

Wireless Supervised Photoelectric Smoke Detectors
Installation Instructions

General Description

The Smoke Detectors are battery-powered photoelectric smoke detectors with a built-in supervised wireless transmitter.

When sufficient smoke is detected, or the test feature is operated, the detector will sound its alarm horn and the transmitter will send an ALARM message. If the alarm condition remains, the message will be repeated 2 or more times (with 65 second intervals). The Alarm output in the receiver will remain activated until the alarm condition is cleared.

The smoke alarm provides the following features:

Smoke Alarm/base lock discourages unauthorized removal of the smoke alarm by requiring a screwdriver to remove the alarm from the base.

CleanMe™ Self-diagnostics monitors its own sensitivity and operational status. If the smoke alarms drifts out of the sensitivity range or fails internal diagnostics, it extinguishes its LED

Internal Signal Outputs

The smoke alarm provides the following signals for interfacing:

- Alarm
- Alarm restore
- Low battery
- Maintenance alert (Visible only)

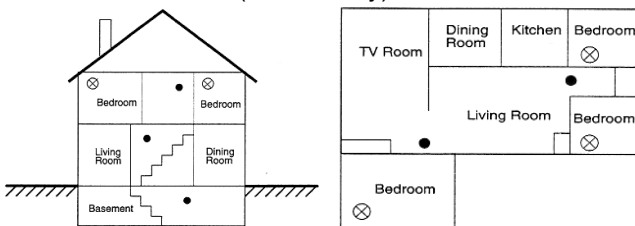


Figure 2 C - Smoke Alarm Placement

● = Required smoke alarms
 ⊗ = Additional smoke alarms required for new construction

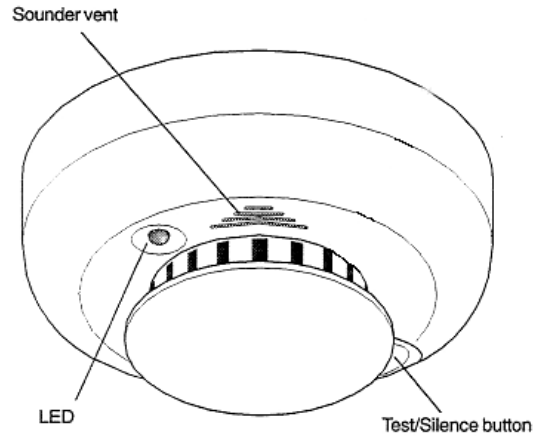


Figure 1 - Smoke Alarm Features

Selecting a Location

Selecting a suitable location is critical to the operation of smoke alarms. This equipment should be installed in accordance with the National Fire Protection Association's (NFPA) Standard 72. See Figure 2. **A-8-1.2.1.C Are More Smoke Alarms Desirable?** The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms. The installation of smoke alarms in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.

Important: Regulations pertaining to smoke alarm installations vary from state to state. For more information, contact your local fire department or local authority having jurisdiction.

In addition to NFPA 72, use the following location guidelines to optimize performance and reduce the chance of false alarms from the alarm:

- Locate ceiling-mounted smoke alarms in the center of a room or hallway at least 4 inches from any walls or partitions.
- Locate wall-mounted smoke alarms so the top of the alarm is 4 to 12 inches below the ceiling.

- Locate in a suitable environment as follows:
 - Temperature between 40°F (4.4°C) and 100°F (37.8°C))
 - Humidity between 0 and 95% non-condensing
- Locate away from air conditioners, heating registers and any other ventilation source that may interfere with smoke entering the alarm.
- Mount smoke alarms on a firm permanent surface.
- Locate away from large metallic objects when listed with a transmitter.

Installing the Alarm

If you are using the alarm/base lock, remove the two knockouts on the mounting base. See Figure 3.

Slide the battery compartment cover away from the alarm to unsnap it and lift it off. See Figure 4.

Follow the write mode procedure as described in the receiver installation of the operational manual.

Observing proper polarity, insert two 3V lithium batteries into the alarm battery compartment and replace the battery compartment cover.

Write message will be sent automatically

10 seconds after installing the batteries. *

Remove the red plastic dust cover from the alarm. The alarm is shipped with a dust cover for protection on construction sites with dusty environments.

Using the two screws and anchors provided, mount the base.

Attach the alarm to the mounting base as follows: Line up the raised tab on the lip of the alarm with the slot on lip of the mounting base. See figure. 4 Insert the smoke alarm into the base and turn clockwise approximately 15 degrees. It should snap firmly into place.

mounting base if no batteries are installed.

Test the alarm (see Smoke Testing the Alarm).

Testing the Smoke Alarm

Smoke alarms should be tested in place annually using smoke or canned aerosol simulated smoke. Follow the instructions on the canned smoke or use the following steps to test the alarm with smoke:

1. Hold a smoldering punk or cotton wick close to the smoke entry openings.
2. Gently direct the smoke into the alarm for 20 seconds or until an alarm is indicated.

BE SURE TO PROPERLY EXTINGUISH THE SMOKE SOURCE AFTER TESTING! The alarm LED should remain ON and the alarm will sound a temporal rhythm until the Test/Silence button is pressed. The alarm automatically resets when smoke is no longer present.

* To generate an additional right mode message,

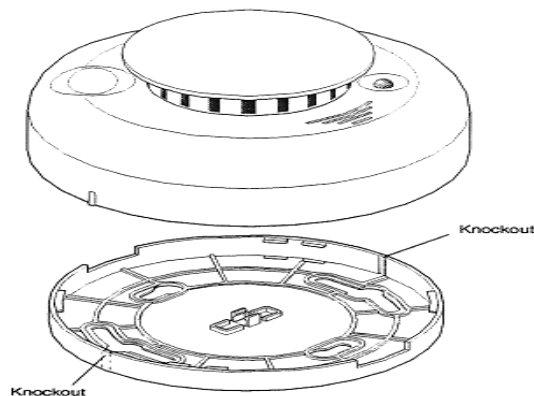


Figure 3 - Base Lock Knockouts

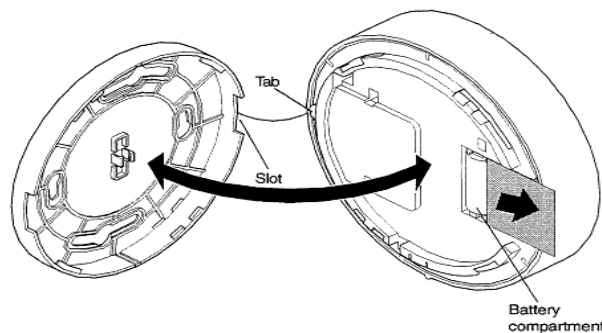


Figure 4 - Smoke Alarm-to-Base Alignment

Test/Silence Button Operation

The Test/Silence button performs three functions:

1. Testing: The testing feature performs both internal Smoke Sensitivity Test and Wireless Communication Test (between the Smoke Detector and the Control Panel receiver).

Press the Test/Silence button for 2 seconds.

Note: The internal alarm sounder inside the smoke detector is not activated.

- **Wireless Communication Test** - The detector establishes a communication test between the panel and the smoke detector. (**Note:** The panel must be set to the communication test mode). The panel will display the communication quality measurement (For more information regarding the communication test, refer to the panel installation manual).
- **Smoke Sensitivity Test** - The Alarm LED on the smoke detector indicates the detector's smoke sensitivity level (see "**Testing the Alarm Sensitivity**" section below).

2. Silence alarm: Press the Test/Silence button to silence the sounder during an alarm. After a few minutes, the sounder and the alarm will resume if smoke is still present.

3. Silence trouble chirp: Press the Test/Silence button to silence a trouble chirp. The trouble chirp resumes after 24 hours if a trouble condition is not corrected.

Testing the Alarm Sensitivity

The smoke alarm provides a sensitivity level test mode that allows you to check the smoke alarms sensitivity using the Test/Silence button and the LED indicator on the alarm as follows:

1. Press the Test/Silence button on the smoke alarm for 2 seconds. Once the test starts, the alarm LED flashes one to nine times.
2. Count the number of times the LED flashes and use the following table to determine the status of the smoke sensitivity and what action to take, if any.

Flashes	Obscuration %/ft (approx)	Indication	Action
1	N/A	Unserviceable hardware fault detected.	Reset unit and rerun sensitivity test. If the error persists, replace the unit.
2, 3	N/A	Detector is not sensitive enough.	Clean the unit. Reset unit and run sensitivity test. If the error persists, replace the unit
4	3.1	Detector is within normal sensitivity range.	N/A
5	2.6		
6	2.1		
7	1.6		
8, 9	N/A	Detector is too sensitive.	Verify that the smoke chamber is snapped down securely. Clean the unit and replace the smoke chamber.

After the flashes, if the sensitivity is within limits and all other tests pass, the alarm goes into alarm and resets after 3 seconds.

If the sensitivity is not within limits, or an unserviceable hardware fault has been detected, the smoke alarm LED extinguishes until the alarm is serviced.

Attaching and Removing the Smoke Alarm

To remove the smoke alarm from the mounting base, grasp the alarm and turn it counterclockwise approximately 15 degrees. The smoke alarm should snap off of the mounting base.

To remove the alarm from the mounting base when the alarm/base lock is used, insert a small screwdriver into the locking tab slot on the side of the base and press in while simultaneously turning the alarm counterclockwise 15 degrees. See Figure 5.

Attach the smoke alarm to its mounting base as follows:

- Line up the raised tab on the lip of the smoke alarm with slot on the lip of the mounting base. See Figure 4.
- Insert the smoke alarm into the base and turn clockwise approximately 15 degrees. It should snap firmly into place.

Understanding the LED

The LED on the alarm indicates the status of the alarm as follows:

FLASHING = Flashes every 9 seconds to indicate normal operation.

ON = Detects smoke.

OFF = Trouble or maintenance is required.

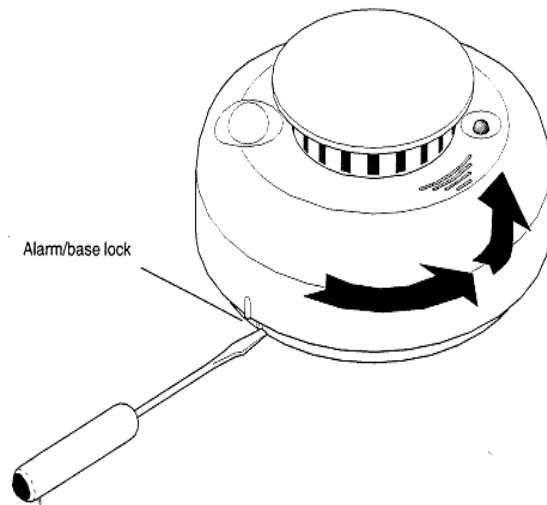


Figure 5 - Smoke Alarm/Base Lock

When to Replace the Batteries

The Smoke Detector requires two 3V lithium A batteries as listed on the battery compartment cover. The required batteries are available where other batteries are sold. Battery life is a minimum of 1 year and varies depending on how often the alarm is tested. When the batteries are low, the alarm extinguishes its LED and chirps every 30 seconds until the batteries are replaced. The sounder can be silenced for 24 hours by pushing the Test/Silence button.

Replacing the Batteries

Use only 3V lithium A batteries as listed on the battery compartment cover.

Remove the alarm from the mounting base. See *Attaching and Removing the Alarm*.

Slide the battery compartment cover away from the alarm to unsnap it and lift it off (See Figure 4).

Remove the batteries and dispose of properly.

Observing correct polarity, insert two new 3V lithium batteries into the battery compartment and replace the cover.

Reattach the alarm to the mounting base (See *Attaching and Removing the Alarm*).

Test the alarm (see *Smoke Testing the Alarm*).

Cleaning the Smoke Chamber

Clean the alarm cover with a dry or damp (water) cloth as needed to keep it free from dust and dirt

When necessary, clean the alarm interior and replace the smoke chamber as follows:

Remove the chamber from its mounting base. See *Attaching and Removing the Alarm*.

Remove the batteries. See *Replacing the Batteries*.

Slide a flat-blade screwdriver in the slot on the alarm cap and gently push the handle down to pry the cap up and off. See Figure 6.

Press in on the sides of the chamber and pull it up and away from the alarm and discard. See Figure 7.

Blow out or use a soft-bristled brush to remove dust and dirt from the smoke chamber base.

Line the new smoke chamber up with the smoke chamber base and snap down into place.

Replace the alarm cap as follows:

Line the cap up with the smoke alarm.

Insert the cap into the smoke alarm and turn clockwise approximately 15 degrees. It should snap firmly into place.

Observing the proper polarity, put the batteries back in the alarm and replace the battery compartment cover.

Reattach the alarm to its mounting base. See *Attaching and Removing the Alarm*.

Test the alarm sensitivity. See *Testing the Alarm Sensitivity*.

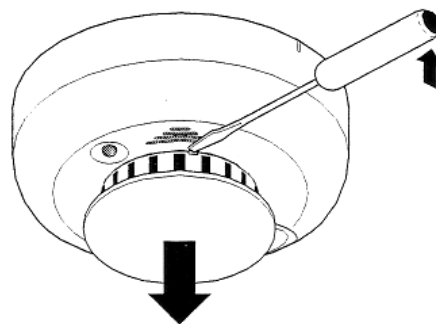


Figure 6 - Removing Alarm Cap

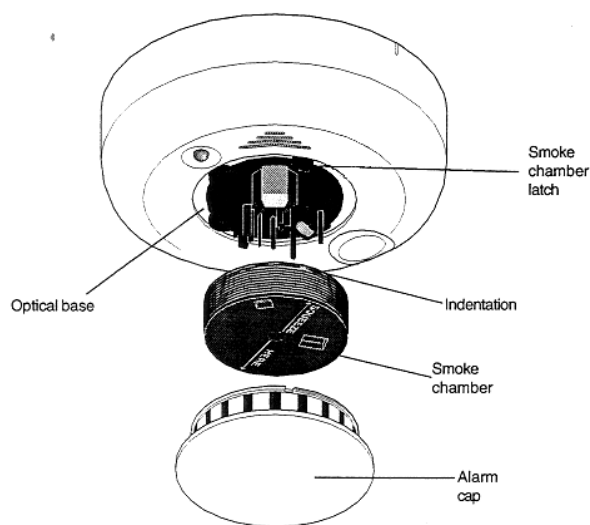


Figure 7 - Alarm Parts

Maintaining the Alarm

The Smoke Detectors are designed for easy field service and maintenance. When installed and used properly, they require minimal maintenance.

The smoke alarm should be tested weekly. See *Testing the Alarm Sensitivity* and *Smoke Testing the Alarm*.

When a Smoke Detector requires maintenance, it extinguishes its LED and initiates the external signals described in the following table.

Signal	Maintenance required
Maintenance alert (LED OFF)	Detector failed to power up on self test. Perform a sensitivity test. See <i>Testing the Detector Sensitivity</i> . If the problem persists, replace the detector.
Low battery	Batteries in the detector are low. Replace the batteries.

FIRE PREVENTION AND ESCAPE

The purpose of an early warning smoke alarm is to detect the presence of fire in its early stages and sound an alarm giving the occupants time to exit the premises safely.

Avoid Fire Hazards

No detection device can protect life in all situations. Therefore, safeguards should be taken to avoid potentially dangerous situations as follows:

1. **Do not** smoke in bed
2. **Do not** leave children home alone
3. **Never** clean with flammable liquids such as gasoline.
4. Properly store materials, Use general good housekeeping techniques to keep your home neat and tidy. A cluttered basement, attic or other storage area is an open invitation to fire.
5. Use combustible materials and electrical appliances carefully and only for their intended uses. **Do not** overload electrical outlets.
6. **Do not** store explosive and/or fast burning materials in your home.

Even after proper precautions have been taken, fires can start. **Be prepared.**

In Case of Fire

In the event of a fire, you should do the following: Leave immediately. Don't stop to pack or search for valuables.

In heavy smoke, hold your breath and stay low crawl if necessary. The clearest air is usually near the floor. If you have to go through a closed door, carefully feel the door and door knob to see if undue heat is present. If they seem cool, brace your foot against the bottom of the door with your hip against the door and one hand against the top edge. Open it slightly. If a rush of hot air is felt, slam the door quickly and latch it. Unvented fire tends to build up considerable pressure. Be sure all members of the household realizes and understands this danger.

Use your neighbor's phone or a street fire alarm box to call the fire department. The job of extinguishing the fire should be left to the professionals.

Be Prepared

Practice the following steps to prepare you and your family in the event of a fire:

1. Perform fire drills regularly. Use them to assure recognition of an alarm signal.
2. Draw a floor plan and show two exits from each room. It is important that children be instructed carefully, because they tend to hide in times of crises.
3. Establish one meeting place outside the home. Insist that everyone meet there during an alarm. This will eliminate the tragedy of someone reentering the house for a missing member who is actually safe.
4. If you have children and/or physically challenged people residing in your household, use window decals to help emergency personnel identify the sleeping quarters of these individuals.

WARNING!

Smoke alarms CANNOT provide warnings for fires resulting from explosions, smoking in bed or other furniture, ignition of flammable liquids, vapors and gases, children playing with matches or lighters.

Warranty

RISCO Group and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 24 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by the Seller, Seller can not guarantee the performance of the security system which uses this product. Seller's obligation and liability under this warranty is expressly limited to repairing and replacing, at Seller's option, within a reasonable time after the date of delivery, any product not meeting the specifications.

Seller makes no other warranty, expressed or implied, and makes no warranty of merchantability or of fitness for any particular purpose.

In no case shall seller be liable for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever.

Seller's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any person's injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery or fire without warning, but is not insurance or a guaranty that such will not occur or that there will be no personal injury or property loss as a result.

Consequently seller shall have no liability for any personal injury, property damage or loss based on a claim that the product fails to give warning. However, if seller is held liable, whether directly or indirectly, for any loss or damage arising from under this limited warranty or otherwise, regardless of cause or origin, seller's maximum liability shall not exceed the purchase price of the product, which shall be complete and exclusive remedy against seller.

No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week.

Caution Notice

This device complies with U.S. FCC Part 15 and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

This device may not cause interference, and This device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by RISCO group may void the user's authority to operate this equipment.

The communication quality of this unit may be affected by its surrounding environment. Nearby electrical equipment may interfere with its normal operation. The operation of this unit must, therefore, be tested at each installation since its transmission quality may vary as a result of operational conditions.

Simultaneous transmissions from two different units may cause message interference resulting in loss of information.

WARNING! LIMITATIONS OF SMOKE ALARMS

Wireless smoke alarms are very reliable, but may not work under all conditions. No fire alarm provides total protection of life or property. Smoke alarms are not a substitute for life insurance.

Smoke alarms require a source of power to work.

This smoke alarm will not operate and the alarm will not sound if batteries are dead or not installed properly.

Smoke alarms may not be heard. A sound sleeper or someone who has taken drugs or alcohol may not awaken if the alarm is installed outside a bedroom. Closed or partially closed doors and distance can block sound. This alarm is not designed for the hearing impaired.

Smoke alarms may not always activate and provide warning early enough. Smoke alarms only activate when enough smoke reaches the alarm. If a fire starts in a chimney, wall, roof, on the other side of closed doors, or on a different level of the property enough smoke may not reach the alarm for it to alarm.

SMOKE ALARMS ARE A SIGNIFICANT HELP IN REDUCING LOSS, INJURY AND EVEN DEATH. HOWEVER, NO MATTER HOW GOOD A DETECTION DEVICE IS, NOTHING WORKS PERFECTLY UNDER EVERY CIRCUMSTANCE AND WE MUST WARN YOU THAT YOU CANNOT EXPECT A SMOKE ALARM TO ENSURE THAT YOU WILL NEVER SUFFER ANY DAMAGE OR INJURY.

Specifications

Voltage	2 X 3VDC	Operating temperature	40°-100°F (4.4°-37.8°C)
Typical average standby current	25µA	Operating humidity	0-95% non-condensing
Typical test current	2mA	Color	White
Typical alarm current	70mA	Alarm dimensions	5.5" x 2.3" (14cm x 5.6cm)
Battery life	1year (min)	Base dimensions	4.88" x 0.38" (12.3cm x 0.95cm)
Battery type	3V lithium, Duracell® DL123A, MN1500 Sanyo® and Panasonic® CR123A Eveready® Energizer E91	Drift compensation adjustment	0.5%/ft. max
Low battery threshold	Low battery signal at 2.70V	Marking	CE
Sounder	85dB at 10 feet (3.3m)	Listings (not including RF transmitter)	UL217, CSFM
Low battery beep rate	1 every 30 sec. + 2 sec.	Radioactivity	Contains No radioactivity
Sensitivity	2.3%+0.8%/ft	Transmitter Characteristics:	
		Supervision Transmission:	Every 65 min.

In order to continue improving its product, RISCO Group reserves the right to change specifications and/or designs without any prior notice.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance, RISCO Group could void the user's authority to operate the equipment.

FCC NOTE (for RWT30S433USA)

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (RISCO Group) could void the user's authority to operate the equipment.

This equipment (RWT30S433USA) has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- (1) Reorient or relocate the receiving antenna.
- (2) Increase the separation between the equipment and receiver.

Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance, RISCO Group could void the user's authority to operate the equipment.

FCC ID (For RWT30433USA): JE4RWT30S433

Ordering Part Numbers

RWT32S86800A	868.65 MHz wireless smoke detector
RWT30S433USA	433.92 MHz wireless smoke detector, FCC Approved

Contacting RISCO Group

RISCO Group is committed to customer service and product support. You can contact us through our website (www.riscogroup.com, www.riscogroup.co.uk) or as follows:

United Kingdom

National Sales: 0870 60 510000
Tel: +44-161-655-5500
sales@riscogroup.co.uk
technical@riscogroup.co.uk

Italy

Tel: +39-02-66590054
info@riscogroup.it
support@riscogroup.it

Spain

Tel: +34-91-490-2133
sales-es@riscogroup.com
support-es@riscogroup.com

France

Tel: +33-164-73-28-50
sales-fr@riscogroup.com
support-fr@riscogroup.com

Belgium

Tel: +32-2522-7622
sales-be@riscogroup.com
support-be@riscogroup.com

Switzerland

Tel: +41-27-452-24-44
sales-ch@riscogroup.com
support-ch@riscogroup.com

USA

Toll Free: 1-800-344-2025
Tel: +305-592-3820
sales-usa@riscogroup.com
support-usa@riscogroup.com

Brazil

Tel: +55-11-3661-8767
sales-br@riscogroup.com
support-br@riscogroup.com

China

Tel: +021-52-39-0066
sales-cn@riscogroup.com
support-cn@riscogroup.com

Israel

Tel: +972(0)3-963-7777
info@riscogroup.com
support@riscogroup.com

All rights reserved.

No part of this document may be reproduced in any form without prior written permission from the publisher.

