



Wireless controller for low voltage hoist

Instruction Manual

Models:

GMC12-WLV-6SX-HL

version 1.0 since 3 February 2020

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 INFORMATIONS

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 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, also not in high humidity atmosphere where condensation forms on the equipment. It should never be placed near or over heat register or other source of heated air and it should not be installed or operated without proper ventilation.

2. Functions and Control

Motor Controller has been designed to control from 1 to 12 electrically compatible motors, either separately or simultaneously – controlled via switches located on front panel or wireless remote/pendant. Optionally you can link GO/STOP button by link connector.

Each device is equipped with unique APA /Automatic Phase Align/ module, which guarantees that on any align of input phases the motors are still moving in the same direction. If any line wire is disconnected, the hoist controller stops to ensure safe operation. Unit is also equipped with AVM /Automatic Voltage Metering/ module. This module checks the main voltage for AC400V +20%, star configuration and if there is any problem with the main voltage user is notified and unit will not run any hoist.

Unit will not work when:

- One phase is missing
- Under voltage is present on lines
- Overvoltage is present on lines

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.

3. Operation

The Motor/hoists connected with the GMCseries controller can be activated individually or simultaneously using the GO button located on the front panel or wireless remote. Units can be optionally linked together to create bigger systems.

3.1 How to start

- Connect the CEE63/5p plug to the AC400V +20% power supply – turn the key to ON position. When the main is OK the power LED lights green, otherwise the unit is OFF. Check phase voltages, frequency and contact manufacturer for reference.
- Connect the plugs for the electric hoists to the Harting 6 sockets.
- Check that the emergency STOP mushroom is not engaged on device or any other linked device in system.

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

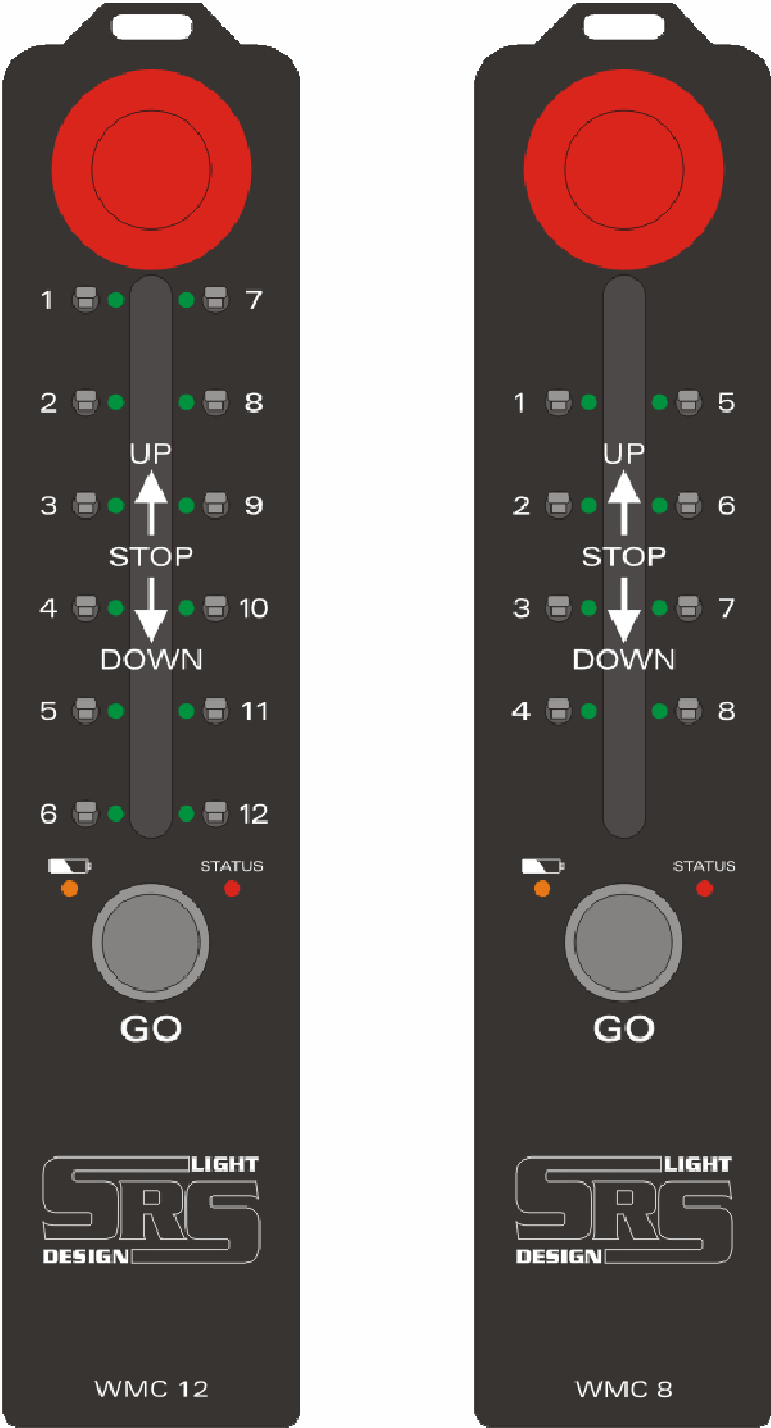
- UP - Lever in upper position
 - STAY – Lever in middle position
 - DOWN - Lever in lower position
- Pushing the GO button will activate the motors to move simultaneously.
 - Releasing the GO button will stop the movement of the motors simultaneously.
 - When is device not used it is highly recommended to turn it OFF using a key located on the front panel.

3.2 To Move a Single/Several hoist:

- Set the UP/DOWN toggle switch for that motor to the desired direction. The associated LED should light green for UP or red for DOWN direction.
- Hold the GO button until the motor are moved the desired height, then release.

4. WMCseries remote controller

WMCseries remote allows control device via wireless connection.



4.1 STOP:

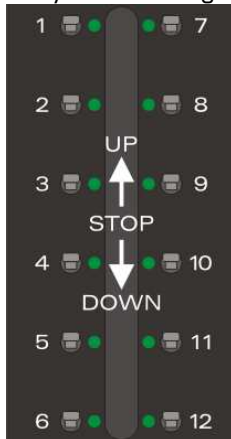
This latching pushbutton switch turns the Hoist Control system OFF. Once the STOP button has been pressed, it locks into the OFF position and must be rotated clockwise and released before disengaging.

4.2 GO:

This pushbutton switch turns the selected channels of Hoist Control system ON when is active. Once the GO button has been pressed, the energizing of the hoists is ON. The backlight of GO button in local mode on Base unit is on only while one or more direction switches in 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 LED indicator.

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

4.5 REMOTE STATUS LED:



Status LED indicator of WMC remote unit.

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

4.6 Link of WMC remotes:

Only two of WMC remotes can be linked together to group operation of STOP and GO button. For linking of WMC you need 5pin miniXLR cable with custom wire connection. Never use 1:1 cable – remotes can be destroyed.

When WMC remotes are linked the GO and STOP buttons are linked – so press of any STOP and GO button is valid for both linked devices.



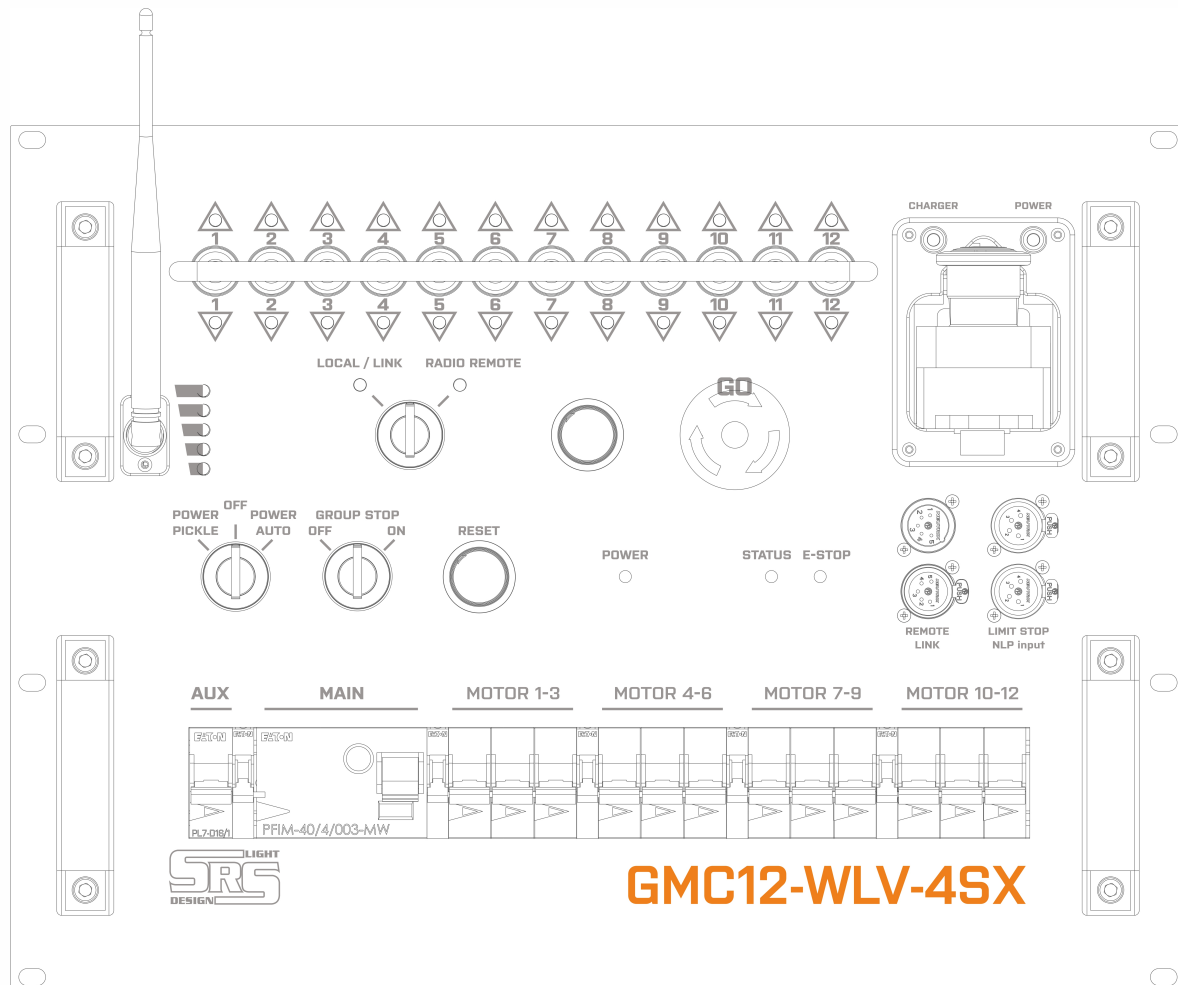
4.7 Link of Base WLV units:

Two or up to 30 units can be linked via link connector located on front panel. For link you'll need 5pin DMX data cable.

Due safety requirements link works only in LOCAL / LINK MODE of controller!

5. GMC12-WLV series base unit

5.1 GMCseries front panel



5.2 Hoist protection:

- GMC12: Each three hoist are protected by single C16/3p MCB

5.3 Power key switch positions:

- OFF: Power off / Only battery charger is active in this state/
- PICKLE: Power to the hoist is enabled
- AUTO: Power to the hoist is enabled when GO command is received

5.4 GROUP STOP key 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 unit

5.5 MODE key switch positions:

- Local / LINK: Device works via local control or via network in linked operation
- Radio Remote: Device is controlled via wireless radio remote

5.6 RESET:

Reset button for SIL3 e-stop relay reset. Needs be pressed every time when unit has been turned on, E-STOP mushroom has been pressed or when the GROUP stop has been activated.

5.7 EMERGENCY STOP:

E-Stop is red color mushroom. Once the E-STOP button has been pressed, it locks into the active position and must be rotated clockwise and released before disengaging. After engaging the E-stop button the RESET need to be pressed to reset system.

5.8 GO:

This green pushbutton turns the selected channels of Hoist Control system ON when is active. Once the GO button has been depressed, the energizing of the hoists is turned off.

5.9 DIRECTION SWITCHES:

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

5.10 Charger status LED:

Status LED of charger located on 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
- No LED : Battery is not inserted

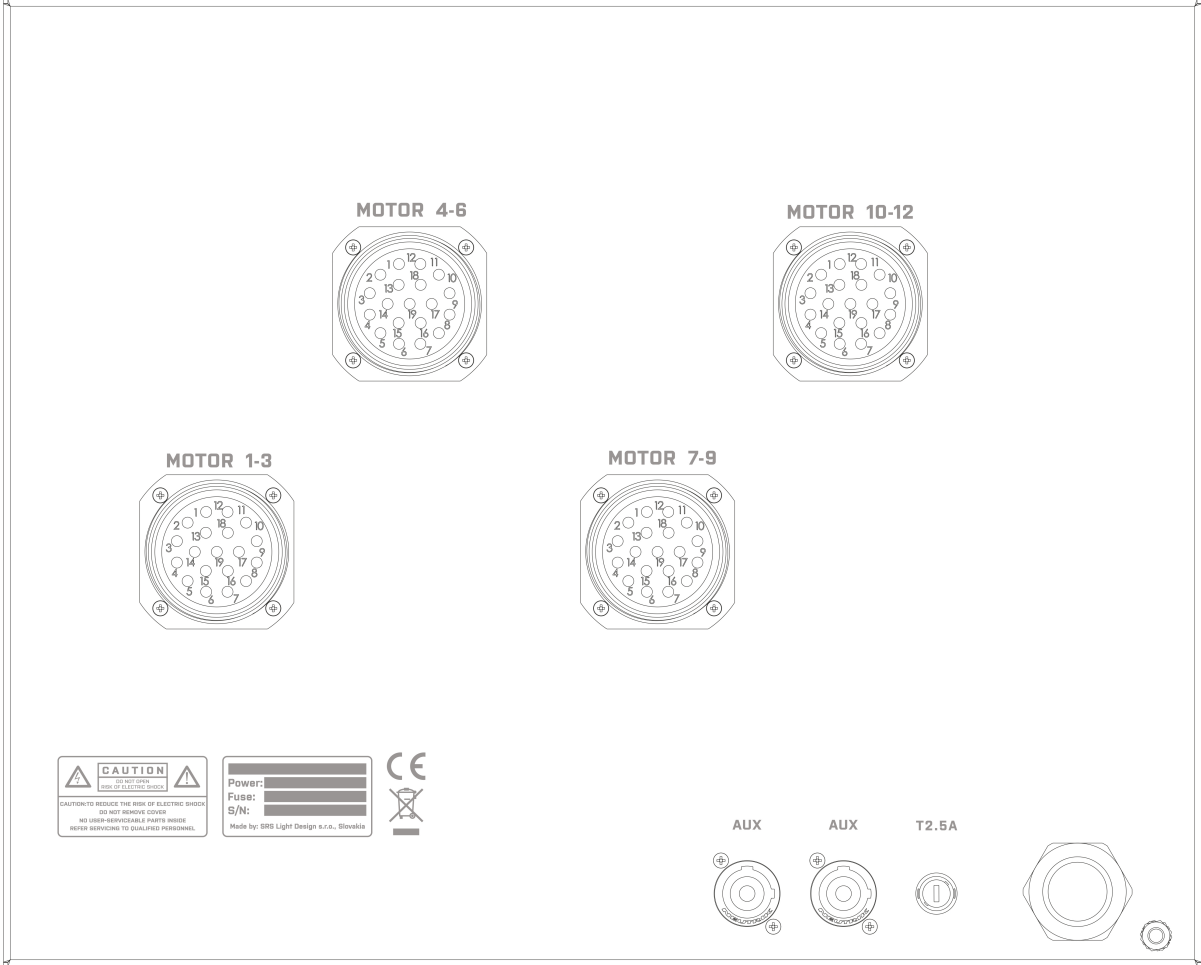
5.11 Limit STOP input:

LIMIT STOP connector for external e-stop from NLP device.

5.12 Link input:

Link input for linking of GMC units.

5.13 GMCseries back panel



5.14 MAINS:

Mains input on 1.5m cable + also fuse for mains transformer T2.5A.

5.15 AUX output:

AUX output for additional AC230 powered devices. Protected by C16/1p breaker on front panel.

6. Output connectors wiring

6.1 Socapex 19 FEMALE

Pin	Function	note
1	UP M1	
2	CMN M1	
3	UP M2	
4	CMN M2	
5	UP M3	
6	CMN M3	
7	L1	Motor1-3
8	EARTH	
9	L2	Motor1-3
10	EARTH	
11	L3	Motor1-3
12	EARTH	
13	DOWN M1	
14	DOWN M2	
15	DOWN M3	
16	L1	Motor1-3
17	L2	Motor1-3
18	L3	Motor1-3
19	Not connected	

6.2 Remote/link connector

Neutrik NC5-MAH/FAH

Connectors are used for a link operation of LV unit or for an additional digital remote CMC-xx-DIGI connection. Up to 30 units can be linked and in the local operation mode, they are controlled via one GO and E-STOP button.

Neutrik NC5-MAH/FAH



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

6.3 Loadcell E-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 are separate and NO /normally open/. For loadcell E-STOP activation contacts need to go to NO /normally closed/ state for E-STOP activation.

For reset a loadcell e-stop function please cycle the E-STOP mushroom on device.

7. Technical data

- Mains input AC400V +-20% 50/60Hz
- HL Mains Plug: CEE63A/5p

7.1 Protections and Safety:

- Short circuit protection of group of hoist by automatic circuit breakers C16A
- Life protection RCD 80A, 30mA type A
- APA – Automatic Phase Align
- AVM – Automatic voltage metering
- Double mechanical blocking contactors
- Double - Recessed Emergency stop with SIL3 certification

7.2 Metal Housing:

- 1.5mm Steel housing with gray powder coating
- 3mm Steel front panel

7.3 Dimensions /W x D x H/:

MC12-WLV-4SX19: 9U box

8. Guarantee

GMCseries hoist controller is sold with 2 year Manufacturer's guarantee. To have extended warranty conditions please contact manufacturer at sales@srslight.com.

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

Warranty void 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 is not conform or there is connection error or mechanical damage of controller, including overload, improper use.

We as manufacturer always help you to repair your unit.



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: Rybníčná 36/D
821 07 Bratislava
Slovakia

Declares that the product

Name of product: **AHD24-LV-8SX**
Type: **945001**
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:

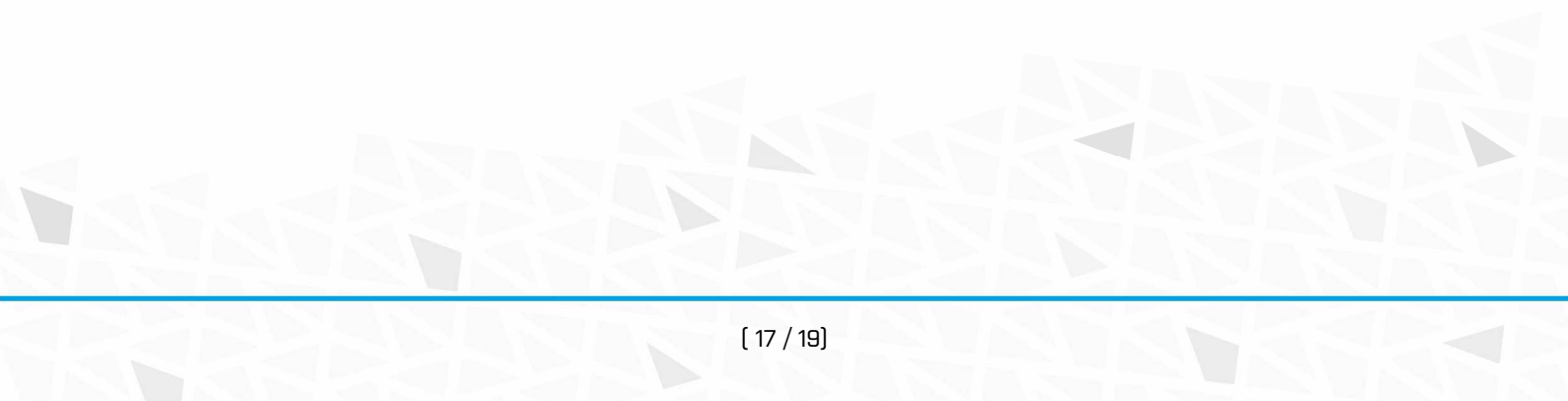
Machinery directive: 2006/42/CE
Low Voltage directive: 2014/35/CE
Electromagnetic compatibility directive: 2014/30/CE

Bratislava, 19.5.2017

SRS
G R O U P
SRS Group s.r.o.
Rybníčná 36/D
821 07 Bratislava
Slovak Republic
SK 2022726629
IČO: 44520433
DIČ: 2022726629
SRS Group s.r.o.

9. Contents

1.	Safety information.....	2
2.	Functions and Control.....	3
3.	Operation.....	4
3.1	How to start.....	4
3.2	To Move a Single/Several hoist:	4
4.	WMCseries remote controller	5
4.1	STOP:.....	5
4.2	GO:	6
4.3	DIRECTION SWITCHES:	6
4.4	BATTERY STATUS LED:	6
4.5	REMOTE STATUS LED:	6
4.6	Link of WMC remotes:	7
4.7	Link of Base WLV units:.....	7
5.	GMC12-WLV series base unit.....	8
5.1	GMCseries front panel.....	8
5.2	Hoist protection:.....	8
5.3	Power key switch positions:	8
5.4	GROUP STOP key switch positions:	8
5.5	MODE key switch positions:.....	8
5.6	RESET:	9
5.7	EMERGENCY STOP:	9
5.8	GO:	9
5.9	DIRECTION SWITCHES:	9
5.10	Charger status LED:.....	9
5.11	Limit STOP input:.....	9
5.12	Link input:	9
5.13	GMCseries back panel.....	10
5.14	MAINS:.....	10
5.15	AUX output:.....	10
6.	Output connectors wiring	11
6.1	Socapex 19 FEMALE.....	11
6.2	Remote/link connector	12
6.3	Loadcell E-STOP connector	12
7.	Technical data	13
7.1	Protections and Safety:.....	13
7.2	Metal Housing:	13
7.3	Dimensions /W x D x H/:.....	13
8.	Guarantee.....	13
9.	Declaration of conformity	Error! Bookmark not defined.
10.	Contents.....	16





Copyright 2017 SRS Group, s.r.o. | Specifications subject to change without notice.
Document: Rigging manual_template | Version 1.0 | Actual as of: 3 February 2020



SRS Group s.r.o.

Rybnicna 38/B | 831 07 Bratislava | Slovakia

Phone: +421 2 32 661 800

Email: sales@srs-group.com | www.srs-group.com

