# mail

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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

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### TDK·Lambda

# **HFE2500 Series**

### 2500W 1U Front End Power Supplies

#### Features

- ◆ 1U rackmount containing up to 4 units
- Internal ORing MOSFET & Current Share
- High Efficiency
- ♦ Up to 9,500W in 1U rack
- ◆ PMBus<sup>™</sup>(I<sup>2</sup>C) and LAN options

#### Key Market Segments & Applications



**Specifications** 





Input Voltage Range (2) VAC 85 - 265VAC, 47 - 63Hz. See model selector for power derating   Input Current A 15 / 12A   Power Factor Correction - Meets EN8100-32, PF > 0.98 at full load   Temperature Coefficient %°C -   Overcurent Protection % 105 - 115%   Overcurent Protection mA < 0.75 / 1.5mA, 100 / 230VAC, 60Hz   Hold-up time mA < 0.75 / 1.5mA, 100 / 230VAC, 60Hz   Remote Sense Compensation - HFE2500-24: 0.5V / Wire, HFE2500-24: 0.5V / Wire, HFE2500-48: 1V / Wire   Indicators - Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuit   Parallel Operation - Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuit   Parallel Operation - Open Collector, ON when AC is within 85 - 270VAC   DC Good Signal - Open Collector, ON when Ota suffix S, PMBus compatible <t< th=""><th>Model</th><th></th><th></th></t<>	Model				
Input Current (Max) 100/230VACA15/12AInrush Current (Max) 100/230VACA15/12AInrush Current Coefficient%COvercurrent Protection%105-115%Overcurrent Protection%110% (Tracking). Cycle AC to reset or utilize Remote On/OffOvercurrent Protection%110% (Tracking). Cycle AC to reset or utilize Remote On/OffOvercurrent ProtectionmA<0.75 / 1.5mA, 100 / 230VAC (BoHz	Input Voltage Range (2)	VAC	85 - 265VAC, 47 - 63Hz. See model selector for power derating		
Innsh Current A <50A   Power Factor Correction - Meets EN61000-3-2, PF > 0.98 at full load   Temperature Coefficient %/C <0.02%/C	Input Current (Max) 100/230VAC	Α	15 / 12A		
Power Factor Correction - Meets EN61000-3-2, PF > 0.88 at full load   Temperature Coefficient %/°C <0.02%/°C	Inrush Current	Α	<50A		
Temperature Coefficient%/°C•0.02%/°COverourment Protection%105 - 115%Overotlage Protection11%110% (Tracking). Cycle AC to reset or utilize Remote On/OffOverotlage Protection11~Shutdown with automatic reset. Warning signal providedHold-up timems>10ms. 115/230VAC Input, 80% loadingLeakage CurrentmA< 0.75 / 1.5mA, 100 / 230VAC, 60Hz	Power Factor Correction	-	Meets EN61000-3-2, PF > 0.98 at full load		
Overcurrent Protection % 105 - 115%   Overvoltage Protection (1) % 110% (Tracking). Cycle AC to reset or utilize Remote On/Off   Overtemperature Protection (1) % 110% (Tracking). Cycle AC to reset or utilize Remote On/Off   Hold-up time ms >10ms, 115/230VAC Input, 80% loading   Leakage Current mA < 0.75 / 1.5mA, 100 / 230VAC, 60Hz	Temperature Coefficient	%/°C	<0.02%/°C		
Overvoltage Protection(1)%110% (Tracking). Cycle AC to reset or utilize Remote On/OffOvertemperature Protection(1)-Shutdown with automatic reset. Warning signal providedHold-up timems>10ms, 115/230VAC Input, 80% loadingLeakage CurrentmA<0.75 / 1.5mA, 100 / 230VAC, 60Hz	Overcurrent Protection	%	105 - 115%		
Overtemperature Protection (1)-Shutdown with automatic reset. Warning signal providedHold-up timems>10ms, 115/230VAC Input, 80% loadingLeakage CurrentmA< 0.75 / 1.5mA, 100 / 230VAC, 60Hz	Overvoltage Protection (1)	%	110% (Tracking). Cycle AC to reset or utilize Remote On/Off		
Hold-up timems>10ms, 115/230VAC Input, 80% loadingLeakage CurrentmA<0.75 / 1.5mA, 100 / 230VAC, 60Hz	Overtemperature Protection (1)	-	Shutdown with automatic reset. Warning signal provided		
Leakage CurrentmA<<Remote Sense Compensation-HFE2500-12: 0.25V / Wire, HFE2500-24: 0.5V / Wire, HFE2500-48: 1V / WireIndicators-AC OK: Green LED, DC OK / Fail: Green / Red LEDRemote On/Off-Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuitParallel Operation(1)-Yes, single wire current share, 95% accuracy, up to 8 unitsAC Fail Signal-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary OutputOperating Temperature°C-30 to +85°CViltity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-I/Vo variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/Vo O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-42, 15K VACVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-ENS5032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Suppliy: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100, Rack: 5000g	Hold-up time	ms	>10ms, 115/230VAC Input, 80% loading		
Remote Sense Compensation-HFE2500-12: $0.25V$ / Wire, HFE2500-24: $0.5V$ / Wire, HFE2500-48: $1V$ / WireIndicators-AC CW: Green LED, DC OK / Fail: Green / Red LEDRemote On/Off-Unit ON: $0 - 0.6V$ or short, OFF: $2 - 15V$ or open circuitParallel Operation(1)-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external $0 - 5V$ signal or 1k potentiometerPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-10 to eyraible speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND 1: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMQ>100MQ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-IEC61000-4-2 (Iv 2.3), -3 (Iv 2.), -4 (V 2), -5 (V 3.4), -6 (Iv 2.), -8 (V 4.), -11Line Dip-IEC61000-4-2 (Iv 2.3), -3 (Iv 2.), -4 (Iv 2.), -5 (IV 3.4), -6 (IV 2.), -8 (IV 4.), -11Size (W x H x D)inPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Leakage Current	mA	< 0.75 / 1.5mA, 100 / 230VAC, 60Hz		
Indicators-AC OK: Green LED, DC OK / Fail: Green / Red LEDRemote On/Off-Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuitParallel Operation(1)-Yes, single wire current share, 95% accuracy, up to 8 unitsAC Fail Signal-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerI²C Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-10 to +70°C, derate 2%°C from 50 to 60°C, 2.5%/°C from 60 to 70°CCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-WP to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND 2kVAC, O/P to GND 2kVAC, HE2500-48, 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (Iv 2.3), -3 (Iv 2), -4 (Iv 2), -5 (Iv 3.4), -6 (Iv 2), -8 (Iv 4), -11Size (W x H x D)inPower Supply: 2.100, Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2.100g, Rack: 5000gWarrantyyrs<	Remote Sense Compensation	-	HFE2500-12: 0.25V / Wire, HFE2500-24: 0.5V / Wire, HFE2500-48: 1V / Wire		
Remote On/Off-Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuitParallel Operation(1)-Yes, single wire current share, 95% accuracy, up to 8 unitsAC Fail Signal-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when AC is within 85 - 270VACDC face Adjust(1)-By either external 0 - 5V signal or 1k potentiometerPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary OutputIsolated from output, Add suffix /S, PMBus compatibleAuxiliary OutputAuxiliary OutputOperating Temperature°C-10 to +70°C, derate 2%°C from 50 to 60°C, 2.5%°C from 60 to 70°CStorage Temperature°C-10 to +70°C, derate 2%°C from 50 to 60°C, 2.5%/C from 60 to 70°CCoolingTwo variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-IEN55032 & FCC part 15; Conducted class B, Radiated class ALine Dip-IEC61000-4-2 (Iv 2,), -3 (Iv 2), -4 (Iv 2), -5 (Iv 3,4), -6 (Iv 2), -8 (Iv 4), -11Conducted and Radiated EMI-IEC61000-4-2 (Iv 2,), -3 (Iv 2), -4 (Iv 2), -5 (Iv 3,4), -6 (Iv 2), -8 (Iv 4), -11Size (W x H	Indicators	-	AC OK: Green LED, DC OK / Fail: Green / Red LED		
Parallel Operation(1)-Yes, single wire current share, 95% accuracy, up to 8 unitsAC Fail Signal-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerI <sup>P</sup> C Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-ITwo variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-//P to O/P 3k/AC, I/P to GND 2k/AC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5k/ACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,), -3 (lv 2), -6 (lv 3), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 2100g, Rack: 17.5 x 1.72 x 1.5.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Remote On/Off	-	Unit ON: 0 - 0.6V or short, OFF: 2 - 15V or open circuit		
AC Fail Signal-Open Collector, ON when AC is within 85 - 270VACDC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerIPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary OutputIsolated from output, Add suffix /S, PMBus compatibleAuxiliary Output11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-IVe to O/P 3k/VAC, I/P to GND 2k/VAC, O/P to GND: HFE2500-12, -24V 500/AC, HFE2500-48 1.5k/VACIsolation ResistanceMQ>100MQ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)Vibration (Basic transportation)Ine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (iv 2,3), -3 (iv 2), -4 (iv 2), -5 (iv 3,4), -6 (iv 2), -8 (iv 4), -11Size (W x H x D)inPower Supply: 210g, Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 210g, Rack: 5000gWarrantyyrsThree Years	Parallel Operation (1)	-	Yes, single wire current share, 95% accuracy, up to 8 units		
DC Good Signal-Open Collector, ON when output is above 85 to 95% of setpoint (tracking)Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerIPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Comples with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (Iv 2.3), -3 (Iv 2), -4 (Iv 2), -5 (Iv 3.4), -6 (Iv 2), -8 (Iv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	AC Fail Signal	-	Open Collector, ON when AC is within 85 - 270VAC		
Remote Adjust(1)-By either external 0 - 5V signal or 1k potentiometerI²C Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-VP to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-MCStorky Agency Certifications-COmplies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4.2 (iv 2,3), -3 (iv 2), -4 (iv 2), -5 (iv 3,4), -6 (iv 2), -8 (iv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	DC Good Signal	-	Open Collector, ON when output is above 85 to 95% of setpoint (tracking)		
IPC Interface(1)-Isolated from output, Add suffix /S, PMBus compatibleAuxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Goround 500VDCVibration (Basic transportation)Shock (Basic transportation)Ine Dip-Comples with SEMI F47 (200VAC line only)Conducted and Radiated EMI-IEC61000-4-2 (Iv 2,3), -3 (Iv 2), -4 (Iv 2), -5 (Iv 3,4), -6 (Iv 2), -8 (Iv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Remote Adjust (1)	-	By either external 0 - 5V signal or 1k potentiometer		
Auxiliary Output-11.2 - 12.5V, 0.5A, 240mV ripple and noiseOperating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-MΩShock (Basic transportation)-MΩLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	I <sup>2</sup> C Interface (1)	-	Isolated from output, Add suffix /S, PMBus compatible		
Operating Temperature°C-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°CStorage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Auxiliary Output		11.2 - 12.5V, 0.5A, 240mV ripple and noise		
Storage Temperature°C-30 to +85°CHumidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Operating Temperature		-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°C		
Humidity (Non condensing)%RHOperating: 10 - 90%RH, Storage: 10 - 95%RHCooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-MΩShock (Basic transportation)-MΩSafety Agency Certifications-MΩLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Storage Temperature		-30 to +85°C		
Cooling-Two variable speed internal fans, airflow exits across input/output connector (3)Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency CertificationsLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Humidity (Non condensing)		Operating: 10 - 90%RH, Storage: 10 - 95%RH		
Withstand Voltage-I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVACIsolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-UL60950-1, EN60950-1, CE MarkLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Cooling		Two variable speed internal fans, airflow exits across input/output connector (3)		
Isolation ResistanceMΩ>100MΩ at 25°C & 70%RH, Output to Ground 500VDCVibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-UL60950-1, EN60950-1, CE MarkLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Withstand Voltage		I/P to O/P 3kVAC, I/P to GND 2kVAC, O/P to GND: HFE2500-12, -24V 500VAC, HFE2500-48 1.5kVAC		
Vibration (Basic transportation)-Meets IEC60068-2-64Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-UL60950-1, EN60950-1, CE MarkLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Isolation Resistance		>100MΩ at 25°C & 70%RH, Output to Ground 500VDC		
Shock (Basic transportation)-Meets IEC60068-2-27Safety Agency Certifications-UL60950-1, EN60950-1, CE MarkLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Vibration (Basic transportation)		Meets IEC60068-2-64		
Safety Agency Certifications-UL60950-1, EN60950-1, CE MarkLine Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Shock (Basic transportation)		Meets IEC60068-2-27		
Line Dip-Complies with SEMI F47 (200VAC line only)Conducted and Radiated EMI-EN55032 & FCC part 15; Conducted class B, Radiated class AImmunity-IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11Size (W x H x D)inPower Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Safety Agency Certifications -		UL60950-1, EN60950-1, CE Mark		
Conducted and Radiated EMI - EN55032 & FCC part 15; Conducted class B, Radiated class A   Immunity - IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11   Size (W x H x D) in Power Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"   Weight g Power Supply: 2100g, Rack: 5000g   Warranty yrs Three Years	Line Dip -		Complies with SEMI F47 (200VAC line only)		
Immunity - IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11   Size (W x H x D) in Power Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"   Weight g Power Supply: 2100g, Rack: 5000g   Warranty yrs Three Years	Conducted and Radiated EMI -		EN55032 & FCC part 15; Conducted class B, Radiated class A		
Size (W x H x D) in Power Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"   Weight g Power Supply: 2100g, Rack: 5000g   Warranty yrs Three Years	Immunity -		IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv 2), -5 (lv 3,4), -6 (lv 2), -8 (lv 4), -11		
WeightgPower Supply: 2100g, Rack: 5000gWarrantyyrsThree Years	Size (W x H x D)		Power Supply: 4.21 x 1.61 x 12.8", Rack: 17.5 x 1.72 x 15.8"		
Warranty yrs Three Years	Weight		Power Supply: 2100g, Rack: 5000g		
	Warranty		Three Years		

(1) See installation manual for detailed specifications & test methods

(2) Derate linearly 1.3%/V from 100VAC to 85VAC input

(3) Reverse air - contact factory

## TDK·Lambda

# **HFE2500 Series**

#### **Model Selector**

Model	Output Voltage	Adjust Range <sup>(1)</sup>	Max Current (Vin>180VAC)	Max Power (Vin>180VAC)	Max Current (100 <vin<132vac)<sup>(2)</vin<132vac)<sup>	Max Power (100 <vin<132vac)<sup>(2)</vin<132vac)<sup>		
HFE2500-12	12V	9.6 - 13.2V	200A	2400W	125A	1500W		
HFE2500-12/S	12V	9.6 - 13.2V	200A	2400W	125A	1500W		
HFE2500-24	24V	19.2 - 29V	104A	2496W	62.5A	1500W		
HFE2500-24/S	24V	19.2 - 29V	104A	2496W	62.5A	1500W		
HFE2500-48	48V	38.4 - 58V	52A	2496W	31.25A	1500W		
HFE2500-48/S	48V	38.4 - 58V	52A	2496W	31.25A	1500W		
	Load	Line	Ripple &	Efficiency	PMBus/			
Model	Reg	Reg	Noise <sup>(1)</sup>	<b>(%)</b> <sup>(4)</sup>	l <sup>2</sup> C			
HFE2500-12	60mV	30mV	240mV	90 / 92%	-			
HFE2500-12/S	60mV	30mV	240mV	90 / 92%	Yes			
HFE2500-24	120mV	60mV	240mV	90 / 92%	-			
HFE2500-24/S	120mV	60mV	240mV	90 / 92%	Yes			
HFE2500-48	240mV	120mV	480mV	91 / 93%	-			

(4) At 75% load, 100 / 230VAC input

Accessories						
Model	Description	Maximum Rack Current				
HFE2500-S1U	Four slot 19" rack, IEC320-C20 input connector	320A each side (640A total)				
HFE2500-S1U-TB	Four slot 19" rack, Terminal Block input connector	320A each side (640A total)				
HFE2500/BP	One slot blanking panel, two provided with each rack	-				
HFE2500-LAN	Plug in LAN module. Takes up one rack slot. For use with /S models only.	-				

#### **Outline HFE2500S1U** 14.0 82.5 61.0 OL /BU OUTP BUS B ting the sum of the ---SEE NOTE 5.4 4.0 TYPX 13.0 T 曲頭 \*\*\*\*\*\* iiiiiiiiiiiiiiiiiiiiiii AN T MODULE " . MODULE "D ~ (8888) <u>188881</u> 188881 100001 MODEL KEY FOR DIFFERE OUTPUT VO AIR FLOW DIRECTION RIPTION: IPLT1-120-01-L-D-RA(SAMTEC) DL CONNECTOR PINS ASSIGNMENT PS\_EXST\_ FAIL IGNAL RETURN 27 INHIBIT 7 SIGNAL RETURN HIBIT 28 IN 29 IN 30 IN LES FOR RACK 19". USE M6x12 SCREWS TO FIX TH SHER AND SPRING WASHER FOR LOAD WIRES STUD M6 FOR LOAD WIRES.RECOMMENDED JSE LUG BRACKET TO THE CHASSIS USE M5x10 S DED TIGHTENING TORQUE 27~31Kgf.cn 483.0 +1.0

For Additional Information, please visit us.tdk-lambda.com/lp/products/hfe-series.htm

