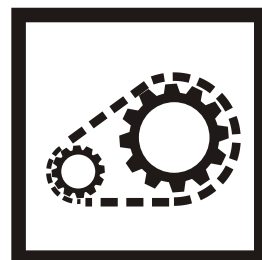
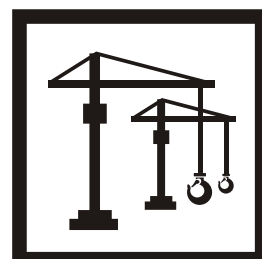
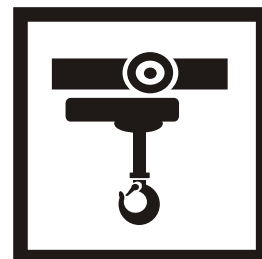


APOLLO *MiniS*

RADIO REMOTE CONTROL

HANDBOOK

DC/AC version



Please read the handbook carefully before operation to avoid any dangerous or damage may be incurred

Jan. 2015

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1. INTRODUCTION

1.1 FEATURES:

1. Pocket-size transmitter, light ,more handy for operation.
2. Advance program design, quick & good performance on movements.
3. ABS +PC transmitter housing, water/shock/dust proof.
4. Single-low button transmitter, compact and lighter design, ensure safe & convenient operation .
5. Receiver with 4-LED indicators, quick, simple judgement for operation status & after services repair.

2. MODELS

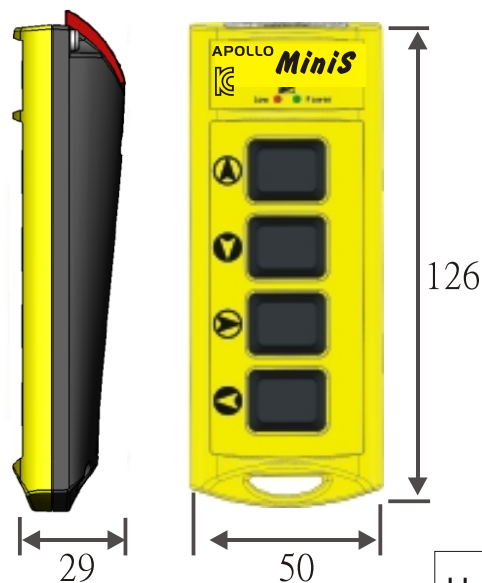
MiniS 20	1 step, (2) buttons
MiniS 30	1 step, (3) buttons
MiniS 40	1 step, (4) buttons
MiniS 20C	1 step, (2) buttons
MiniS 30C	1 step, (3) buttons
MiniS 40C	1 step, (4) buttons

※ All models are equipped with RED EMS stop (push type)

3. TRANSMITTER

3.1 TECHNICAL DATA:

Operation distance: 30M (level and open space)
 Frequency : FSK2.4G(auto scan)
 Output power : < 10mW
 Response time: <100mS
 Antenna: internal type
 Temperature: -10°C~+75°C
 Source supply:Lithium polymer chargeable battery 3.7V(1350mA)
 Enclosure: IP65
 Material: Industrial ABS + PC
 Address code : 42 sets
 Weight : 100 g (excluding batteries)
 Size: 126x50x29mm



Unit : mm

3.2 INDICATOR:

stand-by (power on)	GREEN lights blinks slowly (EMS turn on)
Operation	GREEN lights blinks fast when button pressed
Power low	RED lights blinks slowly
power off	RED lights off (EMS OFF)

3.3 POWER-ON STEPS:

- (1) Power on receiver.
- (2) PUSH up the RED stop button to power on the transmitter.
- (3) Press any button and release, now MINIS is ready to operate
(now receiver power LED lights GREEN)



3.4 POWER-OFF STEPS :

- (1) Push down the RED stop button

3.5 The illustration of indicator lights when connected: .

Receiver:

- (1) When receiver is under auto-scanning channels or unconnected, the OP/ DATA indicator light will be red and blink alternately.
- (2) When OP indicator light turns green, it means the controller has been connected successfully.
The DATA indicator light will be red and blink slowly.

Transmitter

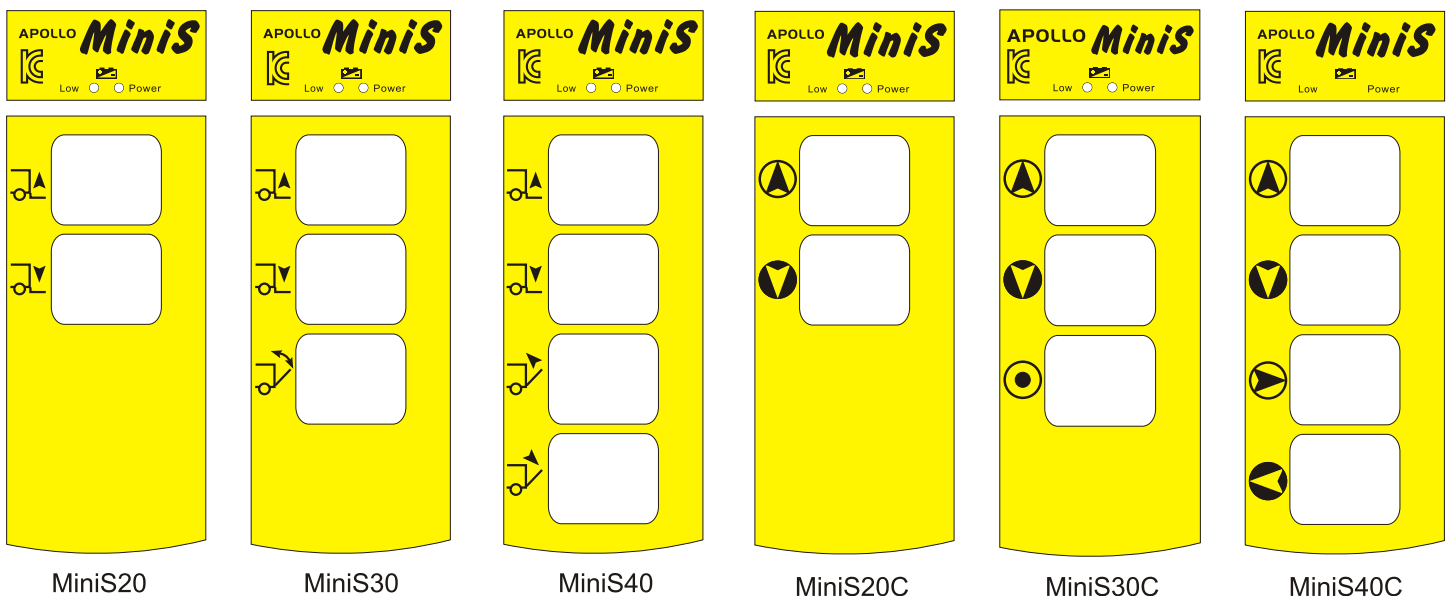
- (1) When transmitter is under auto-scanning channels or unconnected, the indicator lights will be red and blink alternately.
- (2) When indicator lights turns green and blink slowly, it means the transmitter has turned on and connected with receiver. (Without operating)
- (3) After transmitter turned on and connected with receiver, and when transmitter is operating (under communicating), the indicator lights will be green and blink quickly.



CAUTION:

Please take out the batteries if long term period NOT operation.

3.6 STANDARD MINI BUTTON LAYOUT:

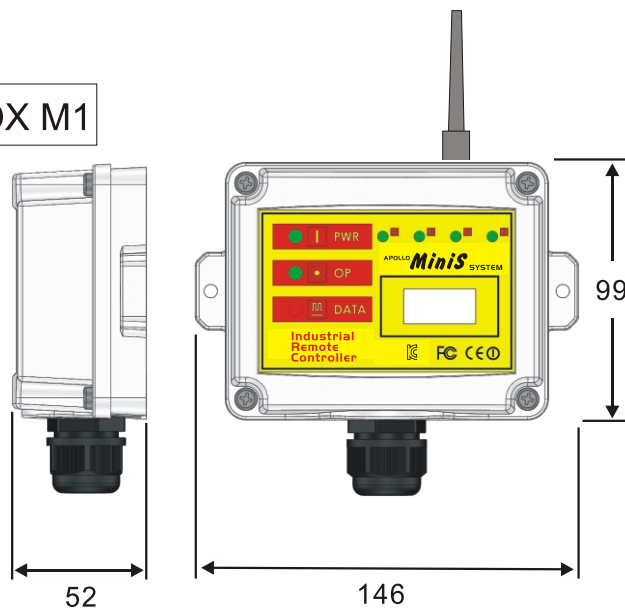


4. RECEIVER

4.1 TECHNICAL DATA:




Frequency : FSK2.4G(auto scan)
 Sensitivity of RF:-94dBm
 Antenna : external type
 Operation Temperature : -10°C~+75°C
 Source Voltage:DC9-30V / AC110~440V,50/60Hz
 Enclosure: IP67
 Consumption: <2.76W
 Security Code: 256sets
 Weight: 280g (Including the 8 core cable, 2m)
 protection: short protection
 Color: Grey

BOX M1



Unit : mm

4.2 INDICATOR:

illustration	description
 PWR	<u>Power LIGHT</u> Green indicator light when power on
 OP	<u>Operation LIGHT</u> GREEN indicator light when EMS turn on GREEN lights blinks fast when frequency auto scan
 DATA	<u>Data LIGHT</u> RED indicator light when button pressed RED lights blinks slowly when linked with transmitter or no button pressed RED lights blinks fast when frequency auto scan

TX*: transmitter



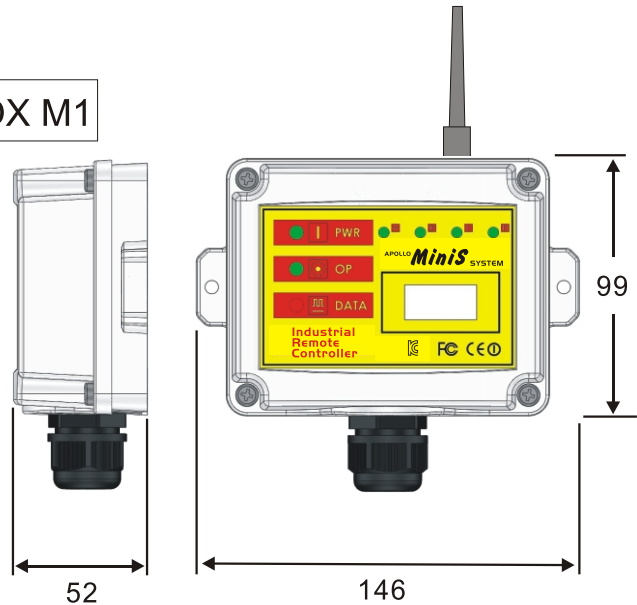
S/No. ID LABEL:

Each MiniS unit has its own s/no. ID label which defines the device's type, ID, service number (S/No.), and channel. For any inquiry please advise your supplier the S/NO. for a faster service.

4.3 INSTALLATION NOTES:

- (1) Ensure the original wired control of equipment works.
- (2) Shut down equipment main power source before installation.
- (3) Mount in a firmed site where the receiver can be seen easily by operator.
- (4) Keep away the mounted site from motors relays, cables, high voltage wiring and devices, or the protrusion of building where crane moves.
Select a firmed site without metal shield.
- (5) Ensure the wiring layout correctly and safely
- (6) Test each function to be sure each output has the same function as wired control
- (7) Put the wired pendant if has in safe position

BOX M1



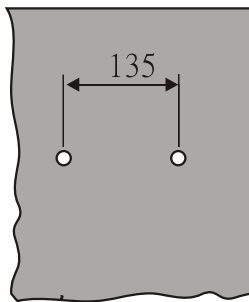
CAUTION:

Please clean the EMS stop regularly at least every week to keep good condition

4.4 RECEIVER INSTALLATION ILLUSTRATION :

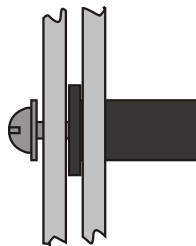
● How to install shock absorber base:

①



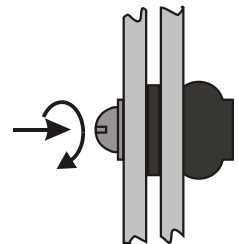
hole 8mm dia x 2

②



insert rubber absorber in position

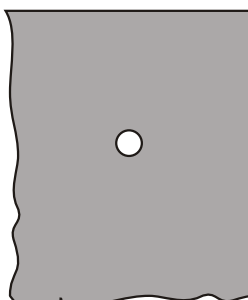
③



screwing in until rubber absorber inflated

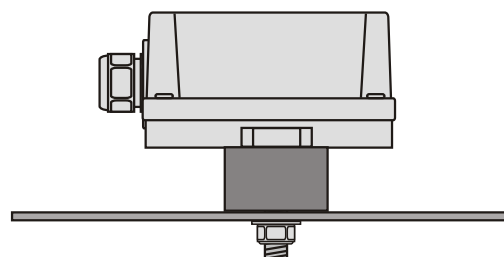
● How to install shock absorber base(optional):

①



hole 10mm dia x 1

②

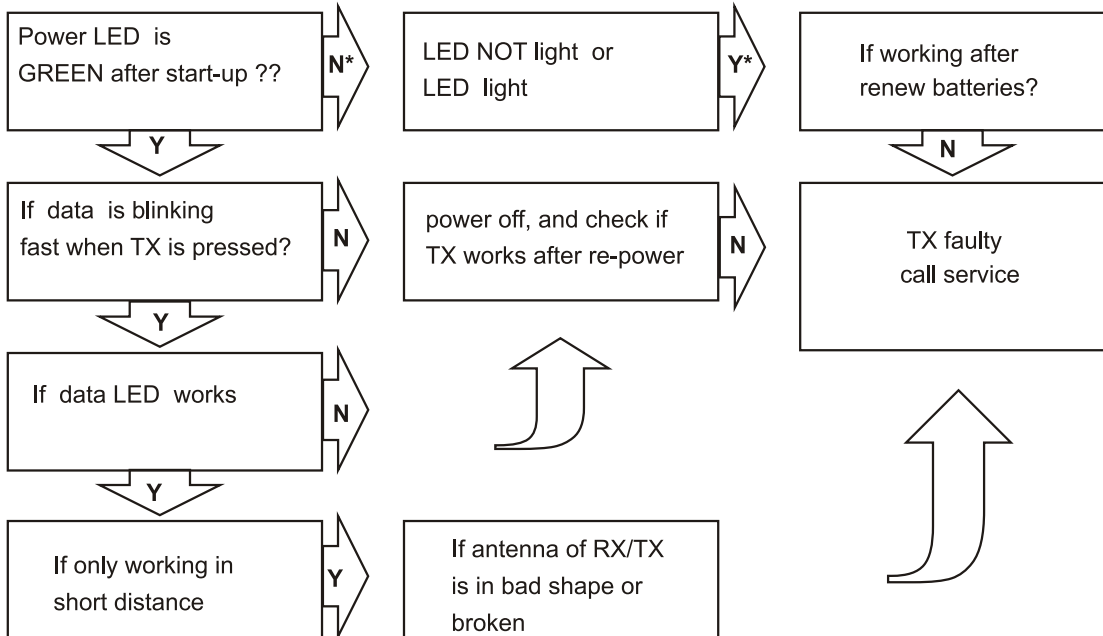


Screw in the screws and then finish

5. TROUBLE SHOOTING- TX

Please make sure the following status before trouble shooting.

- (1) The hoist or device is subject to control works
- (2) The TX outlook is in good condition without leakage
- (3) Receiver works

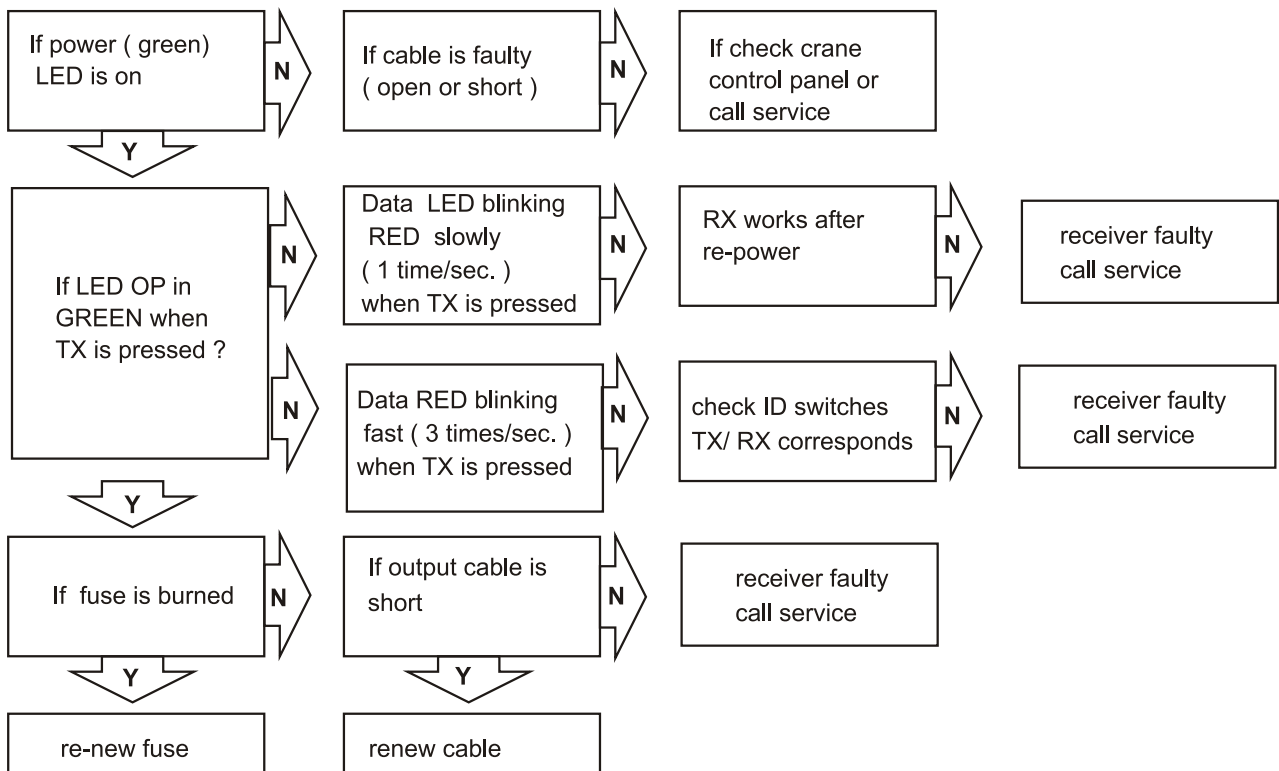


TX*: transmitter

6. TROUBLE SHOOTING- RX

Please make sure the following status before trouble shooting.

- (1) The hoist or device is subject to control works
- (2) The RX outlook is in good condition without leakage
- (3) Transmitter works



RX*: receiver

7. PARTS LIST

TRANSMITTER	
part number	description
MTC	transmitter casing (incl. RED stop, rubber pushbuttons,battery case)
MEDS-20/20C	encoder board(MiniS 20/20C)
MEDS-30/30C	encoder board(MiniS 30/30C)
MEDS-40/40C	encoder board(MiniS 40/40C)
MSB	Nylon belt for transmitter
P01-M	Transmitter protection sleeve
TFP	HF Transmitter frequency board
MRC	Transmitter back cover(incl.recharge battery cover & Lithium Battery)

RECEIVER	
part number	description
BOXM1	receiver housing incl. cable gland
MDDS-20/20C	decoder board (MiniS 20/20C)
MDDS-30/30C	decoder board (MiniS 30/30C)
MDDS-40/40C	decoder board (MiniS 40/40C)
RFP	HF receiver frequency board
CAP8	cable 8 X 0.75mm2 x 1.8 M
CAP10	cable 10 X 0.75mm2 x 1.8 M
ANT2.4G	Fold external antenna for 2.4Ghz
U01	1M USB connector
CA01	Power adapter

8. WIRING DIAGRAM

APOLLO *MiniS*

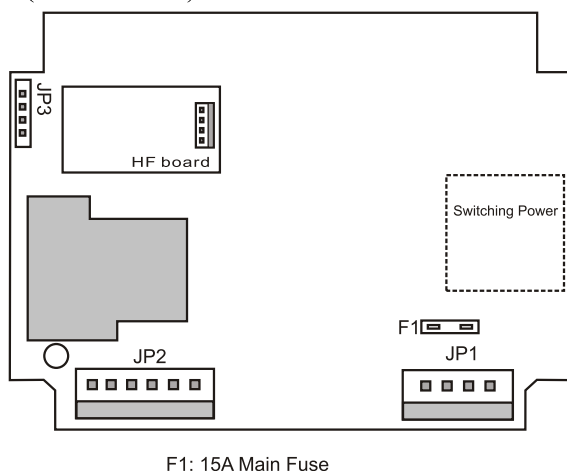
Standard circuit illustration.

- ☐ APOLLO miniS 20
- ☐ APOLLO miniS 30
- ☐ APOLLO miniS 40
- ☐ APOLLO miniS 20C
- ☐ APOLLO miniS 30C
- ☐ APOLLO miniS 40C
- ☐ _____

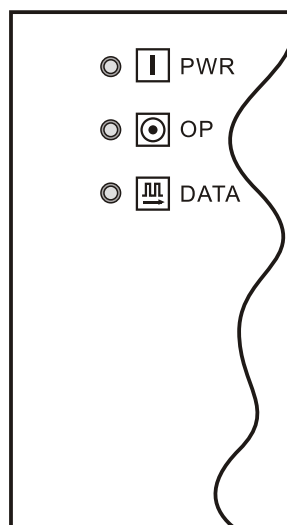
(Special case we will attach circuit illustration.)

APOLLO miniS 20 Installation Wiring Diagram

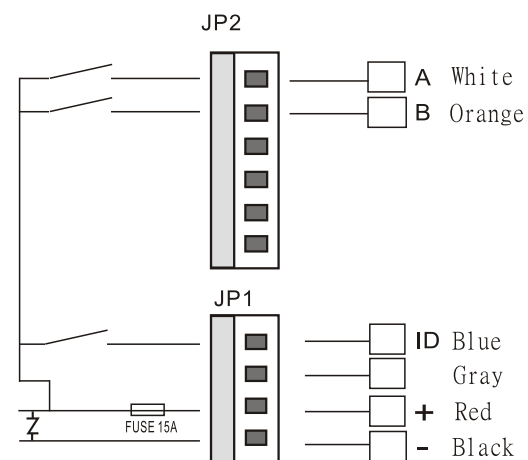
Decoder & Transistor Board
(front side)



Indicator



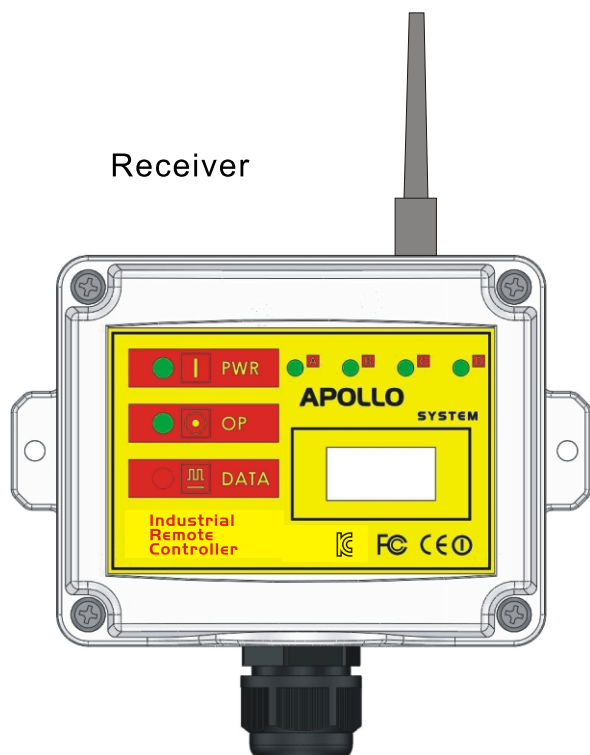
Wires Location in Decoder & Relay Board



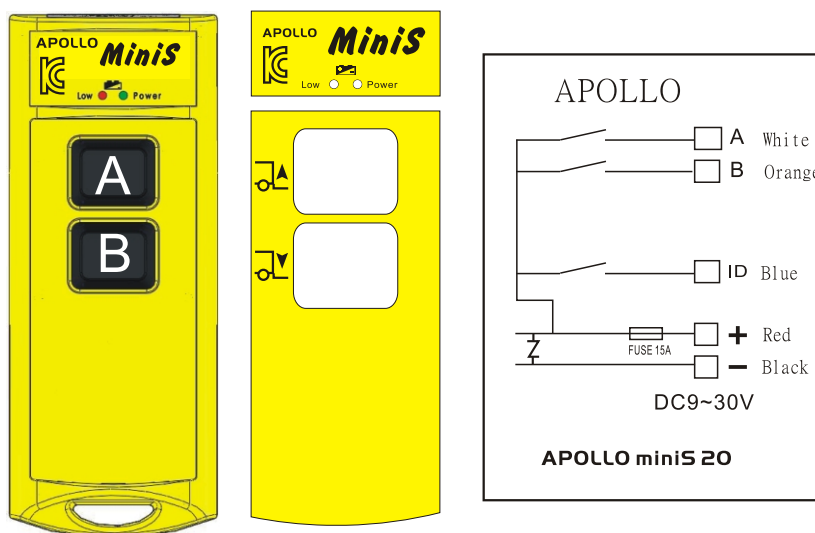
Features:

1. ID1 main relay is set for oil pump to be linked with each movement.
2. Furnished with control cable 2M long.
3. Wrecker button legend is available on demand.
4. Each set of motion (ex.K1/K2) is set with interlock ex-work.

Receiver

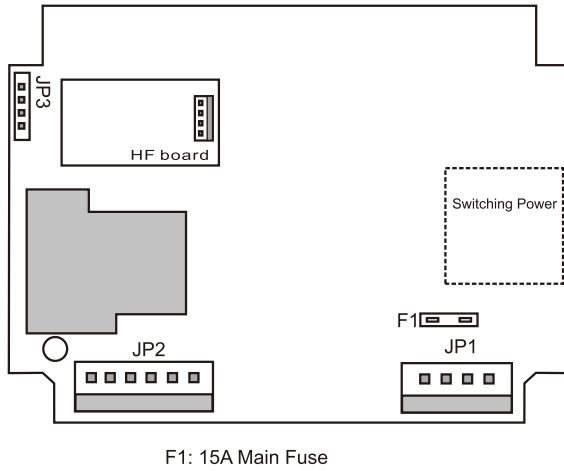


Transmitter

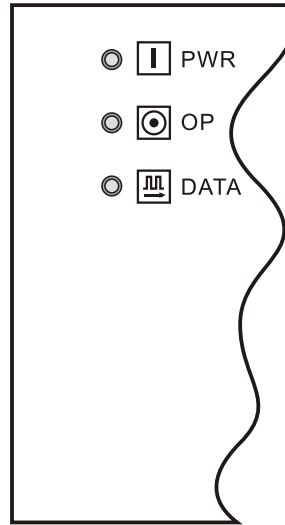


APOLLO miniS 30 Installation Wiring Diagram

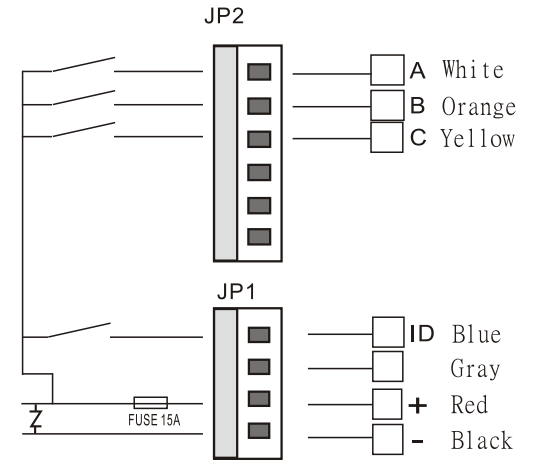
Decoder & Transistor Board
(front side)



Indicator



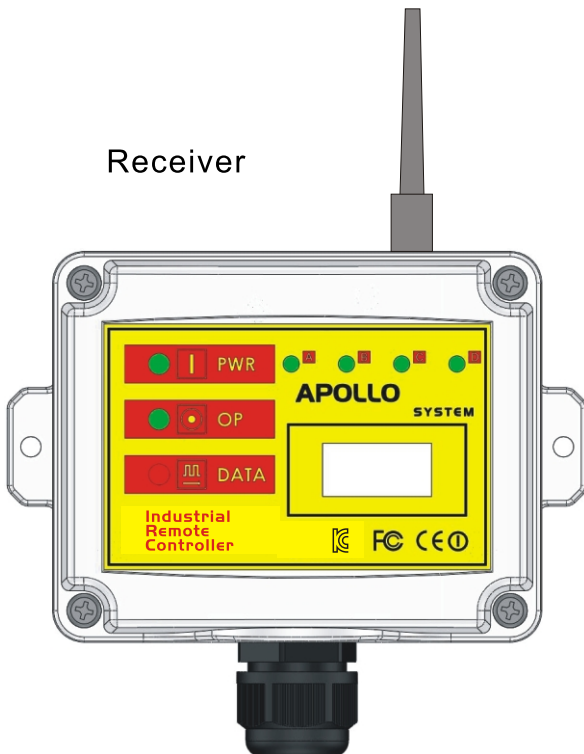
Wires Location in Decoder & Relay Board



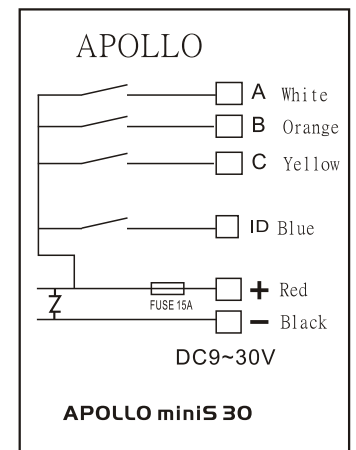
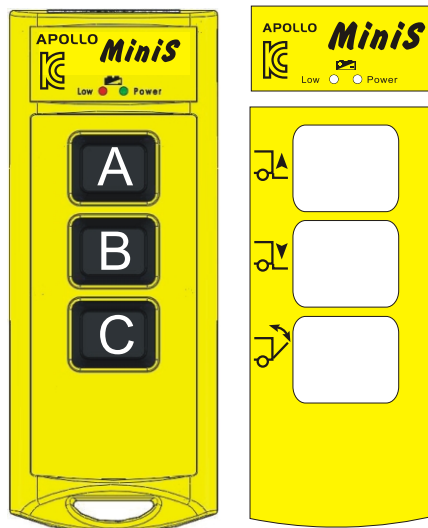
Features:

1. ID1 main relay is set for oil pump to be linked with each movement.
2. Furnished with control cable 2M long.
3. Wrecker button legend is available on demand.
4. Each set of motion (ex.K1/K2) is set with interlock ex-work.

Receiver

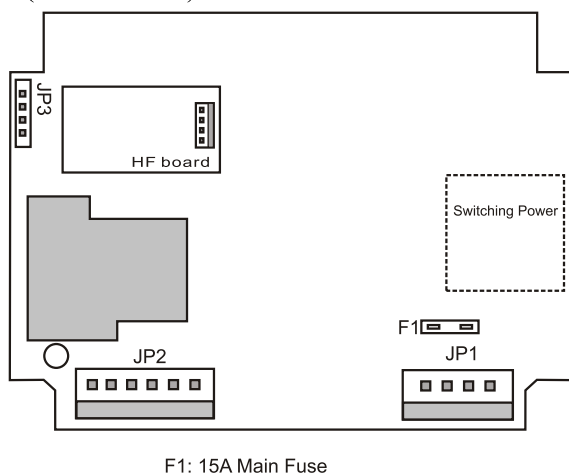


Transmitter

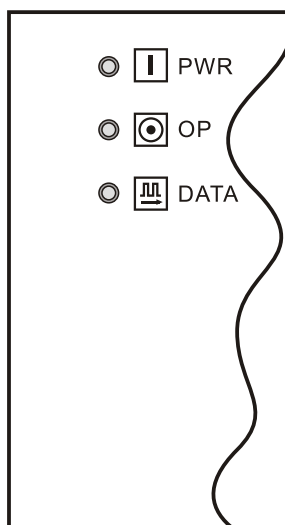


APOLLO miniS 40 Installation Wiring Diagram

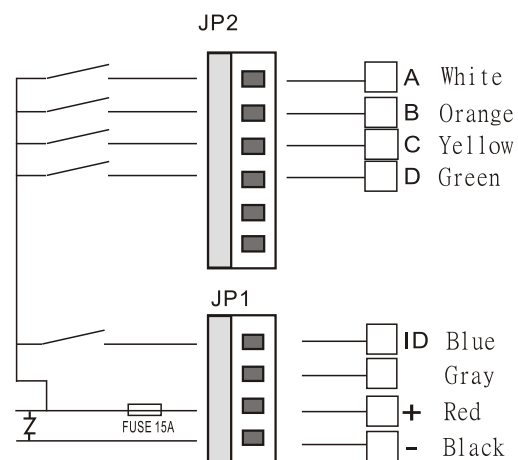
Decoder & Transistor Board
(front side)



Indicator



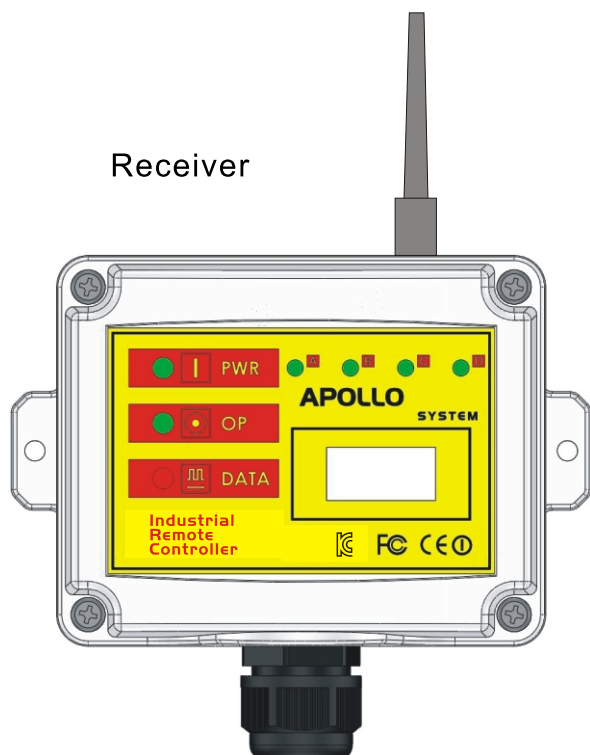
Wires Location in Decoder & Relay Board



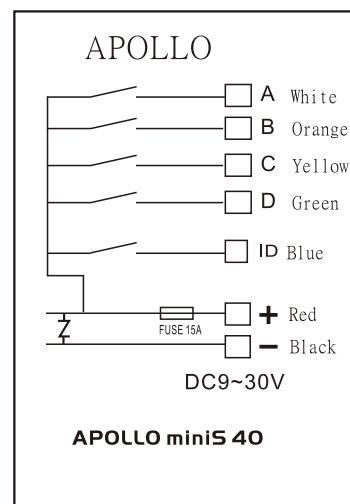
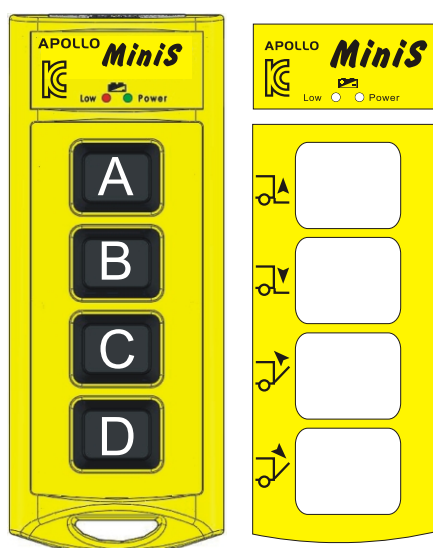
Features:

1. ID1 main relay is set for oil pump to be linked with each movement.
2. Furnished with control cable 2M long.
3. Wrecker button legend is available on demand.
4. Each set of motion (ex.K1/K2) is set with interlock ex-work.

Receiver

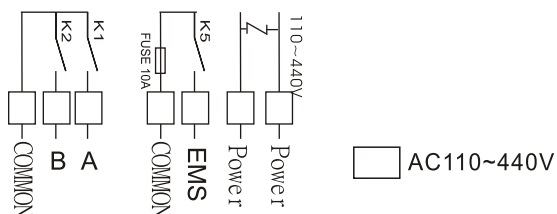
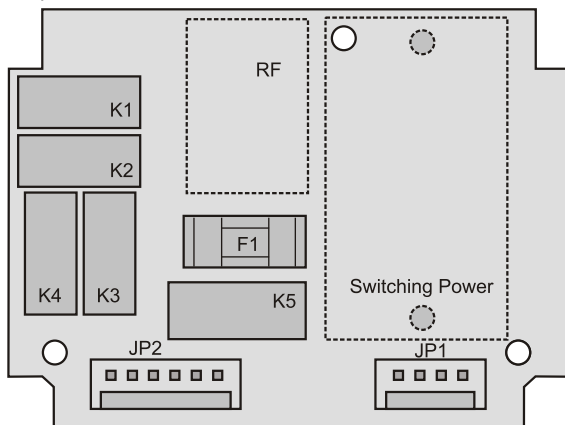


Transmitter



APOLLO miniS 20C Installation Wiring Diagram

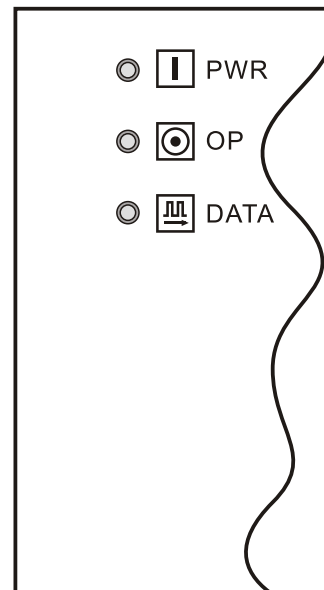
Decoder & Relay Board
(front side)



K5 Main(stop)
K1 1ST step in A
K2 1ST step in B

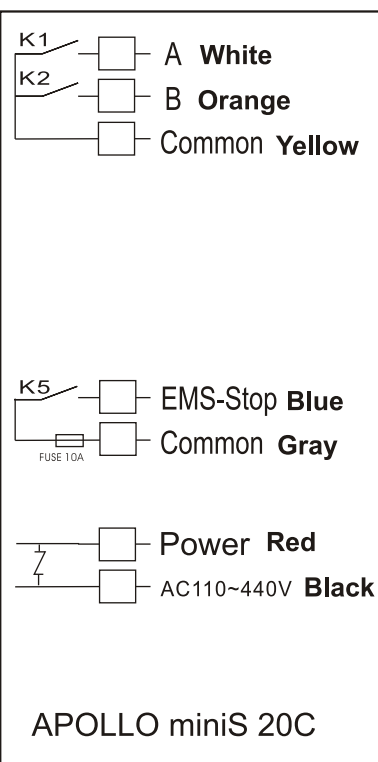
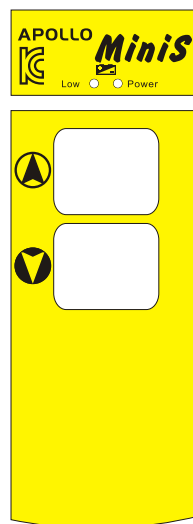
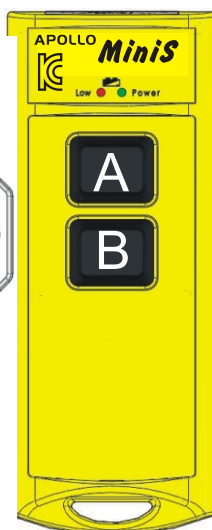
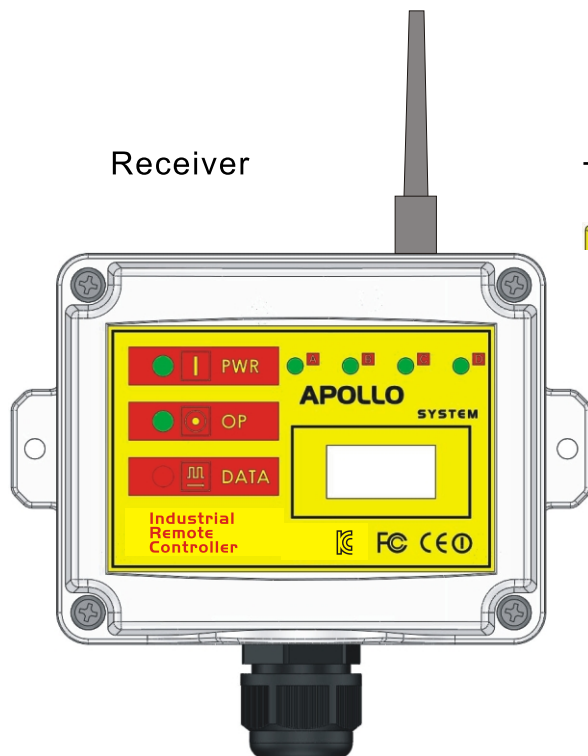
F1 10A Main Fuse

Indicator



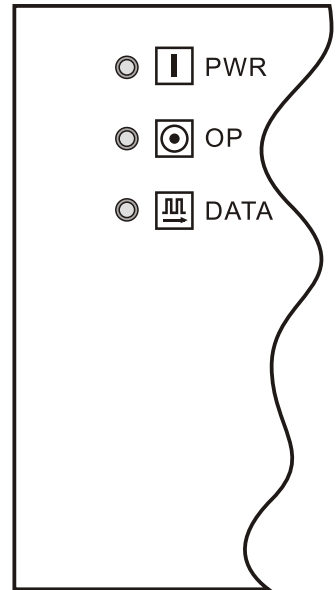
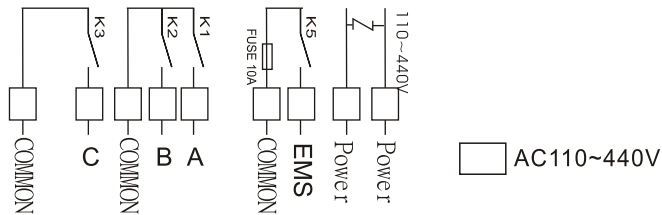
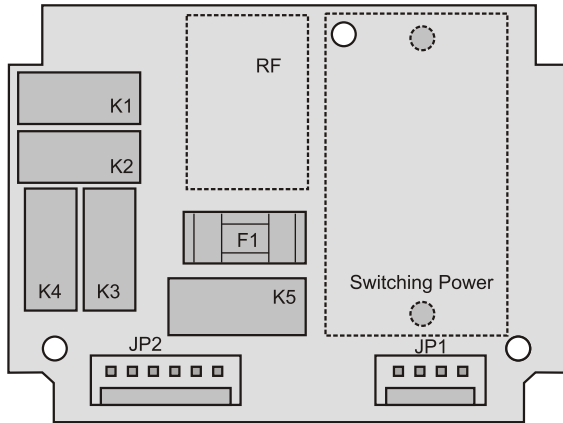
Receiver

Transmitter



APOLLO miniS 30C Installation Wiring Diagram

Decoder & Relay Board
(front side)

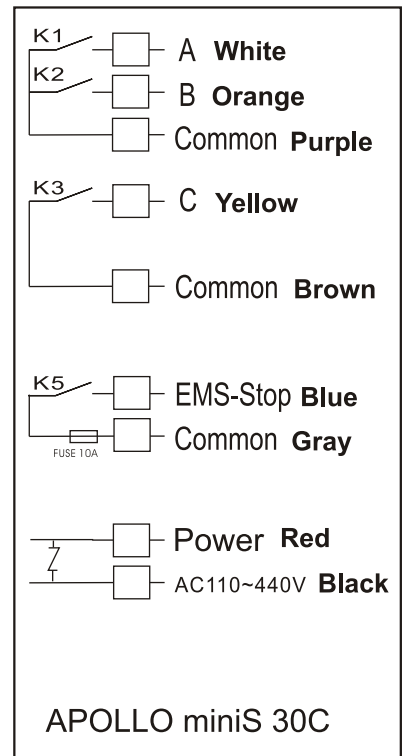
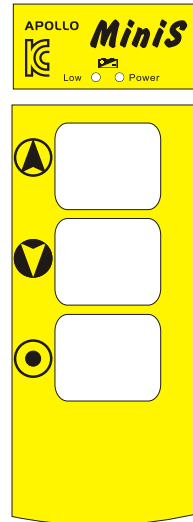
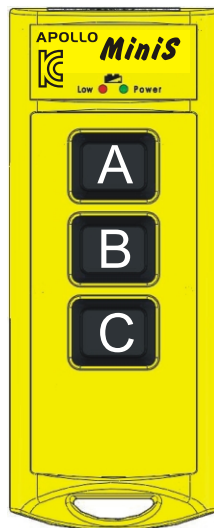
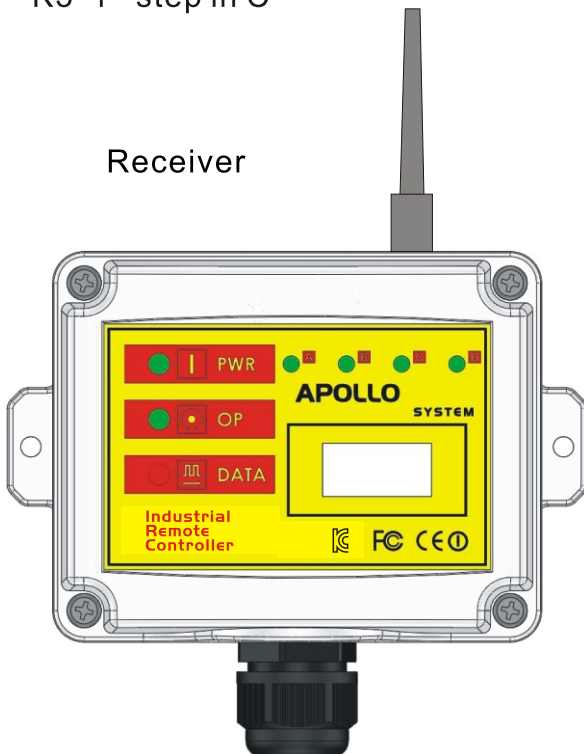


K5 Main(stop)
 K1 1ST step in A
 K2 1ST step in B
 K3 1ST step in C

F1 10A Main Fuse

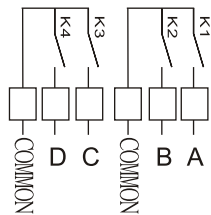
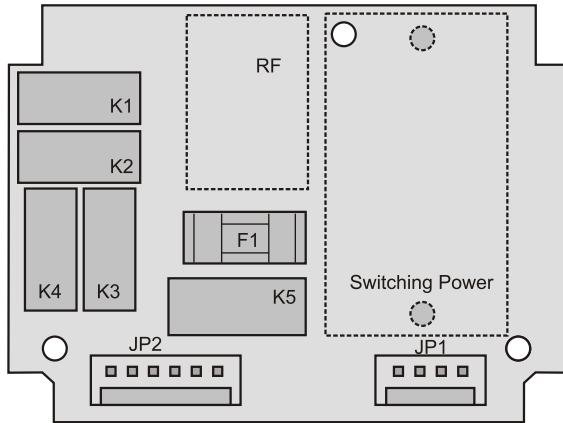
Receiver

Transmitter



APOLLO miniS 40C Installation Wiring Diagram

Decoder & Relay Board (front side)



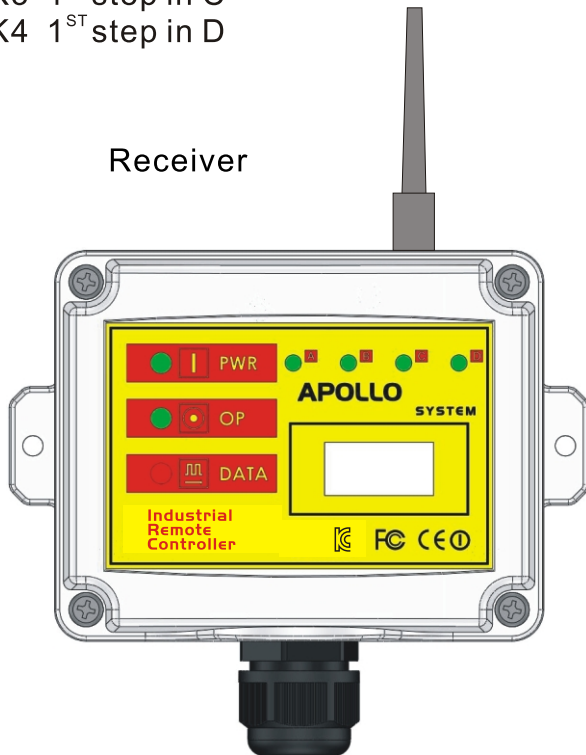
AC110~440V



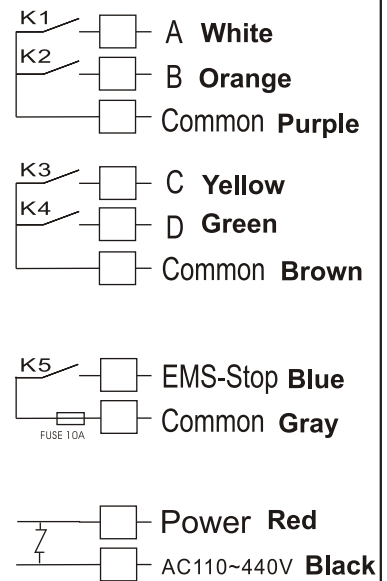
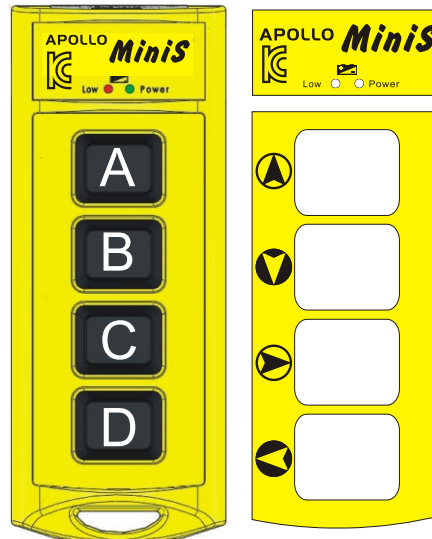
- K5 Main(stop)
- K1 1ST step in A
- K2 1ST step in B
- K3 1ST step in C
- K4 1ST step in D

F1 10A Main Fuse

Receiver



Transmitter



APOLLO miniS 40C

WARRANTY

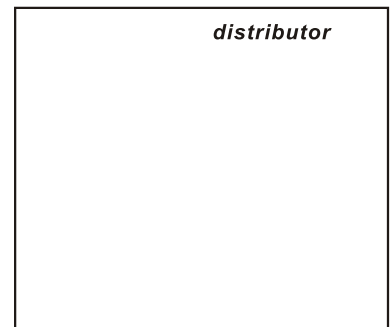
The equipment is warranted for one year from date of purchase against defects in materials or workmanship provided it was purchased from 3-Elite or authorized dealer.

This warranty does not cover equipment which has been abused or damaged by careless handling or shipping, OR damaged by nature disaster such as earthquake, typhoon etc.

The careless handling including self-change components, antenna, voltage; or circuits, and switches increased would be deemed as end of warranty, user should cover the repairing fee.

Should any defect develop, we will, at our option, repair or replace any defective parts without charge for either parts or labour. If we cannot correct the defect in your equipment, we will replace it at no charge with a new one. We will pay for the cost of returning your merchandise to you.

This warranty applies only to items returned to us, shipping costs prepaid, within one year from the date of purchase.



STANDARD ACCESSORY

- | | | |
|--|---|---|
| <input type="checkbox"/> transmitter x 1 | <input type="checkbox"/> receiver x 1 | <input type="checkbox"/> handbook x 1 |
| <input type="checkbox"/> screw x 4 | <input type="checkbox"/> transmitter sleeve x 2 | <input type="checkbox"/> Nylon belt for transmitter x 1 |

