Wireless Motor Controller

Instruction Manual

Models:

WMCseries: WMC12, WMC8

version 3.2 – SIL-3 Emergency since 7/2012

ATTENTION!

This instruction manual contains important information about the installation and the use of the equipment. Please read and follow these instructions carefully.

Always ensure that the power to the equipment is disconnected before opening the equipment or commencing any maintenance work.

1. Safety information

IMPORTANT INSTRUCTIONS

All safety and operating instructions should be read before the equipment is installed or operated.

IMPORTANT SAFETY INFORMATION

The following general safety precautions have to be observed during all phases of operation, service, and the repair of this equipment. Failure to comply with these precautions or with specific warnings in this manual violates safety standards of design, manufacture, and the intended use of this equipment.

Do not operate in an explosive atmosphere!

Do not operate this equipment in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

Water, moisture, heat and humidity

Do not operate this equipment near water or in areas with wet floors or in high humidity atmosphere where condensation forms on the equipment. It should never be placed near or a over heat register or other source of heated air and it should not be installed or operated without proper ventilation.

2. Functions and Control

Wireless Motor Controller was designed to control up to 12 (WMC-12) electrically compatible motors either separately or simultaneously; via wireless remote or locally on the WMCseries base unit.

Each device is equipped with a unique wireless module working on 2.4 GHz network with several features that guarantee solid and stable wireless connection with error correction.

All electrical components carry their own individual CE certification and comply with European Directives. The components are housed in a robust steel 19" rack case with powder coating.

3. Operation

The Motors/Hoists connected to the MCseries controller can be activated either individually or simultaneously using the GO button located either on the corresponding WMCseries controller base or on the remote controller.

3.1 How to start

- Connect the Main plug to the 230V AC power supply /on MCseries controller this is marked as a "AUX" output/
- Connect the Remote connector to the MCseries controller
- Connect Remote2/E-stop connector to the MCseries controller
- Select type of operation LOCAL / REMOTE using the KEY switch
- Check if the emergency STOP button is not engaged
- Engage the gear lever corresponding to each motor to the required position:
    - UP - Lever in upper position
    - STAY – Lever in middle position
    - DOWN - Lever in lower position
- Pushing the GO button will activate the motors that will move simultaneously
- Releasing the GO button will simultaneously cease the movement of the motors
- When the device is not being used, it is highly recommended to turn it off using the key switch or the STOP button

3.2 To Move a Single Motor:

- Set the UP/DOWN toggle switch for the motor to be moved to the desired direction. The associated LED will light green for UP and red for DOWN.
- Hold the GO button until the motor has moved to the desired height and release.

3.3 To Move Several Motors:

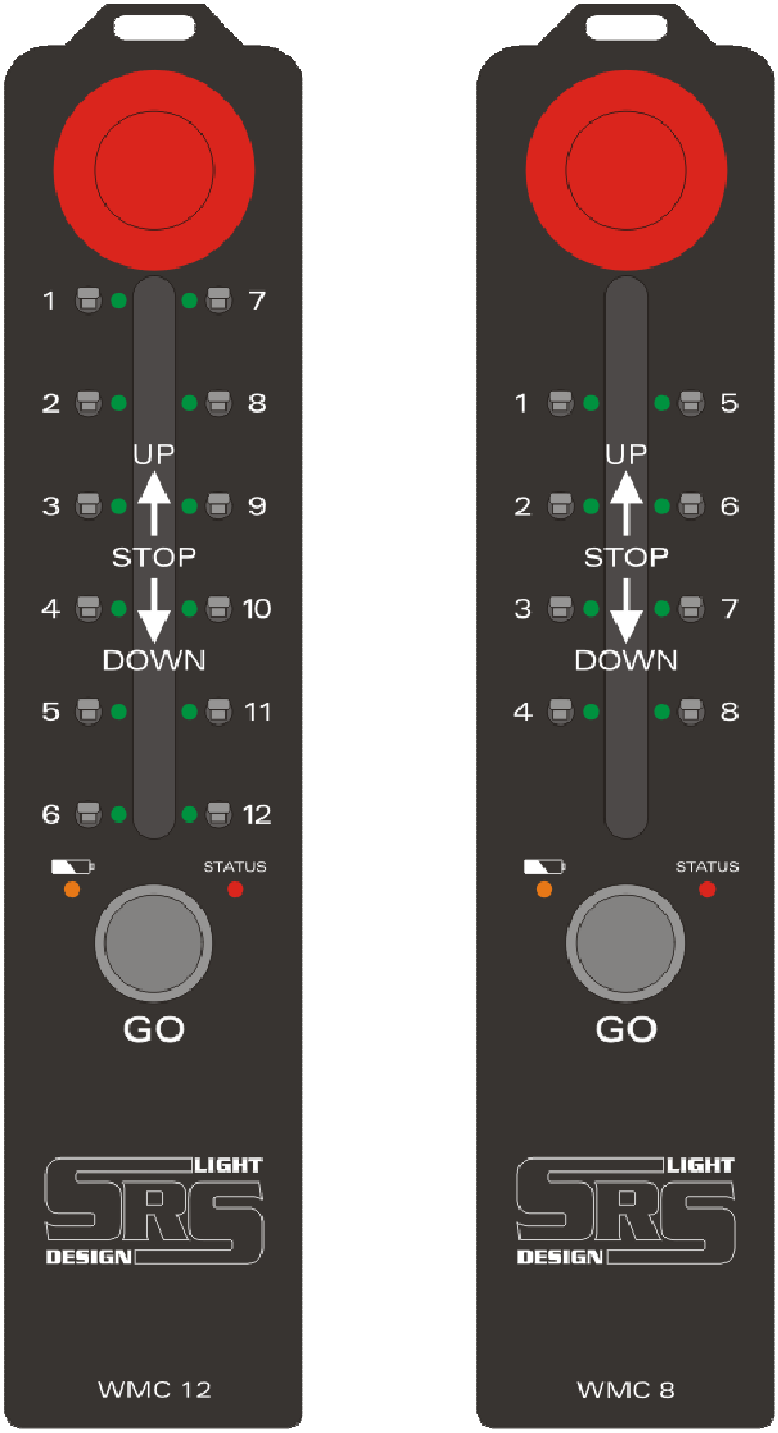
- Set the UP/DOWN toggle switches for each motor to be moved to the desired direction. Every associated LED will light green for UP and red for DOWN.
- Hold the GO button until the motors have moved to the desired height and release.

3.4 Remote battery saving:

- When not in use, turn off the remote controller by the press of STOP button to save the battery.
- After 3 minutes of inactivity, the unit will automatically go to stand-by mode – this state is indicated by the green LED blinking on both Remote and Base units.

4. WMCseries Remote controller

WMCseries controller allows controlling of the MCseries device via wireless connection.



4.1 STOP:

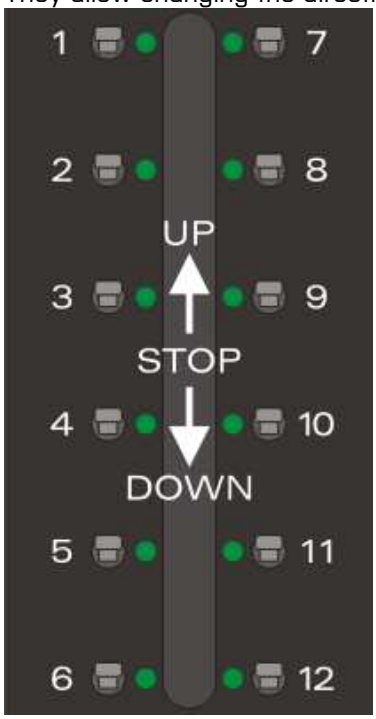
This latching pushbutton switch turns the Hoist Control system off. Once the STOP button has been pressed, it is locked into the off position and must be rotated clockwise to be released.

4.2 GO:

This pushbutton switch turns the selected channels of Hoist Control system on when they are active. Once the GO button has been pressed, the energizing of the hoists is on. The backlight of GO button in local mode on the Base unit is on only when one or more direction switches are in an active position /up or down/.

4.3 DIRECTION SWITCHES:

They allow changing the direction of movement for each motor/hoist separately:

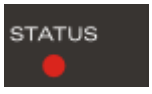


4.4 BATTERY STATUS LED:

Battery status indicator:

- Green LED: 100-90% charged
- Orange LED: 90-10% charged
- Red LED: 10% charged
- Red LED + beep:5% charged

4.5 REMOTE STATUS LED:

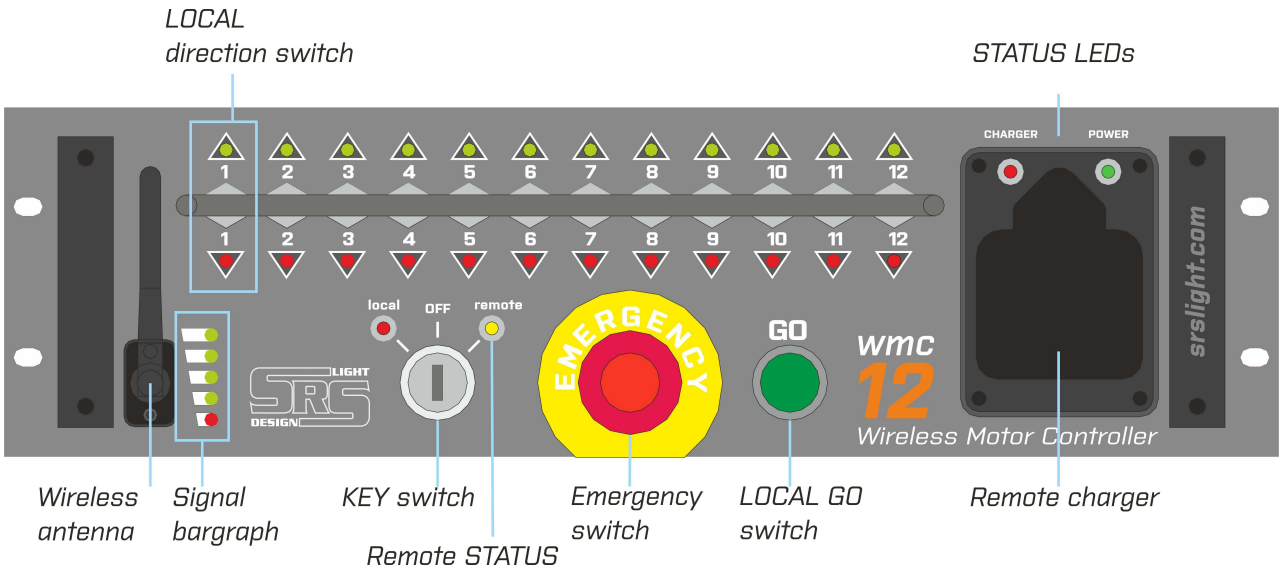


Status LED indicator of WMC remote unit:

- Green : Power on
- Green blinking : Power on – SLEEP mode - move the direction switch or press GO button to resume from sleep. Unit turns into this state after 3 minutes of inactivity.
- Orange : Indicates the activity of direction switch
- Red : GO button is pressed – sending the commands to the Base unit

5. WMCseries base unit

5.1 WMCseries front panel

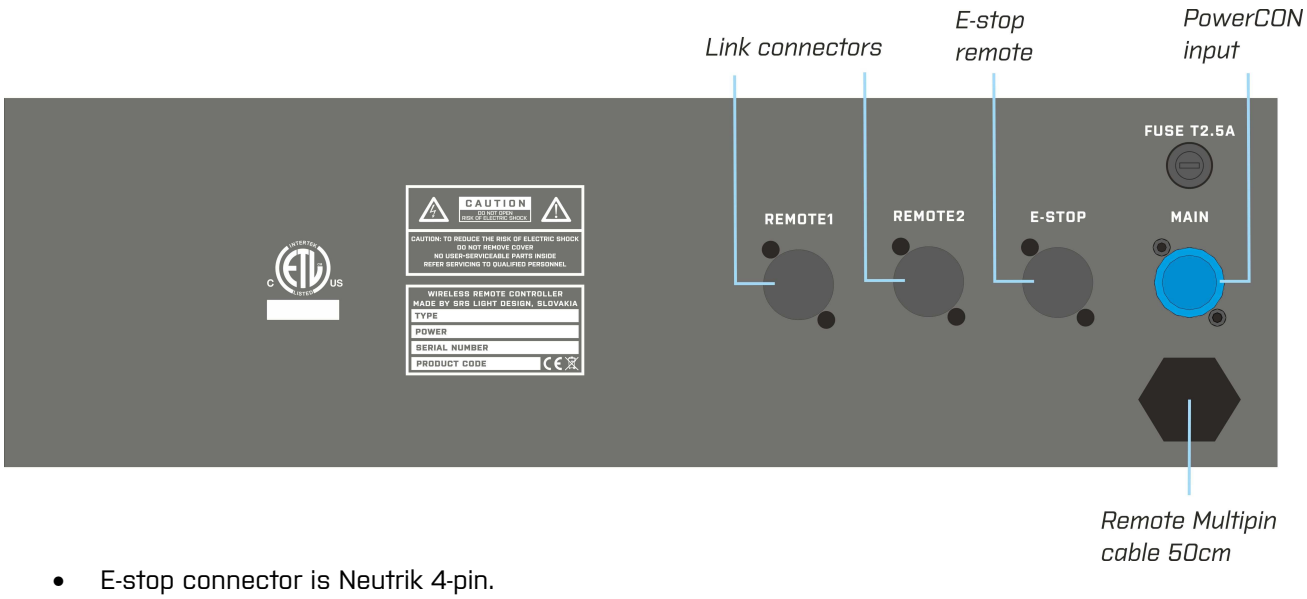


5.2 CHARGER status LED:

The status LED of charger located on the WMC front panel is

- Green : Battery is fully charged
- Green blinking : Battery is charged for 90% or greater capacity
- Orange blinking: Not in rapid mode – waiting to be charged
- Red : Battery is in rapid charge mode
- Red blinking : Battery is ultra rapid charge mode
- Off : Battery is not inserted

5.3 WMCseries rear panel



- E-stop connector is Neutrik 4-pin.
- Link connectors are 3- or 5- pin according to the version of controller. When controllers are linked, the STOP and GO signals of all controllers in LOCAL mode work simultaneously.

6. Outputs wiring

6.1 Remote multipin connector

Amphenol DS3106A28-21P

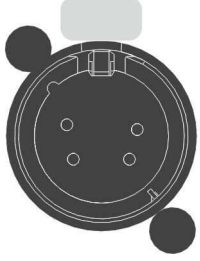
Pin	Function	CMC12A	CMC8A
1	**M1 down**	**X**	**X**
2	**M1 up**	**V**	**V**
3	**M2 down**	*c*	*c*
4	**M2 up**	*d*	*d*
5	**M3 down**	*b*	*b*
6	**M3 up**	*h*	*h*
7	**M4 down**	*j*	*j*
8	**M4 up**	*k*	*k*
9	**M5 down**	*e*	*e*
10	**M5 up**	**Z**	**Z**
11	**M6 down**	**W**	**W**
12	**M6 up**	**L**	**L**
13	**M7 down**	**K**	**K**
14	**M7 up**	**U**	**U**
15	**M8 down**	*m*	*m*
16	**M8 up**	*f*	*f*
17	**M9 down**	**R**	-
18	**M9 up**	**P**	-
19	**M10 down**	**N**	-
20	**M10 up**	**M**	-
21	**M11 down**	**F**	-
22	**M11 up**	**E**	-
23	**M12 down**	**T**	-
24	**M12 up**	**S**	-
25	**Contactor ON**	*a*	*a*
26	**AC1 24V**	*g*	*g*
27	**AC1 24V**	*n*	*n*
28	**AC1 24V**	*p*	*p*
29	**AC2 24V**	*r*	*r*
30	**GROUND**	*s*	*s*

6.2 E-stop connector

Unit is equipped with certified SIL3 E-STOP safety relay. For additional safety, up to two sources of E-STOP can be connected. Usually one is WMC unit and the other one should be the load cell unit. According to the requirement, both lines are normally closed – NC. Due to this, it is necessary to fit the safety breach /MXX connector with short circuit between pins 1 and 2, and pins 3 and 4. Both lines are separated and CANNOT be connected together – otherwise it will not be possible to reset the safety circuit.

Neutrik NC4FXX

Pin 1: Safety line 1 IN
Pin 2: Safety line 1 OUT
Pin 3: Safety line 2 IN
Pin 4: Safety line 2 OUT



6.3 Remote1/Remote2 connector

Remote1 / Remote 2 connectors are used for linking of two or more WMC units together. RS485 is used as a communication link.

Neutrik NC3FXX/MXX	Pin 1: Data common
	Pin 2: Data minus
	Pin 3: Data plus

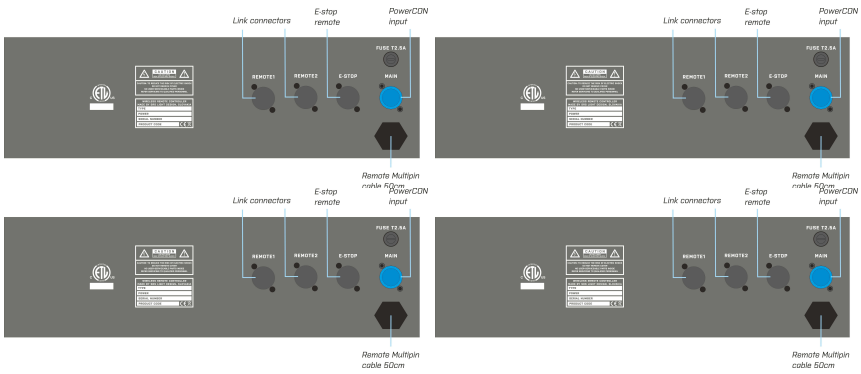
7. Linking of WMC

7.1 Linking of WMC remote controllers:

Only two WMC remote cntrollers can be linked together for the group operation of STOP and GO buttons. For linking of WMC, SRS 5-pin miniXLR cable with custom wire connection is required. Please request it from the manufacturer if you need one. *Any other cable can destroy remote controllers!*

When the WMC remote controllers are linked, the GO and STOP buttons are linked as well. A single press of either STOP or GO buttons will function for both linked devices.

7.2 Link of WMC base:



Up to 4 WMC bases units can be linked together for a group operation of GO buttons. For linking of WMC base, 3-pin XLR cable connected in ratio 1:1 is required. Data are transferred thru the RS485line. All connected devices will have GO button linked in the LOCAL mode.

Wireless/remote function is not affected by this link.

8. Technical data

- Main Power: AC208-230V, 50/60Hz, T2.5

8.1 Protections and Safety:

- Dry contacts – all outputs are galvanic isolated
- Double - Recessed Emergency stop + SIL3 safety module
- Double encoded data communication
- Load cell E-STOP
- External E-STOP option

8.2 Dimensions /W x D x H/:

WMC12: 483 x 365 x 132 mm
WMC8: 483 x 365 x 132 mm

9. Warranty

MCseries hoist controller is covered by a 2-year manufacturer's warranty. For extended warranty conditions please contact the manufacturer at sales@srslight.com.

Warranty covers the original factory installed components of the controller and their correct functioning.

Warranty voids if any part or replacement components are installed or modified without authorization from the manufacturer and/or the internal circuit is tampered or modified and/or the controller is operated outside normal use conditions – electrical power supply is not conform or there is connection error or mechanical damage of controller, including overload, improper use. The manufacturer always helps you with repairing of your unit.

10. Declaration of conformity

DECLARATION OF CONFORMITY
According to guidelines 89/336 EEC and 92/31 EEC, 90/337 CEE Annex II A:

Name of producer: SRS Light Design s.r.o.

Address of producer: Rybnicna 36/D, SK- 83106 Bratislava, Slovak Republic
www.srslight.com/ sales@srslight.com, +421244681417

Declares that the product

Name of product: WMCseries Hoist controller: WMC8, WMC12 and variants

Types:

WMC-8:	Wireless controller 8 channels
WMC-12:	Wireless controller 12 channels

Corresponds with following harmonized standards:

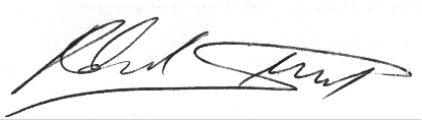
Safety: EN60065, resp. EN 60950
EMC: EN55103-1, resp. EN55103-2

And

Is in compliance with following requirements:

Machinery directive: 98/37 CEE
Low Voltage directive: EEC 73/23

Bratislava, May 10, 2010



Robert Sloboda

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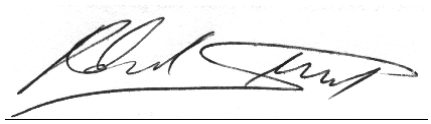
Bratislava, May 4, 2011



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