

# Table of Contents

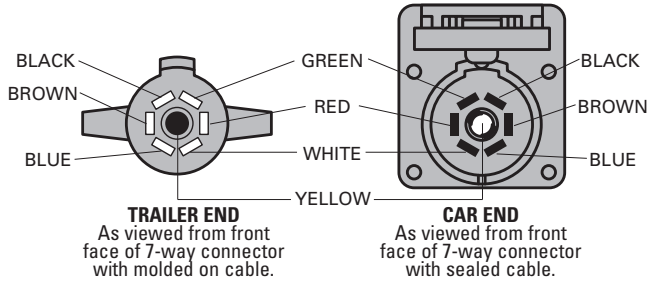
## TECHNICAL MANUAL

7-Way Connector Wiring Diagram .....	32
6-Way Connector Wiring Diagram .....	32
4-Way Connector Wiring Diagram .....	33
5-Way Connector Wiring Diagram .....	33
Trailer Lighting Wiring Diagram .....	33
Trailer Emulator Reference Guide .....	34
Current Monitor Instructions .....	35
Battery Isolator Instructions .....	35
Standard Ag Implement Enhanced Lighting Diagrams .....	36-37

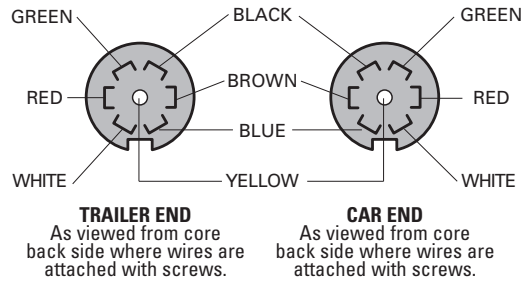


## 7-WAY CONNECTOR WIRING DIAGRAM

### 7-WAY MOLDED TRAILER/ SEALED CAR CONNECTOR & CABLE



### 7-WAY THERMO-PLASTIC/ METAL CONNECTOR

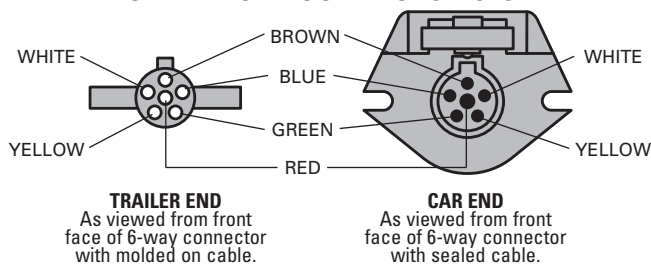


## 7 - WAY WIRING INDEX

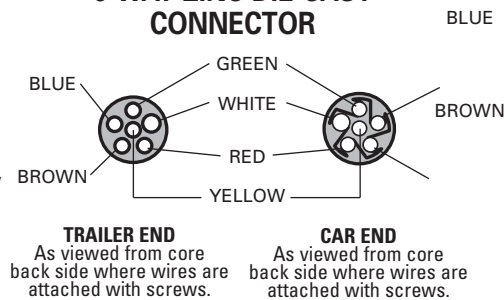
Wire Color & Gauge	Molded Trailer/Sealed Car Connector Terminal	Thermo-Plastic/Metal Connector Terminal
White / 10 gauge	Common Ground	#1 Common Ground
Blue / 12 gauge	Electric Brake	#2 Electric Brake
Green / 14 gauge	Tail & License	#3 Tail & License
Black / 10 gauge	Battery Charge	#4 Battery Charge
Red / 14 gauge	Left Stop & Turn	#5 Left Stop & Turn
Brown / 14 gauge	Right Stop & Turn	#6 Right Stop & Turn
Yellow / 14 gauge	Center Auxiliary	#7 Center Auxiliary

## 6-WAY CONNECTOR WIRING DIAGRAM

### 6-WAY MOLDED TRAILER/ SEALED CAR CONNECTOR & CABLE



### 6-WAY ZINC DIE-CAST CONNECTOR



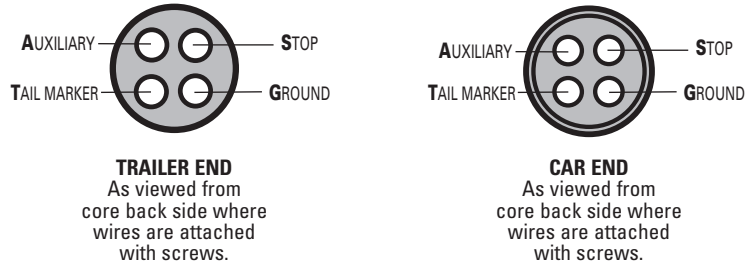
## 6 - WAY WIRING INDEX

Wire Color & Gauge	Molded Trailer/Sealed Car Connector Terminal	Zinc Die-Cast Connector Terminal
White / 10/14 gauge	Common Ground	GD - Common Ground
Blue / 10/14 gauge	Electric Brake	S - Electric Brake
Green / 14 gauge	Right Stop & Turn	TM - Tail & License
Red / 10/14 gauge	Auxiliary	LT - Left Stop & Turn
Brown / 14 gauge	Tail & License	RT - Right Stop & Turn
Yellow / 14 gauge	Left Stop & Turn	A - Auxiliary

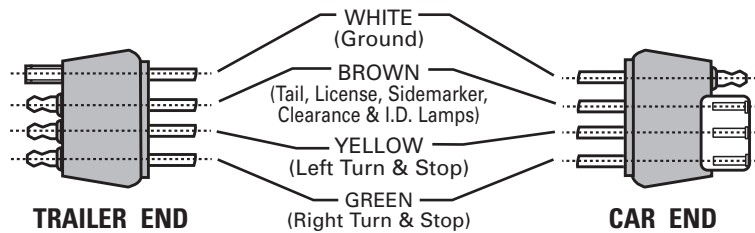
**TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.**

## 4-WAY CONNECTOR WIRING DIAGRAM

### 4-WAY METAL CONNECTOR

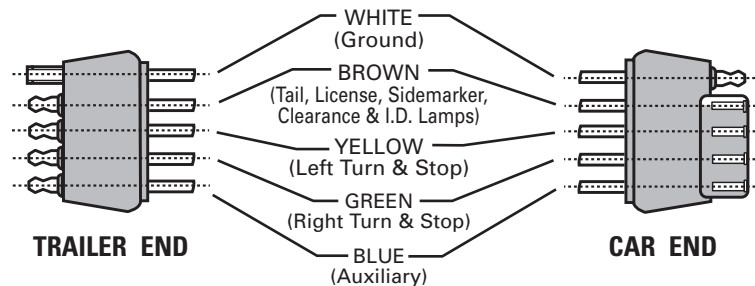


### 4-WAY FLAT CONNECTOR



## 5-WAY CONNECTOR WIRING DIAGRAM

### 5-WAY FLAT CONNECTOR



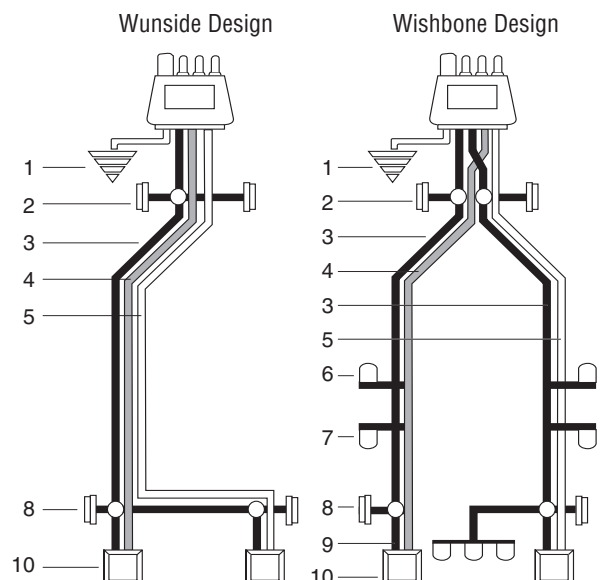
## TRAILER WIRING DIAGRAM

- |   |                                 |
|---|---------------------------------|
| 1. White wire - ground to trailer frame | 6. Clearance lamps - amber      |
| 2. Side marker lights - amber           | 7. Clearance lamps - red        |
| 3. Brown wire                           | 8. Side marker lights - red     |
| 4. Yellow wire                          | 9. I.D. light bar - red         |
| 5. Green wire                           | 10. Tail, stop, and turn lights |

Color coded for conformity to SAE, NMMA, and TMA standards, Wesbar wire is a snap to install. Color coding is:

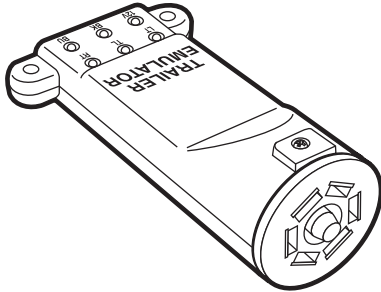
- |                      |                                    |
|----------------------|------------------------------------|
| WHITE - ground       | YELLOW - left turn and stop lights |
| BROWN - tail lights  | GREEN - right turn and stop lights |
| - side marker lights | BLUE - auxiliary                   |
| - clearance lights   |                                    |

**TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.**



## TRAILER EMULATOR REFERENCE GUIDE

### Trailer Emulator



- LT – Left turn signal, Red Light
- TL – Tail / running lights, Red Light
- RT – Right turn signal, Red Light
- 12V – 12 volt battery supply line, Red Light
- BK – Electric trailer brakes, Red Light
- BU – Backup lights, Red Light

### User's Guide

The Trailer Emulator requires the ground and 12 volt battery line to be properly connected in order to check the electric brake circuit.

- 12 volt light on the emulator will be lit as soon as the emulator is connected to the tow vehicle's plug. If this does not happen see *Troubleshooting Chart*.

- The RT, LT, TL and BU lights will light on the emulator as those functions are activated on the tow vehicle. If this does not happen see *Troubleshooting Chart*.
- The BK light on the emulator should be off until the brake control is activated. **NOTE:** The trailer emulator is **not an exact trailer load** so the light displays on various brake controls will respond differently.

## Trailer Emulator Troubleshooting Chart

Condition	Probable Cause
<b>Trailer Emulator connected to tow vehicle</b> - 12 V LED is <b>NOT</b> lit on Trailer Emulator - LT LED is <b>NOT</b> lit on Trailer Emulator	1. Bad ground or incorrect wiring in tow vehicle connector. 2. No 12 volt battery power supplied to connector.
<b>NOTE:</b> Applies for LT, RT, TL and BU LEDs - BK is <b>NOT</b> lit on Trailer Emulator when <u>manual slide / touch pad</u> is activated, but 12 V LED is lit.	1. Bad ground or incorrect wiring in tow vehicle connector 2. Poor ground on Brake Control. Brake Control goes into a limit mode. 3. Gain adjustment on Brake Control is set to minimum, adjust gain to maximum and retest using manual.
- BK is <b>NOT</b> lit on Trailer Emulator when <u>Brake Pedal</u> is depressed, but 12 V LED is lit.	1. If using brake pedal, Cequent Performance Product's inertia activated controls require vehicle movement to activate sensor. Apply the manual switch and see if BK LED lights. (SEE NOTE)

### NOTE:

The following two methods are available to test the **Automatic response** of the Cequent Performance Product's brake control with the Trailer Emulator.

1. Vehicle in Motion Method
  - Connect Trailer Emulator to vehicle
  - Properly adjust the Level of the brake control.
  - Drive vehicle and apply brake pedal, the brake control's light should indicate a braking event.

2. Aggressive Level Method
  - Connect Trailer Emulator to vehicle
  - Properly adjust the Level of the brake control.
  - Adjust Level setting toward Aggressive.
  - The brake control's light should indicate a braking event.
  - When finished with test **remember** to adjust the brake control's level back to desired tow setting.

**Technical Support**  
 1-888-785-5832  
[www.tekonsha.com](http://www.tekonsha.com)  
 (Outside the USA & Canada)  
 517-767-4142

P/N 6558 Rev. E

TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.

## INSTRUCTIONS FOR THE CURRENT MONITOR

The Current Monitor is a testing device designed to assist in determining whether a tow vehicle's wiring is working properly. This unit is also an excellent diagnostic tool for the installation, setup and troubleshooting of electric trailer brake controls and may be used to level and pre-set a brake control when a trailer is not available.

### To Use Current Monitor

1. Plug the Current Monitor into the vehicle's trailer connector. Extend its cable to reach the driver's seat.
2. While sitting in the driver's seat, position the switch (located between the amp and volt meters) to the "Trailer Brakes" position.
3. Then position the switch labeled "Number of Axles" to the appropriate position for the trailer that is expected to be towed.

4. Now, activate each function indicated by the four LED lights across the front of the test unit (i.e. turn on left turn signal/left turn LED turns on, etc.). Once it has been determined that all lighting connections are working properly, you are ready to test the output of the vehicle's trailer brake control.
5. Set the power knob to maximum and engage the brake control's manual override.  
**Brake Voltage must register at least 10 Volts.**  
**Brake Control Current Output should register at least: 12 Amps for two (2) axle trailers, or 18 Amps for three (3) axle trailers.**
6. Switching the "Trailer Brakes" switch to the "Trailer Battery Charger" position will measure the voltage being delivered to the trailer's battery(ies).

### NOTE:

If the brake control will not generate 18 or more amps when used with three or more axle trailers **BE SURE** that you are using a brake control designed to deliver this performance.

**If you discover a performance or wiring problem, look for one or more of the following fault conditions:**

1. Improper wiring of the brake control to the vehicle's power and/or battery ground. (As with any electronic device, Cequent™ Performance Products recommends grounding all brake controls directly to the vehicle battery to ensure the proper performance of the control's advanced circuitry.)
2. Improper vehicle wiring.
3. Defective or improper wiring of the trailer connector.
4. Broken, dirty or corroded trailer connector pins.
5. Open brake magnets, or open, broken or shorted wiring.
6. Defective brake control.

**⚠ WARNING** This unit contains magnets, which may become hot if the unit is left connected to an energized brake control for more than a few minutes.

## INSTRUCTIONS FOR BATTERY ISOLATORS

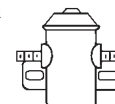
### Installation Guide

1. Mount with cap end (crimped end) up.
2. Mount unit in an area that is not subjected to water rain or salt spray.
3. **⚠ CAUTION** Under normal operating conditions the switch will become hot. Mounting location should be selected to allow for the heat to dissipate.
4. **⚠ CAUTION** To minimize the possibility of accidental damage due to circuit overload, use

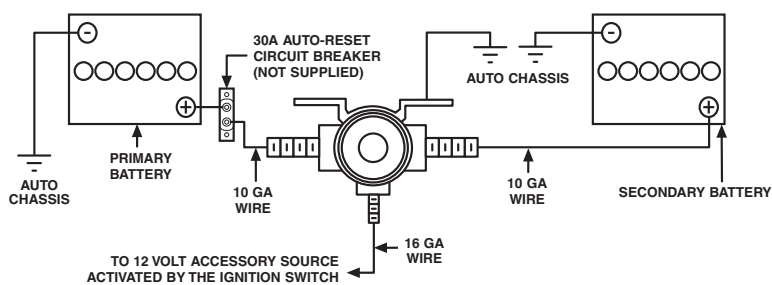
an appropriate circuit breaker inline when wiring to the POSITIVE (+) terminal of the battery.

5. The wire size indicated below for battery connection is a minimum requirement. To improve the secondary battery charge rate, increase this wire size.
6. The three terminal switch housing provides the ground return. This eliminates the need for a ground return wire when mounted on the auto chassis.

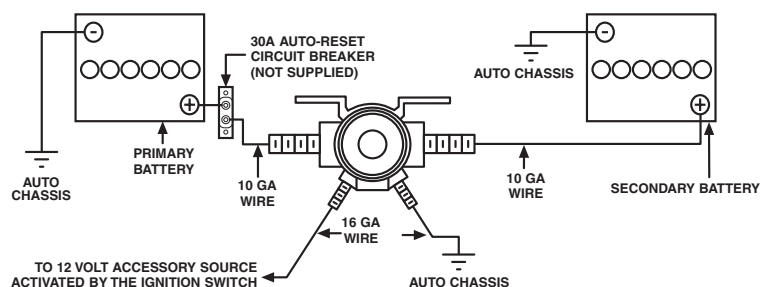
7. The four terminal switch has an isolated case. This would be used when mounting on a non-conductive material, fiberglass, wood, etc. However, to keep switch from overheating it should be mounted on a 6" x 6" metal plate.
8. For Technical Assistance and Warranty Information call: 1-888-785-5832 or [www.tekonsha.com](http://www.tekonsha.com)



### 3 Terminal Switch Model



### 4 Terminal Switch Model



**TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.**

P/N 871 REV E

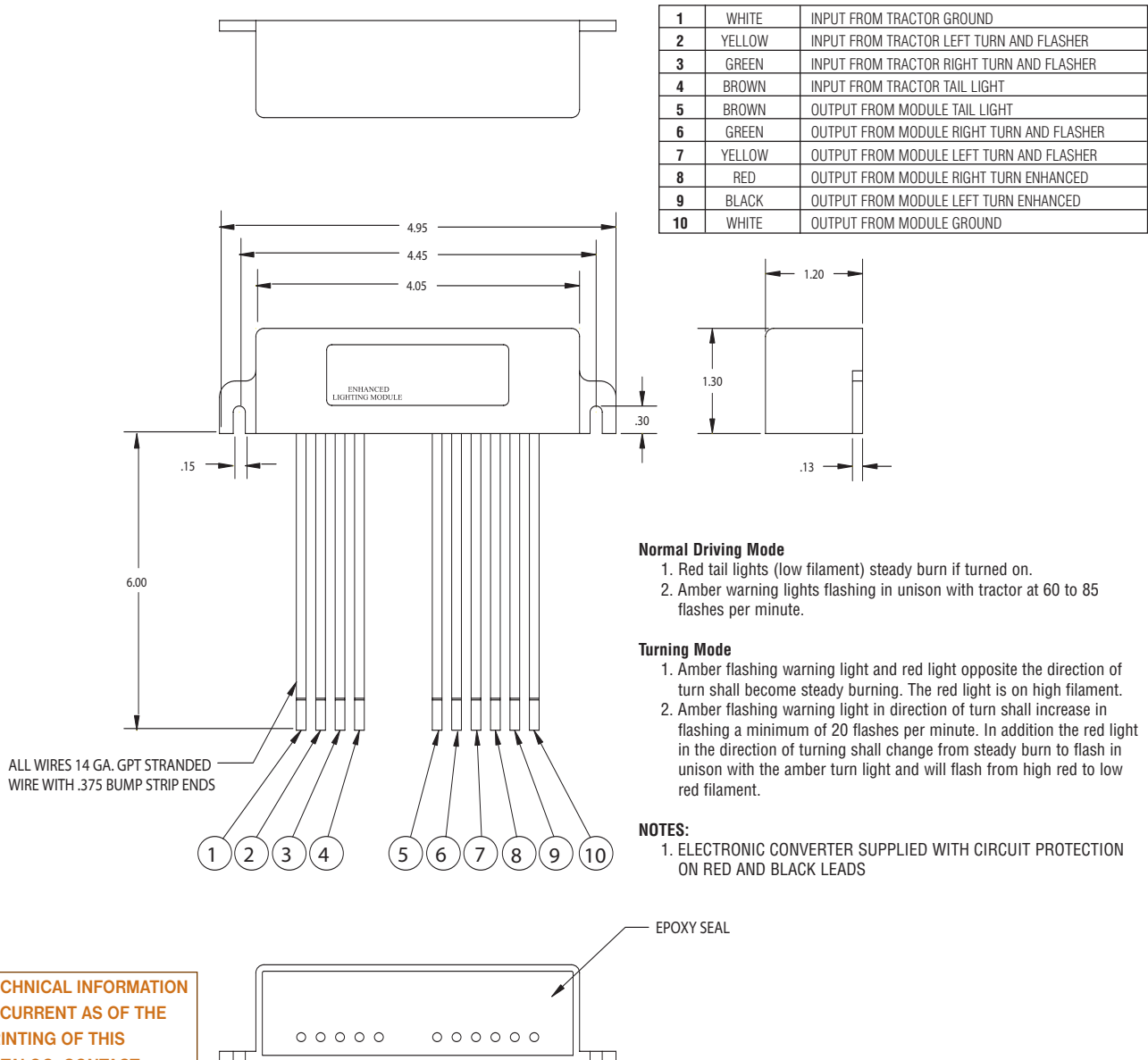
## STANDARD AG IMPLEMENT ENHANCED LIGHTING SCHEME

Under both the standard and enhanced lighting schemes, when traveling straight forward, the amber (outside) lights flash in unison with the tractor's amber lights on the high intensity at approximately 100 pulses per minute, and the low intensity of the red (inside) lights are on constantly.

With the standard wire harness in place, when a turn is being signaled, the amber light signaling the turn will increase flashing to approximately 120 pulses per minute with the amber light on the opposite side changing to a constant high intensity light. This mirrors the amber light on the tractor. Both red lights, however, remain on a constant low intensity.

To meet the enhanced lighting standard, introduce Electronic Ag Light Enhanced Module (see page 14) to the implement's wire harness, and simply add red lights that have an active high intensity along with an additional RH and LH wire to these red lights. With this enhanced ag lighting system, during a turn the red light next to the amber turn side light will rapidly flash on the high intensity in unison with the amber light, and the red light on the opposite side will remain constant on the high intensity. This is a dramatic safety feature to better signal (to everyone) turns by tractors and implements.

### AG LIGHTING WIRING DIAGRAM



#### Normal Driving Mode

1. Red tail lights (low filament) steady burn if turned on.
2. Amber warning lights flashing in unison with tractor at 60 to 85 flashes per minute.

#### Turning Mode

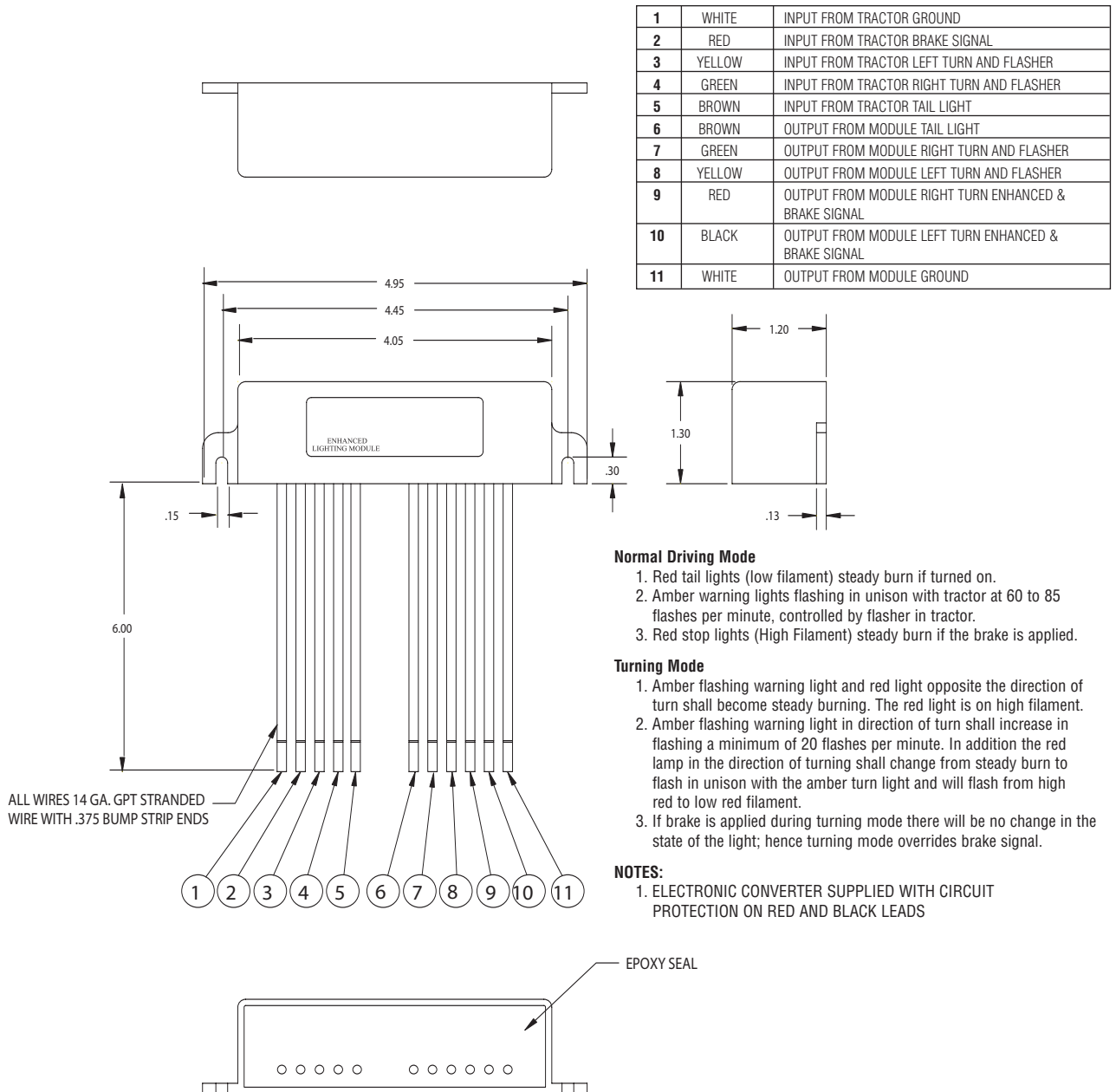
1. Amber flashing warning light and red light opposite the direction of turn shall become steady burning. The red light is on high filament.
2. Amber flashing warning light in direction of turn shall increase in flashing a minimum of 20 flashes per minute. In addition the red light in the direction of turning shall change from steady burn to flash in unison with the amber turn light and will flash from high red to low red filament.

#### NOTES:

1. ELECTRONIC CONVERTER SUPPLIED WITH CIRCUIT PROTECTION ON RED AND BLACK LEADS

TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.

## AG LIGHTING WIRING DIAGRAM WITH BRAKE



TECHNICAL INFORMATION IS CURRENT AS OF THE PRINTING OF THIS CATALOG. CONTACT TECHNICAL SERVICE FOR PERIODIC UPDATES.



# NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---