

Intradoor, Inc

**User's Manual
Railmaster Sliding Door Controller
(SDC)**

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User's Guide

To be used by

This user's guide is to be used by anyone who is to perform any work with or on the Railmaster. Work in this context means: Installation, Setting Up, Changing any settings on the Railmaster, Using the Railmaster in any way, Performing any service or repairs on the Railmaster.

Minimum level of knowledge and experience

The person who is to perform any work with or on the Railmaster must have enough technical knowledge and experience to perform these actions safely. He or she is knowledgeable with the use of a PDA (Personal Digital Assistant), and he or she is trained for the installation of the Railmaster by the manufacturer.

Clues for the use of this manual

The user of this manual must at all times comply with any safety precautions in this manual in addition to any general safety precautions and common sense. The failure to follow these precautions may lead to dangerous situations for the user and/ or others.

Explanation of terminology

- Attention!** -Additional information or a possible problem
- Warning!** -Failure to carefully follow the manual's instructions may cause personal injury and/ or damage to the machine
- Danger!** -Mortal danger, threat of loss of life

Pictograms

The following pictograms appear on the Railmaster:

Dangerous Electric Current!

Danger! (Only on externally sliding doors)



1. Foreword

The function of the Railmaster

The Railmaster is an operating system for automatic opening and closing of doors in residences, health care centers and offices. Opening the door can happen using several manual or automatic sensors. Closing will take place after a certain predetermined (programmable) time.

The Railmaster can also be connected to a centralized fire alarm system. In case of a fire the door that is controlled by the Railmaster can fulfill a role as fire door. To prevent blocking an escape route, the door, controlled by the Railmaster can always be opened manually, whether or not there is electrical current.

Unprescribed Use

The Railmaster is not suitable for use to open exterior doors

The Railmaster is not suitable for use in an industrial environment

The Railmaster is not suitable for use in an area with danger of explosion

2. Technical Specifications

Description:	Automatic Sliding Door Controller
Type:	Railmaster
Area of Application:	Pocket-, Wall-mount-, Bypass- and Multi-pass doors
Controls:	Manual contacts, Contact mats, Manual remote controls, RF remote controls, Central controls, etc.
Extra functions:	Locks, Fire Doors
Environmental Influences:	
-Temperature:	5 °C – 40 °C (41F – 104F)
-Maximum Humidity:	90% at 20 °C (68F), 50% at 40 °C (104F)
Electric Specifications Motor:	
-Voltage:	24 VDC
-Amperage:	6 A
-Power Supply Connection:	VDS 1,5 mm ² ; VMDS 1 mm ²
-Non-operational Wattage:	± 0,5 Watt
-Operational Wattage:	± 145 Watt
Motor:	
-Type:	Valeo GPMG 404
-RPM:	160 RPM.
Performance Specifications:	
-At 160 RPM:	max. 0,3 m/s; adjustable in 5 steps
-At 540 RPM:	max. 0,8 m/s; adjustable in 5 steps
Dimensions:	
-Driving Unit:	160 x 90 x 90 mms.
-Turning Wheel Unit:	150 x 45 x 45 mms.
-Door Mounting Unit:	90 x 90 x 5 mms.
Weight Specification:	
-Maximum Door Weight:	100 kg (220 lbs.)
Sensor Specifications:	
-Manual sensors (sensor 1 and 2):	Potential Free Contact

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-Fire Alarm Sensor (sensor 3):
-RF sensor:

Remarks:

Potential Free Contact
434 MHz Manual Emitter

When several manually controlled wired sensors control one door, all sensor contacts can be connected to work parallel.

Driving Belt:

PU / Aramite

Maintenance Intervals:

The Railmaster SDC is completely maintenance free.

Settings:

Freely programmable with Personal Digital Assistant (PDA) and software package SD Toolkit

IP-classification:

-Controls:
-Power Supply 110 VAC – 24 VDC:

IP 00
IP 44

Applied Normatives:

-Driver:

-Controls:

-Power Supply 110 VAC – 24 VDC:

-Pictograms:

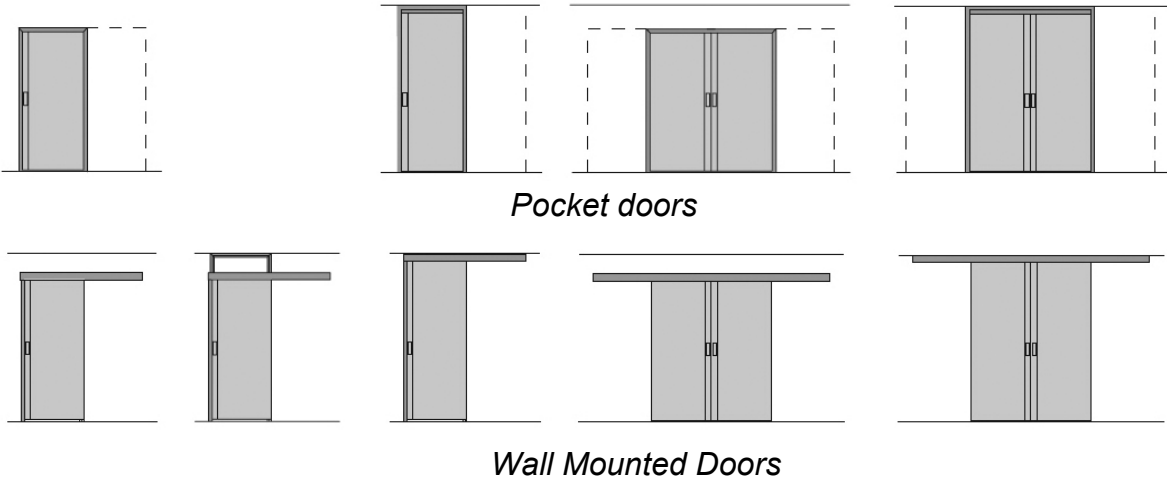
EN 294
EN 349
EN 811
EN 60204-1
EN 61000-6-1
EN 61000-6-3
EN 55022
EN 61000-3-2-3
EN 61000-4-2, 3, 5, 6, 8, 11
ENV 50204
EN 55024
NEN 3011

Sound Emission:

The level of produced sound pressure created by the Railmaster SDC is less than 70 dB(A).

Door Types:

The Railmaster SDC can be applied with the following door types:



Picture 1 – Possible Door Types

3. Precautions and safety instructions

The installer of a Railmaster system

The installer of a Railmaster system possesses a minimum of relevant technical education at WEB level 2 and has sufficient experience. Installation of a Railmaster system may only be executed by a qualified installer that has received education from the manufacturer.

The maintenance technician of the Railmaster system

The maintenance technician of the Railmaster system possesses a minimum of relevant technical education at WEB level 2 and has sufficient experience. Repairs of a Railmaster system may only be executed by a qualified installer that has received education from the manufacturer.

Assembly in wet spaces (Bathrooms)

When a Railmaster system is assembled to control an entrance for (wet) bathrooms, the printboard **MUST NOT** be placed in zone 0. When using the 230 VAC – 24 VDC power supply, the power supply **MUST NOT** be placed in zone 0 or 1.

Ignoring the following safety instructions can be of Mortal Danger!

Mortal Danger!

The Railmaster system uses a 230 VAC current. Any maintenance or repair has to happen when the current is off. The system needs to be unplugged. Any repair or maintenance on the system can be of mortal danger when the power supply is still connected to any electrical current

Warning!

Before the installer of the Railmaster releases the system for general use, the installer needs to test the system and make sure the system is installed properly and works correctly. Ignoring this safety instruction can cause dangerous situations and harm to any normal user.

Warning!

Prohibit children from playing with the control buttons of the Railmaster system. Do not let children play with the remote controls of the Railmaster system. Ignoring these safety instructions may cause dangerous situations and harm to any normal user.

4. Description of the Railmaster

4.1 Operation

The normal position of a door that is controlled by the Railmaster SDC is a closed position. After operating the sensor, the door will open at high speed. At a moment that is determined during installation, the door will slow down to low speed and stops when the door is opened completely. The door will stay open for a predetermined period, and will automatically close. The door will start closing at high speed and will slow down at a predetermined moment to low speed until it is fully closed.

4.2 Controls

The Railmaster SDC can be controlled in four different ways:

- Using a **manually controlled contact**; This contact can be activated using a button.
- Using a **person detection system**; The presence of persons can for instance be detected using a radar or an IR-sensor.
- Using a **RF-sensor**.
- Using a **fire alarm system**; When the Railmaster SDC is connected to an activated fire alarm system, the door will automatically close. The door can still be controlled using the RF manual emitter, and simple manual control is also still possible

4.3 Safety Measures

The Railmaster SDC is equipped with several safety measures which guarantee that with normal use of the door, no situations will arise where people can get hurt. All safety measures are automatic.

Warning!

When the power supply is connected to the electric point, the printboard is under electric current. Touching the track side of the printboard with a conducting part can cause a short circuiting which can damage the printboard.

5 Testing

When the instructions as described in paragraphs 5.1 and 5.2 are executed, the Railmaster can be tested and used according to the following steps.

1. Close the door.
2. Move the driving belt with the mounting unit in such a way that the 50 mm position sticker, which detects the closing position, is in front of the sensor.
3. Mount the mounting unit on the door.
4. Press the reset button of the printboard for 3 seconds.
5. Operate a sensor or the RF manual emitter to open the door. The door will slowly open entirely and then stop. After the programmed amount of time that the door is open, the door will again close.
6. Make sure the door closes properly. If the door does not close properly follow the guidelines under paragraph 5.4.
7. Build the framing around the door opening.
8. The door is ready for use.

5.1 Tuning

- Follow the following guidelines if the door is not properly closed:
 - Turn off the power supply of the Railmaster by pulling the plug from the socket.
 - Measure the distance that the door still has to travel from where it is to where it is fully closed.
 - Slide the door open far enough to make sure that the 50 millimeter position sticker, which detects the closed position, is accessible.
 - Mark the spot where the sticker is.
 - Remove the sticker from the driving belt.
 - Add the distance between the 30 millimeter position sticker and the marked position to the distance that the door still has to travel to close completely.
 - Attach the position sticker to the belt on this spot.
 - Put the plug of the power supply back in the socket.
 - Operate the door with one of the sensors to make sure the door closes properly and completely.

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- In case the door still doesn't close properly or completely, repeat these steps until it does.

- Follow the following instructions if the door runs into the frame at slow speed:
 - Turn off the power supply of the Railmaster by pulling the plug from the socket.
 - Slide the door open far enough to make sure that the 50 millimeter position sticker, which detects the closed position, is accessible.
 - Mark the spot where the sticker is.
 - Remove the sticker from the driving belt.
 - Attach the position sticker a little closer to the 30 millimeter position.
 - Put the plug of the power supply back in the socket.
 - Operate the door with one of the sensors to make sure the door closes properly and completely.
 - In case the door still doesn't close properly or completely, repeat these steps until it does.

6. Use

6.1 Normal Use

The normal position of a door that is controlled by the Railmaster is a closed position. After operating the sensor, the door will open at high speed. At a moment that is determined during installation, the door will slow down to low speed and stops when the door is opened completely. The door will stay open for a predetermined period, and will automatically close. The door will start closing at high speed and will slow down at a predetermined moment to low speed until it is fully closed. When the door comes in contact with an obstacle during opening or closing, it will change direction and start moving at low speed.

6.2 Manual Control

Regardless of the position of the door and the presence of electrical current, it will always be possible to open and close the door manually.

7. Maintenance and Cleaning

The Railmaster SDC is completely maintenance free. Once a year the connection of the door assembler needs to be checked. The Railmaster SDC and the power supply need to be checked regularly conform the demands of NEN 3140. The cleaning of the complete automatic sliding door system needs to be executed conform the instructions of the door supplier.

8. Switching Off

The Railmaster SDC needs to be switched off by pulling the plug from the socket. The door can still be operated manually.

9. Deconstruction, Demolition, Storage and Transport

9.1 Deconstruction

The Railmaster can be deconstructed using the following guidelines:

1. Remove the Railmaster from any current by pulling the plug of the power supply from the socket. If the power supply is connected directly to the wiring in the wall, the connection clamps and the wiring need to be disconnected from the power supply.
2. Disconnect the door from the mounting unit.
3. Remove the door following the guidelines of the door supplier.
4. Remove the framing around the door opening.
5. Disconnect the wiring from the printboard (power supply, sensor(s), fire alarm connections).
6. Unscrew the Railmaster and remove the Railmaster from the door frame.

9.2 Demolition

For demolition of the Railmaster the following needs to be done:

1. Execute steps 1 – 6 from paragraph 9.1.
2. Remove the power supply.
3. If needed the Railmaster can be taken apart further into parts.

9.3 Storage

Storage of new and reusable Railmasters has to find place in spaces that comply with the following environmental specifications:

- temperature: 5 °C – 40 °C (41 F – 104 F)
- maximum humidity: 90% at 20 °C (68 F), 50% at 40 °C (104 F)

9.4 Transport

Transport of the Railmaster has to be done in such a way that there is no chance of damage.

10. Malfunctions and Repairs

10.1 Malfunctions

- **The door does not close completely**

Follow the next steps to solve this malfunction:

- Turn off the power supply of the Railmaster by pulling the plug from the socket;
- Operate the door with one of the sensors to make sure the door closes properly and completely.
- In case the door still doesn't close properly or completely, repeat these steps until it does.
- Measure the distance that the door still has to travel from where it is to where it is fully closed;
- Slide the door open far enough to make sure that the 50 millimeter position sticker, which detects the closed position, is accessible;
- Mark the spot where the sticker is;
- Remove the sticker from the driving belt;
- Add the distance between the 30 millimeter position sticker and the marked position to the distance that the door still has to travel to close completely;
- Attach the position sticker to the belt on this spot;
- Put the plug of the power supply back in the socket;

- **The door runs into the frame during opening or closing**

Follow the next steps to solve this malfunction:

- Turn off the power supply of the Railmaster by pulling the plug from the socket.
- Slide the door open far enough to make sure that the 50 millimeter position sticker, which detects the closed position, is accessible.
- Mark the spot where the sticker is.
- Remove the sticker from the driving belt.
- Attach the position sticker a little closer to the 30 millimeter position.
- Put the plug of the power supply back in the socket.
- Operate the door with one of the sensors to make sure the door closes properly and completely.

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- In case the door still doesn't close properly or completely, repeat these steps until it does.

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For all other malfunctions the manufacturer needs to be contacted.

10.2 Repairs

For repairs of the Railmaster and for replacing the driving belt the manufacturer needs to be contacted.

In case the Railmaster comes supplied with a **power supply** from another manufacturer, replacing the **wiring** of the **power supply** may only be done by qualified personnel.

11. Environment and Waste

The Railmaster does not contain dangerous materials. All parts of the Railmaster can be recycled or handled as normal waste.