



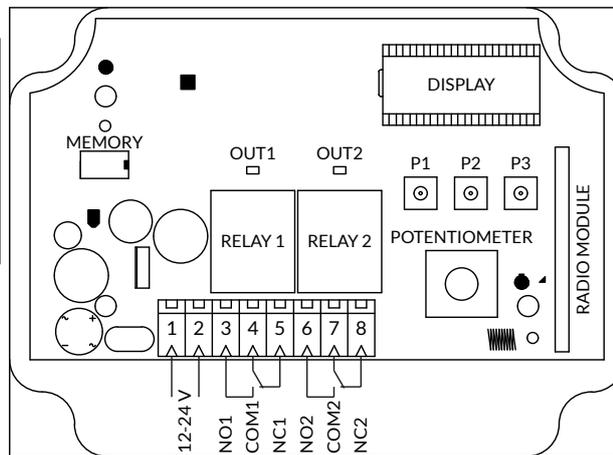
Thank you for choosing this Transmitter Solutions product.
Please read this manual carefully before installing the product.

1 DESCRIPTION

Receiver Rolling Code, 2 channels with dry contact relay output 20A a 12 Vdc. Programming up to 800 transmitters.
Power supply 12-24 Vac/dc with automatic selection of the voltage, frequency 433.92Mhz.

TERMINAL BOARDS

- 1-2: power supply, 12-24 Vdc-Vac
- 3-4: relay 1, N.O. contact.
- 4-5: relay 1, N.C. contact.
- 6-7: relay 2, N.O. contact.
- 7-8: relay 2, N.C. contact.



Code	Rolling Code
Max transmitters	800
Power supply	12-24 Vac/dc
Consumption (12Vdc)	27mA (standby) 110mA (2 relay)
Channels	2 (NO or NC contact)
Frequency	433.92 MHz
Range (in open space)	80-100m*
Relay contact	12A at 12 Vdc
Temperature	-10...55°C

*The range is influenced by the type of transmitter, antenna and radio interferences.

2 PROGRAMMING OF THE TRANSMITTERS

To program the transmitter to the relay 1, follow the following steps:

1. Press briefly the P1 button. The display shows *rRd1*.
2. Press the button of the transmitter you want to memorize. The display shows *donE*.
3. The receiver is still in programming mode and ready for a new transmitter.
4. To exit the receiver from program mode, press briefly the P1 button or wait 10s of inactivity. If it quits by timeout, the display shows the number of transmitters already memorized.

To associate the transmitter to the relay 2, follow the following steps:

1. Press briefly the P2 button. The display shows *rRd2*.
2. Press the button of the transmitter you want to memorize. The display shows *donE*.
3. The receiver waits for a new transmitter.
4. To quit, press briefly the P2 button or wait 10s of inactivity. If it quits by timeout, the display shows the number of transmitters already memorized.

Note: if the transmitter is already memorized, the display shows *Fnd1* (associated to the 1st relay) or *Fnd2* (associated to the 2nd relay) and then it exits from the process.

ATTENTION: a programmed button can not be memorized in both the relays. To change the associated relay, remove the transmitter associated to the button from the memory and then make again the learning process.

NOTE: the programmed button of the transmitter will maintain the associated relay for all the functioning modes.

3 REMOVAL OF THE TRANSMITTERS

To delete all the transmitters from the relay 1, follow the following steps:

1. Press briefly the P1 button.
2. When the display shows *ELr* and the OUT1 led blinks fast for 3s, release the button. The transmitters have been deleted from the relay 1.

To delete all the transmitters from the relay 2, follow the following steps:

1. Press and hold the P2 button.
2. When the display shows C2Lr and the OUT2 led blinks fast for 3s, release the button. The transmitters have been deleted from the relay 2. To delete a single transmitter from the memory, follow the following steps:
 1. Press the P1 or P2 button. The display shows $rAd 1$ or $rAd 2$.
 2. Press the 1st key and the hidden button at the same moment of the transmitter that you want to erase.
 3. When the display shows CLER , release the buttons. The transmitter has been deleted from the memory.

4 CODE TYPE SELECTION

It is possible to select the code type in use on the receiver.

Follow this procedure for the selection:

1. Switch off the power supply.
2. Press and hold at the same moment all the buttons of the receiver. After 5 seconds, OUT1 and OUT2 leds blink:
 - 3 times if the Rolling Code is enable. The display shows $b r o L$.
 - 6 times if the Sawn Rolling Code is enable (Transmitter Solutions 433 MHz + KEELQ® HCS300-301 compatible). The display shows $5RLn$.

When the Sawn Rolling Code is set, a point appears on the display between the 3rd and the 4th digit.

5 MENU

While the receiver is in standby the display shows the selected mode of functioning ($r o d E 1, r o d E 2, r o d E 3, r o d E 4, r o d E 5, r o d E 6$). During the process of a timed command, the display blinks. During a step by step command, as in mode 5 and 6, the display does not blink.

To enter the menu, press briefly the P3 button.

Press briefly the P3 button to move inside the items of the menu and use the POTENTIOMETER to change the parameters.

The receiver saves the parameters when it quits the menu.

MENU	DESCRIPTION	SELECTABLE VALUES min-max	DEFAULT	UNIT
$F U n c t$	FUNCTION Menu for the selection of the functioning mode: 1 - Dual independent outputs. 2 - Switching network. 3 - Vestibule sequencing, type 1. 4 - Vestibule sequencing, type 2. 5 - Latched mode 1. 6 - Latched mode 2.	1 - 6	1	-
$t o n 1$	ACTIVATION TIME FOR RELAY 1	1 - 60	1	s
$t o n 2$	ACTIVATION TIME FOR RELAY 2	1 - 60	1	s
$t d L y$	DELAY TIME BETWEEN THE ACTIVATION OF THE TWO RELAYS	1 - 60	1	s
$P o L E r$	POWER OF THE SIGNAL The display shows the quality of the transmission signal.	BAD - BEST	-	-

5.1 - FUNCTION

By accessing the item $F U n c t$ it is possible to set the functioning mode:

1 - Dual independent outputs: operates as a two channels receiver.

2 - Switching network: also known as a switching network or make/break relay, use this mode with a door operator & lock.

3 - Vestibule sequencing, type 1: to be selected if you want to sequence two doors in both directions, using just one receiver (requires two conductors to the second door).

4 - Vestibule sequencing, type 2: to be selected if you want to sequence two doors in both directions, using two receivers and no wiring between operators.

5 - Latched mode 1: access control application. A transmitter signal programmed into the channel 1 will latch relay 1. While the relay 1 is latched, a transmitter programmed into the channel 2 will activate the relay 2. When the channel 1 is in the off state, the receiver will ignore the channel 2 inputs.

6 - Latched mode 2: freight door application. In this mode a transmitter will active the relay 1 for an adjustable time, then latch the relay 2. The relay 2 stays latched until another transmitter signal is received, then drops out immediately.

5.2 - ACTIVATION TIME FOR RELAY 1

By accessing the item $t o n 1$ it is possible to select the activation time of the relay 1. Use the POTENTIOMETER to set a value between 1 and 60 s.

5.3 - ACTIVATION TIME FOR RELAY 2

By accessing the item $t o n 2$ it is possible to select the activation time of the relay 2. Use the POTENTIOMETER to set a value between 1 and 60 s.

5.4 - DELAY TIME BETWEEN THE ACTIVATION OF THE TWO RELAYS

By accessing the item $t d L y$ it is possible to select the delay time between the activation of the two relays. Use the POTENTIOMETER to set a value between 1 and 60 s.

5.5 - POWER OF THE SIGNAL

By accessing the item $P o L E r$ it is possible to verify the quality of the transmission signal of a transmitter already memorized.

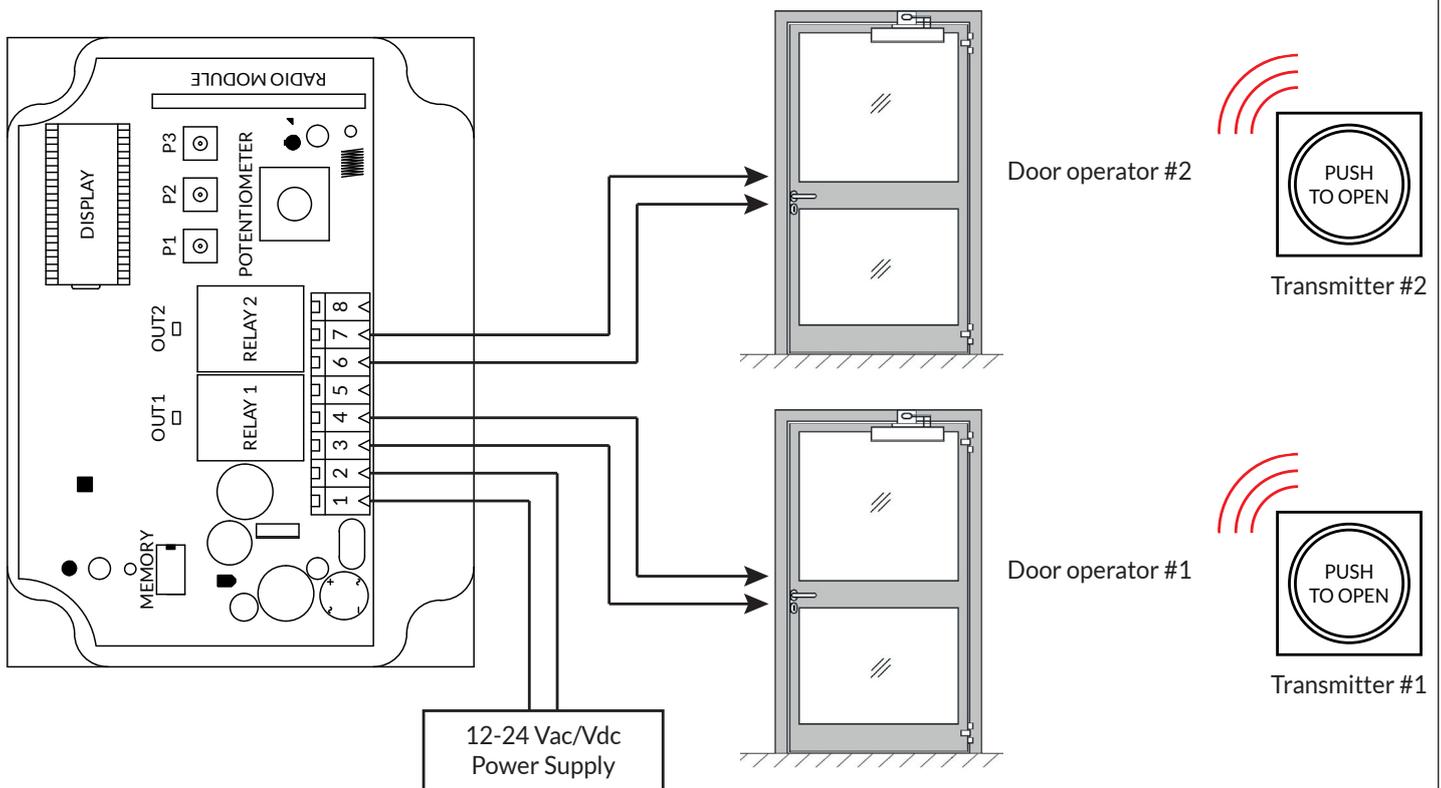
When the display shows $-----$, press the button of the transmitter. The display can show:

- $b r o d$: the signal quality is very low. **With a low signal quality it is suggested that you move the receiver to improve the signal.**
- $b o o d$: the signal quality is good.
- $b E 5 t$: the signal quality is very high.

6 ERROR REPORTING

DISPLAY	ERROR DESCRIPTION
$F1Err$	It appears when there is an error during the erasing of all the transmitters already memorized in the relay 1.
$F2Err$	It appears when there is an error during the erasing of all the transmitters already memorized in the relay 2.
$FErr$	It appears when there is an error during the erasing of all the transmitters already memorized in both the relays.
$FULL$	Memory full
$ErrAd$	It appears when there is an error during the learning of the transmitter.
$ErrE$	Memory error
$ErrEL$	It appears when there is an error during the erasing of a single transmitter already memorized.
$LoVP$	Supply voltage too low.
ini	It appears when the memory is initialized.

8 MODE 1 - DUAL INDEPENDENT OUTPUTS

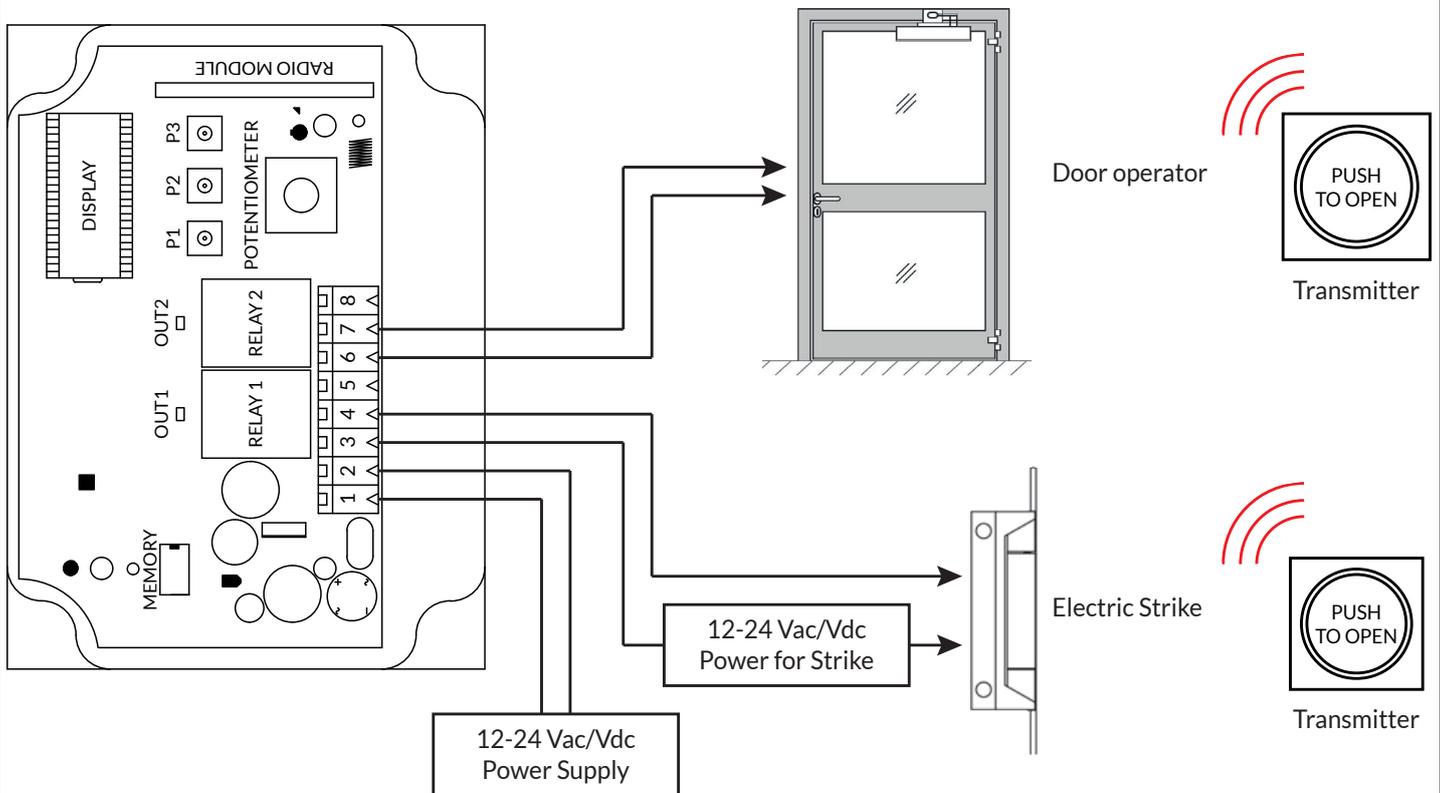


MODE 1 - Dual independent outputs

Program the transmitter 1 on the relay 1. The transmitter 1 activates the relay 1 for the t_{on1} time.
Program the transmitter 2 on the relay 2. The transmitter 2 activates the relay 2 for the t_{on2} time.

PROGRAMMING - STEP BY STEP

1. Press briefly the P1 button. The display shows $rAd1$.
2. Press the button of the transmitter #1. The display shows $donE$.
3. To quit, press briefly the P1 button.
4. Press briefly the P2 button. The display shows $rAd2$.
5. Press the button of the transmitter #2. The display shows $donE$.
6. To quit, press briefly the P2 button.
7. To enter the menu, press briefly the P3 button.
8. Set the item $FULL$ to 1 .
9. Press briefly the P3 button.
10. Set the t_{on1} time to the desired value.
11. Press briefly the P3 button.
12. Set the t_{on2} time to the desired value.
13. Press briefly the P3 button.
14. Press briefly the P3 button.
15. Press briefly the P3 button.



MODE 2 - Switching network

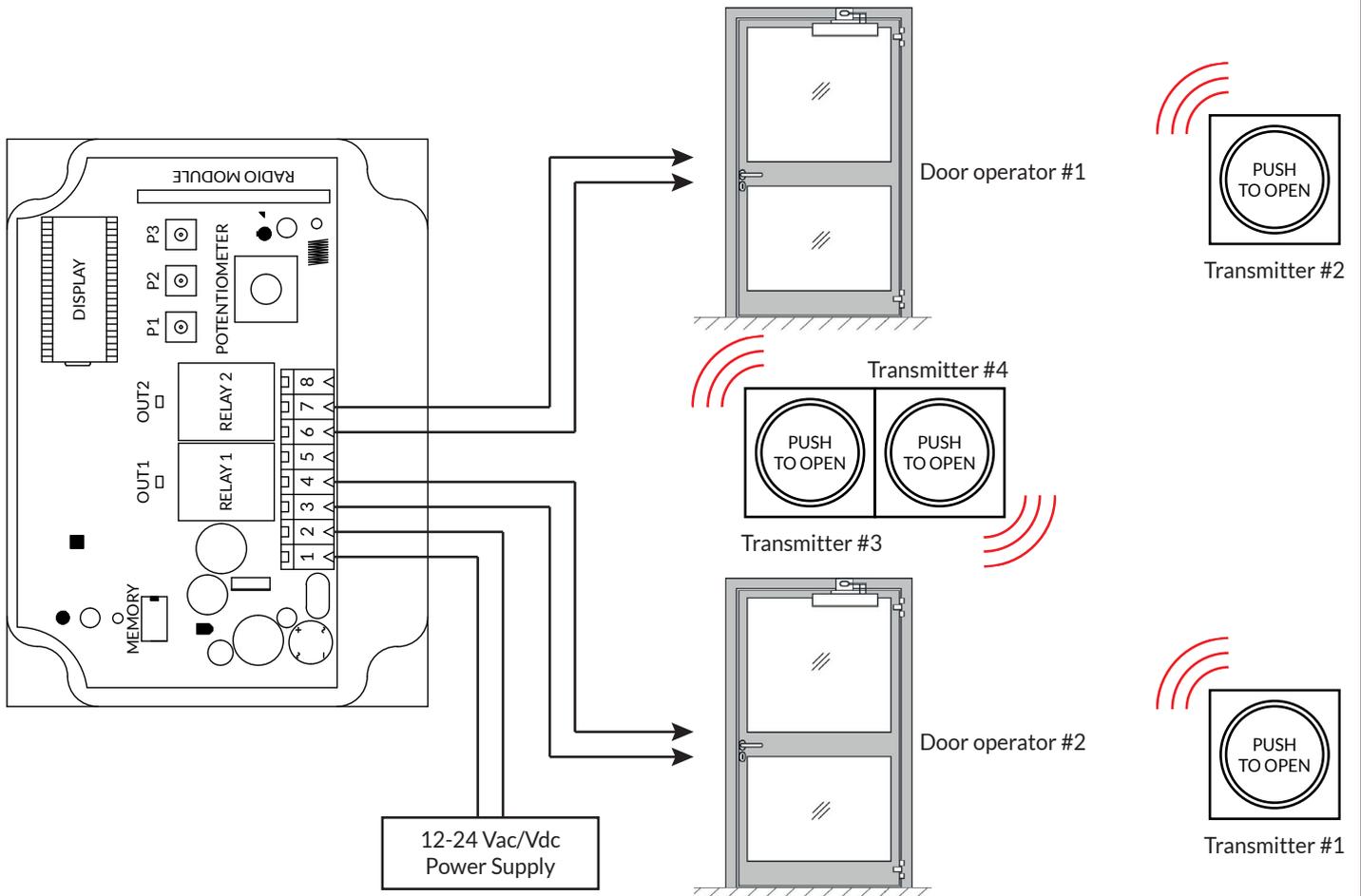
You must program the transmitters on the relay 1.

The transmitters activate the relay 1 for the t_{on1} time. Then, after the t_{dLY} time, they activate the relay 2 for the t_{on2} time.

PROGRAMMING - STEP BY STEP

1. Press briefly the P1 button. The display shows *rAd l*.
2. Press the button of the transmitter #1. The display shows *donE*.
3. To quit, press briefly the P1 button.
4. To enter the menu, press briefly the P3 button.
5. Set the item *FUnct* to 2.
6. Press briefly the P3 button.
7. Set the t_{on1} time to the desired value.
8. Press briefly the P3 button.
9. Set the t_{on2} time to the desired value.
10. Press briefly the P3 button.
11. Set the t_{dLY} time to the desired value.
12. Press briefly the P3 button.
13. Press briefly the P3 button.

10 MODE 3 - VESTIBULE SEQUENCING OPTION (1)



MODE 3 - Vestibule sequencing, type 1

Program the transmitters 1&4 on the relay 1.

The transmitters 1&4 activate the relay 1 for the t_{on1} time. Then, after the t_{delay} time, they activate the relay 2 for the t_{on2} time.

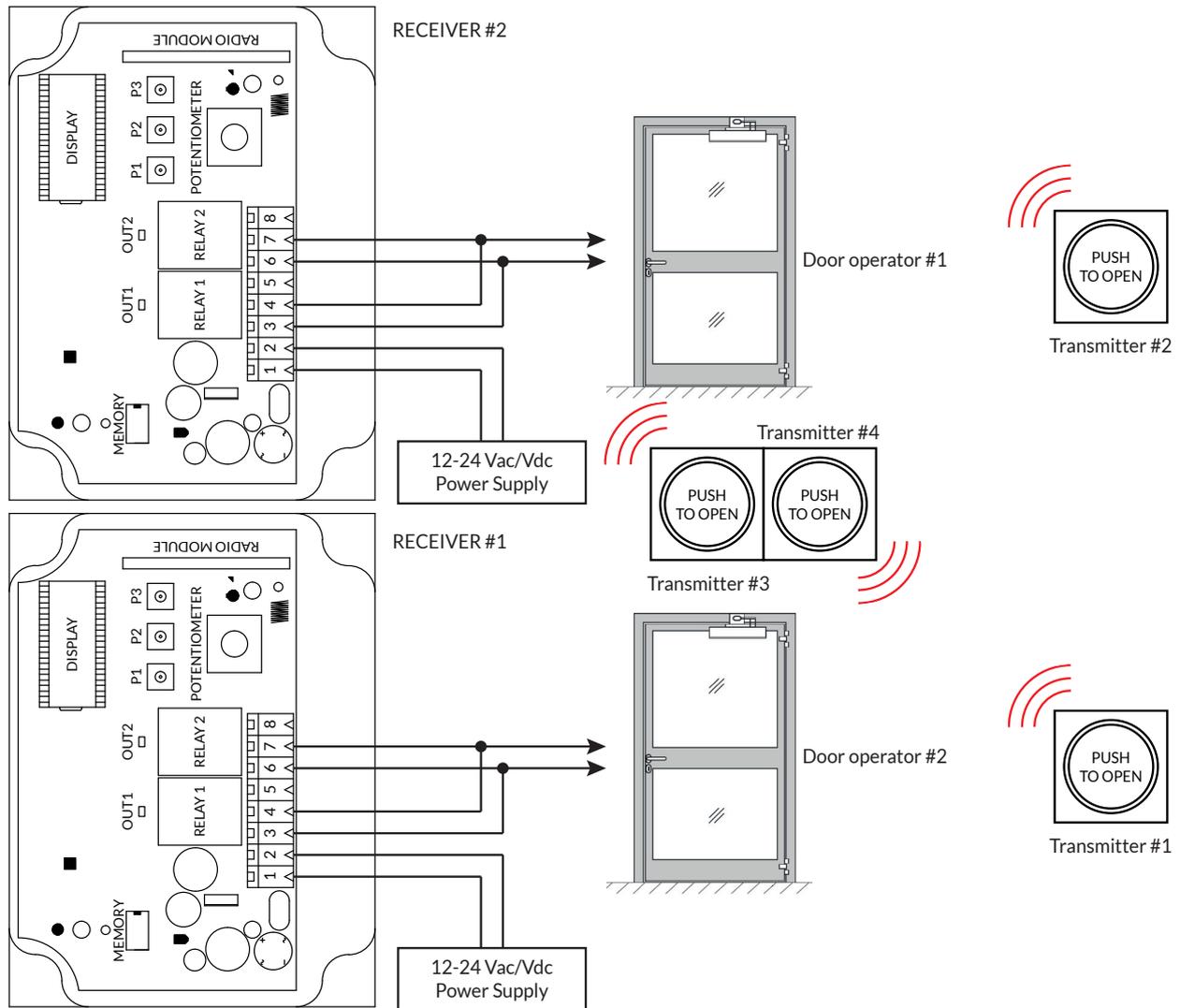
Program the transmitters 2&3 on the relay 2.

The transmitters 2&3 activate the relay 2 for the t_{on2} time. Then, after the t_{delay} time, they activate the relay 1 for the t_{on1} time.

PROGRAMMING - STEP BY STEP

1. Press briefly the P1 button. The display shows $rRd1$.
2. Press the button of the transmitter #1. The display shows $donE$.
3. Press the button of the transmitter #4. The display shows $donE$.
4. To quit, press briefly the P1 button.
5. Press briefly the P2 button. The display shows $rRd2$.
6. Press the button of the transmitter #2. The display shows $donE$.
7. Press the button of the transmitter #3. The display shows $donE$.
8. To quit, press briefly the P2 button.
9. To enter the menu, press briefly the P3 button.
10. Set the item $Funct$ to 3.
11. Press briefly the P3 button.
12. Set the t_{on1} time to the desired value.
13. Press briefly the P3 button.
14. Set the t_{on2} time to the desired value.
15. Press briefly the P3 button.
16. Set the t_{delay} time to the desired value.
17. Press briefly the P3 button.
18. Press briefly the P3 button.

11 MODE 4 - VESTIBULE SEQUENCING OPTION (2)



MODE 4 - Vestibule sequencing, type 2

RECEIVER 1

Program the transmitters 1&4 on the relay 1 and the transmitters 2&3 on the relay 2.

The transmitters 1&4 activate the relay 1 for the t_{on1} time.

The transmitters 2&3 activate the relay 2 for the t_{on2} time after the t_{dly} time.

RECEIVER 2

Program the transmitters 2&3 on the relay 1 and the transmitters 1&4 on the relay 2.

The transmitters 2&3 activate the relay 1 for the t_{on1} time.

The transmitters 1&4 activate the relay 2 for the t_{on2} time after the t_{dly} time.

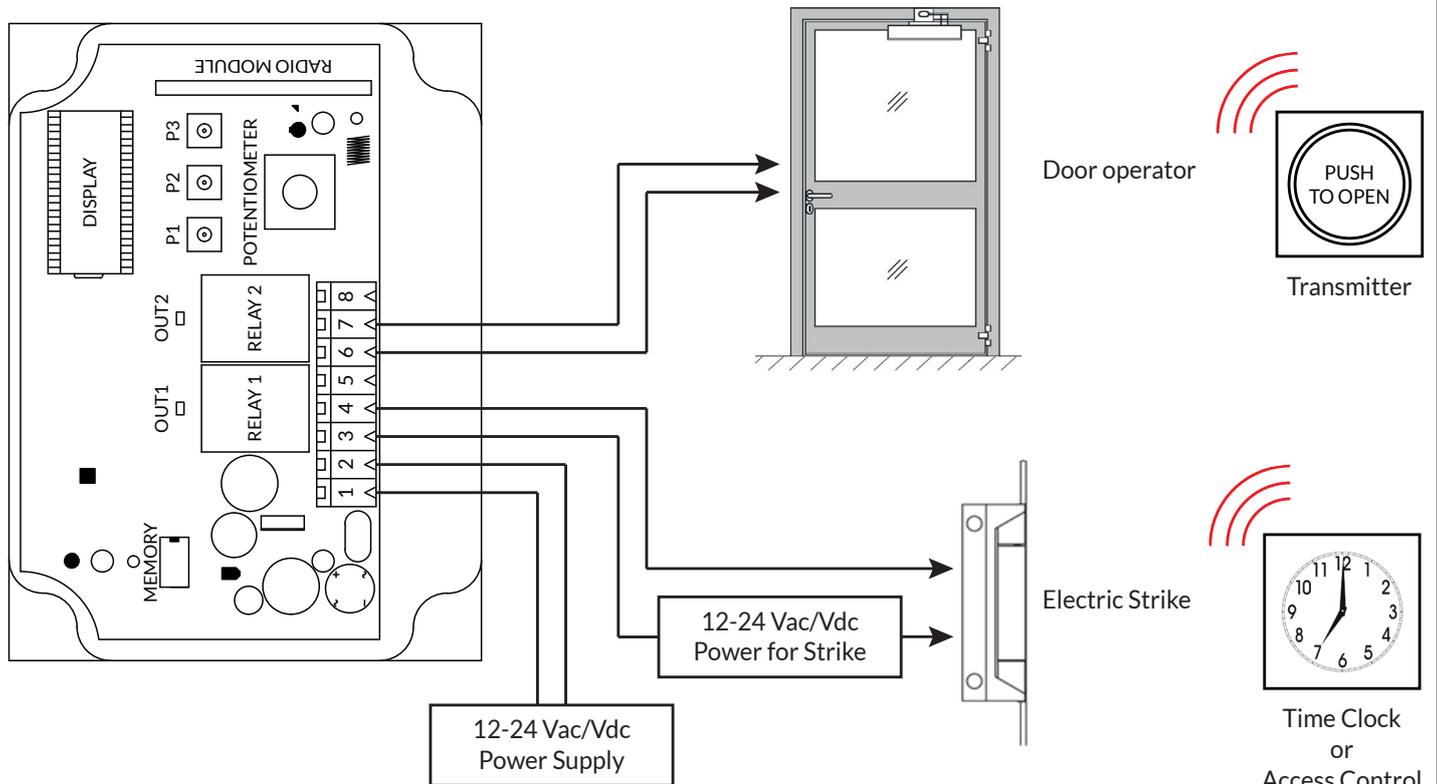
PROGRAMMING RECEIVER 1 - STEP BY STEP

1. Press briefly the P1 button. The display shows $rAd1$.
2. Press the button of the transmitter #1. The display shows $donE$.
3. Press the button of the transmitter #4. The display shows $donE$.
4. To quit, press briefly the P1 button.
5. Press briefly the P2 button. The display shows $rAd2$.
6. Press the button of the transmitter #2. The display shows $donE$.
7. Press the button of the transmitter #3. The display shows $donE$.
8. To quit, press briefly the P2 button.
9. To enter the menu, press briefly the P3 button.
10. Set the item $FUnCt$ to 4.
11. Press briefly the P3 button.
12. Set the t_{on1} time to the desired value.
13. Press briefly the P3 button.
14. Set the t_{on2} time to the desired value.
15. Press briefly the P3 button.
16. Set the t_{dly} time to the desired value.
17. Press briefly the P3 button.
18. Press briefly the P3 button.

PROGRAMMING RECEIVER 2 - STEP BY STEP

1. Press briefly the P1 button. The display shows $rAd1$.
2. Press the button of the transmitter #2. The display shows $donE$.
3. Press the button of the transmitter #3. The display shows $donE$.
4. To quit, press briefly the P1 button.
5. Press briefly the P2 button. The display shows $rAd2$.
6. Press the button of the transmitter #1. The display shows $donE$.
7. Press the button of the transmitter #4. The display shows $donE$.
8. To quit, press briefly the P2 button.
9. To enter the menu, press briefly the P3 button.
10. Set the item $FUnCt$ to 4.
11. Press briefly the P3 button.
12. Set the t_{on1} time to the desired value.
13. Press briefly the P3 button.
14. Set the t_{on2} time to the desired value.
15. Press briefly the P3 button.
16. Set the t_{dly} time to the desired value.
17. Press briefly the P3 button.
18. Press briefly the P3 button.

12 MODE 5 - LATCHED MODE OPTION (1)



MODE 5 - Latched mode 1

Program Access Control (or Time Clock) on the relay 1 and the transmitters on the relay 2.

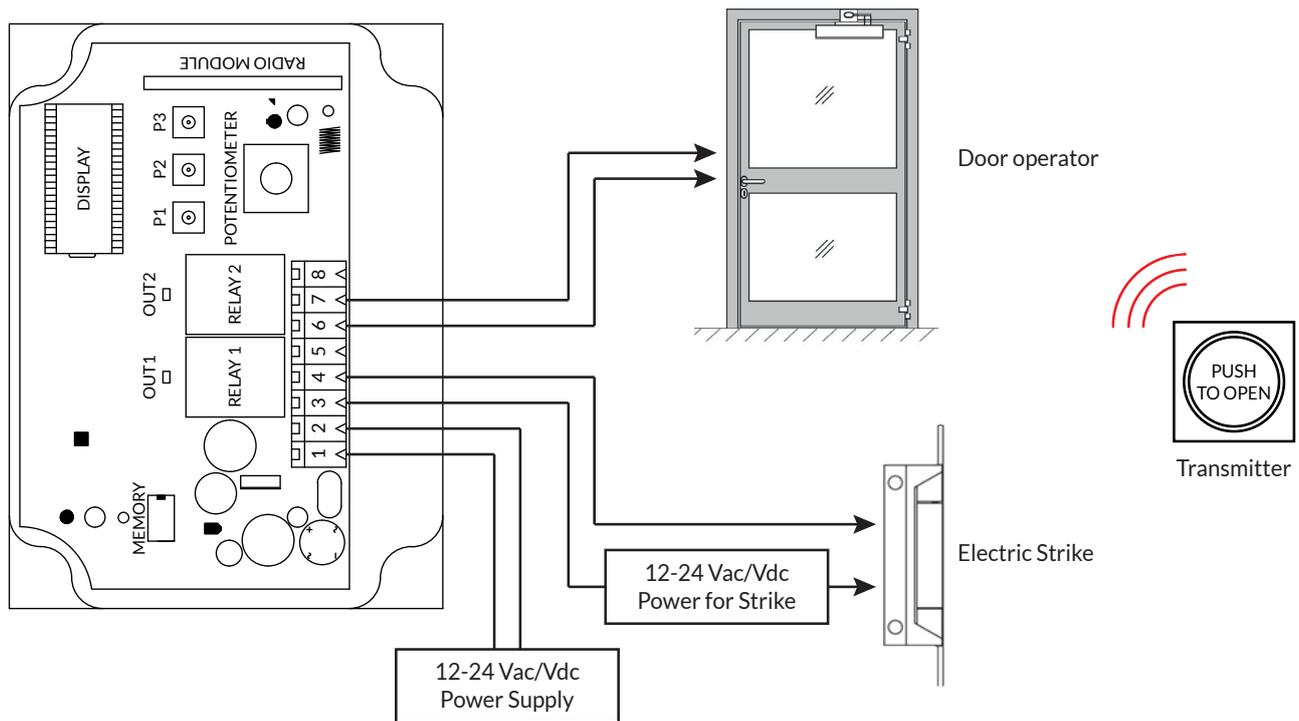
Access Control (or Time Clock) activates the relay 1 with a Step-by-Step command. To deactivate the relay 1, give another command with Access Control (or Time Clock).

The transmitters activate the relay 2 for the t_{ON2} time, only with the relay 1 activated.

PROGRAMMING - STEP BY STEP

1. Press briefly the P1 button. The display shows $rAd 1$.
2. Give a command with the Access Control (or Timed Clock). The display shows $donE$.
3. To quit, press briefly the P1 button.
4. Press briefly the P2 button. The display shows $rAd 2$.
5. Press the button of the transmitter. The display shows $donE$.
6. To quit, press briefly the P2 button.
7. To enter the menu, press briefly the P3 button.
8. Set the item $Funct$ to 5.
9. Press briefly the P3 button.
10. Press briefly the P3 button.
11. Set the t_{ON2} time to the desired value.
12. Press briefly the P3 button.
13. Press briefly the P3 button.
14. Press briefly the P3 button.

13 MODE 6 - LATCHED MODE OPTION (2)



MODE 6 - Latched mode 2

You must program the transmitters on the relay 1.

The transmitter activates the relay 1 for the t_{ON} time. Then, after the t_{OFF} time, it activates the relay 2.

To disable the relay 2, use again the transmitter.

PROGRAMMING - STEP BY STEP

1. Press briefly the P1 button. The display shows $rRd l$.
2. Press the button of the transmitter. The display shows $donE$.
3. To quit, press briefly the P1 button.
4. To enter the menu, press briefly the P3 button.
5. Set the item $FUnLk$ to 5.
6. Press briefly the P3 button.
7. Set the t_{ON} time to the desired value.
8. Press briefly the P3 button.
9. Press briefly the P3 button.
10. Set the t_{OFF} time to the desired value.
11. Press briefly the P3 button.
12. Press briefly the P3 button.

14 WARRANTY

NOTICE

Any changes or modification to the equipment not expressly approved by Transmitter Solutions could void the manufacturer's warranty and the user's authority to operate this product.

WARRANTY

The warranty period of Transmitter Solutions receiver is twenty-four (24) months. This warranty shall begin on the date the receiver is manufactured. During the warranty period, the product will be repaired or replaced (at the sole discretion of Transmitter Solutions) if the product does not operate correctly due to a defective component. This warranty does not extend to (a) the receiver case, which can be damaged by conditions outside the control of Transmitter Solutions.



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