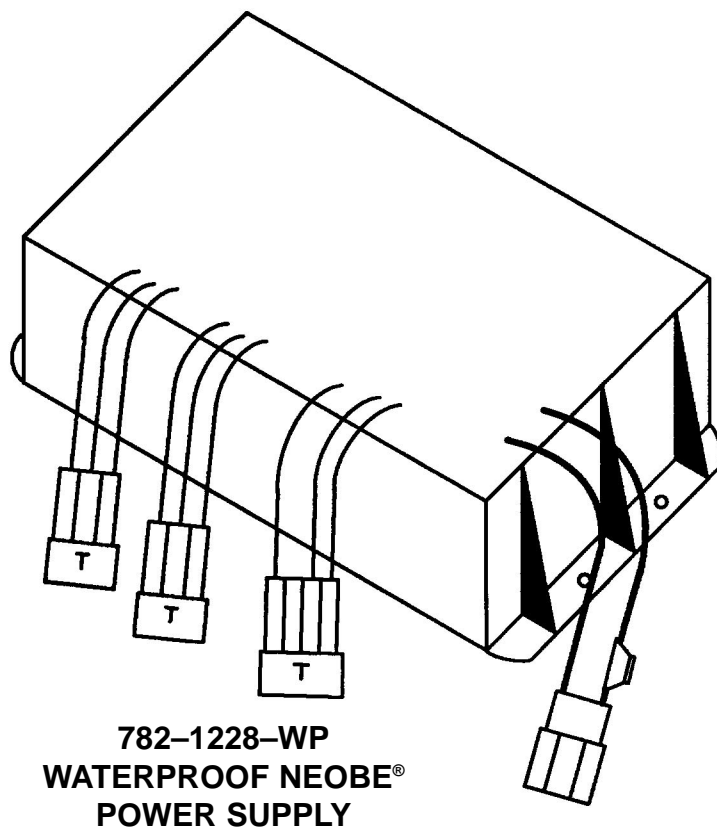
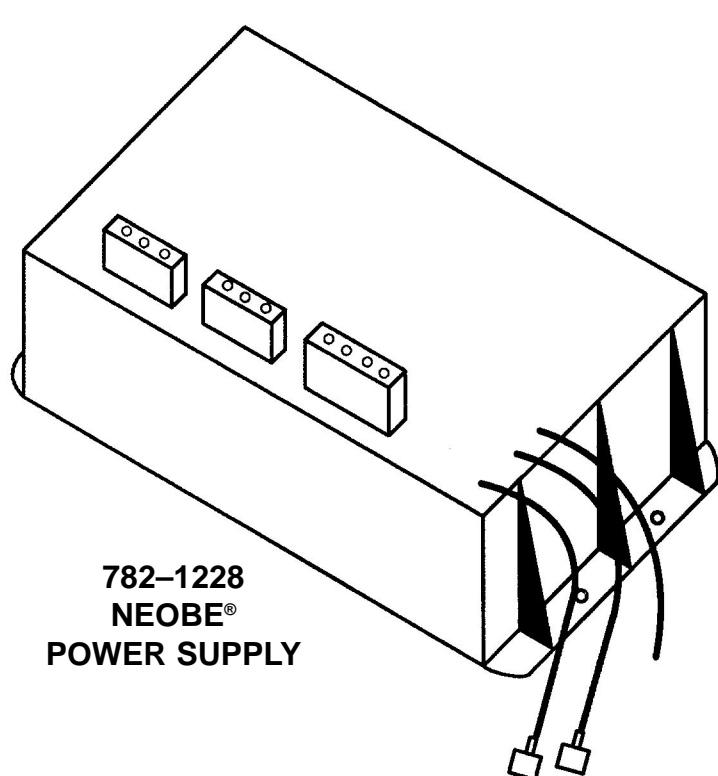


NEOBE[®] POWER SUPPLY

Models: 782-1228

782-1228-WP

Instruction Manual



TOMAR Electronics, Inc.

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SAFETY NOTICES WARNING

Failure to follow all safety precautions and instructions may result in property damage, serious injury or death to you or others.

SAFETY MESSAGE TO INSTALLERS, USERS AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This power supply is to be installed by a trained installer who is thoroughly familiar with electrical wiring techniques, including manufacturer's guidelines for mobile vehicular applications, the national electrical code and local codes.

This power supply generates 600 Volts. NEVER work on this power supply or lighting system before removing input power. WAIT 10 MINUTES AFTER REMOVING INPUT POWER BEFORE ATTEMPTING ANY SERVICE ON THIS SYSTEM.

The selection of the mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the engineer in charge.

The 782–1228 weights approximately 2.5 pounds. For mobile vehicular applications, the installer must find a safe mounting location so that in the event of an accident the power supply cannot become loose within the passenger compartment of the vehicle and potentially cause impact to a passenger.

Listed below are other important safety instructions and precautions:

- Read and understand all instructions before beginning any installation.
- DO NOT connect power to this device before completing installation. If installing in a vehicle, disconnect the battery of the vehicle before beginning installation.
- After installation, ensure that all mounting hardware is tightened, all electrical joints are tight and all connectors are properly seated.
- After installation and testing is complete, provide a copy of these instructions to all operating personnel.
- TEST THE SYSTEM REGULARLY TO ENSURE THAT IT IS OPERATING PROPERLY.

INSTALLATION

1. UNPACKING

After unpacking the power supply, examine it for damage that may have occurred in shipping. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels and tags before removing or destroying them.

782-1228

<u>Quantity</u>	<u>Description</u>
1	782-1228 Power Supply
1	782-IKIT Installation Kit Consisting Of: 1 BLACK Power Lead M897 1 RED Power Lead M902 1 Control Connector 782-CC 1 Instruction Manual IS0053

782-1228-WP

<u>Quantity</u>	<u>Description</u>
1	782-1228-WP Waterproof Power Supply
1	782WP-IKIT Installation Kit Consisting Of: 1 WP Power Connector WPPC-1 1 WP Control Connector WPCC-1 1 Instruction Manual IS0053

Carefully check the material received. If you are missing any of the above items, contact TOMAR Electronics Customer Service to request the missing part.

2. MOUNTING

THE 782-1228 WEIGHS APPROXIMATELY 2.5 POUNDS. FOR MOBILE VEHICULAR APPLICATIONS, THE INSTALLER MUST FIND A SAFE, STURDY MOUNTING LOCATION SO THAT IN THE EVENT OF AN ACCIDENT THE POWER SUPPLY CANNOT BECOME LOOSE WITHIN THE PASSENGER COMPARTMENT OF THE VEHICLE AND POTENTIALLY CAUSE IMPACT TO A PASSENGER.

The Model 782-1228 NEOBE® Power Supply is designed for mounting on a sturdy flat surface protected from rain, spills, excessive heat, and physical damage. It may be installed in the trunk of a car, the saddle bag of a motorcycle or other similar protected location. This device may also be installed in the engine compartment of a vehicle as long as it is mounted to a sturdy flat surface, as far away from the engine as possible.

Wiring for the device must be protected from cuts, nicks, abrasion, fraying or any form of accidental exposure to prevent contact with its high voltage output.

Mount the power supply so that its nameplate can be seen by maintenance personnel. It displays an important safety message and advises of the high voltage output.

The Model 782-1228 is potted in polyurethane to prevent any damage from vibration or moisture and is not intended for unprotected use exposed to direct water. The 782-1228-WP Waterproof Supply should be used whenever use of the supply will expose it to direct contact with rain. The Model 782-1228 -WP is completely waterproof and intended for outdoor use in extreme environments with long term exposure to water.

Mounting hardware and installation details are left to the installer.

3. POWER SUPPLY PROTECTION DESIGN

The 782-1228 Power Supply design includes protection against reversed polarity input voltage by incorporating an in-line fuse and a large high amperage internal shunt diode together to form a protection network.

The lamp output ports are protected from external shorts or opens in the lamps or wiring. The power supply will shut itself off if any lamp becomes shorted; no damage will be done to the supply. The supply will restart automatically as soon as the short is removed. The supply also includes output voltage regulators so that its energy storage capacitors will not be damaged if it is activated without lamps connected.

4. WIRING

DISCONNECT BATTERY OR OTHER POWER SOURCE BEFORE INSTALLING THE 782-1228.

INPUT POWER

The Model 782-1228 Power Supply is designed to operate from 12 or 28VDC automotive electrical systems. Input power is connected to the power supply via two FASTON type connectors. Mating input power wires are supplied in the install kit. The red wire is positive. The black wire is negative. Refer to the wiring diagram and use 14 AWG size wire minimum to connect the positive and negative power leads to the power supply, through a suitable customer supplied 20 Amp switch.

This power supply is polarity sensitive and will blow its fuse if connected to the wrong polarity. The 20 Amp input power fuse supplied is part of the polarity protection system. Do not attempt to operate the supply with the fuse bypassed or shorted at any time as the power supply will be irreparably damaged or destroyed and its warranty voided, if connected to the wrong polarity without proper size fuse protection.

LAMP CONNECTIONS

CAUTION: LAMP CONNECTIONS CARRY 600 VOLTS. USE EXTREME CAUTION.

Lamp 1 and Lamp 2 alternate with one another.

Cabling plugged into the lamp connectors must match the wire color code shown on the nameplate. Failure to observe color coding will cause short lamp life or failure of the power supply to operate at all.

When using shielded lamp cables, use the #18 AWG black power supply wire to ground the shields.

5. TESTING

Double check to verify that you have connected the power supply to the proper polarity before applying battery power.

Once you have completed the lamp port, control wiring and input wiring, you may reinstall the vehicle battery or reactivate the main power source.

If the main fuse or power input in-line fuse blows when power is applied to the power supply, check the input power wiring polarity. If backwards, simply reconnect correctly and replace the blown fuse.

Mounting hardware and installation details are left to the installer.

INSTALLATION IS NOW COMPLETE

TROUBLE SHOOTING WARNING

STROBE POWER SUPPLIES ARE HIGH VOLTAGE DEVICES AND CAN STORE LETHAL AMOUNTS OF ENERGY. DO NOT REMOVE OR CONNECT LAMPS OR TOUCH LAMPS WHILE IN OPERATION. DISCONNECT INCOMING POWER AT POWER SUPPLY AND WAIT 10 MINUTES BEFORE BEGINNING ANY SERVICE ON ANY PORTION OF A STROBE LIGHTING SYSTEM.

TROUBLE

THINGS TO CHECK

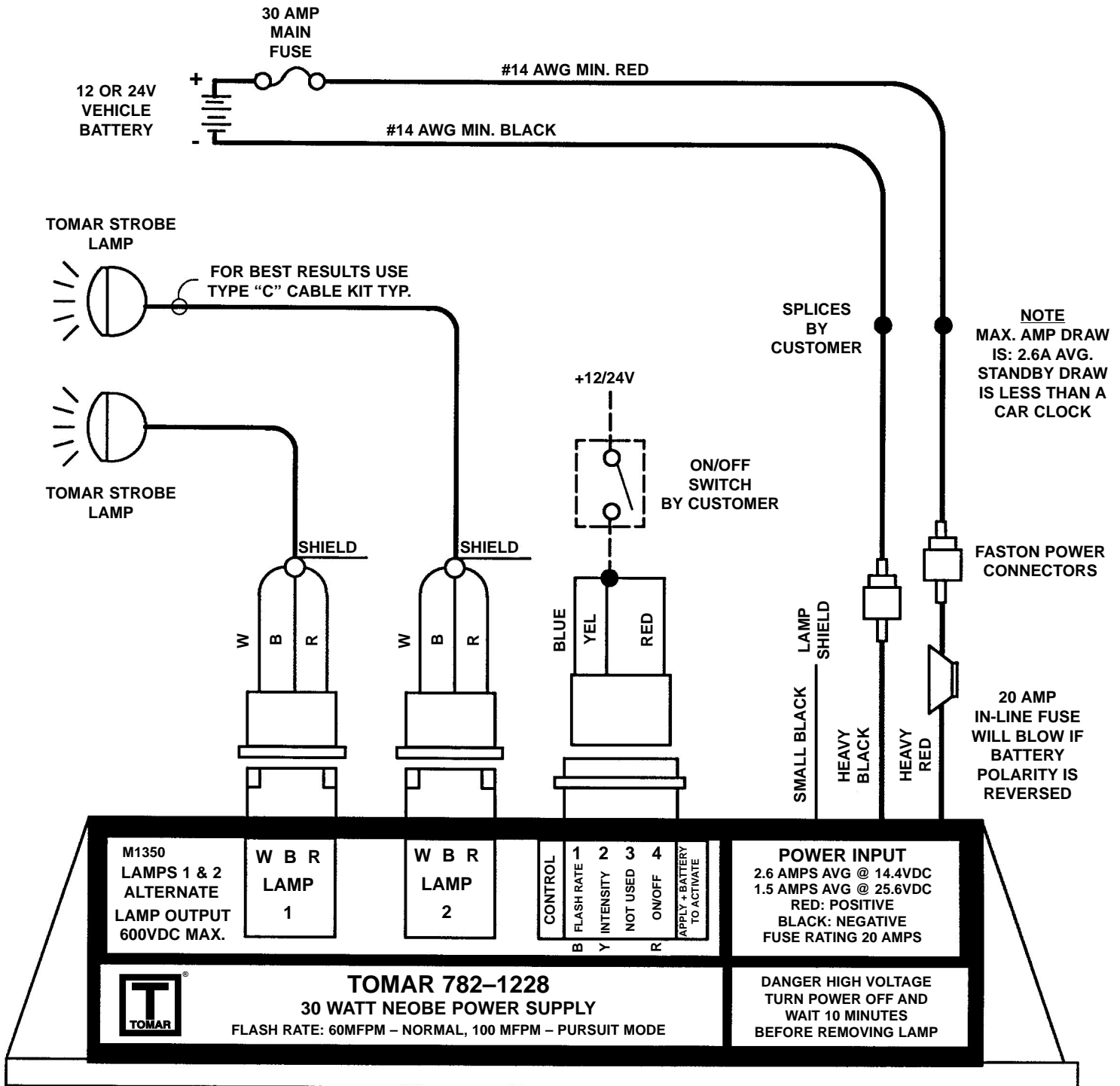
Nothing Works	1) Check battery or power source and main fuse or breaker.
	2) Check ground connection.
Power Supply Blows In-Line Fuse	1) Check for reverse polarity on input power connection.
	2) Power supply may be defective. Replace with known good unit.
One Lamp Does Not Flash	1) Check lamp by replacing it with known good lamp.
	2) Check lamp cable by plugging a known good lamp directly into the non-functioning lighthouse port.

MAINTENANCE

The 782-1228 NEOBE® Power Supply lighting system should be checked regularly for proper operation.

Lamps connected to the 782-1228 should be kept clean and checked monthly for signs of wear. If the lamp is blackened along more than approximately 30% of its length or flashes erratically, the lamp should be replaced.

**782-1228
WIRING DIAGRAM**



BATTERY WIRING

DISCONNECT BATTERY OR OTHER POWER SOURCE BEFORE INSTALLING THE 782-1228.

INPUT POWER

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This power supply is polarity sensitive and will blow its fuse if connected to the wrong polarity. The 20 Amp input power fuse supplied is part of the polarity protection system. Do not attempt to operate the supply with the fuse bypassed or shorted at any time as the power supply will be irreparably damaged or destroyed and its warranty voided, if connected to the wrong polarity without proper size fuse protection.

LAMP CONNECTIONS

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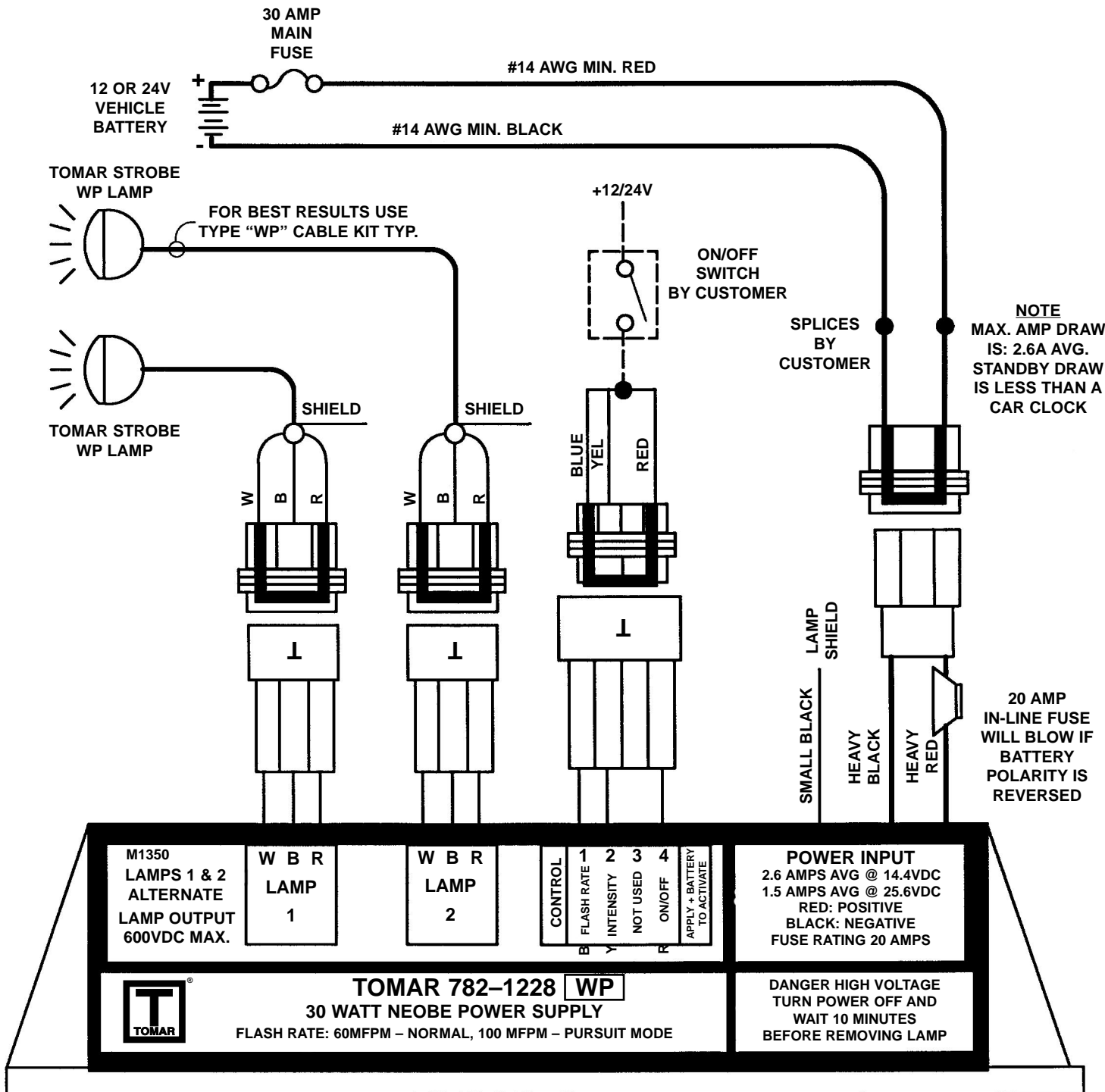
When using shielded lamp cables, use the #18 AWG small black power supply wire to ground the lamp cable shields.

CONTROL CONNECTIONS

CONTROL WIRE HAVE LESS THAN 1/4 AMP CURRENT DRAW.

To activate lamps: Apply +12/24V to control wire 4 (RED).
To select Hi Intensity: Apply +12/24V to control wire 2 (YEL).
To select Hi Flash Rate: Apply +12/24V to control wire 1 (BLUE).

782-1228-WP WIRING DIAGRAM



BATTERY WIRING

DISCONNECT BATTERY OR OTHER POWER SOURCE BEFORE INSTALLING THE 782-1228.

INPUT POWER

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PRODUCT DESCRIPTION

TOMAR Model 782–1228 NEOBE® Power Supply features a technology that produces the look of neon and the intensity of strobe lighting, combined into one lamp that appears to burn continuously rather than flash. The NEOBE® design produces more light per watt than any strobe power supply on the market. The result is unequalled warning light performance, far superior to a halogen, rotator, or conventional strobe. TOMAR Model 782–1228 NEOBE® Power Supply is designed to operate two remote strobe heads in a multiple flash alternating pattern. The unit features weather proof design and hi-low intensity, selected manually by a remote switch or automatically by remote mounted photocell. The 782–1228 operates on 12 thru 28VDC, features polarity protection diode and contains RFI filters for both high and low band. The TOMAR NEOBE® Power Supply features a revolutionary strobe circuit that extends the dwell time (on time) of the strobe as well as increasing the life of the strobe lamp by approximately 50%. Any TOMAR remote strobe lighthouse will operate with the Model 782–1228 Power Supply.

SPECIFICATIONS

Power Requirements:

2.6 A avg. @ 14.4VDC

1.5 A avg. @ 25.6VDC

Output Power Rating:

30 Watts Minimum in Hi-Intensity

NEOBE Flash Rate, 2 Lamps Running

Flash Rate:

60 MFPM/Head—NEOBE Rate Minimum

100 MFPM/Head—HYPER-NEOBE Rate Minimum

Flash Pattern:

5 Equal Power Flashes/Multi-Flash

Control Features:

On-Off and all features are controlled by switching positive low current battery voltage.

The main battery power may be left connected to the supply at all times. Current draw is less than 10 microamps in standby.

Construction:

Glass filled Lexan® case, polyurethane potting.

Size:

$\frac{7.125''}{(181\text{mm})}$ X $\frac{3.75''}{(95\text{mm})}$ X $\frac{1.75''}{(44\text{mm})}$

Weight:

$\frac{2.5 \text{ Lbs.}}{(1.12\text{kg})}$

OPERATING DUTY CYCLE

The 782–1228 and 782–1228–WP NEOBE® Power Supplies are rated for continuous operating duty, and are suitable for extended around the clock operation.

TOMAR NEOBE POWER SUPPLY WARRANTY

TOMAR Electronics, Inc. warrants the products described herein for a period of 10 years under normal use and service from the date of manufacture as marked on the product, that the product will be free of defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser connecting the unit to wrong voltage or polarity.

THERE IS NO WARRANTY OF MERCHANTABILITY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. THERE ARE NO WARRANTIES EXPRESSED OR IMPLIED OR ANY AFFIRMATION OF FACT OR REPRESENTATION EXCEPT AS SET FORTH HEREIN.

REMEDY

TOMAR Electronics, Inc.'s sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at TOMAR's option, of a part or parts not so conforming to the warranty. All products requiring warranty service shall be returned to TOMAR within 10 years of manufacture, shipping prepaid. TOMAR will return repaired or replaced products to the purchaser via prepaid ground transportation. In no event shall TOMAR be liable for damages of any nature, including incidental or consequential damages, including but not limited to any damages resulting from non-conformity, defect in material or workmanship.

All material being returned for service must have an RMA number shown on the shipping label. Please write or call to obtain the RMA number prior to sending the material for service.

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