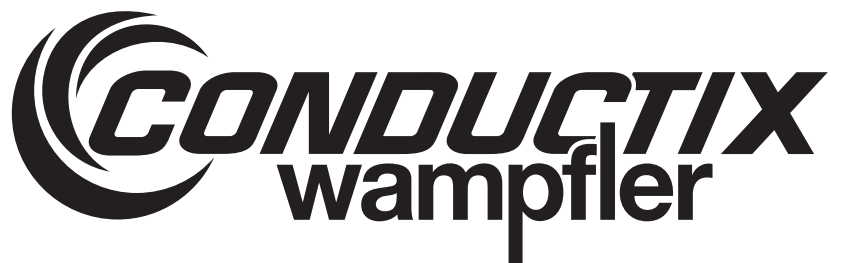


# Radio Remote Controls Manual

## K Series



# Conductix Incorporated

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Seller agrees to repair or exchange the goods sold hereunder necessitated by reason of defective workmanship and material discovered and reported to Seller within one year after shipment of such goods to Buyer.

Except where the nature of the defect is such that it is appropriate, in Seller's judgment, to effect repairs on site, Seller's obligation hereunder to remedy defects shall be limited to repairing or replacing (at Seller's option) FOB point of original shipment by Seller, any part returned to Seller at the risk and cost of Buyer. Defective parts replaced by Seller shall become the property of Seller.

Seller shall only be obligated to make such repair or replacement if the goods have been used by Buyer only in service recommended by Seller and altered only as authorized by Seller. Seller is not responsible for defects which arise from improper installation, neglect, or improper use or from normal wear and tear.

Additionally, Seller's obligation shall be limited by the manufacturer's warranty (and is not further warranted by Seller) for all parts procured from others according to published data, specifications or performance information not designed by or for Seller.

Seller further agrees to replace or at Seller's option to provide a refund of the sales price of any goods that do not conform to applicable specifications or which differ from that agreed to be supplied which non-conformity is discovered and forthwith reported to Seller within thirty (30) days after shipment to the Buyer. Seller's obligation to replace or refund the purchase price for non-conforming goods shall arise once Buyer returns such goods FOB point of original shipment by Seller at the risk and cost of Buyer. Goods replaced by Seller shall become the property of Seller.

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Seller makes no warranty (and assumes no liability) as to function of equipment or operation of systems built to Buyer's design or of the ability of any goods to interface, operate or function with any portions of Buyer's system not provided by Seller.

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Seller is not responsible for incorrect choice of models or where products are used in excess of their rated and recommended capacities and design functions or under abnormal conditions. Seller assumes no liability for loss of time, damage or injuries to property or persons resulting from the use of Seller's products. Buyer shall hold Seller harmless from all liability, claims, suits and expenses in connection with loss or damage resulting from operation of products or utilization of services, respectively, of Seller and shall defend any suit or action which might arise there from in Buyer's name - provided that Seller shall have the right to elect to defend any such suit or action for the account of Buyer. The foregoing shall be the exclusive remedies of the Buyer and all persons and entities claiming through the Buyer.

## **1.0 Warning and Caution**

## **2.0 Important Information Before You Start**

2.1 Important

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# 1.0 Warning and Caution

The following symbols may be found on the product or throughout the documentation.

Symbol	Description
	<b>Refer to Manual</b> Refer the user manual for additional information when product marked with this sign.
	<b>Dangerous Voltage</b> Indicated presence of hazardous voltage. Unsafe practice could result in sever personal injury.
	<b>Warning</b> Denotes a hazard. Included text gives proper procedures. Failure to follow instructions could result in severe personal injury and/or property damage.
	<b>Caution</b> Denotes a hazard. Included text gives proper procedures. Failure to follow instructions could result in minor personal injury and/or property damage.

## 2.0 Important Information Before You Start

### 2.1 Important

**Due to the complex nature of equipment, read this entire manual carefully before operation and installation.**

- 2.1.1 Never allow any unauthorized personnel to dismantle equipment as this may cause the equipment damage.
- 2.1.2 The equipment has been stringently tested for quality assurance before delivery from factory. However, it must not be used in extremely dangerous situations, or where damage may result.
- 2.1.3 After operation, switch off crane main power as well as receiver unit and remove rotary key from transmitter unit.
- 2.1.4 The transmitter should be kept in a safe place when not in use to avoid any unintentional operation.
- 2.1.5 The crane should be equipped with main power relay, limit switch and the other safety devices required.
- 2.1.6 Do not use this device during electrical storms or where there are conditions of high electrical interference.
- 2.1.7 Always check transmitter battery and receiver input power conditions before operation.
- 2.1.8 The installation and maintenance service is allowed only when the crane and receiver power are turned off to avoid electrical shock.
- 2.1.9 The contents of the manual may be amended by the manufacturer without notice.
- 2.1.10 The specification and function is subjected to change without notice by manufacturer.

### 2.2 Precautions

- 2.2.1 Press EMS button and switch off main power of crane and receiver after operation. Then remove transmitter rotary key and keep in a safe place.
- 2.2.2 The following situations may cause receiver response delay and stop operation immediately when situation occurs.
  - a) Beyond operation range
  - b) During sever radio interference
- 2.2.3 Remove transmitter batteries when not in use for a long period of time.
- 2.2.4 To extend product life, please follow the standard operation procedure and maintain system regularly.
- 2.2.5 Check EMS button and other main functions before operation.
- 2.2.6 Press EMS button during system failure or any abnormal conditions occur.
- 2.2.7 The operator must be familiar with emergency procedures before operating the system.

### 2.3 Emergency Procedures

**In case of emergency, please follow the procedure below:**

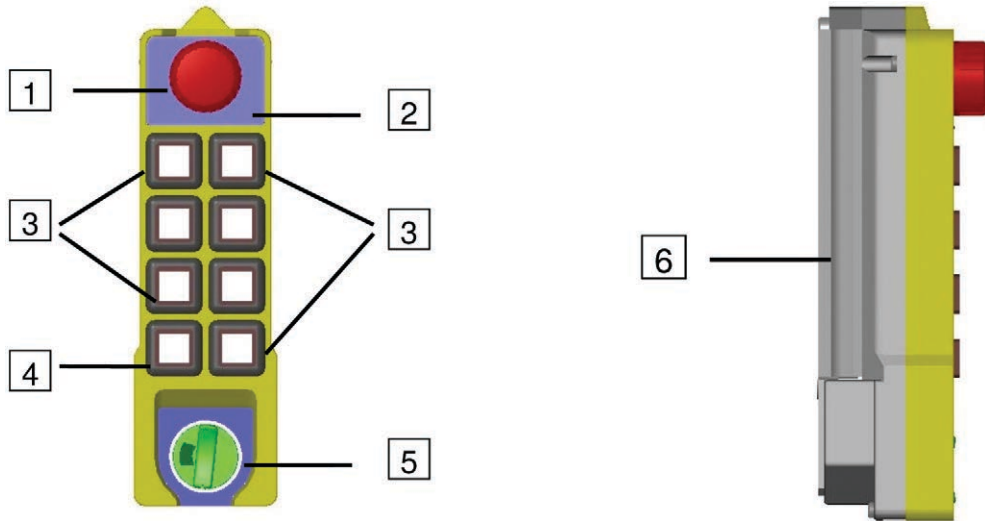
- 2.3.1 Press EMS button and stop operation.
- 2.3.2 Switch rotary key to "OFF" position and remove it from transmitter unit.
- 2.3.3 Switch off crane main power.
- 2.3.4 Contact the authorized distributor for further assistance.

## 3.0 Specification

General Specification	
ID Code	Over 1 Million Sets
Channel Space	25 KHz
Hamming Distance	$\geq 4$
Structure	Enhanced Glass-Fiber
Operation Environment	-40°C ~ +85°C
Operating Distance	Up to 100 M
Transmitter	
Power	AA Battery x 4
Emission Power	< 10mW
Dimension	163x49x45mm (Series K1/K2) 274x77x42mm (Series K3/ K4)
Weight	210 g (Series K1/K2) 385 g (Series K2/K3)
Receiver	
Power	24/48/110/220/380VAC ( $\pm 20\%$ )
Dimension	167x154x88mm (Series K1/K2) 310x160x95mm (Series K2/K3)
Weight	2100g (Series K1/K2 with cable) 2900g (Series K2/K3 with cable)

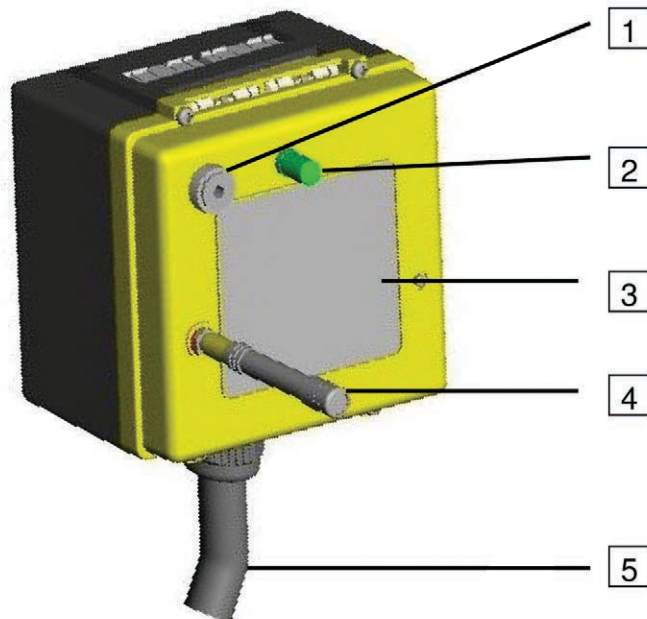
## 4.0 Transmitter & Receiver Overview

### Series K1/K2 Transmitter Overview



- |                   |                        |
|-------------------|------------------------|
| 1 EMS Button      | 2 LED Indicator        |
| 3 Function Button | 4 START / Alarm Button |
| 5 Rotary Key      | 6 Battery Cover        |

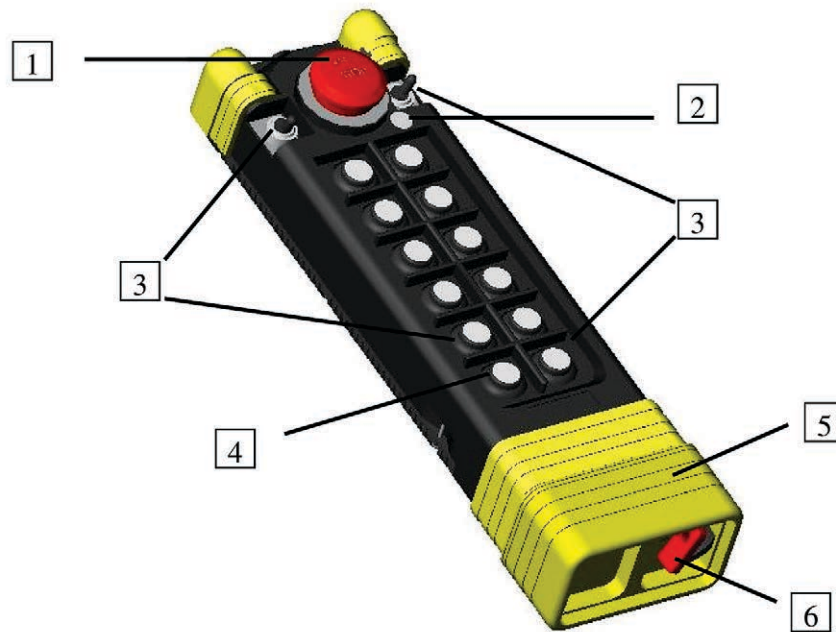
### Series K1/K2 Receiver Overview



- |                           |                        |
|---------------------------|------------------------|
| 1 Alarm (Horn)            | 2 Power - On Indicator |
| 3 Receiver Wiring Diagram | 4 Antenna              |
| 5 Cable                   |                        |

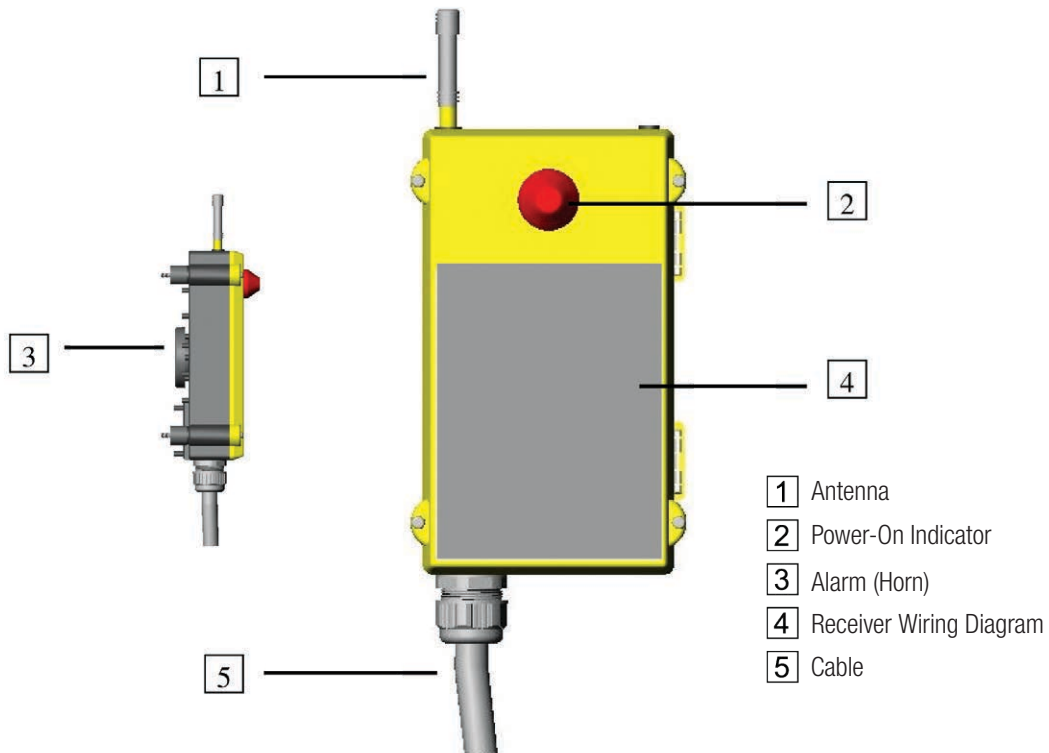
## 4.0 Transmitter & Receiver Overview

### Series K3/K4 Transmitter Overview



- 1 EMS Button
- 2 LED Indicator
- 3 Function Button & A/B Switch
- 4 START / Alarm Button
- 5 Battery Cover
- 6 Rotary Key

### Series K3/K4 Receiver Overview



- 1 Antenna
- 2 Power-On Indicator
- 3 Alarm (Horn)
- 4 Receiver Wiring Diagram
- 5 Cable



## 5.0 General Operation

### 5.1 Getting Started

5.1.1 Install 4 new AA-size batteries in the battery compartment (make sure batteries correctly installed according to the indication of “Positive” & “Negative”) and close battery cover firmly.

5.1.2 Insert rotary key into transmitter unit and switch to “ON” position.

5.1.3 Press START button to power the system.

**Note: Red LED indicator will flash when fail to follow procedures above accordingly.**

5.1.4 Press function button for operation.

5.1.5 Follow the procedure below when finished with operation.

1. Press EMS button.
2. Switch rotary key to “OFF” position.
3. Remove rotary key and keep in a safe place.
4. Remove batteries if not to be used for long period of time.

### 5.2 Transmitter LED Indicator

<b>Green</b> (Full Power)	Operate as usual.
<b>Yellow</b> (Mid Power)	Unload the article as soon as possible and stop operation until batteries are replaced.
<b>Red</b> (Low Power)	An EMS signal will be sent to receiver automatically to turn off receiver. To avoid the interruption during operation, check battery power frequently.

**Note: Switch rotary key to “OFF” position to turn off transmitter completely thus extending the battery life, otherwise transmitter is in standby mode when rotary key remains in the “ON” position.**

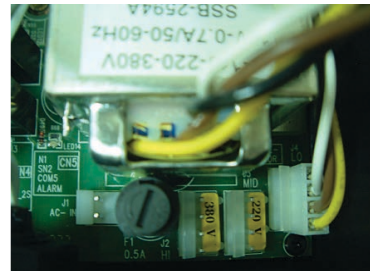
### 5.3 Changing Receiver Input Voltage

If the factory preset receiver voltage is different from application, follow the procedures below to change input voltage. (Three different voltage options for each receiver as shown in the picture with yellow label.)

5.3.1 Switch off receiver main power.

5.3.2 Remove the connector from original position.

5.3.3 Insert connector to new voltage position accordingly.

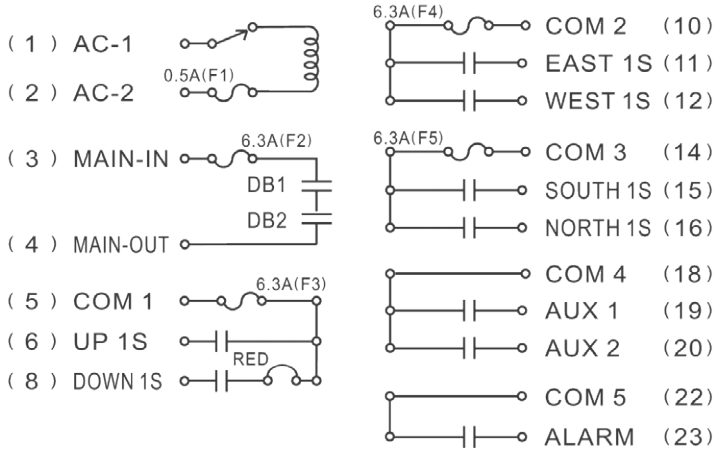


**Note: Four different transformer options are available for K Series.**

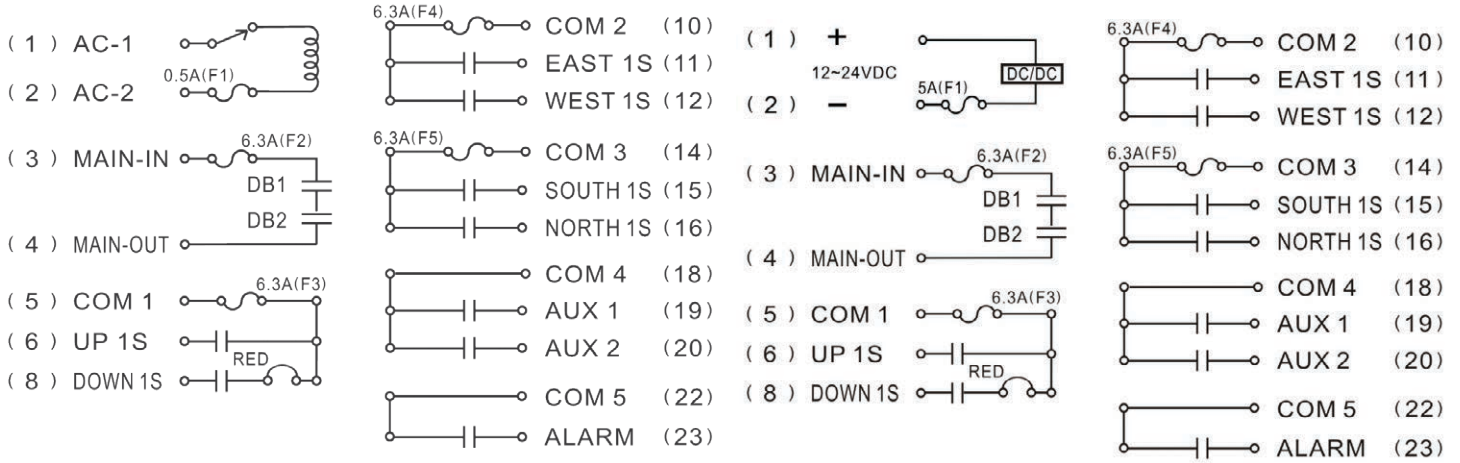
- (1) 24V/42V/230V
- (2) 48V/110V/220V
- (3) 110V/220V/380V
- (4) 48V/220V/380V

# 6.0 Receiver Wiring Diagram

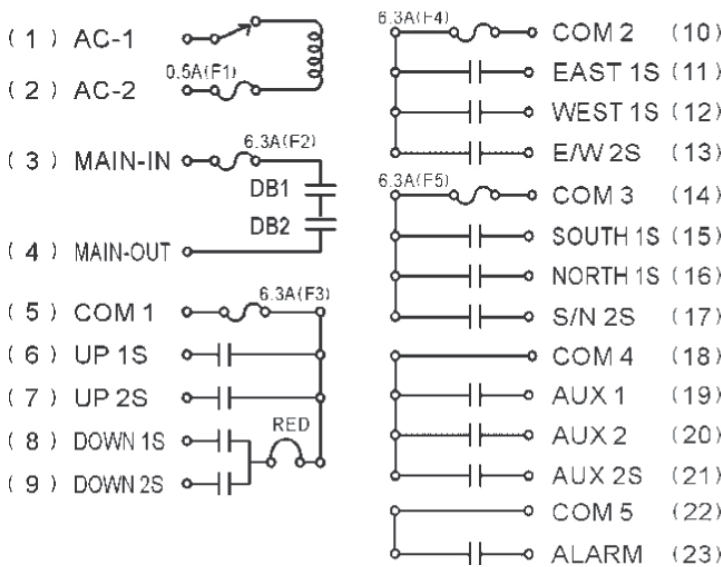
## K1 Series



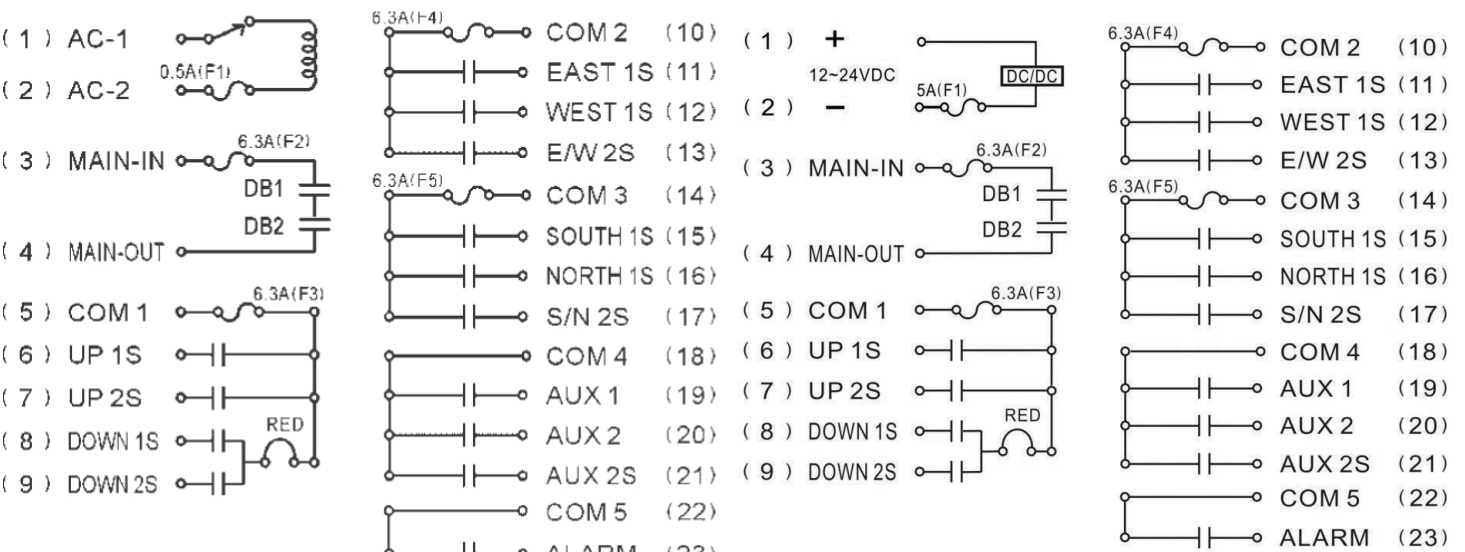
## K1 Series (DC)



## K2 Series

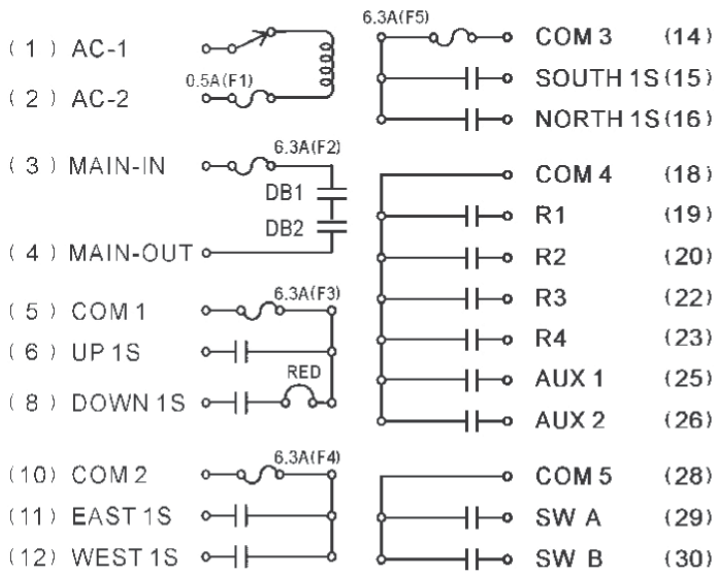


## K2 Series (DC)

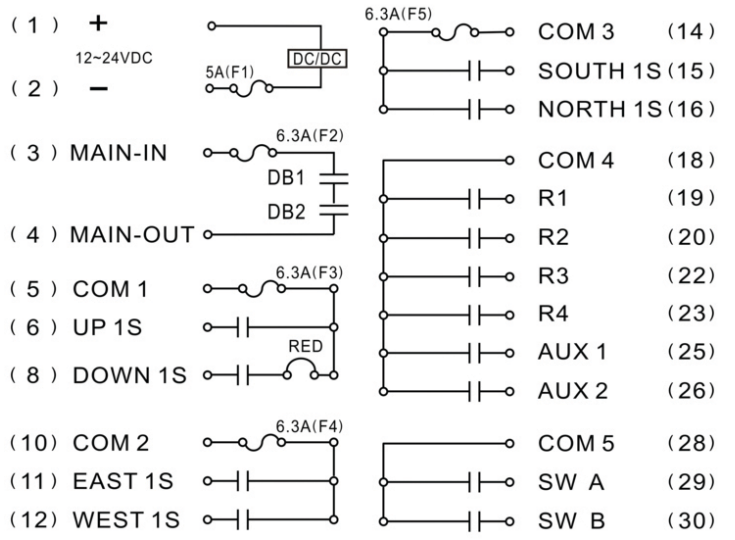


# 6.0 Receiver Wiring Diagram

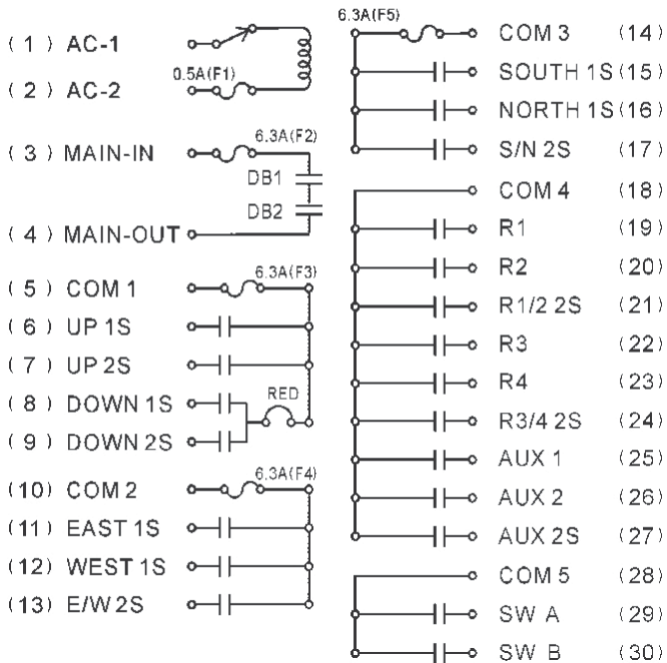
## K3 Series



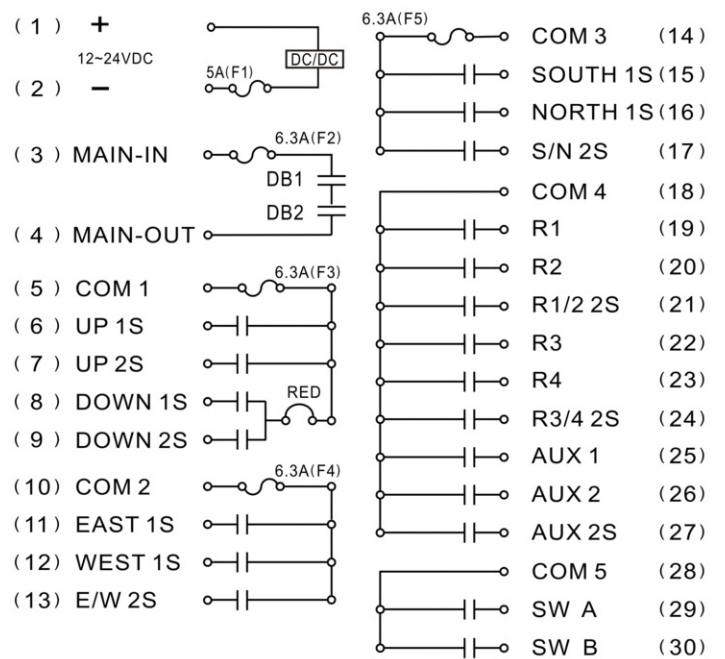
## K3 Series (DC)



## K4 Series



## K4 Series (DC)



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