Installation and operating manual
Roller blind multifunction receiver for flush mounting

EN

Réf. 10020063 **SE: LSS10020063**

1. General

1.1 Utilisation

The roller blind receiver **O$_2$LINE *10020063*** is used to receive radio signals originating from **O$_2$LINE** switch transmitters. The outputs UP ↑ and DOWN ↓ are used to control a roller blind, a blind or a patio blind equipped with a limit switch (230V/50Hz motor).
Before any use, the transmitters must be allocated to a receiver (maximum 32 transmitters). Each sensor or transmitter can control an unlimited number of receivers.
Note: Read the operating manual carefully before initial use.

1.2 Guarantee terms

This operating manual is an integral part of the device and our guarantee terms. It must always be delivered to the user. We reserve the right to modify the technical design of these devices without warning. **TRIO$_2$SYS products are manufactured and their quality checked by making use of the latest technologies and taking into account the applicable national and international directives.** If nevertheless a fault arises, **TRIO$_2$SYS** undertakes to remedy the default as follows, without prejudicing the rights of the end customer that arise from the sales contract with his reseller:
If the event of exercising of a legitimate and regular right, **TRIO$_2$SYS**, may at its sole discretion, rectify the device fault or supply a fault-free device. Any claim beyond this and all claims for consequential damages are excluded.
A legitimate fault exists if the device cannot be used at the time of delivery to the end customer because of a design or manufacturing defect or if its practical use is severely limited. The guarantee is void in cases of natural wear and tear, incorrect use, incorrect connection, where the device has been repaired or external influence. The period of guarantee is 24 months (from the date of invoicing). French law applies to the regulation of guarantee rights.

1.3 Recycling of the device

To recycle the device, conform to the legislation and standards in force in the country of use.

2. Safety

WARNING! Risk of electric shocks! (See UTE C18-150) The device contains live internal components. Risk of wounds or injuries if contact occurs! All work on the mains supply network and the device must only be carried out by authorised professional technicians.
• Before carrying out any work, switch-off and isolate the device.
• Secure the device to prevent it being switched back on.
• Check the device is in a zero-volts state.
• Carefully reclose the casing before reconnecting to mains power.

Observe the following points:
• The laws, standards and directives in force.
• Best practice at the time of installation
• The device operating manual.
• An operating manual can only give general instructions. They must be interpreted in the context of a specific installation.
The device is intended solely for use conforming to its purpose. Any repairs or modifications by the user are forbidden! Do not use with other devices the operation of which could endanger people, animals or property.

3. Technical characteristics

General characteristics	
Transmission frequency	868.3 MHz
Power supply	230V~ / 50 Hz
Terminal capacity	1.5^2 max rigid
Power supply line fusing	Circuit breaker of 10A max.
Types of load	Inductive 600 VA
Ambient temperature	from -10°C to +45°C
Storage temperature	from -40°C to +85°C
Testing specifications	IEC 60669-2-1
Conformity	CE ; KEMA/KEUR
Degree of protection	IP 20
EEP Profiles	F6-02-01 / F6-03-01 / F6-10-00 / D5-00-01 A5-06-01 / A5-06-02 A5-08-01 to A5-08-03 A5-13-01 / A5-30-02 / A5-38-08 32-02-01 / A5-3F-00 A5-11-03 / A5-30-02

Range in buildings	
Masonry	20m, through 3 walls at most
Reinforced concrete	10m, through 1 wall / ceiling at most
Plasterboard / Wood	30m, through 5 walls at most

Note: The signal strength between the transmitter and the receiver decreases as the distance increases. Where there is a line of sight connection, the range is approximately 30 m in corridors and 100 m in large workshops or halls. The range can be increased with an **O$_2$LINE** repeater.

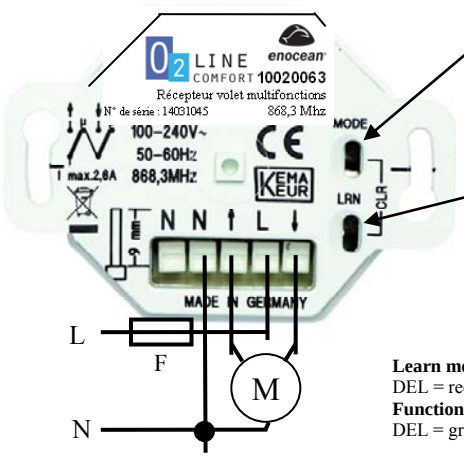
4. Installation and initial use

4.1 Safety instructions

The installation and initial use must only be performed by authorised qualified electricians. The electrical installation must be placed off-load before connecting it to the mains (230V~/50Hz). Conform to the legislation and standards in force in the country of use.

4.2 Installation

• NEVER install the receiver in a metal casing or in the immediate vicinity of large metallic objects.
• Installation on the ground or close to the ground is not recommended
• For a wall, the installation must use a pattress box of at least 40 mm depth.
• Place the receiver in its box and screw in.
• Protect the power supply line with an automatic circuit breaker (**F=10A max**.).



MODE Button (with DEL)
Delete all the transmitters and associated parametrisation

LRN Button (with DEL)
Delete all the transmitters and associated parametrisation

Learn mode :
DEL = red
Function parametrisation :
DEL = green or orange

Note : the two N terminals are internally linked.

4.3 Initial use

• Connect power to the electrical installation after it has been installed.
• Program the transmitter on the receiver (see point 5).

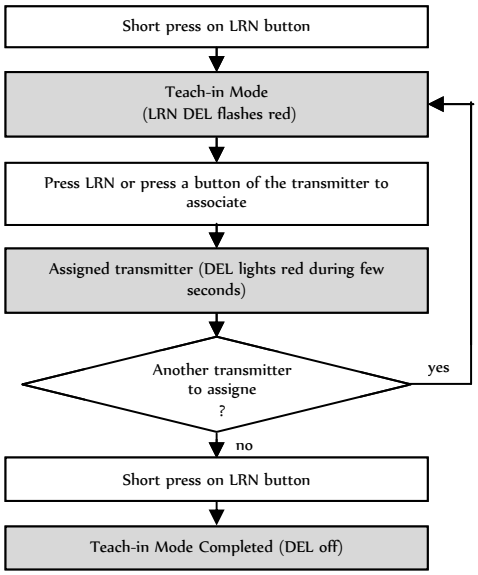
5. Programming

For programming the receiver must be connected to the mains. The programming is conserved during a power failure.
A small insulated screwdriver is used to set the **MODE and LRN** buttons.

5.1 Programming mode

N.B.! A transmitter must not be further away than 5 m from the receiver in learn mode. The receiver has a limited range!

Teach-in procedure



Note : When no button is pressed, the teach-in mode will end after 30s.
The activation of the window handle is obtained by a movement from opening towards closure.

All the switches are programmed by default with function 1.

5.2 Clearing of one or more of the programmed transmitters :

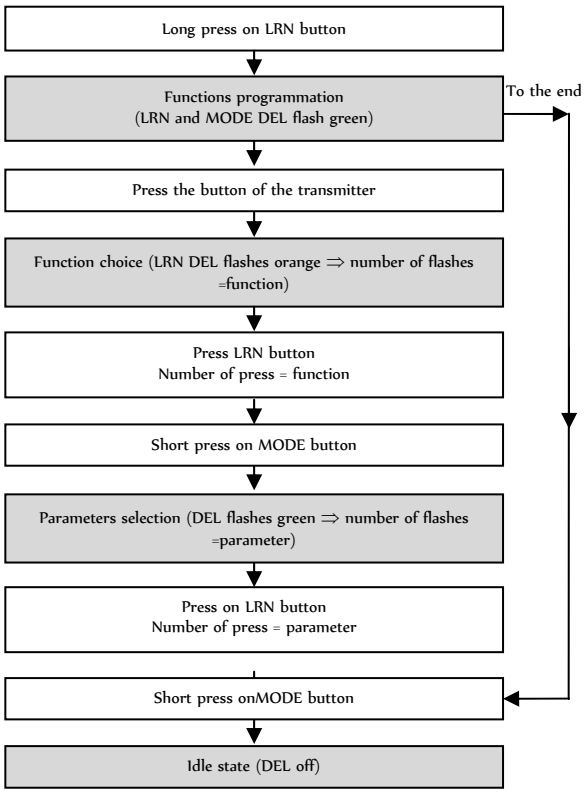
5.2.1 Clearing of one transmitter :

To clear one already programmed transmitter, do the learning procedure (Cf. 5.1.) on this transmitter again.

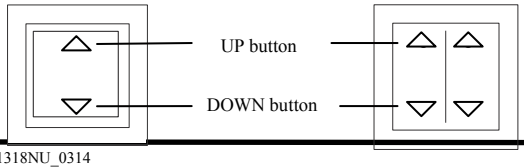
5.2.2 Clearing of all transmitters :

• Long press on the MODE and LRN buttons simultaneously (red DEL on).
• All the transmitters are cleared and the receiver comes back in the idle state (DEL off).

5.3 Programming functions :



5.3.1 Switches associated functions :



Function N° and name	Transmitter		Parameters	
	Button	attribution	N°	Description
1- Blinds	Short press △	UP or Stop	/	
	Short press ▽	DOWN or Stop	/	
	Long press △	UP during a time fixed by parameters 1 to 10	1	120s duration
			2	10s duration
			3	30s duration
			4	60s duration
			5	90s duration
	Long press ▽	DOWN during a time fixed by parameters 1 to 10	6	3mn duration
			7	5mn duration
			8	10mn duration
Note 1			9	30mn duration
			10	60mn duration
2- Roller blinds	Press △	UP during a time fixed by parameters 1 to 10	1	120s duration
			2	10s duration
			3	30s duration
			4	60s duration
			5	90s duration
	Press ▽	DOWN during a time fixed by parameters 1 to 10	6	3mn duration
			7	5mn duration
			8	10mn duration
			9	30mn duration
			10	60mn duration
3- Remote control switch	Press (parameters 1 to 3)	Automatic working : UP, DOWN or Stop	1	press △
			2	press ▽
			3	press △▽
4- control by pressing a button	Press △	UP	/	(60 mn duration)
	press ▽	DOWN	/	(60 mn duration)
	Release △▽	Stop	/	

Note 1 : standard function after the learn of a switch transmitter.

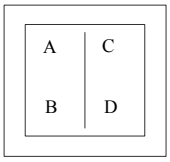
5.3.2. Locking function

Function N° and name	Transmitter		Parameters	
	Button	attribution	N°	Description
5- Locking	Press △	Parameters 1 or 2 unlocked	1	Switch locked
	Press ▽	Parameters 1 or 2 locked	2	Functions 7 and 8 locked
	Window sensor or handle	Lock / Unlock	3	Lowering locked if the window is opened

The locking function is used to protect the system or the user, or simply to deactivate temporarily some functionalities. It is used in association with other functions. It can lock a switch, deactivate automatic functions (functions 7 and 8). It is advisable to use no more than one radio transmitter to lock or unlock the system. By default the locking functions is disabled.

In association with a window sensor or a window handle, the locking function is automatic : when the window is detected opened, the roller blind will not be able to go down. When a window handle or sensor is associated to the receiver, it will be in that parameter by default.

5.3.3. Scenes configuration function



The scenes configuration function is used to store blind or roller blids positions in 4 settings (A to D) and call them back.
Procedure : assign the transmitter to the receiver and set the function 6 with desired parameter. Set the required direction of the blind or roller blind with the local radio transmitter, then press the A-D button during more than 2 seconds to store the scene. To call back one scene, short press the corresponding button (A to D).

Function N° and name	Transmitter		Parameters	
	Button	attribution	N°	Description
6- Scene configuration	Short press ▲▼	Scenes A-D called up	/	
	Long press ▲▼	Scenes A-D stored	/	
	Scene A : ▲ Scene B : ▼ Rising time : 60mn	DOWN during a time fixed by parameters 1 to 5	1 2 3 4 5	5s duration 10s duration 15s duration 30s duration 90s duration
	Scene C : ▲ Scene D : ▼ Rising time : 60mn	DOWN during a time fixed by parameters 6 to 10	6 7 8 9 10	5s duration 10s duration 15s duration 30s duration 90s duration

5.3.4. Automatic functionalities

The parameter 1 of function 7-automatic can be used with all types of transmitter : switches, radio timer…
These transmitters must be associated to other switches programmed with lock function (§5.3.2).

The parameter 2 works only with a radio timer associated to a twilight sensor. In the morning, motors move UP after the timer has switched on **AND** the twilight sensor has transmitted an OFF signal. In the evening, motors move DOWN when the timer is switched ON **OR** when the twilight sensor transmits an ON signal. The radio timer can be activated / deactivated via a switch with locking function (§5.3.2).

Function N° and name	Transmitter		Parameters	
	Button	attribution	N°	Description
7- automatic	Short press ▲	UP or Stop	1	Automatic working with radio transmitters
	Short press ▼	DOWN or Stop		
	Long press ▲	Rising time : 60mn		
	Long press ▼	Lowering time : 60mn		
		UP (day)	2	Timer with twilight sensor
		DOWN (night)		
8- automatic			1	Wind
			2	Rain
			3	Wind, rain
			4	Wind, rain, sun
			5	Wind, rain, twilight
			6	Wind, rain, sun, twilight
			7	Sun
			8	Twilight
			9	Sun, Twilight

The function 8 is used to manage the system automatically through the wind, sun, rain sensor detected changes.

Each sensor means a different working of the system :

- wind and rain sensors associated : mainly used for blinds. When one **OR** both sensors transmit an ON signal, the motor moves UP and is locked.

- Capteurs de pluie et de vent associés : principalement utiles pour les stores. Quand le signal de vent **OU** de pluie est actif, le store se ferme et est verrouillé. The manual lowering is then no more possible. When rain sensor AND wind sensor send an OFF signal, the motor is unlocked again after a timer of 2 minutes.

- Sun sensor : mainly used for blinds. When the sensor transmits an ON signal, the motor moves DOWN. When the sensor transmits an OFF signal, the motor moves UP. To avoid inconvenient raising and lowering movements when the sun sensor transmits ON/OFF signals, a 10 minutes timer is integrated between each state.

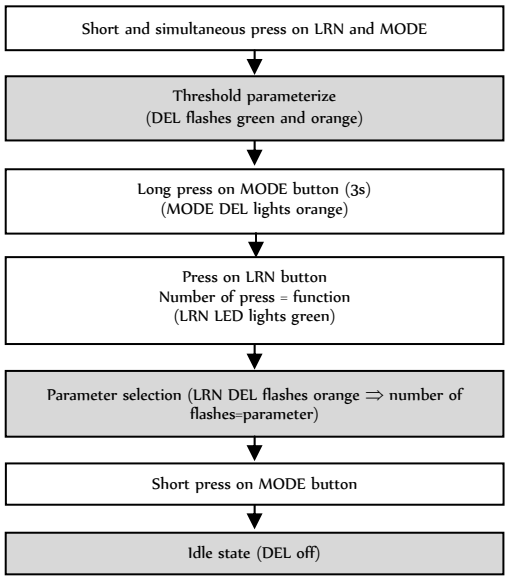
- Twilight sensor : When the sensor transmits an ON signal, the motor moves DOWN. When the sensor transmits an OFF signal, the motor moves UP. The twilight sensor works with a 2 minutes timer. To move DOWN, the wind and rain sensors must transmit OFF signals.

By default, a weather station will be configured in parameter 6 of function 8, and a light sensor will be configured in parameter 8 of function 8.

The parameterising of detection thresholds is presented in section §5.3.5.

5.3.5. parameterising detection threshold of function 8 :

Parameterising procedure :



Parameters :

Variable	Description	Parameter	
		N°	Description
Sun	When the light value isover the upper limit, the motor moves DOWN. Under the lower limit the motor moves UP.	1	25 – 75 klx
		2	50 – 100 klx
		3	75– 125 klx
		4 *	25 – 50 klx
		5	10 – 40 klx
		6	10 – 25 klx
Sun sensor	Parameter selection for systems with several sensors	7	EAST sensor
		8 *	SOUTH sensor
		9	WEST sensor
Time duration	The motor moves DOWN during the tim selected by the parameter when the upper light value is excedeed. If there is a position detection, the motor will be positioned regarding the selected value (in %)	10	5s (15%)
		11	8s (20%)
		12 *	10s (25%)
		13	13s (30%)
		14	16s (35%)
		15	20s (40%)
		16	25s (50%)
		17	30s (60%)
		18	40s (70%)
Wind strength	When the measured value is over the upper limit, the motor moves UP and is locked. The motor is unlocked when the measured value is under the lower threshold.	19	3,4 – 5,4 m/s
		20 *	5,5 – 7,9 m/s
		21	8 – 10,7 m/s
		22	10,8 – 13,8 m/s
		23	13,9 – 17,1 m/s
		24	17,2 – 20,7 m/s
Twilight	The motor moves UP when the light value is over the upper limit, and moves DOWN when the light value is under the lower threshold.	25	25 – 75 lx
		26 *	75 – 125 lx
		27	125 – 175 lx
		28	175 – 225 lx
		29	275 – 325 lx
Twilight sensor		30	The motor moves DOWN in the evening
		31	The motor moves UP in the morning
		32 *	The motor moves UP in the morning and moves DOWN in the evening

* : default values

5.3.6 Repeater function :

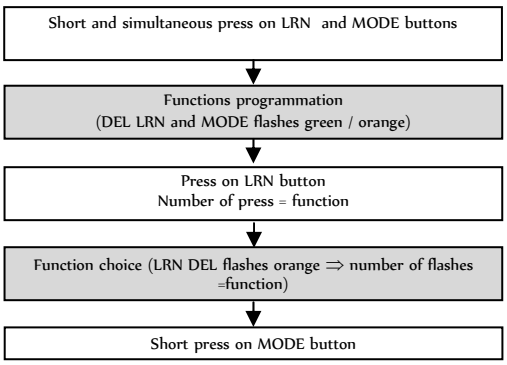
In case of bad reception quality, it can be useful to configure the receiver as a repeater. In the first level function, the radio signal of a transmitter is retrieved by the repeater to the associated receiver. Repeated radio signals are not retrieved.

In the two levels function, the radio signal of a transmitter is retrieved to the receiver through 2 repeaters at most.

⚠ The use of more than two repeaters is counterproductive and may cause collisions between telegrams.

Function N° and name	Description
1-Deactivation	Repeater mode deactivated
2- level 1	One repeater
3- level 2	Two cascaded repeaters

Repeater teach-in procedure :



6. Troubleshooting

6.1 New or existing installation

- Check the circuit breaker, the electrical supply and the load connected to the receiver associated with this sensor (qualified electricians).
- Check the connected load and the connecting cables (qualified electricians).
- If the receiver functions at a shorter distance relative to the sensor, it is subject to interference or used outside the transmission range.
- Search the system environment for changes that could cause the interference (for example movement of metallic cabinets, furniture or partitions).
- Use the sensor or receiver in a more suitable location.
- Clear the receiver and perform a new learn process.

6.2 Automatic activation of the receiver

- The cause may be the activation of a sensor external to the system which has by chance been programmed on the receiver.
- Clear the receiver and perform a new learn process.

6.3 Limitation of the range of the radio signals

- Transmitter/receiver used close to metallic objects or close to materials containing metallic elements. Observe a distance of at least 10 cm.
- Moisture in the materials.
- Devices emitting high frequency signals such as audio and video systems, computers, electronic ballasts or fluorescent tubes. Observe a distance of at least 0.5 m.

6.4 Contacts

E-mail:..... contact@trio2sys.fr

7. Declaration of conformity

These products can be marketed and distributed in the countries of the European Union, Switzerland, Iceland and Norway. **TRIO$_2$SYS** hereby declares that the roller blind receiver for flush mounting ***10020063*** conforms to the base requirements and other applicable requirements of the directive 1999/5/CE referred to as R&TTE.