

NNS -50 Instruction Manual

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| Dwg. No. | IA507-04-01F |
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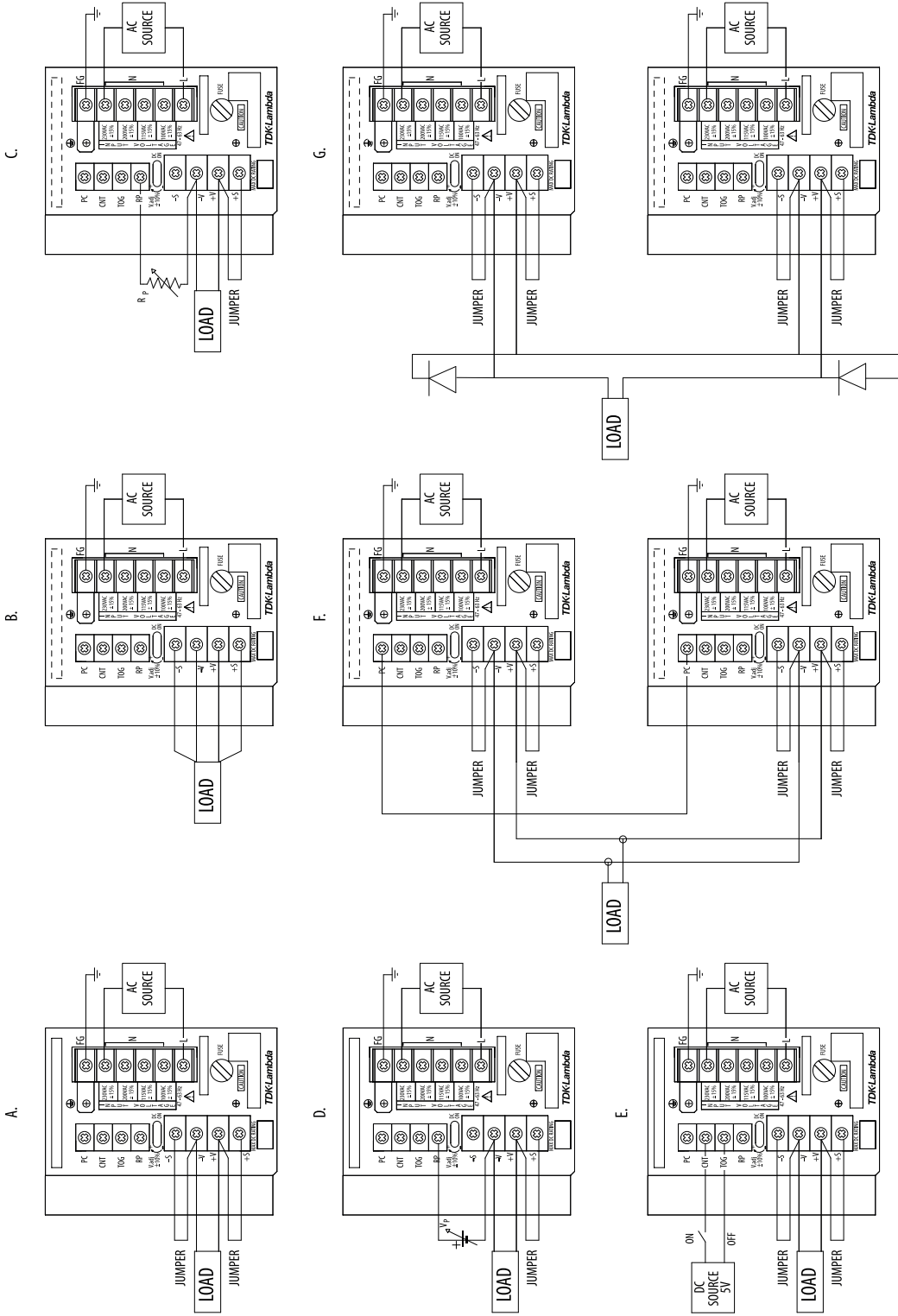
| Items | | Model | NNS 50-5 | NNS 50-12 | NNS 50-15 | NNS 50-24 |
|-------|---|-------|---|-----------------------------------|------------|------------|
| 1 | Nominal Output Voltage | V | 5 | 12.0 | 15.0 | 24.0 |
| 2 | Maximum Output Current | A | 10 | 6.5 | 5.5 | 3.8 |
| 3 | Maximum Output Power | W | 50 | 78 | 82.5 | 91.2 |
| 4 | Efficiency (Typ) (*1) | % | 42 | 51 | 53 | 56 |
| 5 | Input Voltage Range (*2) | - | 100: 85~115VAC 200: 170~230VAC | 115: 98~132VAC 230: 195~265VAC | 47~440Hz | |
| 6 | Input Current (Typ) (*1) | A | 1.50 | 2.0 | 2.0 | 2.20 |
| 7 | In-rush Current (Typ) | A | 60A@ 100VAC 40A@ 200VAC, cold start | | | |
| 8 | Output Voltage Range | % | 10 -/+ | | | |
| 9 | Maximum Ripple & Noise (*3) | mV | 1mV RMS 3mV ptp | | | |
| 10 | Maximum Line Regulation | mV | 0.5mV | 1.2mV | 1.5mV | 2.4mV |
| 11 | Maximum Load Regulation | mV | 1.5mV | 3.6mV | 4.5mV | 7.2mV |
| 12 | Over Current Protection (*4) | A | 10.5~13.0 | 6.8~8.45 | 5.8~7.15 | 4.0~4.94 |
| 13 | Over Voltage Protection Crowbar Type (*6) | V | 6.0~7.2V | 14.5~17.2V | 18.1~21.5V | 29.0~34.3V |
| 14 | Remote Programming | - | Volt/Volt, 1000Ω / Volt typ. RP to -V Terminals | | | |
| 15 | Remote Sensing | - | POSSIBLE, via +S, -S Terminals | | | |
| 16 | Remote ON/OFF Control | - | POSSIBLE | | | |
| 17 | Parallel Operation | - | POSSIBLE, current sharing with single connection via PC terminal | | | |
| 18 | Series Operation | - | POSSIBLE | | | |
| 19 | Operating Temperature | °C | -20~71°C, -20°C...60%, 0~50°C...100%, 60°C...60%, 71°C...40% | | | |
| 20 | Operating Humidity RH | % | 30~95% | | | |
| 21 | Storage Temperature | °C | -40~85°C | | | |
| 22 | Storage Humidity RH | % | 10~95% | | | |
| 23 | Cooling | - | Convection Cooling | | | |
| 24 | Temperature Coefficient (*1) | - | 0.02% / °C | | | |
| 25 | Withstand Voltage | - | Input-Output...3.75K VAC Input-Chassis...2.5K VAC for 1 min. @ 20mA | | | |
| 26 | Insulation Resistance | - | More than 100M Ω at DC 500V @25°C and 70% RH for 1 min. | | | |
| 27 | Vibration | - | 55~10Hz Amplitude (sweep 1 min.) less than 2G X, Y, Z 1h. each | | | |
| 28 | Shock | - | Less than 20 G | | | |
| 29 | Weight | gm | 4200 | | | |
| 30 | Size (W*H*D) (*5) | mm | 97 x 113 x 200 | | | |
| 31 | EMC | - | Designed to meet EN55032, CISPR-32, FCC Part 15, VCCI-class B | | | |
| 32 | Safety | - | IEC/UL/CSA 60950-1, IEC/EN/UL/CSA 62368-1 | | | |

NOTES

- * 1: At 100VAC and maximum Output Power.
- * 2: For cases where conformance various safety specs. (UL, UL-C, etc.) are required, input voltage will be 250VAC max. and frequency range 47~ 63Hz.
- * 3: Floating output or grounded +V or -V Terminal.
- * 4: Foldback current limit with automatic recover.
- * 5: See Outline Drawings.
- * 6: OVP circuit will shut down output, manual reset. (Line recycle).

IMPORTANT,

See Installation Instructions Before Connecting to the Supply.



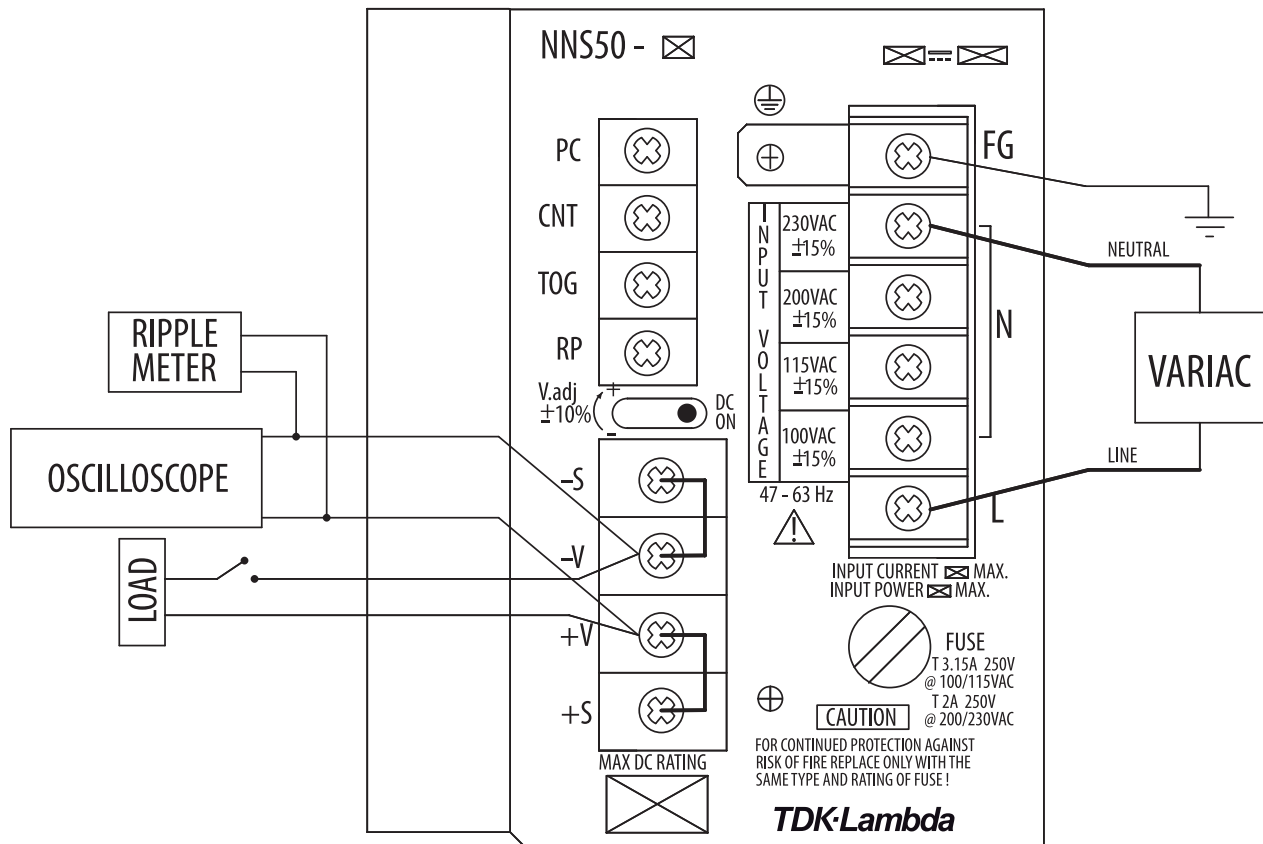
CONNECTIONS DIAGRAM:

- A. LOCAL SENSING
- B. REMOTE SENSING
- C. RESISTIVE PROGRAMMING (LOCAL SENSE)
- D. VOLTAGE PROGRAMMING (LOCAL SENSE)
- E. REMOTE CONTROL ON/OFF (LOCAL SENSE)
- F. PARALLEL OPERATION WITH CURRENT SHARE (LOCAL SENSE)
- G. SERIES OPERATION (LOCAL SENSE) EXTERNAL DIODES RATING: 10A, 50V

NOTES:

- .1 NNS50 MODEL IS NOT RECOMMENDED FOR CONSTANT CURRENT LOADS
- .2 MAX. CAPTIVATE LOAD RECOMMENDED:
NNS50-5: 27,000uF, NNS50-12:10,000uF, NNS50-15: 10,000uF, NNS50-24: 3,000uF
- .3 CONNECTIONS DIAGRAMS SHOWN HERE FOR 230VAC OPERATION
FOR OTHER INPUT VOLTAGES, CONNECT NEUTRAL LEAD TO THE APPROPRIATE "N" CONNECTION ON THE INPUT TERMINAL

CONNECTIONS FOR PERFORMANCE CHECKS



NOTES:

- .1 REGULATION AND RIPPLE METERS MUST NOT BE GROUNDED THROUGH THREE WIRE LINE CORD TO GROUND.
- .2 PERFORM CHECKS WITH LOCAL SENSING CONNECTIONS ONLY.
- .3 DIAGRAM IS SHOWN FOR 230VAC. FOR OTHER VOLTAGES, CONNECT THE NEUTRAL LEAD TO THE APPROPRIATE "N" CONNECTION ON THE INPUT TERMINAL.
- .4 POWER SUPPLY IS SUPPLIED WITH 3.15A FUSE FOR 85~132VAC OPERATION. 2A FUSE FOR 170~265VAC OPERATION IS SUPPLIED IN THE PACKAGE.

SAFETY INSTRUCTIONS

- .1 FUSE RATING: T3.15A 250V@100/115VAC, T2A 250V@200/230VAC.
- .2 POWER SUPPLY MUST BE SECURED TO THE CHASSIS OF THE END USE EQUIPMENT BY 4 SCREWS, INSERTED INTO THREADED HOLES IN THE MOUNTING SURFACE OF THE POWER SUPPLY ENCLOSURE (REFER TO OUTLINE DRWG).
- .3 MAX. LEAKAGE CURRENT OF THE END USE EQUIPMENT SHOULD NOT EXCEED 3.5mA.

CAUTION: FUSE MUST BE REPLACED BY AUTHORIZED SERVICE PERSONNEL ONLY!

CE MARK

CE Marking when applied to a product covered by this handbook indicates compliance with the Low Voltage Directive (LVD) of the European Union in that it complies with EN 62368-1.

A "Declaration of Conformity" in accordance with the preceding directive and standard has been made and is on file at our EU representative: TDK-LAMBDA Germany GmbH, Karl-Bold-Str. 40, D-77855 Achern.

The latest revision of EU Declaration of Conformity is available via company web site www.emea.tdk-lambda.com/manual.

SICHERHEITSHINWEISE

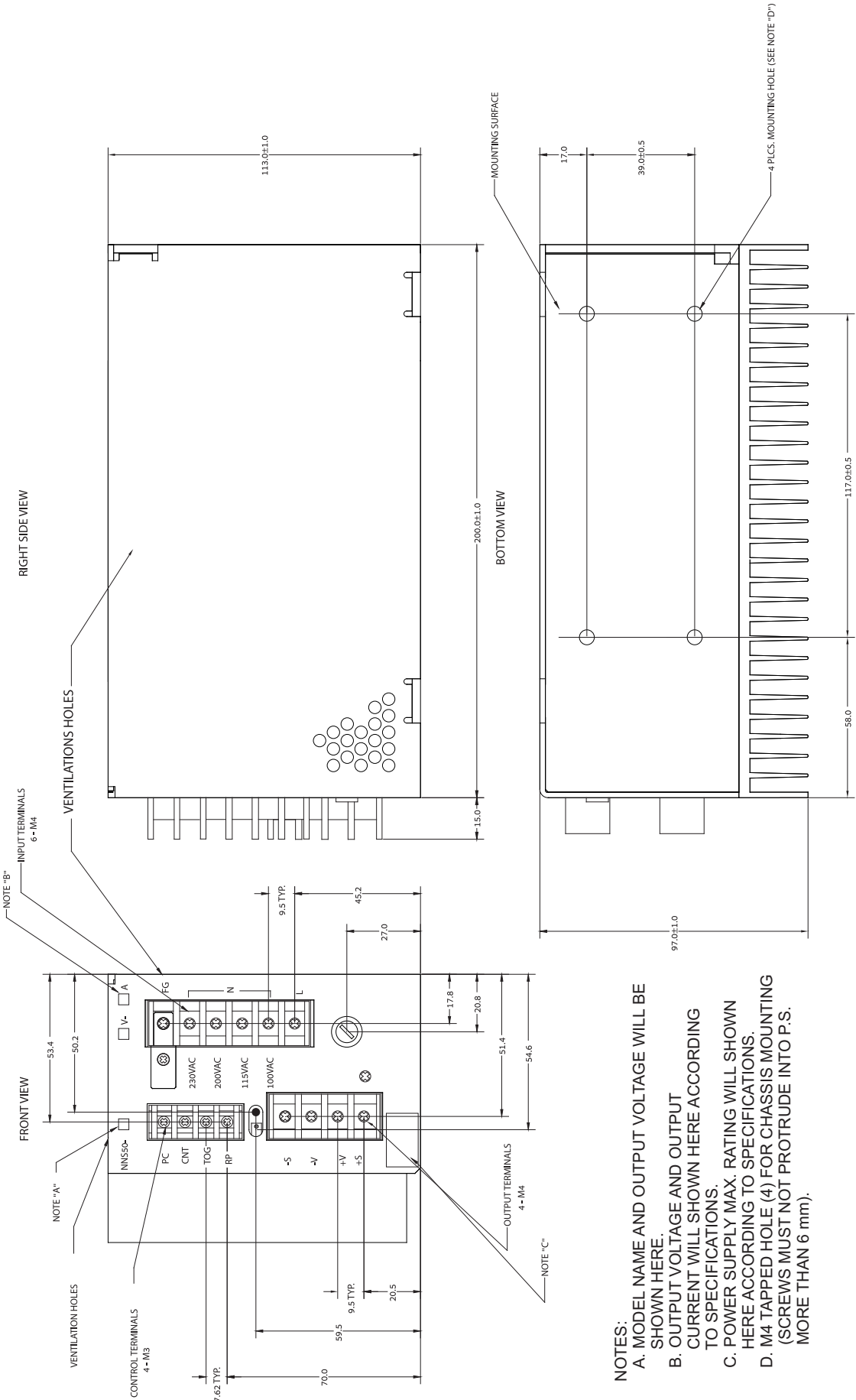
VOR ANSCHLUSS AN DAS NETZ AUFSTELLANLEITUNG BEACHTEN!

1. ABSICHERUNG: T3.15A 250V@ 100/115VAG, T2A 250V@200/230VAC.
2. DIE BEFESTIGUNG DES NETZGERAETES IN DER END-ANLAGE ERFOLGT DURCH 4 SCHRAUBEN. IM NETZTEIL EINGESETZTE EINPRESSMUTTERN AUF DER BEFESTIGUNGSSEITE MUESSEN VERWENDET WERDEN. (SIEHE MASSZEICHNUNG).
3. DER MAXIMALE ABIEITSTROM DER END-ANLAGE DARF 3.5mA NICHT UEBERSCHREITEN.

ACHTUNG

AUSTAUSCH DES SICHERUNGSEINSATZ NUR DURCH GESCHULTES FACHPERSONAL !

NNS 50 OUTLINE



- NOTES:**
- A. MODEL NAME AND OUTPUT VOLTAGE WILL BE SHOWN HERE.
 - B. OUTPUT VOLTAGE AND OUTPUT CURRENT WILL SHOWN HERE ACCORDING TO SPECIFICATIONS.
 - C. POWER SUPPLY MAX. RATING WILL SHOWN HERE ACCORDING TO SPECIFICATIONS.
 - D. M4 TAPPED HOLE (4) FOR CHASSIS MOUNTING (SCREWS MUST NOT PROTRUDE INTO P.S. MORE THAN 6 mm).

NOTE: EU REPRESENTATIVE ADDRESS LABEL IS AVAILABLE ON PRODUCT COVER.