset by AC input recycle in autostart mode or by OUT button or by rear panel ENABLE, or by communication port.  User selectable, latched or non latched.				
. Over temperature protection		User selectable, latched	or non latched.			
		User selectable, latched o	or non latched.			, , , , , , , , , , , , , , , , , , ,
NALOG PROGRAMMING AND MONITORING					,	
NALOG PROGRAMMING AND MONITORING .Vout voltage programming		0~100%, 0~5V or 0~10V,	user selectable. Accuracy		rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming  Lout voltage programming (*13)		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V,	user selectable. Accuracy user selectable. Accuracy	and linearity: +/-1% of ra	rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming  Lout voltage programming (*13)  Vout resistor programming		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm fu	user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A	and linearity: +/-1% of recuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  . Vout voltage programming . lout voltage programming (*13) . Vout resistor programming . lout resistor programming (*13)		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft 0~100%, 0~5/10Kohm ft	user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale, user selectable. A	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming (*13)  Vout resistor programming (*13)  Lout resistor programming (*13)  Shut-off (SO) control		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~0	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A .6V/2~15V or dry contact	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming (*13)  Vout resistor programming (*13)  Lout resistor programming (*13)		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft 0~100%, 0~5/10Kohm ft	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A .6V/2~15V or dry contact	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming (*13)  Vout resistor programming (*13)  Lout resistor programming (*13)  Shut-off (SO) control		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~0	user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale, user selectable. A 1.6V/2~15V or dry contact ctable. Accuracy: +/-1%.	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  lout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft 0~100%, 0~5/10Kohm ft By electrical Voltage: 0~( 0~5V or 0~10V, user sele	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A L6V/2~15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%.	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-	rated Vout. ated lout. 1% of rated Vout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming (*13)  Lout resistor programming (*13)  Shut-off (SO) control  Output voltage monitor  Power supply OK signal		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A L6V/2~15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%.	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming lout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A 1.6V/2–15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with s	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation		0~100%, 0~5V or 0~10V, 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A 1.6V/2–15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with s	and linearity: +/-1% of recuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming (*13)  Sout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  1. CV/CC indicator		0~100%, 0~5V or 0~10V, 0~10V%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A .6V/2~15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with se ternal diodes). : On, CV mode: Off. Maxin	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance mum voltage: 30V, maxim	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout. ce connection.	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming (*13)  Sout-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  0. Series operation  1. CV/CC indicator  2. Interlock (ILC) control		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A .60/2–15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sternal diodes). con, cV mode: Off. Maxin put by dry contact (Short: O	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- curacy and linearity: +/- , user selectable logic. ingle wire current balance mum voltage: 30V, maxin n, Open: Off, Source curren	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout ce connection. hum sink current: 10mA :: less than 0.5mA). Ena/Dis	
NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming (*13)  Vout resistor programming Lout resistor programming Lout resistor programming Lout resistor programming Output current monitor  Output current monitor Power supply OK signal Parallel operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control		0~100%, 0~5V or 0~10V, 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Op	user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ill scale, user selectable. A .6V/2–15V or dry contact ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sernal diodes). : On, CV mode: Off. Maxii put by dry contact (Short: O en/Short: 0~0.6V or short	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balanc mum voltage: 30V, maxin n, Open: Off, Source current Remote, 2~15V or open	rated Vout. 1% of rated Vout. 1.5% of rated lout. 1.5% of rated lout. te connection. num sink current: 10mA t: less than 0.5mA). Ena/Dis	is activated by front pane
NALOG PROGRAMMING AND MONITORING  .Vout voltage programming .lout voltage programming .lout resistor programming .lout resistor programming .lout resistor programming .lout resistor programming .Shut-off (SO) control .Output current monitor (*13) .Output voltage monitor .Power supply OK signal .Parallel operation (*19) 0. Series operation 1. C.V/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator		0~100%, 0~5V or 0~10V, 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the P5 out 0 pen collector (shunted by 0 pen collector (shunted by 0 pen collector)	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lid scale, user selectable. A lid scale, user selectable. A locuracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sternal diodes).  1: On, CV mode: Off. Maxingut by dry contact (5hort: Oen/Short: Oe	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/-, user selectable logic.  ingle wire current balanc mum voltage: 30V, maxin n, Open: Off, Source current Remote, 2~15V or open /, 10mA sink current max	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout	is activated by front pane
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  1. CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Indicator  5.Trigger out		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Op Open collector (shunted Maximum low level outp	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sternal diodes). : On, CV mode: Off. Maxii put by dry contact (Short: O en/Short: O -0.6V or short by 36V zener). On (O -0.6V ut = 0.8V, Minimum high	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin n, Open: Off, Source current Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin level output = 2V, maxin	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis t Local .)-Remote. Off-Local (30 num source current = 8r	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor Power supply OK signal Parallel operation (*19)  D. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the P5 ou By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level outp Maximum low level input triquer: twe 10us minimur	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lid scale, user selectable. A lid scale, user selectable. A lid scale, accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: -/-1%.	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance mum voltage: 30V, maxim, Open: Off, Source current: Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxim gh level input votage = 2. m.	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  L. CV/CC indicator  L. Interlock (ILC) control  L. Local/Remote mode Control  Local/Remote mode Indicator  5. Trigger out  5. Trigger in		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the P5 ou By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level outp Maximum low level input triquer: twe 10us minimur	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sternal diodes). : On, CV mode: Off. Maxii put by dry contact (Short: O en/Short: O -0.6V or short by 36V zener). On (O -0.6V ut = 0.8V, Minimum high	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance mum voltage: 30V, maxim, Open: Off, Source current: Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxim gh level input votage = 2. m.	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC indicator  L. Interlock (ILC) control  L. Local/Remote mode Control  L. Local/Remote mode Indicator  S. Trigger out  S. Trigger in  P. Programmed signal 1		0~100%, 0~5V or 0~10V, 0~10V%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS out By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum Open collector, maximum	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lid scale, user selectable. A lid scale, user selectable. A lid scale, accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accuracy: -/-1%.	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin , Open: Off, Source current , Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  I. CV/CC indicator  L. Interlock (ILC) control  B. Local/Remote mode Control  C. Trigger out  Trigger in  Programmed signal 1  B. Programmed signal 2		0~100%, 0~5V or 0~10V, 0~10V%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS out By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum Open collector, maximum	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance. master/slave mode with sternal diodes). : On, CV mode: Off. Maxit put by dry contact (Short: O en/Short: O en/	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin , Open: Off, Source current , Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming Lout voltage programming Lout vesistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC Indicator  Linterlock (ILC) control  Local/Remote mode Control  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~10V%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~6 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum Open collector, maximum	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. Cable. Accuracy: +/-1%. The series resistance. The series resistance are series resistance are series resistance are series resistance. The series resistance are series r	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin , Open: Off, Source current , Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout vesistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  I. CV/CC indicator  Interlock (ILC) control  J. Local/Remote mode Control  A. Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V loKohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum Open collector, maximum	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. Cable. Accuracy: +/-1%. The series resistance. The series resistance are series resistance are series resistance are series resistance. The series resistance are series r	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin , Open: Off, Source current , Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout vesistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  I. CV/CC indicator  Interlock (ILC) control  J. Local/Remote mode Control  A. Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V~0K, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector, CC mode Enables/Disables the P5 out By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level outp Maximum low level outp Maximum low level input trigger: tw=10us minimum Open collector, maximum Open collector, maximum Open collector, maximum Mutiple options with 2 E Vout/lout manual adjust	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A listory and selectable. Accuracy: +/-1%. Ctable. Accu	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin , Open: Off, Source current , Remote, 2~15V or open , 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout vesistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  I. CV/CC indicator  Interlock (ILC) control  J. Local/Remote mode Control  A. Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the P5 out By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level outp Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A ll scale, user selectable. A ll scale, user selectable. A couracy: +/-1%. Ctable. Accuracy: +/-1%. Ctable. Accura	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- ccuracy and linearity: +/- curacy and linearity: +/- curacy and linearity: +/- curacy and linearity: +/- curacy and linearity: -/- ingle wire current balance mum voltage: 30V, maxin n, Open: Off, Source current semonte, 2~-15V or open d, 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout vesistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  I. CV/CC indicator  Interlock (ILC) control  J. Local/Remote mode Control  A. Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~6 0~5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Op Open collector (shunted Maximum low level input trigger: tw= 10us minimur Open collector, maximum Open colle	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A couracy: +/-1%. The series resistance. Master/slave mode with sternal diodes).  • On, CV mode: Off. Maxingut by dry contact (Short: Oen/Short: O-0.6V or short by 36V zener). On (O-0.6V ut = 0.8V, Minimum high voltage = 0.8V, minimum high voltage = 0.8V, minimum high voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin ncoders	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- curacy and linearity: +/- , user selectable logic.  ingle wire current balanc mum voltage: 30V, maxin n, Open: Off, Source curren: Remote, 2~15V or open f, 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte k current 100mA. (Shunte	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  L CV/CC indicator  Interlock (ILC) control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V lokohm ft. 0~100%, 0~5V lokohm ft. 0~100%, 0~5V lokohm ft. 0~100%, 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS out By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimum Open collector, maximum Open collector, maximum Open collector, maximum Mutiple options with 2 E Vout/lout manual adjust OVP/LVIL/UVP manual ad protection Functions - O'Communication Functions - O'Communication Function	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A liscale. Accuracy: +/-1%. ctable. Accuracy: +/-1%. ctable. Accuracy: +/-1%. m series resistance.  master/slave mode with sternal diodes). con, CV mode: Off. Maxin grut by dry contact (Short: O en/Short: O-0.6V or short: O en/Short: O-0.6V or short: O en/Short: O-0.8V, Minimum high worldage – O.8V, Minimum high voltage = O.8V, maximum sin voltage 25V, maximum sin coders  lijust //P, UVL, UVP,Foldback, OC ss - Selection of LAN,IEEE,	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balanch with the control of the current balanch with the current balanch with the current of the current of the current of the current of the current max level output = 2V, maxing hevel output = 2V, maxing hevel output = 2V, maxing hevel input votage = 2. m. k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte P, INT, SO RS232,RS485,USB	rated Vout. ated lout. 19% of rated Vout. 1.5% of rated lout.  te connection.  num sink current: 10mA t: less than 0.5mA). Ena/Dis Local J-Remote. Off-Local (30 num source current = 8r OV, Maximum sink curren d by 27V zener)	is activated by front pane V max.). nA, pulse =20us Typica
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  . Series operation  . CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger in  . Programmed signal 1  5. Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V,	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A table. Accuracy: +/-1%. The series resistance. The serie	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance mum voltage: 30V, maxin n, Open: Off, Source current: Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin gly level input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k) p, INT, SO RS232,RS485,USB e, Address	rated Vout. ated lout. 1% of rated Vout. 1.5% of rated lout. 1.5% of rated lout.  te connection.  hum sink current: 10mA t: less than 0.5mA). Ena/Dis t: local a)-Remote. Off-Local (30) hum source current = 8r 0V, Maximum sink curren d by 27V zener) d by 27V zener)	is activated by front pan V max.). mA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  . Series operation  . CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger in  . Programmed signal 1  5. Programmed signal 2  RONT PANEL		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V,	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ctable. Accuracy: +/-1%. m series resistance. master/slave mode with s ternal diodes). : On, CV mode: Off. Maxin put by dry contact (Short: O en/Short: O0.6V or short by 36V zener). On (00.6 ut = 0.8V, Minimum high voltage = 0.8V, minimum h in. TDLH.TpHL=1 us maximu voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 15V, maximum sin solution of the contact of the contac	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- curacy and linearity: -/- linearity: -/- curacy and linearity: -/-	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC indicator  Linterlock (ILC) control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions		0~100%, 0~5V or 0~10V, 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. By electrical Voltage: 0~6 v5V or 0~10V, user sele 4~5V-OK, 0V-Fail. 500oh Possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS ou By electrical signal or Open collector (shutada Maximum low level outh Maximum low level input trigger: tw= 10us minimur Open collector, maximum Copen collector, maximum Open collector	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ll scale. Accuracy: +/-1%.  In series resistance. In master/slave mode with selectable. Accuracy in master/slave mode off. Maxin put by dry contact (Short: O en/Short: O en/Sh	and linearity: +/-1% of r. ccuracy and linearity: +/- ccuracy and linearity: +/- curacy and linearity: +/- , user selectable logic.  ingle wire current balance mum voltage: 30V, maxin n, Open: Off, Source current Remote, 2~15V or open 1, 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte y, INT, SO RS232,RS485,USB e, Address tive programming, 5V/10 urrent Monitoring 5V/10 urrent Monitoring 5V/10	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC indicator  Linterlock (ILC) control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions		0~100%, 0~5V or 0~10V, o~100%, 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector, CC mode Enables/Disables the PS out by electrical signal or Op Open collector (shunted Maximum low level output trigger: tw=10us minimum Open collector, maximum Over Collector, maximum Open colle	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy user selectable. A lil scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A liscale. Accuracy: +/-1%. to the list of the li	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte k current 100mA.)	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC indicator  Linterlock (ILC) control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions		0~100%, 0~5V or 0~10V, o~100%, 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector, CC mode Enables/Disables the PS out by electrical signal or Op Open collector (shunted Maximum low level output trigger: tw=10us minimum Open collector, maximum Over Collector, maximum Open colle	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ll scale. Accuracy: +/-1%.  In series resistance. In master/slave mode with selectable. Accuracy in master/slave mode off. Maxin put by dry contact (Short: O en/Short: O en/Sh	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin gh level input votage = 2. m. k current 100mA. (Shunte k current 100mA.)	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger out  5. Trigger in  Programmed signal 1  B. Programmed signal 2  RONT PANEL  Control functions  Display		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh consistency of 0~10V, user sele 0~5V or 0~10V, user sele 0~10V, u	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy user selectable. A lil scale, user selectable. A lil scale, user selectable. A lil scale, user selectable. A liscale. Accuracy: +/-1%. to the list of the li	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-curacy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count. nt+/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  L. CV/CC indicator  2. Interlock (ILC) control  3. Local/Remote mode Control  4. Local/Remote mode Indicator  5. Trigger out  5. Trigger in  7. Programmed signal 1  3. Programmed signal 2  RONT PANEL  Control functions  Display		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh consistency of 0~10V, user sele 0~5V or 0~10V, user sele 0~10V, u	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A ctable. Accuracy: +/-1%. m series resistance. master/slave mode with seternal diodes). : On, CV mode: Off. Maxingut by dry contact (Short: O en/Short: O0.6V or short by 36V zener). On (00.6 ut = 0.8V, Minimum high voltage = 0.8V, minimum h n. TDH.T.PHL=1 us maximu voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin s - Selection of LAN,IEEE, ns - Selection of Baud Rat s - Selection of Baud Rat s - Selection of Voltage/resis - Selection of Voltage/resis - Selection of rated output volta .5% of rated output volta5% of rated output volta.	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-curacy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count. nt+/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming lout resistor programming lout resistor programming lout resistor programming shut-off (SO) control  Output current monitor (*13) Output voltage monitor Power supply OK signal Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out 6. Trigger out 6. Trigger in 7. Programmed signal 1 8. Programmed signal 2  RONT PANEL Control functions  Display  Indications		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex 0pen collector. CC mode Enables/Disables the PS out By electrical signal or Op 0pen collector (shunted Maximum low level outp Maximum low level output loger the low	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale scale selectable. A Ill scale selectable. Accuracy: +/-1%. In series resistance. In series des series des l'exitente In series resistance. In series des l'exitente Ill scale	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-curacy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count. nt+/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming shut-off (50) control  Output current monitor (*13)  Output voltage monitor Power supply OK signal Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5. Trigger out 6. Trigger in 7. Programmed signal 1 3. Programmed signal 2  RONT PANEL Control functions  Display  Indications		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V loKohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~100%, 0~5/10Kohm ft, 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode tenables/Disables the PS ou By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level input trigger: tw=10us minimur Open collector, maximum Open collector, maximum Open collector, maximum Autiple options with 2 E Vout/lout manual adjust OVP/UVL/UVP manual ac Protection Function Func	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale scale selectable. A Ill scale selectable. Accuracy: +/-1%. In series resistance. In series des series des l'exitente In series resistance. In series des l'exitente Ill scale	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor Power supply OK signal Parallel operation (*19) 0. Series operation 1. CV/CC indicator 2. Interlock (ILC) control 3. Local/Remote mode Control 4. Local/Remote mode Indicator 5.Trigger out 6.Trigger in 7. Programmed signal 1 3. Programmed signal 2  RONT PANEL Control functions  Display  Indications  Function buttons		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V, us	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale scale selectable. A Ill scale selectable. Accuracy: +/-1%. In series resistance. In series des series des l'exitente In series resistance. In series des l'exitente Ill scale	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  Deries operation  CV/CC indicator  Interlock (ILC) control  Local/Remote mode Control  Coral/Remote mode Indicator  Trigger out  Trigger in  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O)		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V,	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A interest resistance.  master/slave mode with seternal diodes). : On, CV mode: Off. Maxin iput by dry contact (Short: O en/Short: O0.6V or short by 36V zener). On (00.6 ut = 0.8V, Minimum high voltage = 0.8V, minimum h in_TDH.TpHL=1 us maximu voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin solutage 25V, maximum sin solutage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 75V, maximum sin	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming (*13)  Vout resistor programming (*13)  Sout-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  . CV/CC indicator  P. Interlock (ILC) control  Local/Remote mode Control  Local/Remote mode Indicator  Trigger out  Trigger out  Programmed signal 1  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O)  Vout programming accuracy		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode lenables/Disables the PS our by electrical signal or Op Open collector (shunted Maximum low level output trigger: tw=10us minimur Open collector, maximum Ope	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale user selectable. A Interest selection S Interest selectable. Accuracy: +/-1%. Interest selectable. Accuracy: +/-1%. Interest selection S Interest selectable. A Interest selectable. A Ill scale user selectable. A I	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming lout resisto		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh fossible, up to 6 units in 2 identical units (with ex Open collector, CC mode Enables/Disables the PS out by electrical signal or Op Open collector (shunted Maximum low level output Maximum low level output frigger: tw=10us minimum Open collector, maximum Over collector, maximum Over collector functions - 0° Communication Function Communication Function Analog Control Function Analog Control Function Iout: 4 digits, accuracy: CGREEN LED's: Filie, MENU RED LED's: Filie, MENU FILIE, LAN) 0.05% of rated output vor 0.1% of ra	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale user selectable. A Interest selection S Interest selectable. Accuracy: +/-1%. Interest selectable. Accuracy: +/-1%. Interest selection S Interest selectable. A Interest selectable. A Ill scale user selectable. A I	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout vesistor programming lout resistor programming lout resistor programming shut-off (SO) control  Output current monitor (*13)  Output voltage monitor Power supply OK signal Parallel operation (*19)  D. Series operation LCV/CC indicator Linterlock (ILC) control Local/Remote mode Control Local/Remote mode Indicator Trigger out Trigger in Programmed signal 1 Programmed signal 2 RONT PANEL Control functions  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O) Vout programming accuracy Iout programming accuracy Iout programming resolution		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 1~5V-OK, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS our By electrical signal or Op Open collector (shunted Maximum low level outp Maximum low level outp Maximum low level outp Maximum low level outp Maximum low level input trigger: twe=10us minimum Open collector, maximum Open collector, functions - O'Communication Function Communication Function Analog Control Function Communication Function (See 1) (See 1	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy Ill scale, user selectable. A Ill scale user selectable. A Interest selection S Interest selectable. Accuracy: +/-1%. Interest selectable. Accuracy: +/-1%. Interest selection S Interest selectable. A Interest selectable. A Ill scale user selectable. A I	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pand V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  . Series operation . CV/CC indicator . Interlock (ILC) control . Local/Remote mode Control . Local/Remote mode Indicator .Trigger out .Trigger in .Programmed signal 1 .Programmed signal 2  RONT PANEL Control functions  Display  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O) Vout programming accuracy (*13) Vout programming resolution lout programming resolution		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V, user sele 0~5V or 0~10V, user sele	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy ill scale, user selectable. A interest resistance.  master/slave mode with seternal diodes). : On, CV mode: Off. Maxin iput by dry contact (Short: O en/Short: O0.6V or short by 36V zener). On (O0.6 ut = 0.8V, Minimum high voltage = 0.8V, minimum h in_TDH.TpHL=1 us maximu voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin solutage 25V, maximum sin solutage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 25V, maximum sin voltage 75V, maximum sin voltage 15V, maximum sin	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming (*13)  Vout resistor programming (*13)  Shut-off (SO) control  Output current monitor (*13)  Output voltage monitor  Power supply OK signal  Parallel operation (*19)  D. Series operation  . CV/CC indicator  e. Interlock (ILC) control  b. Local/Remote mode Control  c. Local/Remote mode Indicator  c. Trigger out  f. Programmed signal 1  Programmed signal 1  Programmed signal 2  RONT PANEL  Control functions  Display  Indications  Function buttons  ROGRAMMING AND READBACK (RS232/485,USB, O)  Vout programming accuracy  lout programming accuracy  lout programming resolution  Vout readback accuracy		0~100%, 0~5V or 0~10V, user sele 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS our 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible, up to 6 units in 2 identical units (with ex Open collector. CC mode Enables/Disables the PS our 0~5V or 0~10V, user sele 4~5V~0K, 0V-Fail. 500oh possible the pS our 0~5V or	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A li scale. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: -/-1%. Table. Accuracy: -/	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge
NALOG PROGRAMMING AND MONITORING  Vout voltage programming lout voltage programming lout resistor programming lout resisto		0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5V or 0~10V, 0~100%, 0~5/10Kohm ft. 0~10V, user sele 0~5V or 0~10V, user sele 0~10V, user sele 0~5V or 0~10V, user sele	user selectable. Accuracy user selectable. Accuracy user selectable. Accuracy all scale, user selectable. A li scale. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: +/-1%. table. Accuracy: -/-1%. Table. Accuracy: -/	and linearity: +/-1% of r. ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-ccuracy and linearity: +/-, user selectable logic.  ingle wire current balance and the selectable logic.  mum voltage: 30V, maxin n, Open: Off, Source current selectable logic.  Remote, 2~15V or open /, 10mA sink current max level output = 2V, maxin glavel output = 2V, maxin glavel input votage = 2. m.  k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current 100mA. (Shunte k current Monitoring 5V/10 gret/-1 count.	rated Vout. ated lout. 19% of rated Vout. 1.1.5% of rated lout. 1.	is activated by front pan V max.). nA, pulse =20us Typica t = 8mA, possitive edge

16 —



### Z<sup>\*</sup>800 SERIES SPECIFICATIONS

INPUT CHARACTERISTICS		10-72	20-40	36-24	60-14	100-8
1. Input voltage/freq. (*3)			85~265Va	c continuous, 47~63Hz, sir	ngle phase	
2. Maximum Input current 100/200VAC		8.9/4.40	9.60/4.70	9.40/4.60	10.00/4.90	9.05/4.60
3. Power Factor (Typ)			0.	.99 at 100/200Vac, 100% lo	ad	
4. Efficiency (Typ) 100/200VAC (*4)	y.	81/83	84/86	85/87	85/87	85/87
5. Inrush current (*5)				Less than 25A		

### **ENVIRONMENTAL CONDITIONS**

1. Operating temperature		0~50°C, 100% load.
2. Storage temperature		-20~85°C
3. Operating humidity	7.	20~90% RH (no condensation).
4. Storage humidity	χ.	10~95% RH (no condensation).
e also I		Maximum 3000m. Derate ambient temp above 2000m.
5. Altitude		Operating: Maximum ambient temperature, From 2000m up to 3000m Ambient temperature 40°C.

### SAFFTY/FMC

JAI ETT/EMC					
1. Applicable standards:	Safety		UL61010-1, EN61010-1, IEC61010-1. Design to meet UL60950-1, EN60950-1 10V≤Vout≤60V: Output,J1,J2,J3,J4,USB,LAN,IEEE/ISOLATED Analog are Non Hazardous Vout=100V:Output,J1,J2 are Hazardous J3,J4,USB, IEEE/ISOLATED Analog ,LAN are Non Hazardous		
	EMC		IEC61326-1 (Built to meet EN55022/EN55024)		
2. Withstand voltage			10≤Vout≤36V models: Input-Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2,J3,J4,USB,LAN/IEEE/ISOLATED ANALOG-Ground: 1000VDC/1min. 60V,100V models: Input-Output&J1,J2: 4242VDC/1min; Input-J3,J4,USB,LAN/IEEE/ISOLATED Analog: 4242VDC/1min; Input-Ground: 2828VDC/1min. Output&J1,J2-J3,J4,USB,LAN/IEEE/ISOLATED ANALOG: 1910VDC/1min; Output&J1,J2-Ground: 1380VDC/1min. J3, J4, USB/LAN/IEEE/ISOLATED ANALOG - Ground: 1000VDC/1min;		
3. Insulation resistance			More than 100Mohm at 25°C, 70%RH.		
4. Conducted emission			IEC/EN61326-1 Industrial Location - B, FCC part 15-B, VCCI-B		
5. Radiated emission			IEC/EN61326-1 Industrial Location - A, FCC part 15-A, VCCI-A		
5. Radiated emission			EN55022B, FCC part 15-B, VCCI-B		

### MECHANICAL

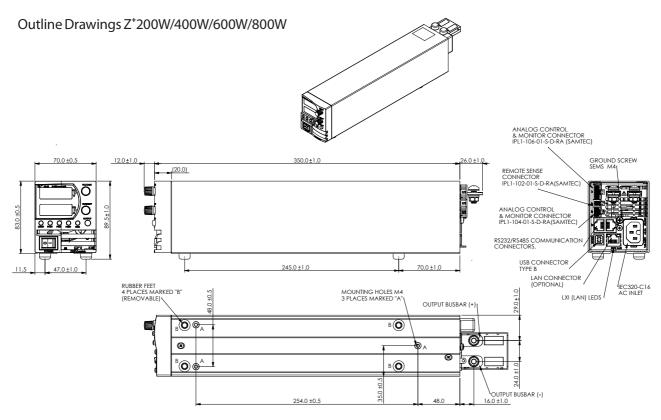
1. Cooling			Forced air cooling by internal fan.
2. Weight	STANDARD	l Ka	Less than 2.5Kg.
	WIDE BODY		Less than 3.0Kg. Wide body with Isolated analog or Binding post or IEEE.
3. Dimensions (WxHxD)	STANDARD		H: 83, W: 70, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).
	WIDE BODY		H: 83, W: 105, D: 350 (excluding bus bars, handles). (Refer to Outline drawing).
4. Vibration			According to:IEC60068-2-64
5. Shock			Less than 20G, half sine, 11mS. Unit is unpacked. According to: IEC600068-2-27

- \*1: Minimum voltage is guaranteed to maximum 0.1% of rated output voltage.
  \*2: Minimum current is guaranteed to maximum 0.2% of rated output current.
- \*3: For cases where conformance to various safety standards (UL, IEC, etc...) is required, to be described as 100-240Vac (50/60Hz).
- \*4: Ta=25°C with rated output power.
  \*5: Not including EMI filter inrush current, less than 0.2mSec.
- \*6: At 85~132Vac or 170~265VAC, constant load.
- \*7: From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense. \*8: Measured with JEITA RC-9131A (1:1) probe.
- \*9: From 10% to 90% or 90% to 10% of Rated Output Voltage, with rated resistive load.

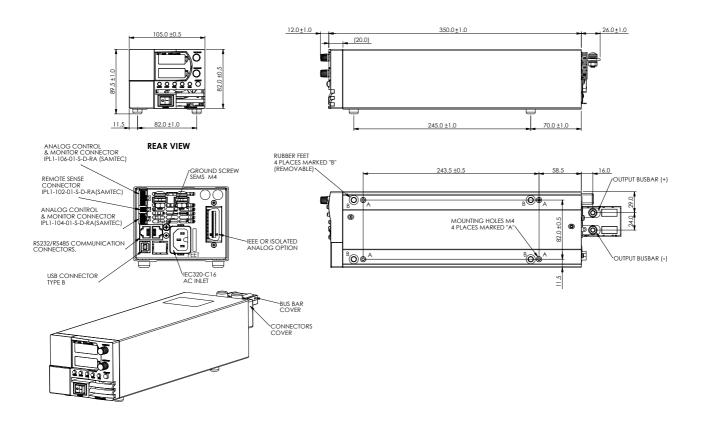
- \*10: From 90% to 10% of Rated Output Voltage.
  \*11: For load voltage change, equal to the unit voltage rating, constant input voltage.
  \*12: For 10V model the ripple is measured at 2V to rated output voltage and rated output current. For other models, the ripple is measured at 10~100%
- of rated output voltage and rated output current.

  \*13: The Constant Current programming, readback and monitoring accuracy do not include the warm-up and Load regulation thermal drift.
- \*14: Measured with JEITA RC-9131A (1:1) probe.
- \*15: For cases where the time interval between each down programming is longer than Td (time delay).
  \*16: For cases where the time interval between each down programming is shorter than Td (time delay).
  \*17: Td typical (±20%) Minimum time between consecutive down programming cycles.
- \*18: PS with isolated analog option decreases efficiency by 0.5% and increases input current by 0.5% \*19: For Parallel operation more than 2 units 5% of toatal output current is requierd.



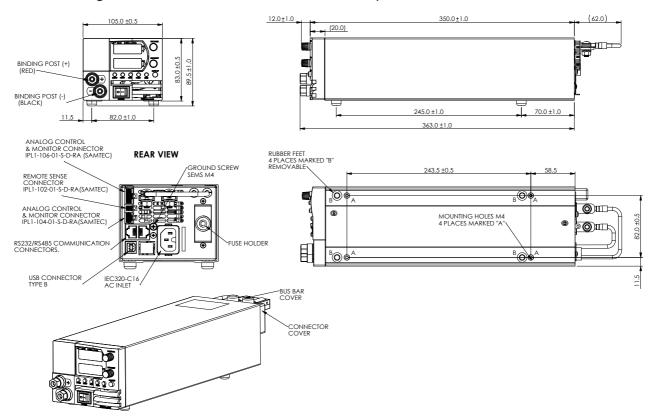


### Z<sup>+</sup>200W/400W/600W/800W Optional IEEE, Isolated Analog Interface

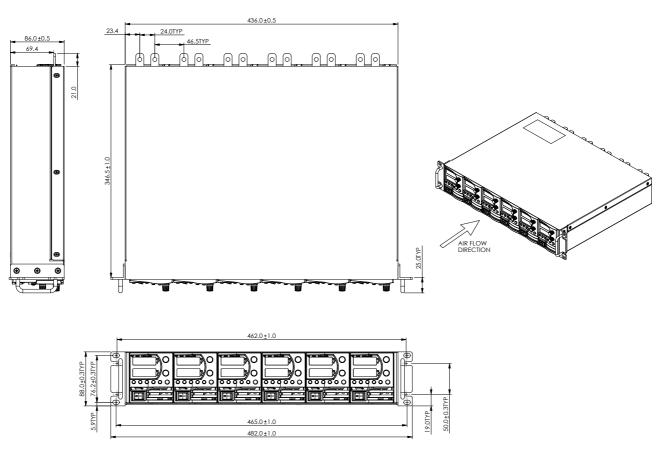




### Outline Drawings Z<sup>+</sup>200W/400W/600W/800W Front Panel Output Jacks



### 19" Rack Housing for Z<sup>+</sup>200W/400W/600W/800W



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