MODEL 440 MICROSTACK

STROBE OR NEOBE® STACKABLE MODULES

INSTRUCTION SHEET

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 Microstack is to be installed by a trained installer who is thoroughly familiar with electrical wiring techniques, 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 components of this MICROSTACK generate 400 volts. NEVER work on this unit 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.

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.
- 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 MICROSTACK, 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.

2. WIRING INSTRUCTIONS

Prepare the MICROSTROBE for wiring:

- Using a 5/64 allen wrench, remove the two 6–32 X 1/4 button socket head stainless steel screws that hold module 1 to the base.
- Lift module 1 from the base by pulling straight up. DO NOT TWIST FROM SIDE TO SIDE.
NOTE: Remove o-ring and retain for assembly.
- Remove the three #6 X 1/4 slotted pan head screws that hold the MICROSTACK printed circuit board to the base. Remove the MICROSTACK protective cover and retain for assembly.
- Remove the printed circuit board from the base and turn it upside down so that the terminal block is visible to you. YOU ARE NOW READY TO BEGIN WIRING.

Please follow the instructions below which pertain to the specific number of modules your MICROSTACK contains.

The Model 440 MICROSTACK operates from 100 thru 240 VAC 50/60 Hz power source and will produce the same light intensity and flash rate over that range.

ONE MODULE

- For a single module unit, place the neutral wire from the power source into the terminal block labeled "C". Then, tighten the screw down on the wire.
- Next, place the hot wire from the power source into the terminal block labeled "1". Again, be sure to tighten the screw down on the wire.

TWO MODULES

- If the unit has two modules, place the neutral wire from the power source into the terminal block labeled "C". Then, tighten the screw down on the wire.
- Place the first hot wire from the power source into the terminal block labeled "1". Be sure to tighten the screw down on the wire.
- Place the second hot wire from the power source into the terminal block labeled "2". Again, be sure to tighten the screw down on the wire.

THREE MODULES

- If the unit has three modules, place the neutral wire from the power source into the terminal block labeled "C". Then, tighten the screw down on the wire.
- Place the first hot wire from the power source into the terminal block labeled "1". Be sure to tighten the screw down on the wire.
- Place the second hot wire from the power source into the terminal block labeled "2". Be sure to tighten the screw down on the wire.
- Place the third hot wire from the power source into the terminal block labeled "3". Again, be sure to tighten the screw down on the wire.

FOUR MODULES

- If the unit has four modules, place the neutral wire from the power source into the terminal block labeled "C". Then, tighten the screw down on the wire.
- Place the first hot wire from the power source into the terminal block labeled "1". Be sure to tighten the screw down on the wire.

- Place the second hot wire from the power source into the terminal block labeled "2". Be sure to tighten the screw down on the wire.
- Place the third hot wire from the power source into the terminal block labeled "3". Be sure to tighten the screw down on the wire.
- Place the fourth hot wire from the power source into the terminal block labeled "4". Again, be sure to tighten the screw down on the wire.

FIVE MODULES

- If the unit has five modules, place the neutral wire from the power source into the terminal block labeled "C". Then, tighten the screw down on the wire.
- Place the first hot wire from the power source into the terminal block labeled "1". Be sure to tighten the screw down on the wire.
- Place the second hot wire from the power source into the terminal block labeled "2". Be sure to tighten the screw down on the wire.
- Place the third hot wire from the power source into the terminal block labeled "3". Be sure to tighten the screw down on the wire.
- Place the fourth hot wire from the power source into the terminal block labeled "4". Be sure to tighten the screw down on the wire.
- Place the fifth hot wire from the power source into the terminal block labeled "5". Again, be sure to tighten the screw down on the wire.
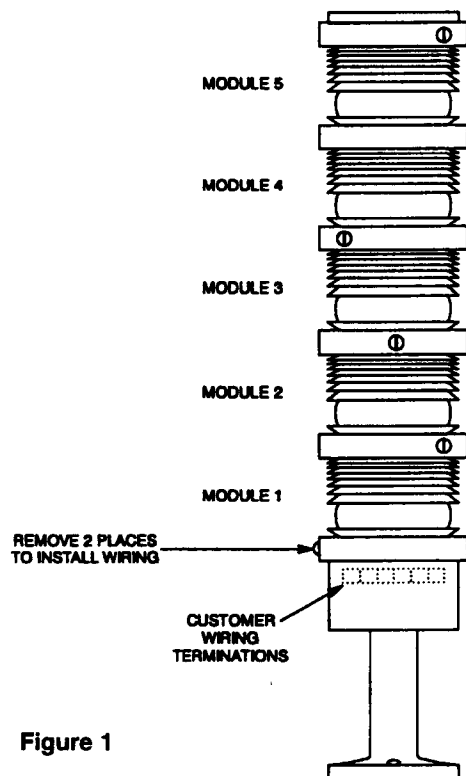

MODULE 5
MODULE 4
MODULE 3
MODULE 2
MODULE 1
REMOVE 2 PLACES TO INSTALL WIRING
CUSTOMER WIRING TERMINATIONS

Figure 1

3. REASSEMBLY OF MICROSTACK

- Feed wires through the MICROSTACK base and stand. Reinstall the termination printed circuit board.
NOTE: The printed circuit board is keyed and can go into the base in only one direction.
- Next, reinstall the MICROSTACK protective cover.
- Fasten the MICROSTACK protector and printed circuit board to the base using the three #6 X 1/4 slotted pan head screws.
- Reinstall number 1 module assembly onto the base.
NOTE: The base and module are also keyed and can only be installed when properly aligned.
- Install the two 6–32 X 1/4 button socket head stainless steel screws through the opening in number one module and through the base. Tighten these screws down using a 5/64 allen wrench.

4. WIRING

Please refer to Figure 2, on the following page, for a detailed wiring diagram of the TOMAR MICROSTACK.

FOR CUSTOMER WIRING EXTERNAL TO THE UNIT, BE SURE TO FOLLOW ALL LOCAL AND NATIONAL CODES.

5. MOUNTING

The Model 440 MICROSTACK is designed for mounting on a sturdy flat surface protected from excessive heat and physical damage.

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

Mount the MICROSTACK so that its nameplate can be seen by maintenance personnel. It displays important information regarding the MICROSTACK.

External mounting hardware and installation details are left to the installer.

6. TESTING

Apply power to the power terminal block as shown in Figure 2 to activate and test each module.

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 THE SOURCE AND WAIT 10 MINUTES BEFORE BEGINNING ANY SERVICE ON ANY PORTION OF A MICROSTACK.

TROUBLE	THINGS TO CHECK
Nothing Works	1) Check battery or power source and main fuse or breaker 2) Check ground connection
Blows Customer's In-Line Fuse	1) Unit 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 wiring to terminal block.

MAINTENANCE

The MICROSTACK should be checked regularly for proper operation.

Lamps connected to the MICROSTACK should be checked 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.

RELAMPING

All MICROSTACK modules (strobe, flashing, or steady burn) use the same type of lamp, TOMAR part number 5002.

The 5002 is a plug-in lamp and may be changed by grasping the lamp and pulling straight out.
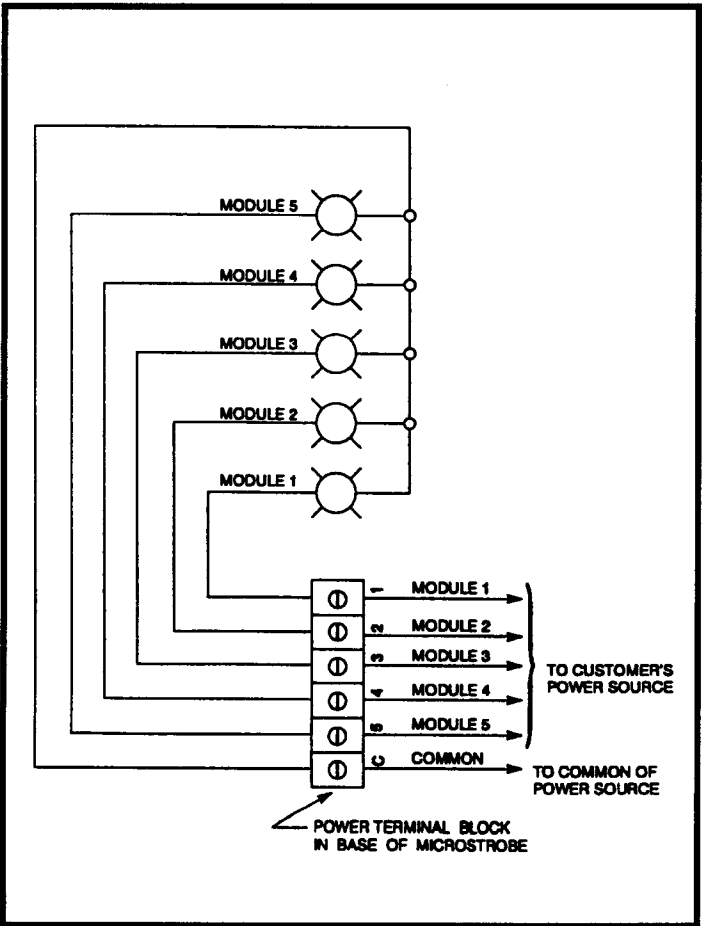
SPECIFICATIONS

Figure 2 Wiring Diagram

IS0016
022598

Lamp Type:	5002 (plug-in type)	
Size:	Dia. 3.32"	
	84mm	
Weight:	440–1	0.6 lbs. (0.3 kg)
	440–2	0.8 lbs. (0.4 kg)
	440–3	1.1 lbs. (0.5 kg)
	440–4	1.3 lbs. (0.6 kg)
	440–5	1.6 lbs. (0.7 kg)
Height:	440–1	7.7" (196 mm)
	440–2	10.0" (254 mm)
	440–3	12.3" (312 mm)
	440–4	14.6" (371 mm)
	440–5	16.9" (429 mm)
Power Requirements:	85-246 VAC 50/60 Hz @ 7 Watts per module	
Flash Rate:	60-80 Flashes per minute	

440 MICROSTACK WARRANTY

Except for lamps, TOMAR Electronics, Inc. warrants the product described herein for a period of 2 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, or lightning damage. Lamps are warranted for 1 year from date of manufacture.

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.

TOMAR Electronics' 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 2 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.