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TO319G 3P 80A

TOMZN TO319G Manual Transfer Switch (MTS) - 3P 80A User Manual

Model: TO319G 3P 80A | Brand: Generic

1. Product Overview

The TOMZN TO319G 3P 80A Manual Transfer Switch (MTS) is designed for dual power systems, allowing for manual switching between two power sources. This isolating interlock circuit breaker provides protection against short circuits and overloads, ensuring system stability and safety. Its robust construction, including flame-retardant and UV-resistant housing, makes it suitable for various applications, particularly in solar installations.

Key Features:

- Prevents damage caused by short circuits and overloads.
- Constructed with insulating materials to withstand extreme outdoor conditions.
- Features flame-retardant and UV-resistant housing for long-term durability, especially in solar environments.
- Equipped with screw-type terminals to ensure stable and secure electrical connections.
- Suitable for use with solar inverters, charge controllers, and battery banks.

Figure 1: Front view of the TOMZN TO319G 3P 80A Manual Transfer Switch, showing the three poles and operating handles.

2. Safety Information

Please read and understand all safety instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, serious injury, or death.

- **Qualified Personnel Only:** Installation and maintenance should only be performed by qualified electricians or personnel with appropriate electrical training.
- **Disconnect Power:** Always ensure all power sources are disconnected and locked out before performing any installation, wiring, or maintenance on the switch.
- **Proper Wiring:** Use appropriate wire gauges and ensure all connections are tight and secure to prevent overheating and arcing.
- **Environmental Conditions:** Do not install the switch in environments exceeding its specified operating temperature or humidity ranges.
- **Grounding:** Ensure proper grounding practices are followed according to local electrical codes.

3. Setup and Installation

This section provides general guidelines for installing the TOMZN TO319G Manual Transfer Switch. Always refer to local electrical codes and standards for specific requirements.

3.1 Mounting the Switch

1. Select a suitable mounting location that is dry, well-ventilated, and protected from direct sunlight and extreme temperatures.
2. Ensure there is sufficient space around the switch for wiring and operation.
3. Mount the switch securely to a DIN rail or appropriate surface using the integrated mounting clips or screws.

Figure 2: Side view of the switch, illustrating the compact design and potential mounting points.

3.2 Wiring Connections

Before making any connections, ensure all power sources are OFF and verified de-energized.

1. Identify the input terminals for Power Source 1 (e.g., utility grid) and Power Source 2 (e.g., generator or solar

inverter). These are typically labeled I and II.

2. Identify the output terminals for the load.
3. Connect the live (L1, L2, L3) and neutral (N) conductors from Power Source 1 to the corresponding input terminals labeled 'I'.
4. Connect the live (L1, L2, L3) and neutral (N) conductors from Power Source 2 to the corresponding input terminals labeled 'II'.
5. Connect the load conductors to the output terminals of the switch.
6. Ensure all screw terminals are tightened to the manufacturer's specified torque to prevent loose connections and potential hazards.

Figure 3: Detailed view of the switch terminals, showing input (I, II) and output connections.

4. Operating Instructions

The TOMZN TO319G is a manual transfer switch, meaning operation requires direct physical interaction to change power sources.

4.1 Switching Power Sources

1. **To connect to Power Source 1:** Ensure the switch handles are in the 'OFF' (middle) position. Push the handles firmly to the 'I' position. This connects the load to Power Source 1.
2. **To connect to Power Source 2:** First, move the switch handles from the 'I' position to the 'OFF' (middle) position. Then, push the handles firmly to the 'II' position. This connects the load to Power Source 2.
3. **To disconnect all power (OFF position):** Move the switch handles to the central 'OFF' position. This isolates the load from both Power Source 1 and Power Source 2.

Note: The interlock mechanism prevents simultaneous connection to both power sources, ensuring safe operation.

5. Maintenance

Regular maintenance helps ensure the longevity and reliable operation of your manual transfer switch.

- **Visual Inspection:** Periodically inspect the switch for any signs of physical damage, discoloration, or loose connections.
- **Terminal Tightness:** Annually, or as needed, verify that all terminal screws are securely tightened.*Always disconnect power before checking terminals.*
- **Cleaning:** Keep the switch free from dust and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Operation Check:** Occasionally operate the switch through its 'I', 'OFF', and 'II' positions to ensure smooth mechanical action.

6. Troubleshooting

This section addresses common issues you might encounter with the manual transfer switch.

Problem	Possible Cause	Solution
No power to load from either source.	Switch in 'OFF' position; input power source failure; tripped upstream breaker.	Ensure switch is in 'I' or 'II' position. Check if input power sources are active. Reset any tripped circuit breakers upstream.
Power from one source, but not the other.	Failure of the specific power source; wiring issue for that source.	Verify the non-working power source is active. Inspect wiring connections for that source at the switch terminals.
Switch handles are stiff or difficult to move.	Accumulation of dirt/debris; internal mechanical issue.	Clean the exterior of the switch. If stiffness persists, contact qualified personnel for inspection. Do not force the handles.
Overheating at terminals.	Loose connections; undersized wiring; excessive load.	*Immediately disconnect power.* Check and tighten all terminal screws. Verify wire gauge is appropriate for the current. Reduce load if necessary.

If you encounter issues not listed here or if troubleshooting steps do not resolve the problem, contact a qualified electrician.

7. Specifications

Technical specifications for the TOMZN TO319G 3P 80A Manual Transfer Switch.

Feature	Specification
Model Number	TO319G 3P 80A (UCJJJXUXZ-3P-80A)
Rated Voltage	400V~ AC
Rated Current	80A
Poles	3P (3 Pole)
Frequency	50/60Hz
Type	Manual Transfer Switch (MTS), Isolating Interlock Circuit Breaker
Certification	CE
Housing Material	Flame-retardant & UV-resistant insulating materials
Connection Type	Screw-type terminals
Item Weight	3.53 ounces (approx. 100g)
Package Dimensions	0.39 x 0.39 x 0.39 inches (approx. 1 x 1 x 1 cm)

8. Warranty and Support

For information regarding warranty coverage, terms, and conditions, please refer to the documentation provided at the time of purchase or contact your retailer. For technical support or assistance with installation and troubleshooting, please reach out to the product manufacturer or your authorized distributor.