

TYCO TE 0 332 011 007

TYCO TE 0 332 011 007 12V 30A PBT-GF30 Relay Instruction Manual

Model: 0 332 011 007

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your TYCO TE 0 332 011 007 12V 30A PBT-GF30 Relay. Please read these instructions carefully before use to ensure safe and efficient performance. This relay is designed for automotive and general-purpose switching applications requiring a 12V DC control signal and capable of handling up to 30 Amps.

2. PRODUCT OVERVIEW

The TYCO TE 0 332 011 007 is a robust 12V, 30A Single Pole, Single Throw (SPST) relay. It features a durable PBT-GF30 housing and silver contacts for reliable electrical switching. This relay is commonly used in automotive circuits to control high-current devices such as headlights, fuel pumps, cooling fans, and horns, using a low-current switch signal.



Figure 1: Front view of the TYCO TE 0 332 011 007 12V 30A Relay. This image displays the black PBT-GF30 housing with 'Made in Portugal', '>PBT-GF30<', and '12V' markings, along with the four blade terminals extending from the bottom.



Figure 2: Angled view of the TYCO TE 0 332 011 007 Relay, showing the side with a printed circuit diagram. This diagram illustrates the internal coil and switch contacts, along with standard automotive relay terminal numbers (30, 85, 86, 87).

3. SPECIFICATIONS

Feature	Specification
Model Number	0 332 011 007
Brand	TYCO TE
Voltage Rating	12V DC
Current Rating	30 Amps
Contact Type	SPST (Single Pole, Single Throw)
Contact Material	Silver
Housing Material	PBT-GF30
Terminal Type	Blade Terminals
Manufacturer	TYCO TE

4. INSTALLATION/SETUP

Proper installation is crucial for the safe and reliable operation of the relay. If you are unsure about any steps, consult a qualified automotive technician.

Safety Precautions:

- Always disconnect the vehicle's battery before performing any electrical work.
- Ensure the relay's voltage and current ratings match or exceed the requirements of the circuit it will control.
- Use appropriate wire gauges for all connections to prevent overheating.
- Protect all connections from moisture and physical damage.

Wiring (Typical SPST Relay):

A standard 4-pin SPST relay typically has the following terminal designations:

- **Terminal 30:** Power input from the battery (fused).
- **Terminal 85:** Ground connection for the relay coil.
- **Terminal 86:** 12V trigger signal from a switch or control module.
- **Terminal 87:** Switched 12V output to the device being powered.

Installation Steps:

1. Identify the appropriate location for the relay, preferably in a relay socket or a secure mounting point away from excessive heat or moisture.
2. Connect Terminal 30 to a fused 12V power source (e.g., directly from the battery or a main power distribution point). The fuse should be rated appropriately for the load.
3. Connect Terminal 87 to the positive input of the device you wish to power (e.g., headlight, fan motor).
4. Connect Terminal 85 to a reliable chassis ground.
5. Connect Terminal 86 to the 12V trigger signal from your control switch or module.
6. Ensure all connections are secure and insulated.
7. Reconnect the vehicle's battery and test the circuit.

5. OPERATION

The TYCO TE 0 332 011 007 relay operates by using a small electrical current to control a larger current. When a 12V signal is applied to Terminal 86 (with Terminal 85 grounded), an electromagnetic coil inside the relay is energized. This magnetic field pulls a contact arm, closing the circuit between Terminal 30 and Terminal 87. This allows power to flow from the 12V source (Terminal 30) to the connected device (Terminal 87). When the 12V signal to Terminal 86 is removed, the coil de-energizes, and the contact arm returns to its open position, breaking the circuit.

6. MAINTENANCE

Relays are generally low-maintenance components. However, periodic inspection can help ensure long-term reliability:

- **Visual Inspection:** Periodically check the relay and its connections for any signs of corrosion, loose wires, or physical damage to the housing.

- **Connection Integrity:** Ensure that the blade terminals are clean and securely seated in their socket or connectors. Loose connections can lead to resistance, heat buildup, and premature failure.
- **Environmental Factors:** While the PBT-GF30 housing offers good durability, avoid exposing the relay to extreme temperatures, excessive moisture, or corrosive chemicals.

7. TROUBLESHOOTING

If the controlled device is not functioning correctly, consider the following troubleshooting steps:

- **No Click from Relay:**
 - Check for 12V at Terminal 86 when the trigger is active.
 - Verify a good ground connection at Terminal 85.
 - Inspect the relay coil for damage (though this is rare without external signs).
- **Relay Clicks but Device Doesn't Work:**
 - Check for 12V at Terminal 30 (main power input). Ensure the fuse is intact.
 - Test for 12V at Terminal 87 when the relay is activated. If no power, the internal contacts may be faulty or burned.
 - Verify the wiring from Terminal 87 to the device.
 - Check the device itself for proper operation and ground connection.
- **Relay Always On/Off:**
 - If always on, the contacts may be stuck closed, or there's a constant 12V signal to Terminal 86.
 - If always off, there might be no trigger signal to Terminal 86, or the coil is open.

If these steps do not resolve the issue, the relay may need to be replaced.

8. WARRANTY AND SUPPORT

Specific warranty information for the TYCO TE 0 332 011 007 relay is not provided in this manual. For details regarding warranty coverage, returns, or technical support, please refer to the original point of purchase or contact the manufacturer, TYCO TE, directly through their official channels.