

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

› [ABB](#) /

› [ABB RK 927 001-AB Timer Over-Voltage Protection Relay Assembly Housing User Manual](#)

ABB RK 927 001-AB

ABB RK 927 001-AB Timer Over-Voltage Protection Relay Assembly Housing User Manual

Model: RK 927 001-AB

INTRODUCTION

This manual provides essential instructions for the safe and efficient installation, operation, and maintenance of the ABB RK 927 001-AB Timer Over-Voltage Protection Relay Assembly Housing. Please read this manual thoroughly before attempting any installation or operation to ensure proper functionality and to prevent potential hazards.

The ABB RK 927 001-AB is designed to house and protect a timer over-voltage protection relay, ensuring its reliable performance in industrial applications. This product is intended for use by qualified personnel only.

SAFETY INFORMATION

Warning: Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by ABB for any consequences arising out of the use of this material. This document is not intended to be a complete instruction manual for all persons untrained in electrical safety.

- Always disconnect power before installing or servicing the device.
- Ensure proper grounding to prevent electrical shock.
- Follow all local and national electrical codes.
- Do not operate the device if it appears damaged.

PRODUCT OVERVIEW

The ABB RK 927 001-AB is an assembly housing specifically designed for timer over-voltage protection relays. It provides a protective enclosure for the sensitive internal components of the relay, ensuring durability and operational integrity in various environments.



Figure 1: The ABB RK 927 001-AB Timer Over-Voltage Protection Relay Assembly Housing in its original packaging. The cardboard box features the ABB logo prominently.



Figure 2: Another view of the ABB RK 927 001-AB packaging, showing the product box from a slightly different perspective, confirming the branding.



Figure 3: A close-up view of the product label on the ABB RK 927 001-AB packaging. The label clearly displays "RK 927 001-AB" and "RHGX4 CASE AREA" along with a stock code, confirming the model number and type.

SETUP AND INSTALLATION

1. **Unpacking:** Carefully remove the assembly housing from its packaging. Inspect for any signs of damage during transit. If damage is found, do not proceed with installation and contact your supplier.
2. **Mounting:** The housing is designed for secure mounting. Identify a suitable location that is free from excessive vibration, moisture, and extreme temperatures. Use appropriate fasteners (not included) to secure the housing to a stable surface. Refer to the specific relay's manual for mounting orientation if applicable.
3. **Relay Insertion:** Open the housing cover. Carefully insert the compatible timer over-voltage protection relay into the designated slots or mounting points within the housing. Ensure the relay is seated correctly and securely.
4. **Wiring:** Connect the relay's terminals to the appropriate power supply and control circuits. Refer to the wiring diagram provided with the specific relay and adhere to all electrical safety standards. Ensure all connections are tight and secure.
5. **Closure:** Once the relay is installed and wired, securely close the housing cover. Ensure all seals are properly seated to maintain the housing's protective rating.

Note: This housing is designed to protect the relay. The specific functionality and wiring of the over-voltage protection relay itself are detailed in its separate instruction manual.

OPERATING INSTRUCTIONS

The ABB RK 927 001-AB is an assembly housing and does not have direct operational controls. Its primary function is to provide a protective environment for the timer over-voltage protection relay. Operation of the relay itself is governed by its internal logic and external control signals.

- Ensure the housing remains closed during operation to protect the internal relay from environmental factors.
- Monitor the status indicators on the installed relay (if present and visible through the housing) to confirm proper

operation.

- Refer to the specific relay's instruction manual for detailed operational parameters, settings, and monitoring procedures.

MAINTENANCE

Regular maintenance ensures the longevity and reliability of the ABB RK 927 001-AB housing and the relay it protects.

- **Cleaning:** Periodically clean the exterior of the housing with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect the housing for any signs of physical damage, cracks, or loose fasteners. Check that all seals are intact and providing adequate protection.
- **Internal Check (Qualified Personnel Only):** If internal inspection is required, disconnect all power to the device before opening the housing. Check for dust accumulation, loose wiring, or corrosion. Clean as necessary using appropriate tools and methods.
- **Environmental Conditions:** Ensure the operating environment remains within the specified limits for temperature and humidity to prevent premature wear or failure.

TROUBLESHOOTING

Since the RK 927 001-AB is a housing, most troubleshooting will pertain to the relay housed within it. However, issues related to the housing itself can impact the relay's performance.

Problem	Possible Cause	Solution
Relay not functioning (no power)	Loose wiring connections within the housing.	Disconnect power, open housing, check and secure all wiring connections.
Moisture or dust inside housing	Damaged or improperly seated seals/gaskets.	Disconnect power, open housing, inspect and replace damaged seals. Ensure cover is properly closed.
Physical damage to housing	Impact or improper handling.	Assess damage. If structural integrity is compromised, replace the housing to ensure continued protection of the relay.

For issues related to the relay's specific functions (e.g., timing, over-voltage detection), consult the relay's dedicated instruction manual.

SPECIFICATIONS

Feature	Detail
Model	RK 927 001-AB
Type	Timer Over-Voltage Protection Relay Assembly Housing
Brand	ABB
Product Dimensions	11.81 x 11.81 x 11.81 inches
Weight	4.41 Pounds

Feature	Detail
ASIN	B07X8QJ4Z2

WARRANTY INFORMATION

ABB products are manufactured to high-quality standards. For specific warranty terms and conditions applicable to the RK 927 001-AB assembly housing, please refer to the official ABB warranty statement available on the [ABB website](#) or contact ABB customer support. Proof of purchase may be required for warranty claims.

CUSTOMER SUPPORT

For technical assistance, product inquiries, or support, please contact ABB customer service. Visit the official [ABB Store on Amazon](#) or the main ABB website for contact details and additional resources.

When contacting support, please have your product model (RK 927 001-AB) and ASIN (B07X8QJ4Z2) readily available.



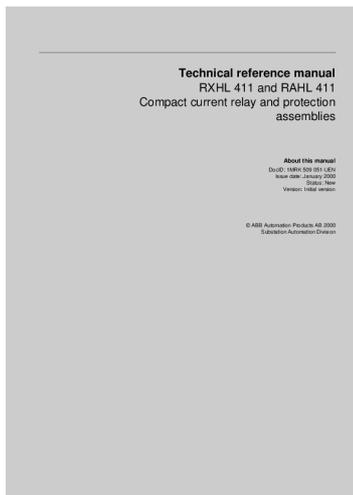
© 2023 ABB. All rights reserved. Information subject to change without notice.

Related Documents - RK 927 001-AB

	<p>ABB REX640 Application Manual: Protection and Control Applications</p> <p>The ABB REX640 Application Manual details various protection and control applications for the REX640 relay, offering guidance on configuration, settings, and use cases for power system engineers.</p>
	<p>ABB RET650 Transformer Protection Relay - Product Guide</p> <p>Explore the ABB RET650, a versatile transformer protection relay offering advanced differential, impedance, current, voltage, and frequency protection for power systems. This product guide details its features, applications, and technical specifications for reliable substation automation.</p>
	<p>ABB CM-EFS.2 Voltage Monitoring Relay for Single-Phase AC/DC Voltages</p> <p>ABB CM-EFS.2 is a compact voltage monitoring relay designed for single-phase AC/DC systems. It provides over- and undervoltage protection for voltages ranging from 3V to 600V, featuring adjustable thresholds, configurable operating modes (ON/OFF delay, open/closed circuit, latching), and multiple measuring ranges. The relay offers 1x2 or 2x1 changeover contacts for flexible output signaling.</p>

 <p>ABB REX640 Operation Manual</p>	<p>ABB REX640 Operation Manual: Protection and Control Relay Guide</p> <p>Comprehensive operation manual for the ABB REX640 protection and control relay. Covers installation, commissioning, operation, troubleshooting, and technical specifications for advanced power distribution applications.</p>
 <p>ABB REX640 Product Guide</p>	<p>ABB REX640 Protection and Control Relay Product Guide</p> <p>Explore the ABB REX640, a powerful and flexible all-in-one protection and control relay designed for advanced power distribution and generation applications. This product guide details its modular hardware and software, extensive application packages, and advanced features for reliable power system management.</p>
 <p>ABB REX610 Operation Manual</p>	<p>REX610 Operation Manual - ABB</p> <p>Comprehensive operation manual for the ABB REX610 protection and control relay. Covers overview, HMI usage, protection relay operation, troubleshooting, and commissioning.</p>

Documents - ABB – RK 927 001-AB



[\[pdf\]](#) User Manual

Untitled Document Technical reference manual RXHL 411 and RAHL Compact current relay protection assemblies 1MRK509051 UEN en reference library e abb public

0e34aa9767017ee9c12578570041e3d8 |||

Technical reference manual RXHL 411 and RAHL 411 Compact current relay and protection assemblies Abo ... U 36C 4U 60C 6U x 1/1 19 rack 6U x 1/2 19 rack 6U x 1/4 19 rack 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C...

lang:en score:16 filesize: 1.89 M page_count: 140 document date: 0000-00-00

Technical reference manual
RXHL 422 and RAHL 422
Compact current relay and protection
assemblies



About this manual
DocID: 10485 (2010-08-24)
Issue date: May 2009
5 Pages
Version: Initial version

© ABB Automation Products AB 2009
Distribution: Automation Channel

[\[pdf\]](#) User Manual

Untitled Document Technical reference manual RXHL 422 and RAHL Compact current relay protection assemblies 1MRK509059 UEN en reference library e abb public 5f575e503daa5b51c12578570041e3d9

|||

Technical reference manual RXHL 422 and RAHL 422 Compact current relay and protection assemblies Abo ... U 36C 4U 60C 6U x 1/1 19 rack 6U x 1/2 19 rack 6U x 1/4 19 rack 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C...

lang:en score:15 filesize: 6.34 M page_count: 146 document date: 0000-00-00

Reverse power relay and protection assemblies
RXPPK 2H and RAPPK



Features

- Microprocessor based time-directional current/overpower protection with continuous settings for operate time and time delay.
- RXPPK 2H is used to detect reverse power or low for equipment to prevent damage of the prime mover.
- Setting range $I_n = 0.1 - 15$ % of rated current.
- Two operate modes.
- Status output:
- $I > I_n$, $I < I_n$, $I > I_n$ or $I < I_n$.
- $I > I_n$, $I < I_n$, $I > I_n$ or $I < I_n$.

- Two different output time delay stages.- 36V AC or 24V DC or 12V DC or 5V DC.
- Stop function is implemented with a stop delay time. If the stop function is implemented with a stop delay time, the stop time will not reset until the hold time has elapsed, regardless of the fact I_n has been reset.
- Break function.
- Under-voltage blocking of the functions if the under-voltage is set to 0.
- Undercurrent blocking of the functions if the undercurrent is set to 0.25 % of the rated current.

Power and productivity
for a better world™ **ABB**

[\[pdf\]](#)

1MRK509042 BEN B en Reverse power relay and protection assemblies RXPPK 2H RAPPK library e abb public 3f89bd2d0b404f099bade3c5ae18008d |||

Reverse power relay and protection assemblies RXPPK 2H and RAPPK

RXPPK_2H.tif se980054.eps Fea ... 6U x 1/1 19 rack 6U x 1/2 19 rack 6U x 1/4 19 rack Article No. 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C...

lang:en score:15 filesize: 490.04 K page_count: 12 document date: 2016-06-08

Time-overvoltage relay and protection assemblies
RXEDA 1 and RAEDA



Features

RXEDA relay

- Microprocessor based time overvoltage relay for DC and AC single or three phase with or without neutral.
- Setting voltage ranges 200-500 V DC and 18-210 V AC 10-60 Hz.
- Setting time range 0-10 seconds time.
- Two independent set points one for start and one for time function or both for time function.
- Time function is independently wired I/O.
- High sensitivity ratio: 0.9 %.
- No auxiliary voltage required.
- Suitable as a replacement for electromechanical relays.

RAEDA protection

- DC time overvoltage protection for AC 50/60 Hz.
- Transforms time overvoltage protection connection for measuring line to line or line to neutral voltage.
- Can also be applied for AC 10-60 Hz single phase voltage measuring.
- Can be used as DC or AC single phase instantaneous overvoltage protection.
- Time measured in standard.
- Works with medium or heavy duty trip output contacts and short circuiting.
- Compact design.

Application

The time-overvoltage protection RAEDA can be used in many different applications, such as:

- Overvoltage protection - For generator overvoltage protection it is used to detect failure in the voltage regulation. For transformers and transmission lines overvoltage protection is used to detect excessive voltages. For these applications the high sensitivity ratio is essential.
- Break point voltage protection - Overvoltage protection is used to detect occurrence of earth faults in not solidly earthed systems by detecting the most common voltage from three delta connected secondary windings of phase transformer or from transformers connected between neutral and earth. The start function of the protection can be used to enable selection earth-fault current protection.
- Under-voltage protection - Single phase under-voltage protection is used to detect abnormal voltage vectors at low voltage systems to prevent problems with tripping of system voltage recovery. A separate time delay is provided to delay the tripping.
- DC voltage protection - Both over- and under-voltage protection are used to detect abnormal battery voltages. For under-voltage protection a separate time delay is recommended.

Power and productivity
for a better world™ **ABB**

[\[pdf\]](#)

Time overvoltage relay and protection assemblies RXEDA 1 IEC 61000 4 3 level Radiated pulse electromagnetic field test 10 V m 900 MHz ENV 50204 Conducted 0 15 80 Q library e abb public e7ec3c959ccf4ecbbf27295fc8d66a69 1MRK509044 BEN A en RAEDA x sign nY9iOrpY63qW dyuLLhJicDZYXa6VptiJBONmJ0xP1P5OmFpkK Kg46NIWus |||

Time-overvoltage relay and protection assemblies RXEDA 1 and RAEDA

RXEDA_1.tif RAEDA_1.tif RXE ... 6U x 1/1 19 rack 6U x 1/2 19 rack 6U x 1/4 19 rack Article No. 1MRK 000 137-PA 1MRK 000 137-RA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C...

lang:en score:15 filesize: 196.02 K page_count: 10 document date: 2014-11-28

Negative sequence overcurrent relay and protection assemblies RXIIK 4 and RAIK 400

Features

- RXIIK 4 relay**
 - Negative sequence overcurrent relays are used to detect unbalanced load on a generator which may cause excessive rotor heating. The relay is also used to detect unbalanced load conditions.
 - The relay can also be used in the other applications such as:
 - Unsymmetrical load which increases the negative sequence current.
 - Phase unbalance, e.g. a broken conductor.
 - Failure on one or two poles of a breaker or disconnector, both on opening and closing.
 - Earth fault detection in solidly earthed systems.
 - The relay has Class 1, class 2 and 3.
 - Blocking functions.
 - Three current ranges: I₁, I₂, I₃ and I₄.
 - Set range (I_{set} = 40% of I_n (phase current) with inverse characteristic).
 - I_n = 10, 15, 20.
 - Ac: 0-100 seconds or definite time: 0-100 minutes.
 - Set range: Alarm 0-30% of I_n (phase current) with definite time.
- RAIK 400 relay**
 - Time: 0-100 seconds.
 - Thermal memory for block trip function with settable cooling time up to 200 minutes.
 - Block time: 0-100 seconds.
 - Five independent output relays selectable for 1 Service, 2 Block, 3 Alarm, 4 Trip, 5 Blocking as well as Group 2 action.
 - Easy selectable setting of intervention through the RMI. The information available on the RMI.
 - Self-protection of blocking function: the relays are not able through the RMI. The active setting group 1 or 2 can be entered through one of the binary inputs.
 - Selectable binary inputs to block or enable 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
 - Testing of the relay relay and operation of binary inputs can be performed through the RMI.
 - Service values are available through the RMI.
 - But available, DCCDC converter and heavy duty trip relays are available as specified option.

Power and productivity for a better world™ **ABB**

[pdf] Instructions

Negative sequence overcurrent relay and protection RXIIK4.tif se980083 eps assemblies RXIIK 4 RAIK 400 nite time 0 100 seconds – Thermal memory for block trip function with the set 1MRK509045 BEN B en library e abb public 48d1e7c8c00f42f3b73c49d492b9d347 |||

Negative sequence overcurrent relay and protection assemblies RXIIK 4 and RAIK 400 RXIIK4.tif s ... cle No. 1MRK 001 643-AA 1MRK 001 643-CA 1MRK 001 643-BA Article No. 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C... lang:en score:14 filesize: 523.42 K page_count: 14 document date: 2016-06-07

Impedance relay and protection RXZK 21H, 22H, 23H and RAZK assemblies

Features

- Micro processor based impedance relay with 400V setting for generator relays and built-in time delay functions.
- Characteristic angle between 0° to 90°.
- Three ranges with wide setting range.
- RXZK 21H: one zone - one element.
- RXZK 22H: two impedance measuring zones.
- RXZK 23H: one zone - out of step function.
- Outlets time delay variables 0.1-5 s on external relays (range).
- Overhaul function with variable characteristic angle 0° to 180° and memory.
- Assemblies.
- Independent measuring elements with indication lock.
- Test switch and heavy duty start and stop control contacts are available as option.

Application

The RXZK family of impedance relays detect and sense directional impedance relays are suitable for general purpose use in power systems in primary or back-up functions. When implemented with total protection, they can be used for protection of transmission lines, busbars and generators. The RXZK 21H is installed for protection of long transmission lines and busbars and for protection of generators and motors. The RXZK 22H is used for protection of busbars and for protection of generators and motors. The RXZK 23H is used for protection of busbars and for protection of generators and motors. The RXZK 21H is used for protection of busbars and for protection of generators and motors. The RXZK 22H is used for protection of busbars and for protection of generators and motors. The RXZK 23H is used for protection of busbars and for protection of generators and motors.

[pdf]

1MRK509006 BEN en Impedance relay and protection assemblies RXZK 21H 23H RAZK library e abb public c1256d32004634bac1256e14006dc9c2 |||

Impedance relay and protection assemblies RXZK 21H, 22H, 23H and RAZK 1MRK 509 006-BEN Page 1 Issue ... K 000 845-FA Code A1 A2 A3 A4 A5 A6 Code H5 H6 H7 H8 Article No. 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C... lang:en score:12 filesize: 581.78 K page_count: 20 document date: 1999-06-09

Time- and instantaneous overcurrent and earth fault line protection based on single phase elements RACIK

Features

- Protection for short-circuits and earth faults in overhead, high impedance earthed, low impedance earthed or solidly earthed networks.
- Two or three single phase time overcurrent protection with built-in delay and instantaneous functions.
- Low set delay with inverse time or definite time characteristic.
- Instantaneous or definite time delayed high set stage.
- Sensitive directional earth fault protection for overhead or high impedance earthed networks.
- Independent measuring elements with indication per phase.
- Settable value of the residual voltage.
- Manual or remote automatic reclosure of the overhead or underground component of the earth fault circuit.
- Built-in residual voltage protection for back-up.
- Sensitive earth fault protection for small residual currents in solidly earthed systems.
- Micro processor based relay with continuous setting of current (earth return and time delay).
- The protection can be installed with or without test switch and tripping relay relays, e.g. using low inductance in a cost-reduced version.

[pdf] User Manual

Untitled Document 1MRK509032 BEN en Time and instantaneous overcurrent earth fault line protection based on single phase elements R library e abb public c1256d32004634bac1256e0f006bf24f

Time- and instantaneous overcurrent and earth fault line protection based on single phase elements ... 6U x 1/2 19 rack 6U x 1/4 19 rack Code H5 H6 H7 H8 Article No. 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C... lang:en score:11 filesize: 590.5 K page_count: 22 document date: 1999-10-28



Directional time-overcurrent relays and protection assemblies based on single phase elements

RXPDK 2H and RAPDK



Features

- Two or three phase directional overcurrent protection for cables and overhead lines
- Directional earth fault protection for cables, high impedance or solidly earthed systems
- Independent measuring elements with independent per phase
- Test switch, test and trip indication
- Micro-processor based directional time-overcurrent relay with distributed settings for current, voltage and time delay
- Chaperonic angle settable: 120° to +120°
- They variants with wide setting ranges:
 - Low set directional range: 0.25 In to 3.25 In or 0.275 to 19.2 A
 - High set directional range: 0.1 to 0.4 In or 0.5 to 200 A and +
- Low settings programmed for the following line characteristics:
 - Very inverse
 - Extremely inverse
 - Long time inverse
 - 50 Inverse
 - Definite time delay settable 50 ms to 1 s
 - Adjustable inverse time is possible to change the protection function to be non-directional

RXPDK 2H relay

- Two variants with wide setting ranges: 0.25 to 19.2 In or 0.275 to 19.2 A with standard definite time delay 50 ms to 1 s
- Setting resolution: 0.50 % of rated or point voltage
- Based on reverse automatic reconnection of the characteristic angle is for measuring of the direction or opposite component of the earth fault current
- Setting on or independent function
- Secure built-in over or undervoltage protection function. Can be replaced by used as a residual point overvoltage protection

[pdf]

1MRK509007 BEN en Directional time overcurrent relays and protection assemblies based on single phase elements RXPDK2H library e abb public c1256d32004634bac1256e0f006bed90

Directional time-overcurrent relays and protection assemblies based on single phase elements RXPDK ... U 36C 4U 60C 6U x 1/1 19 rack 6U x 1/2 19 rack 6U x 1/4 19 rack 1MRK 000 137-GA 1MRK 000 137-KA **RK 927 001-AB** RK 927 002-AB RK 927 003-AB RK 927 004-AB 1MRK 000 315-A 1MRK 000 315-B 1MRK 000 315-C...

lang:en score:10 filesize: 590.66 K page_count: 22 document date: 1999-04-30