Hoist Controller for Low Voltage Hoist

Instruction Manual

Models:

AHD12-WLV-4SX-HL

version 1.1 since 12 September 2025

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.

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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 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 over a heat register or other source of heated air and it should not be installed or operated without proper ventilation.

Functions and Control

AHD12-WLV-4SX-HL was designed to control 1 to 12 electrically compatible low voltage hoists, either separately or simultaneously – using switches located on front panel, wireless remote or cable remote/pendant. Up to 40 units of AHD12-WLV-4SX-HL can be linked together to make larger systems controlled by a single GO button.

Each device is equipped with unique APA (Automatic Phase Align) module, which guarantees that on any align of input phases the motors move in the same direction. In case any line wire is disconnected, the hoist controller stops to ensure safe operation. The unit is also equipped with AVM (Automatic Voltage Metering) module. This module checks if the main voltage is AC400V +-20% and the star configuration is correct. If there is any problem with the main voltage, the user is notified, and the unit will stop all movements.

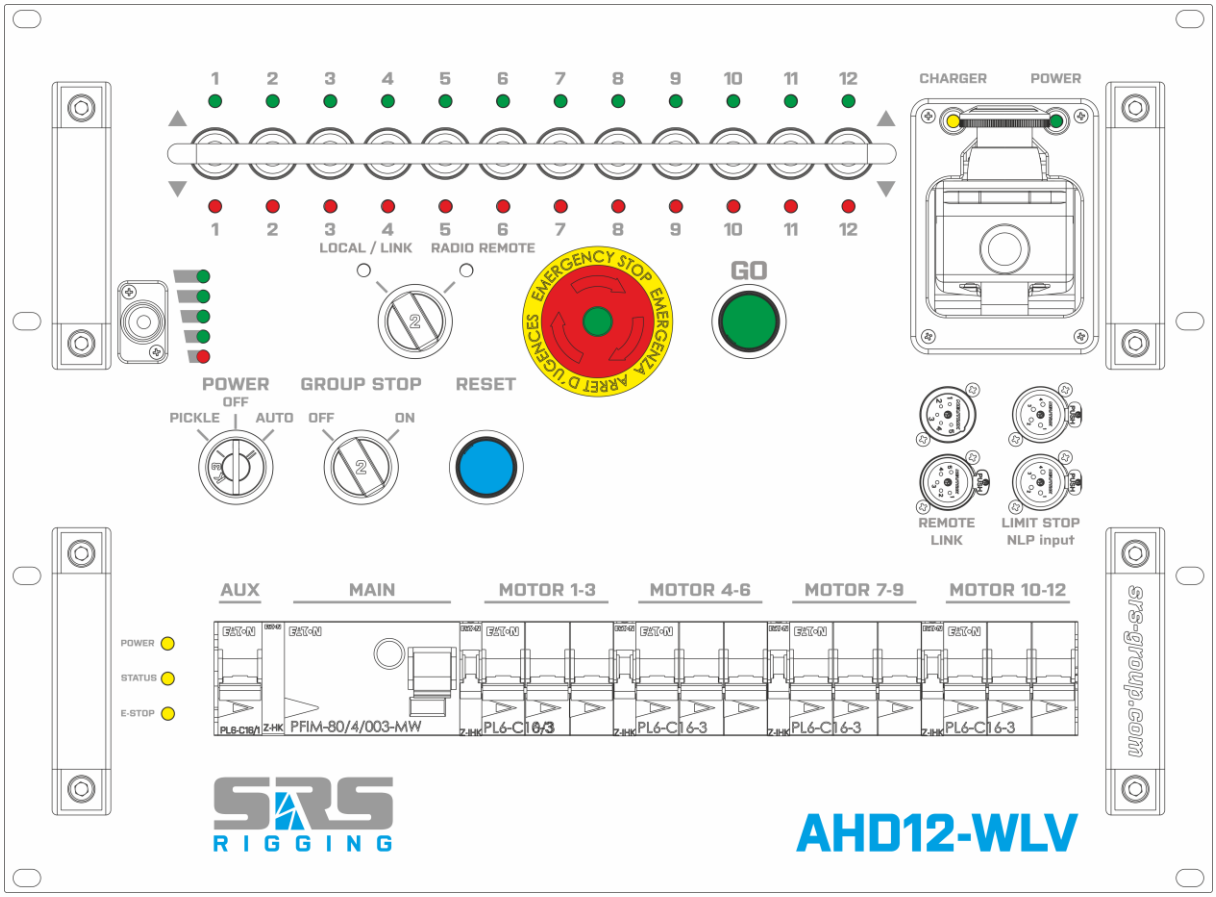
The unit will not work when:

- One phase is missing
- There is under-voltage on mains
- There is over-voltage on mains

All electrical components carry their own individual cSA/UL, CE and comply with European Directives. The components are housed in robust steel 19" rack casing with powder coating. Complete unit complies with the CE according the Certification of conformity attached to this manual.

AHD12-WLV-4SX-HL

AHD12-WLV-4SX-HL front panel



HOIST protection:

AHD12-LV-4SX: Each three hoists are protected by single C10/3p MCB
AHD12-LV-4SX-HL: Each three hoists are protected by single C16/3p MCB

POWER switch positions:

- OFF: Power OFF
- PICKLE: Power to the hoist is enabled permanently
- AUTO: Power to the hoist is enabled ONLY when GO command is received

GROUP STOP switch positions:

- OFF: Trip of any breaker or mains GFI breaker will NOT cause E-STOP
- ON: Trip of any breaker or mains GFI will cause E-STOP of the unit.
  This E-STOP is transferred also to all linked devices.

MIDDLE switch positions:

- LOCAL/LINK Unit works in local mode or linked mode via cable line
- RADIO REMOTE Unit works when controlled by radio remote

RESET:

RESET button for SIL3 E-STOP relay reset

E-STOP:

E-STOP is a red color mushroom. Once the E-STOP button is pressed, it locks the unit into inactive position and must be rotated clockwise and released before operation. After engaging the E-STOP button, the RESET procedure must be followed.

GO:

This green pushbutton turns the selected channels of the hoist controller system ON when active. Once the GO button is released, the energizing of the hoists is NOT happening.

DIRECTION SWITCHES:

They allow changing the direction of movement for each motor/hoist separately or in groups. LED close to the switch indicates the direction of movement.

LIMIT STOP input:

LIMIT STOP connectors serve for external E-STOP from NLP device or another STOP source. Short circuit on pair 1+2 or 3+4 will stop the controller. Please follow RESET procedure to cancel the limit STOP.

REMOTE/LINK:

Link input serves for linking of AHD units. To link the units, standard 5-pin DMX data cable is needed. Only first three pins 1,2,3 are used on the cable.

Due to different software platforms and encoding, the AHD units are not compatible with GMC and GMD units. For more details contact us at sales@srs-group.com

POWER LED indication:

- OFF: Power OFF
- GREEN: Power OK
- YELLOW: Power OK, PICKLE mode enabled
- RED: Power failure, please check mains

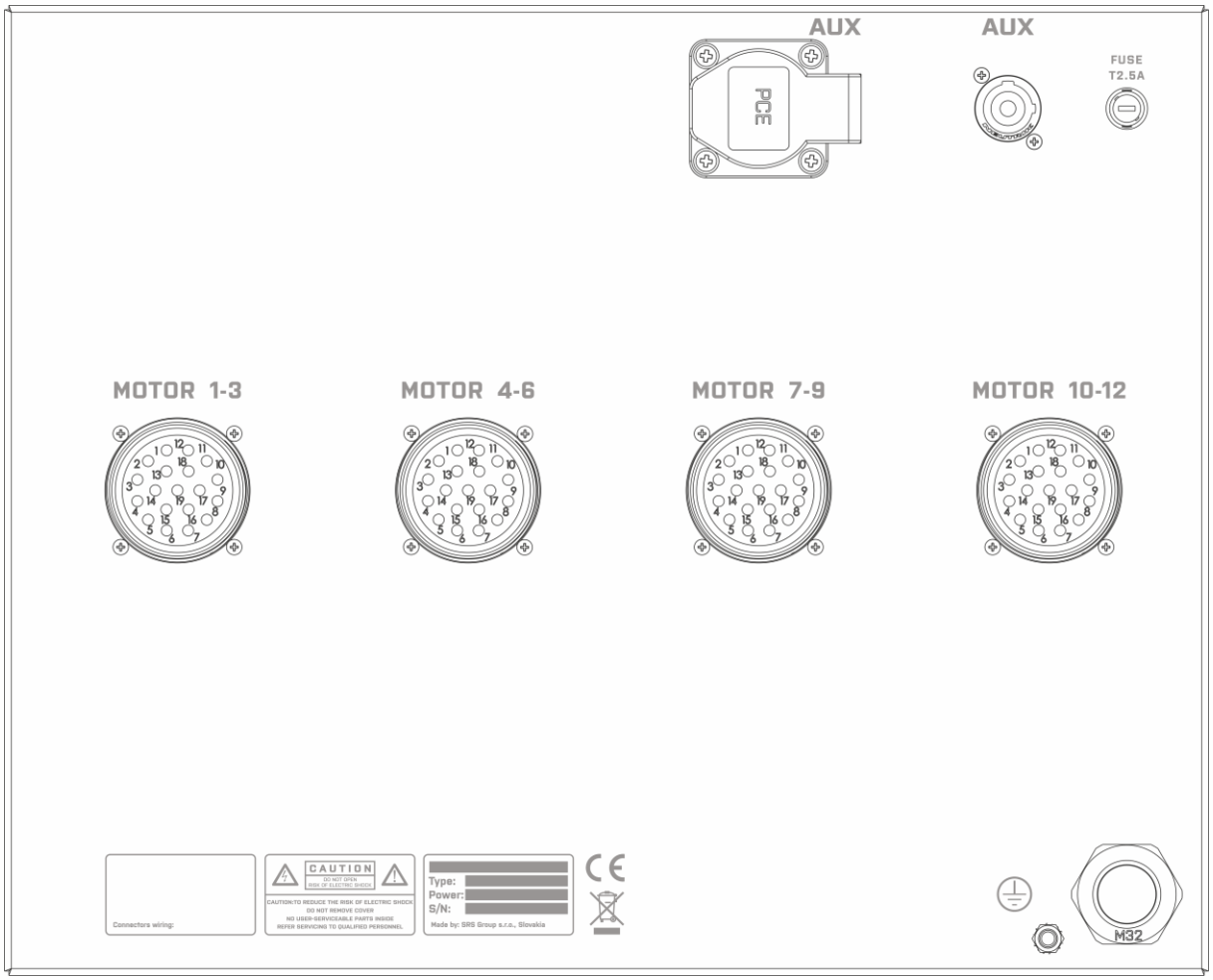
STATUS LED indication:

- GREEN: READY to work in auto mode
- RED: GO is activated
- YELLOW: Direction switch is changing its status

E-STOP LED indication:

- YELLOW: Unit is waiting for RESET or linked unit is waiting for RESET
- GREEN: Unit after reset, READY TO WORK
- RED steady: GROUP STOP or remote GROUP STOP is activated
- RED blinking: E-STOP from another linked device is activated
- RED double blink: LOCAL E-STOP is activated (mushroom pressed)

AHD12-WLV-4SX-HL CEE rear panel



MAINS:

AHD12-LV-4SX	Mains input CEE32/5p on 1.5m cable, cable is not displayed on preview
AHD12-LV-4SX-HL	Mains input CEE63/5p on 1.5m cable, cable is not displayed on preview

OUTPUTS:

Socapex19 female hoist controller outputs. Check wiring diagram for more details.

FUSE:

Fuse used for mains transformer T2.5A.

AUX:

AUX output for additional AC230 powered devices. German Schuko socket and AC3FCB panel mount. AUX is protected by C16/1p breaker on the front panel.

Operation

The motors/hoists connected to the AHD12-WLV-4SX-HL controller can be activated individually or simultaneously using the GO switch located on the front panel or the cable remote. Units can also be linked together to create bigger systems.

How to start using the system

- Connect the CEE32/5 or CEE63/5p plug to the AC400V +-20% power supply and turn the key to the ON position. When the main is OK, the power LED will light green. Otherwise the LED is RED. In that case, please check the phase voltages, frequency and the presence of all phases.

- Connect the plugs of the electric hoists to the output sockets.

- Check that the E-STOP mushroom is not engaged on the device or any other linked device in the system.

How to RESET system

- Turn ON the unit using a key to AUTO or PICKLE position.
- Reset button with blue backlight should be ON (if it is not, please contact us).
- Press and release E-STOP button.
- Press the blue reset button. After the press, the blue backlight will turn OFF.
- GO button should start to blink; this indicates that the controller is ready for operation.

Move lever corresponding to each motor to the required position on the front panel or the remote:

  - UP - Lever in upper position
  - STAY – Lever in middle position
  - DOWN - Lever in lower position

- Pushing the GO button will activate the motors to move simultaneously.
- Releasing the GO button will stop the movement of the motors simultaneously.
- When the device is not being used, it is highly recommended to turn it OFF using the key located on the front panel.

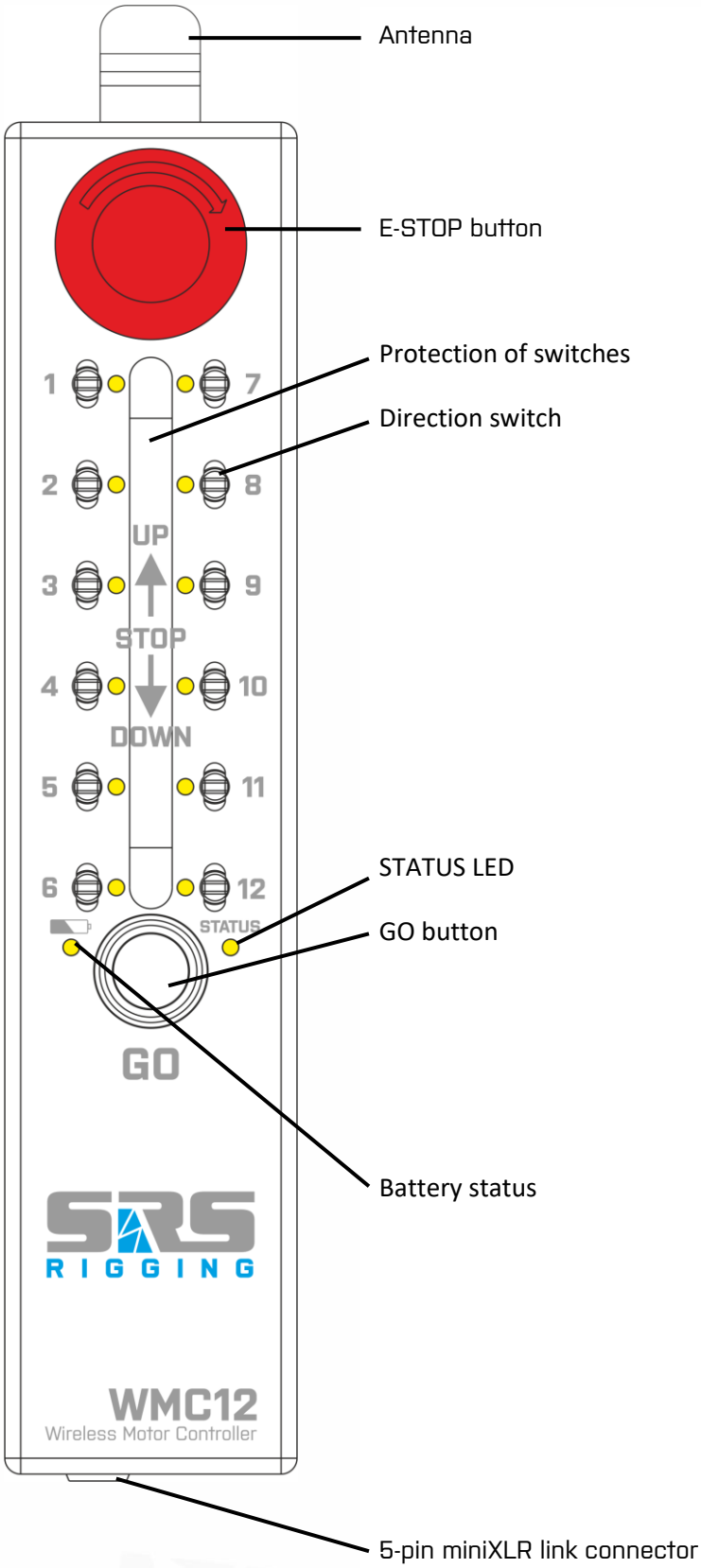
To Move a single/several hoist(s):

Move lever on the front panel or WMC remote corresponding to each motor to the required position:

  - UP - Lever in upper position
  - STAY – Lever in middle position
  - DOWN - Lever in lower position

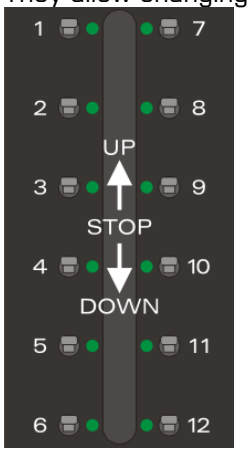
- Pushing the GO button will activate the motors to move simultaneously.
- Releasing the GO button will stop the movement of the motors simultaneously.
- When the device is not being used, it is highly recommended to turn it OFF using the key located on the front panel.

Wireless remote:



Direction switches:

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



BATTERY STATUS LED:



Battery status LED indicator.

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

REMOTE STATUS LED:



Status LED indicator of the WMC remote unit.

- Green : Power ON
- Green blinking : Power ON – SLEEP - move the direction switch or press GO button to resume from sleep. The unit goes into this status after 3 minutes of inactivity.
- Orange : Indicates the direction switch activity.
- Red : GO button is pressed – remote is sending commands to the base unit.

Remote battery saving:

- When not in use, turn OFF the remote controller by a press of the STOP button to save the battery.

Linking of WMC wireless remotes:

Maximum of two WMC wireless remotes can be linked together to achieve group operation of STOP and GO buttons. To link WMC wireless remotes, 5-pin miniXLR cable with special wire connection is needed. You can purchase the cable directly from the manufacturer. Never use cable in ratio 1:1 – the remotes can be destroyed.

When WMC wireless remotes are linked, the GO and STOP buttons are linked – so the press of any STOP and GO button will cause an action on both linked devices.



Operation:

Set the UP/DOWN toggle switch for each motor to the desired direction. The associated LED will light green for UP and red for DOWN direction.

Hold the GO button to activate the hoists' movement until it reaches the desired height and release.

Hoist controller outputs

Refer to the sticker on the rear panel of the device for pinout of the output connectors.

Remote/link connector

Neutrik NC5-MAH/FAH connectors are used for a link operation of units or for an additional digital remote. Using this connector, several units can be linked for synchronized operation and control using one GO and E-STOP button.

Neutrik NC5-MAH/FAH

Pin	Function	note
1	**Data CMN**	*Data Common*
2	**Data -**	*Data Minus*
3	**Data+**	*Data Plus*
4	**DC1**	*Power supply for CMC DC12-36V*
5	**DC2**	*Power supply for CMC DC12-36V*



LIMIT STOP connector

Neutrik NC4-FAH

Pin	Function	note
1	**DC24-36V**	Connected to 3
2	**Active 1**	Active line 1
3	**DC24-36V**	Connected to 1
4	**Active2**	Active line 2



Both safety lines work independently as "NO" (normally open) inputs. If a "NC" contact is need, please contact us at sales@srs-group.com. It can be set up via USB programming tool.

For the loadcell STOP activation, make a short circuit of at least one pair of contacts. To reset the loadcell STOP function, please follow the RESET procedure.

Technical data

Mains connection:

- Mains input AC400V +-20% 50/60Hz
- AHD12-W:LV-4SX Main Plug: CEE32A/5p
- AHD12-W:LV-4SX-HL Main Plug: CEE63/5p

Protections and Safety:

- Short circuit protection for group of three hoists by automatic circuit breakers C10
- Mains leakage current protection 30mA
- APA – Automatic Phase Align
- AVM – Automatic Voltage Metering
- ADR – Automatic Digital Reset
- Double mechanical blocking contactors
- Double - Recessed E-STOP with SIL3 certification

Metal Housing:

- Compact 6U size
- 3mm Steel front panel
- 1.5mm Steel housing with gray powder coating

Warranty

AHD12-WLV-4SX-HL hoist controller is covered by a 2-year manufacturer's warranty. For extended warranty conditions, please contact the manufacturer at sales@srs-group.com.

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

Warranty voids if: Any part or replacement components is 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 does not confirm or there is connection error or mechanical damage of controller, including overload and improper use.

DECLARATION OF CONFORMITY

According to the specification of Machinery Directive 2006/42/CE, Annex II A:

Name of producer:	SRS Group s.r.o.
Address of producer:	Rybničná 36/D 821 07 Bratislava Slovakia

Declares that the product

Name of product:	**AHD12-LV-4SX**
Type:	**945002**
Year of construction:	**2017**

Corresponds with the following harmonized standards:

Safety:	EN 60065 EN 60950 EN 60204-1 EN 13850 EN 12100-2
EMC:	EN55103-1, resp. EN55103-2

And is in compliance with following requirements:

Machinery directive:	2006/42/CE
Low Voltage directive:	2014/35/CE
Electromagnetic compatibility directive:	2014/30/CE

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