https://product.tdk.com/en/power/gxe
www.emea.lambda.tdk.com/gxe600

Single Output 600W Programmable Medical and Industrial Power Supplies



Medical Industrial Test Broadcast COMM

With efficiencies up to 95%, the medical and industrial certified GXE600 is rated at 600W with convection cooling for low audible noise. The output voltage and current can be programmed and set for constant current or constant voltage characteristics. The Modbus RTU serial protocol is used for data transmission due its high interference immunity within noisy industrial environments. The parameters for fault programming (protection level and recovery characteristics) and the slew rate timing can be changed. Remaining electrolytic capacitor life, operating hours and alarm history can be read through the RS-485 interface, aiding remote preventative maintenance. As standard the GXE600 has a 5V 1A standby voltage, isolated DC Good and AC Fail signals, remote on/off and paralleling capability for up to five units.

Features	Benefits
• Convection Cooled	• Quiet Operation
• Up to 95% Efficient	• Lower Operating Costs
• RS-485 Read-Write Communication (Modbus RTU protocol)	• Applicable for Communication in Industrial Applications
• Constant Voltage & Constant Current Modes	• Versatile Use
• Monitoring & Programming Functions	• Allows Remote Monitoring and Operation
• Digital or Analog Programming	• Easier System Integration
• Seven Year Warranty(1)	• Low Cost of Ownership

Model Selector

Model	Nominal Output Voltage (V)	Output Adjustment Manual (V)	Output Adjustment Programming(2) (V)	Maximum Current (A)	Maximum Power (W)	Efficiency (typ %) 115 / 230Vac
GXE600-24	24	19.2 - 28.8	4.8 - 28.8	25	600	92 / 95
GXE600-48	48	38.4 - 57.6	9.6 - 57.6	12.5	600	92 / 95

GXE600-	24	/	A

Output voltage 24, 48

blank	U channel chassis
/A	U channel chassis with cover
/HD	U channel chassis, ruggedized & pcb coating
/HDA	U channel chassis with cover, ruggedized & pcb coating

Specifications

Model		GXE600-24	GXE600-48
Input			
Input Voltage Range [3] (Operating)	Vac	85 - 265. Withstands 300 for 5s	
Nominal Input Voltage Range	Vac	100 - 240 (Note: Safety certified for 90-264Vac)	
Input Frequency	Hz	47 - 63	
Input Current (typ) (115/230Vac)	A	6.1 / 3.1	
Inrush Current (typ 100/200Vac) (Cold Start)	A	40 / 40	
Leakage Current (Maximum)	mA	<0.3	
Power Factor (115/230Vac)	-	0.99 / 0.95	
Harmonic Compliance	-	Meets EN61000-3-2	
No Load Power Consumption	W	3.4 at 100Vac. 1.2 at 200Vac when remote on/off is activated and no load on 5Vsb	
Hold Up Time (typ) at 115 / 230Vac Input	ms	20	
Efficiency	-	See model selector	
Conducted & Radiated EMI	-	EN55011-B, EN55032-B, FCC Class B	
Immunity	-	IEC61000-4-2, IEC60601-1-2 Ed4. See immunity table	
Insulation Class	-	Class I	
Safety Certifications and Markings	-	IEC/UL/ES/CSA/EN60601-1, IEC/UL/CSA/EN62368-1, 60950-1, CE Mark and UKCA Mark	

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	Air ±8kV and contact ±4kV	A	See website for immunity test report
Radiated Susceptibility	EN61000-4-3	80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	± 2kV	A	
Surge	EN61000-4-5	Normal ± 1kV	A	
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11	30% 500ms	A	
Voltage Dips	EN60601-1-2	30% 500ms	A	
SEMI F47 Line Dip	SEMI F47	-	-	At input voltages > 200Vac

Specifications

Model		GXE600-24	GXE600-48
Output			
Switching Frequency	kHz	134, PFC 100	
Line Regulation	mV	96	192
Load Regulation	mV	144	288
External Load Capacitance	uF	10,000	
Ripple & Noise	mV	150	350
Temperature Coefficient	%/°C	<0.02%/°C	
Minimum Load	-	No minimum load required	
Overcurrent Protection (Factory Set)	A	>27.5	>13.8
Overcurrent Protection (Via Programming) [2,4]	A	5 - 28.8	2.5 - 14.4
Overvoltage Protection (Via Programming) [4]	V	28.8 - 31.2	57.6 - 62.4
Remote Sense	-	Yes	
Remote On/Off	-	Isolated opto-coupler. Unit off when current is flowing through the opto diode	
Power Fail Signal	-	Signal is high when the output voltage drops due to AC loss or OCP, OVP, OTP	
AC Fail Signal	-	Signal goes high when the AC input is not present	
Standby Voltage	V / A	4.8V - 5.2V 1A	
Indicators	-	DC OK	
Parallel Operation	-	Up to five units	

Specifications

Model		GXE600-24	GXE600-48
Environmental			
Operating Temperature	°C	-20 to +70. Derate linearly to 50% load from +50 to +70 (5)	
Storage Temperature	°C	-40 to +85	
Humidity (non condensing)	%RH	Operating: 20 - 90 Storage: 10 - 90	
Pollution Degree	-	PD 2	
Cooling	-	Convection or Forced Air Cooled	
Altitude	m	5000 (IEC 62368-1), 4000 (IEC 60601-1)	
Withstand Voltage (For 1 minute)	Vac	Input to Ground 2,000 (1xMOPP), Input to Output 4,000 (2xMOPPs), Output to Ground 1,500 (1xMOPP)	
Isolation Resistance	MΩ	>100 at 25°C, 70%RH & 500Vdc	
Vibration (Non Operating)	-	10 - 55Hz: 19.6m/s^2 constant sweep 1 min X, Y, Z for 1 hour /HD version: Designed to meet MIL-STD-810G 514.7 Category 4, 10	
Shock	-	< 196.1 m/s^2, /HD version: Designed to meet MIL-STD-810G 516.7 Procedure I, VI	
Other			
Weight (Typ)	g	1300, 1400 with cover	
Size (LxWxH)	mm	254 x 127 x 41, /A model 254 x 127.5 x 50	
Size (LxWxH)	Inches	10 x 5 x 1.61, /A model: 10 x 5.02 x 1.97	
Case Material	-	Aluminum	
Connectors	-	Screw Terminals. See detailed outline drawings on website for signal connectors	
MTBF - Telcordia SR-332 issue 3*	Hours	511,677	
Warranty	Years	7 (1)	

Notes

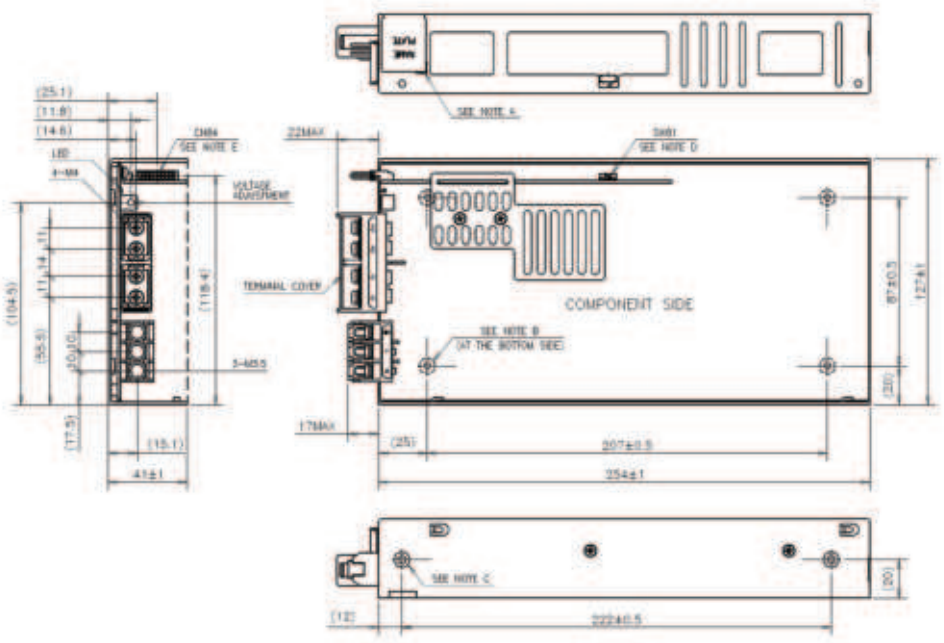
See website for detailed specifications, test methods and installation manual

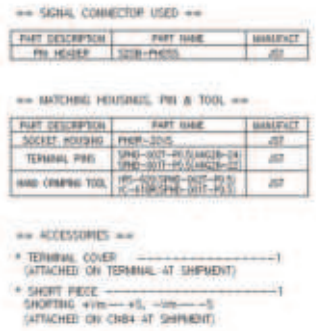
(1) The Americas and EMEA regions: 7 years. Other regions: 5 years. See applicable regional terms of sale.
(2) Using RS-485 communications or external 1-6V voltage source. See installation manual for details
(3) 85Vac: 360W, 100 to <170Vac: 500W, 170V to 265Vac: 600W (Convection cooled). 600W when forced air is applied (see installation manual)
(4) Overcurrent & Overvoltage limits and recovery modes can be set using the RS-485 communications
(5) Models with cover (/A option) have additional derating. See derating curves in the instruction manual
*24V output model, 25°C ambient, full load, 230Vac input

Monitoring and Programming Functions

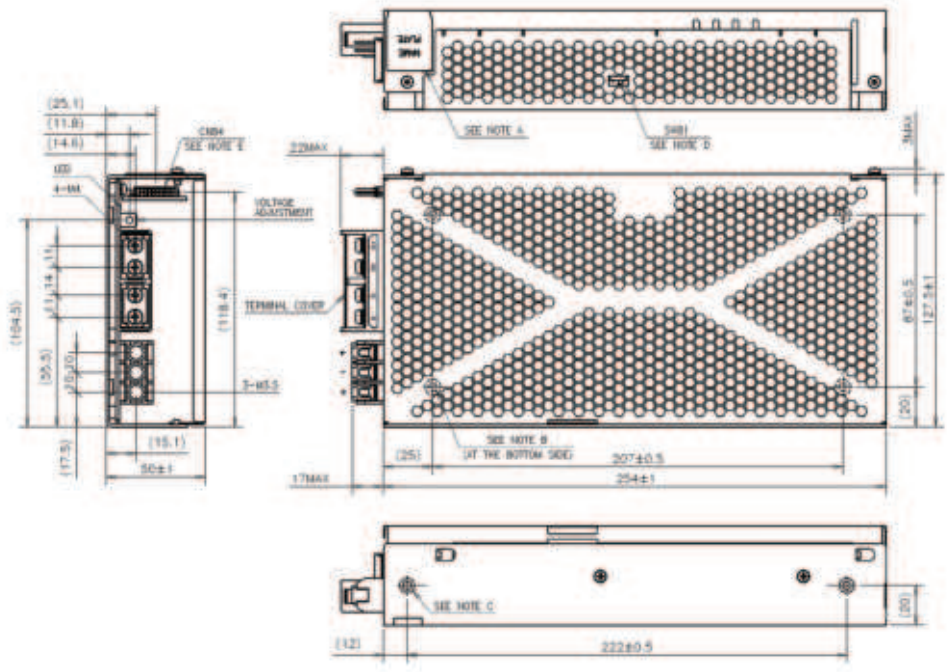
Function	Digital (RS-485) Control	Analog Control
Output Voltage Monitor	Read back	No
Output Current Monitor	Read back	No
Output Voltage Programming	Adjustable	Adjustable, use a 1-6V external voltage source
Output Current Programming	Adjustable	Adjustable, use a 1-6V external voltage source
Over Voltage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

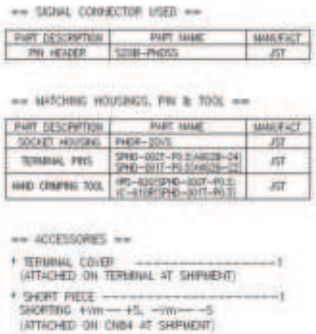
Outline Drawing GXE600





Outline Drawing GXE600/A





** NOTES **

A : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND SAFETY MARKING (FOR ONLY APPROVED PRODUCTS) ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

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

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

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

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



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