XIBANY GV2-PM21C

XIBANY GV2-PM21C Motor Circuit Breaker User Manual

Three-Phase Motor Circuit Breaker, 17-23A, Knob Type

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of the XIBANY GV2-PM21C Three-Phase Motor Circuit Breaker. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and safety.
The GV2-PM21C is designed to protect three-phase motors against overloads, short circuits, and phase failures. It features a thermal-magnetic trip unit and a rotary knob for control.

2. Safety Information

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power before working on the circuit breaker or connected equipment.
- Ensure proper grounding of all electrical components.
- Verify that the circuit breaker's ratings match the motor and supply specifications.
- Do not operate the circuit breaker if it appears damaged.
- Adhere to all local and national electrical codes and regulations.

3. Product Overview

The XIBANY GV2-PM21C is a compact motor circuit breaker designed for industrial applications. Key features include a rotary operating handle, thermal and magnetic trip indicators, and clearly marked terminals.

Figure 3.1: Front View of GV2-PM21C. This image displays the front of the motor circuit breaker, showing the rotary knob for operation, the 'TRIP' indicator, the 'TEST' button, and the main power terminals (1L1, 3L2, 5L3 at the top; 2T1, 4T2, 6T3 at the bottom).

Figure 3.2: Angled View with Specifications. This view shows the circuit breaker from an angle, highlighting the side label which contains detailed technical specifications such as rated voltage, current range, breaking capacity, and compliance standards.

Figure 3.3: Side View. This image provides a side perspective of the circuit breaker, illustrating its compact design and potential mounting features.

Figure 3.4: Detailed Technical Label. A close-up of the technical label on the side of the breaker, clearly showing the electrical ratings, such as the current adjustment range (Ie: 17-23A), rated operational voltage (Ue: 690V, 50/60Hz), impulse withstand voltage (Uimp: 6kV), and various breaking capacities (Ics, Icu) at different voltages.

4. Specifications

Parameter	Value
Model	GV2-PM21C
Current Adjustment Range (Ie)	17 - 23 A
Rated Operational Voltage (Ue)	690 V AC, 50/60 Hz
Rated Impulse Withstand Voltage (Uimp)	6 kV
Rated Thermal Current (Ith)	23 A
Poles	3P
Type	Knob Type

Parameter	Value
Standards Compliance	VDE 0660.0113, IEC 60947-2, IEC 60947-4-1, GB 14048.2, GB 14048.4
Manufacturer	XIBANY

5. Setup and Installation

Installation must be performed by a qualified electrician in accordance with all applicable electrical codes and standards.

5.1 Mounting

1. Ensure the mounting surface is stable and free from vibrations.
2. Mount the circuit breaker vertically on a DIN rail or using screws through the designated mounting holes.
3. Allow adequate clearance around the breaker for ventilation and wiring.

5.2 Wiring

1. **Disconnect all power sources** before beginning wiring.
2. Connect the incoming three-phase power supply to terminals 1L1, 3L2, and 5L3.
3. Connect the motor load to terminals 2T1, 4T2, and 6T3.
4. Ensure all connections are tight and secure to prevent loose contacts and overheating.
5. Verify correct phase sequence if required by the motor.

5.3 Current Setting

- Adjust the thermal trip setting (current adjustment knob) to match the motor's full load current (FLC). The range is 17-23A.
- Refer to the motor's nameplate for its FLC.

6. Operating Instructions

6.1 Turning On/Off

- **To Turn On:** Rotate the operating knob clockwise to the "I" (ON) position.
- **To Turn Off:** Rotate the operating knob counter-clockwise to the "O" (OFF) position.

6.2 Trip Indication and Reset

- If an overload or short circuit occurs, the breaker will trip, and the "TRIP" indicator will become visible. The knob will move to an intermediate position.
- **To Reset:** First, rotate the knob fully counter-clockwise to the "O" (OFF) position. Then, rotate it clockwise to the "I" (ON) position.
- Before resetting, identify and rectify the cause of the trip.

6.3 Test Function

- The "TEST" button allows for manual verification of the tripping mechanism.
- Press the "TEST" button to simulate an overload trip. The breaker should trip, and the "TRIP" indicator

should appear.
- Reset the breaker after testing as described above.

7. Maintenance

Regular maintenance helps ensure the longevity and reliable operation of the circuit breaker.

- **Periodic Inspection:** Visually inspect the breaker for any signs of damage, discoloration, or loose connections.
- **Cleaning:** Keep the breaker clean and free from dust and debris. Use a dry, lint-free cloth. Do not use solvents or abrasive cleaners.
- **Connection Checks:** Periodically check terminal screws for tightness.
- **Function Test:** Perform the "TEST" function periodically (e.g., annually) to ensure the tripping mechanism is operational.

8. Troubleshooting

Problem	Possible Cause	Solution
Breaker trips frequently	Overload, short circuit, phase imbalance, motor fault, incorrect current setting.	Check motor load, inspect wiring for short circuits, verify motor health, adjust current setting to motor FLC.
Breaker does not reset	Persistent fault, internal damage.	Ensure the fault is cleared. If the fault persists or the breaker is damaged, replace the unit.
Motor does not start	Breaker in OFF or TRIP position, no power supply, wiring error.	Check breaker position, verify power supply, inspect wiring connections.

If troubleshooting steps do not resolve the issue, contact qualified technical support.

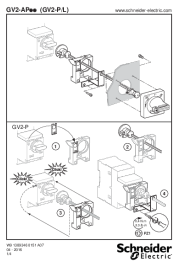
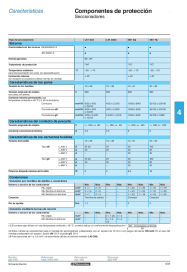
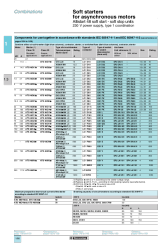
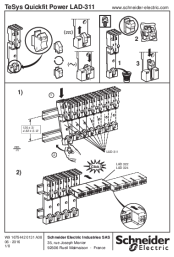
9. Warranty Information

Warranty terms and conditions for the XIBANY GV2-PM21C Motor Circuit Breaker are provided by the seller or manufacturer at the time of purchase. Please retain your proof of purchase for warranty claims. For specific details, refer to the documentation included with your product or contact your point of purchase.

10. Technical Support

For technical assistance, questions regarding installation, operation, or troubleshooting that are not covered in this manual, please contact the seller or XIBANY customer support. Have your product model number (GV2-PM21C) and purchase information ready when contacting support.
You may also refer to the manufacturer's official website for additional resources or updated documentation.

Related Documents - GV2-PM21C

	Schneider Electric GV2-AP Accessory Installation Guide Detailed installation instructions for Schneider Electric GV2-AP accessories, covering mounting, connection, and operation for GV2-P and GV2-L motor circuit breakers. Includes dimensions, torque specifications, and locking procedures.
TeSys®系列(国产) 电动机起动器选型替代手册 	TeSys® （ ） TeSys®
	Schneider Electric Seccionadores: Componentes de Protección Guía completa de componentes de protección Schneider Electric, enfocada en seccionadores. Incluye especificaciones técnicas, modelos, accesorios y esquemas de conexión para las series LS1 y GK1.
	Schneider Electric TeSys Catalog 2024: Motor Control Solutions Explore the Schneider Electric TeSys Catalog 2024, featuring innovative and connected solutions for motor starters, control, protection, and power management. Discover a century of expertise in motor control technology.
	Altistart 48 Soft Starters: Combinations for Asynchronous Motors This document provides comprehensive combination tables for Altistart 48 soft starters with circuit-breakers, contactors, and fast-acting fuses for asynchronous motors. It covers various voltage supplies and coordination types (Type 1 and Type 2), detailing component references, ratings, and specifications for optimal motor control.
	Schneider Electric TeSys Quickfit Power LAD-311 Installation Guide Detailed installation guide for the Schneider Electric TeSys Quickfit Power LAD-311, covering mounting and connection procedures for various TeSys components.