1 YEAR WARRANTY

Download User Manual

MSI PLUS LITE

mobitech®
wireless solution

OFF

ON

SIM Error

POWER

Network | Phase Failure | Dry Run | Over Load | Motor On

USER MANUAL

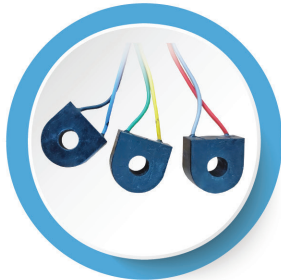# WIRELESS MOTOR CONTROLLER

Model: MS1 Plus Lite

PACKAGE CONTENTS

MS1+ Lite Cellphone
Motor Starter

Battery

Wirring Kit

3 CT Coil

Mounting Screw

Antenna

PARTS OF CELL PHONE MOTOR STARTER
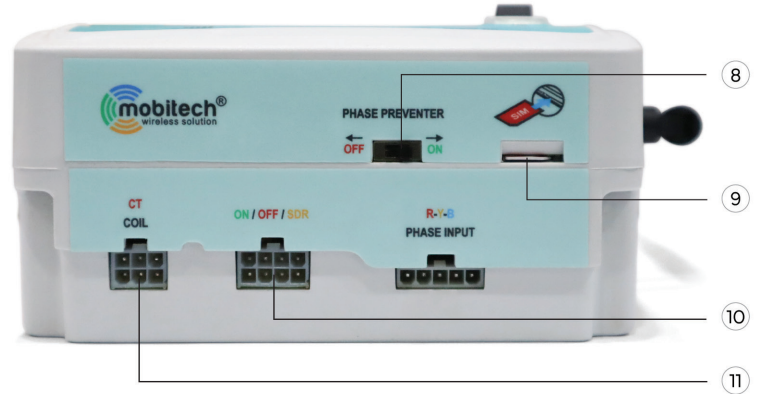
1	Power ON/OFF switch	5	Dry run	9	SIM slot
2	SIM Error Indicator	6	Overload	10	ON/OFF/SDR Relay
3	Network	7	Motor feedback	11	CT Coil
4	Phase failure	8	Phase preventer switch		

2.1 Power ON/OFF switch:

It helps to switch ON/OFF the Device

2.2 SIM Error:

This light will glow in red color either the SIM card is not inserted properly or SIM damaged

2.3 Network:

This LED blinks in two types

a) It blinks continually If not registered in network (0.3 sec ON & 0.5 sec OFF)

h) It blinks for every three seconds If registered in network (0.3 sec ON & 3 sec OFF)

2.4 Phase Failure

Incase of phase failure or phase imbalance this LED will glow in red color

2.5 Dry Run & Over Load

If the running current level decrease below the set level or increase above the set level this LED will glow in Red color

*Note:* When phase fail, dry run, over load condition the motor will be OFF automatically.

2.6 Motor Feedback:

If this LED glows in green, the Motor is ON. If this Light not glow the Motor is OFF.

2.7 Phase preventer Switch:

• It prevents the motor from phase failure and phase imbalance.

• if switch is ON prevent is enabled, if the switch is OFF preventer is disabled.

• In Single phase connection this switch must be in OFF position.

2.8 SIM Slot:
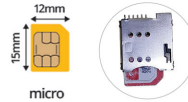
a) Insert the micro SIM card shown in the picture.

b) Any network prepaid or postpai.

2.9 CT Coil:

a) The supplied CT coil range is up to 0-30A.

b) If the motor rating is above 30A, use external CT and that connection is showed in the picture, and configures it by the CT configuration settings.
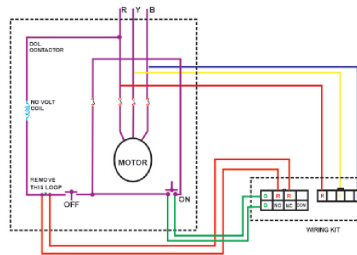
2.10 Extra Relay

It can be used for either star to delta conversion in star-delta starter or to switch ON/OFF pump room light.

3 INSTALLATION STEPS TO MS1+ Lite CONTROL UNIT

3.1 Ensure that the Motor ON/OFF Manually.

3.2 Switch off the main power and remove all fuse carriers

3.3 Make wiring in starter according to wiring diagram for Direct Online (DOL) starter

3.4 Battery RESTART Switch

Press the restart switch to ON the MS1+ Lite without power through the battery

3.5 Mark screw points with help of Marking template.

3.6 Mount the screws on the marked position of marking template

3.7 Fix the MS1+ lite cellphone motor starter nearby starter

3.8 Connect the connectors to the device at the end of wiring kit

3.9 Insert fuses in fuse box. (optional)

3.10 Connect the Removed fuse carriers and SWITCH ON the MAIN POWER.

4. BASIC CONFIGURATION

4.1 Send SMS A1+ to MS1+ Lite SIM number, it will send the confirmation SMS.

4.2 For Smart phone users download the app from play store (Android) / Apple stores (iPhones) and Install it in your phone.

4.3 Refer the QR code at the end of manual

4.4 Switch ON the motor from admin 1

4.5 Set the dry run and over load levels based on running current of the motor (Ref: 7.1)

4.6 Switch OFF the motor from admin1

Note: Admin A1 have all rights to change setting and modify other users.

5. USER CONFIGURATIONS

5.1 Addition of other user mobile number

a. Send SMS A2+91 user mobile number *# to MS1+ Lite from A1 mobile phone

b. Example: A2+919823874576*#

c. MS1+ Lite stores A2 mobile number and sends confirmation SMS to A1 & A2.

Note : If you want to add more user:

For 3rd User send SMS A3+91 < 3rd user mobile number > *#

For 4th User send SMS A4+91 < 4th user mobile number > *#

For 5th User send SMS A5+91 < 5th user mobile number > *#

For 6th User send SMS A6+91 < 6th user mobile number > *#

For 7th User send SMS A7+91 < 7th user mobile number > *#

For 8th User send SMS A8+91 < 8th user mobile number > *#
For 9rd User send SMS A9+91 < 9th user mobile number > *#
Note: A1 to A5 user only receive the SMS.

5.2 Deletion of user mobile number

a. Send SMS AX- to MS1+ Lite mobile number
b. MS1+ Lite delete's AX mobile number and sends confirmation SMS

COMMAND	DESCRIPTION
AX-	Delete ADMIN X
DL-	To delete all user number
ID	To know the Registered User Numbers

Note: X =1 to 9

Example: If you want to remove A2 user, send SMS A2- and follow same command to delete up to A9.

6 CONFIGURATION STEPS FOR MOTOR STARTER

6.1 Motor ON/OFF modes

6.1.1 SMS MODE

COMMAND	DESCRIPTION
ON	To START the Motor
OFF	To STOP the Motor

6.1.2 Missed Call Mode

a. If the registered user calls the MS1+ Lite SIM number it will reject the call at 4 to 5 rings and switch ON the Motor.
b. If Motor is already running, Device will reject the call in 2 rings and switch OFF the Motor and send the reply SMS.

6.1.3 Smart Phone

a. User can control & monitor the motor through Android & IOS application.
b. To download applications refer UR at the end of the User manual.

6.1.4 Web Control

User can control & monitor the Motor through the Website URL: www.mobitechwireless.com

6.2 Motor status

a. To know the Live status of Motor send ? to MS1+ Lite number
b. Live status can be monitored through application & website.

6.3 Current date and time

COMMAND	DESCRIPTION
T?	To know the current date and time
TS hh mm ss dt mn yr (TS 16 40 00 07 11 17)	Change the device date and time

6.4 Timer mode

Any of the following timers can be enabled, while others are automatically disabled.

6.4.1 Auto

Motor status will remain the same after power back as before power off.

COMMAND	DESCRIPTION
EAUTO	To Enable AUTO mode
DAUTO	To disable AUTO mode (default)

6.4.2 Daily Run Time

a. This setting helps to start motor in real time with running hours
b. Motor ON time and run time notifications will be sent to the User through SMS/Web/Application

COMMAND	DESCRIPTION
ORT hh mm hh mm (Ex: 15 30 04 00)	15 30: Real time 04 00: Run time
EORT	To Enable ORT timer mode
DORT	Disable ORT timer Default)

6.4.3 Demand Run Time

a. This setting helps to start motor immediately with running hours.
b. Runtime Notification will be sent to the User through SMS/Web/Application

COMMAND	DESCRIPTION
ONT hh mm (Ex:ONT 09 30)	hh:Running hours mm:Running minutes
EONT	To Enable ONT timer mode
DONT	Disable ONT timer (Default)

6.4.4 Schedule Time

This setting helps to start motor with scheduled time in 10 different timers

Note: Motor will be ON & OFF according to Real time of schedule depends ON power availability.

COMMAND	DESCRIPTION
ST(timer No) hh mm hh mm Example:STO 10 30 11 30	0-Timer No (upto 9) 10 30: ON time 11 30:OFF time
ST?	To know the SCHEDULE TIMERS list
ST-	To Delete SCHEDULE TIMERS list
EST	Enable SCHEDULE TIMER Mode
DST	Disable SCHEDULE TIMER mode

6.4.5 Cyclic Time

a. This setting helps to start motor in cyclic timer mode.
b. Cyclic ON and OFF time notification will be sent to the user through SMS/Web/ Application.

COMMAND	DESCRIPTION
CYC hh mm hh mm (Ex: CYC 01 00 30 00)	To set RUN time & OFF time
ECYC	To Enable the CYCLIC timer
DCYC	To Disable the CYCLIC timer (Default)

6.4.6 Missed Call Run Time

a. ON /OFF the Motor by missed calls with User defined run time

COMMAND	DESCRIPTION
MRT hh mm (Ex: MRT 01 30)	To set the missed call run time
EMRT	Enable missed call TIMER mode
DMRT	Disable missed call TIMER mode (Default)

7 CONFIGURATION STEPS FOR MOTOR PROTECTION

7.1 Dry Run & Over Load

a. MS1+ Lite will Switch OFF the motor automatically if motor runs out of water.
b. It can be done by Fixing CT coils in R,Y,B phases.
c. If the running current value decreases below the set level or increases the above the set level motor MS1+ Lite will off the motor automatically

COMMAND	DESCRIPTION
DROL (Ex.DROL 0080 0120 0080 0120	To set Dry run and over load Amps level (Max : 999)
EDRS	Enable dry & overload run sensor
DDRS	Disable dry & overload run sensor

d. To set the Dry run sensing delay in seconds

COMMAND	DESCRIPTION
DR sss (Ex: DR 060)	To set dry run sense delay in seconds (default 150)

e. To set the overload sensing delay in seconds

COMMAND	DESCRIPTION
OL sss (Ex: OL 005)	To set Overload sense delay in seconds

7.1.1 Dry Run Resume

The Motor will start automatically after the set level of dry run resume delay

COMMAND	DESCRIPTION
DRD hh mm (Ex: DRD 01 00)	To set Dry run RESUME time
EDRR	Enable Dry run RESUME time mode
DDRR	Disable Dry run RESUME time mode

8 CONFIGURATION STEPS FOR DIFFERENT TYPES OF STARTER

8.1 Configuration Steps for Three Phase Three Button Oil Starter

1. Do Wiring in THREE BUTTON OIL STARTER as per diagram
2. Send SMS ESD to MS1+ Lite mobile number
3. MS1+ Lite enables star delta mode and Sends SMS
4. To increase the ON/OFF relay time send SMS SDL ss ss
5. To Disable star delta conversion, send SMS DSD

COMMAND	DESCRIPTION
SDL ss ss	STARTER DELAY
(Ex: SDL 15 15) (ss - seconds)	ONRELAY & OFFRELAY (Hold seconds (SDL onss offss)

THREE BUTTON OIL STARTER
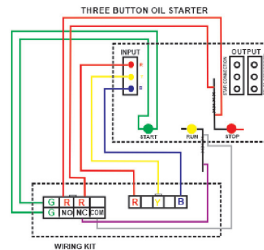
Note: To disable star delta mode send DSD

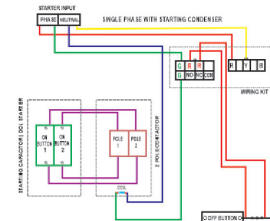### 8.2 Configuration Steps For Single Phase MCB Type Motor Starter

1. Do wiring in MCB as per diagram
2. Send SMS ESP to MS1+ Lite mobile number
3. MS1+ Lite enables single phase mode and sends SMS
4. Send SMS EONRLY to MS1+ Lite mobile number to switch hold in on relay permanently.
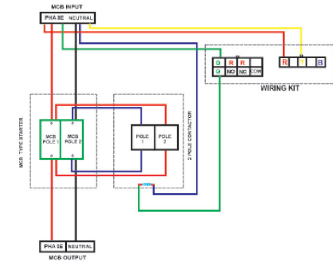
Note: To disable single phase mode send sms DSP.

To disable on relay send SMS DONRLY.

8.3 Steps For Single Phase DOL Type Motor Starter (with starting condenser)

1. Do wiring in DOL type starter as per diagram
2. Send SMS ESP to MS1+ Lite mobile number
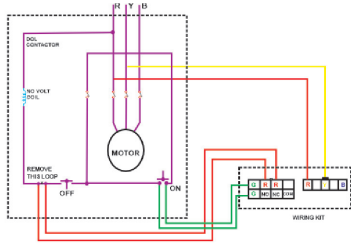3. MS1+ Lite enables single phase mode and wants to hold ON relay for 3 seconds send SMS SDL 03 04

Note: To disable single phase mode send SMS DSP

8.4 Configuration Steps For Single Phase DOL Type Motor Starter (without staring condenser)
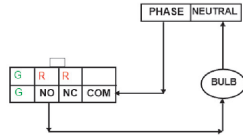
1. Do wiring in starter as per diagram
2. Send SMS ESP to MS1+ Lite mobile number
3. MS1+ Lite enables single phase mode and sends SMS

Note: To disable single phase mode send SMS DSP

9 CONFIGURATION STEPS FOR STARTER ROOM LIGHT BULB CONNECTION

a. An external light bulb load of 40Watts can be driven through it
b. Do wiring according to wiring diagram

c. If light want to be ON at 6.00 pm and OFF 6.00am send SMS EL hh mm hh mm to MS1+ Lite mobile number (EX: EL 18 00 06 00)
d. MS1+ Lite stores time and confirm through SMS
e. Send SMS DL to disable light

10 VALUE ADDED FEATURES

10.1 Low and high voltage alert

Gives SMS alert when voltage level increase above or decreases below the set level.

COMMAND	DESCRIPTION
LHV 400 450 410 500	To set low & high voltage level
ELHVF	To enable low & high voltage functions
DLHVF	To disable low & high voltage functions

10.2 LOG information

a) It gives Power availability time and Motor running time
b) If you want to fetch previous day report send SMS PLOG
c) Send SMS CLOG to know the present day report
d) User can also obtain both electricity available status and motor ON Status for specified date from the SMS reply as follows

   *0000MS1+LITE0012*021017*1234*0000*0020*0000
   0000MS1+LITE0012-MS1+ Lite serial number

   021017-Date: 2.10.2017

   1243:Electricity available for 12hours 43 minutes in 3phase

   0000: Motor ON time on 3phase

   0020: Electricity available for 20 minutes in 2phase

   0000: Motor run time on 2phase

e) If you want to know LOG data of 10th of current month send SMS LOG 10(date of this month)

   Note: i) In Default A1 user receives LOG SMS in midnight To stop receiving it send SMS DLOG

   ii) To enable LOG SMS, send SMS ELOG

10.3 Power back alert

COMMAND	DESCRIPTION
EPBCA	Enable POWER BACK call alert
EPB	Enable POWER BACK Alert SMS
DPB	Disable POWER BACK Alert SMS

a) It gives CALL to user after power resumes

10.4 Firmware update

We can update the program through Air (GPRS).

10.5 Enable and disable SMS

a) Send SMS DSMS from A1 mobile phone to MS1+Lite mobile number It disable the SMS alert & confirm through SMS
b) Send SMS ESMS from A1 mobile phone to MS1+Lite mobile number It enable & confirm through SMS

10.6 Add Field name

If you wish to add Field name in SMS, user send SMS LOC xxxxxxxxx#

Example: If you want add field name as MOBI FARM send SMS LOG MOBIFARM# from A1 mobile number to MS1+Lite mobile number.

NOTE: Maximum 10 characters only

10.7 Restart

If you want to restart the MS1+Lite cell phone motor starter send SMS RESET from A1 mobile number.

Note: Once this command is received by MS1+Lite cell phone motor starter, it will restart and send Power back SMS.

WARRANTY CARD

MODEL   : MS1+ Lite

CUSTOMER NAME   : ....

ADDRESS   : ....

                         : ....

                         : ....

MOBILE NO   : ....

DEALER STAMP   :

PURCHASE DATE   : ....

Terms and Conditions:

1. Warranty period 1 year
2. Warranty does not cover for product failure due to high voltage, mishandling and natural calamities.

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IRRIGATION AUTOMATION

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TECHNICAL SPECIFICATION

Input Voltage   : 150V-450V

Power consumption : 5w

Protection circuit for : Phase failure, Phase imbalance, Dry run & over load and low voltage, high voltage cut off

Timer   : Inbuilt daily run timer, ON demand run timer, Cyclic timer, Real-time ON/OFF

Wiring kit   : Power cable -0.5sqmm 3 core, CT cable - 0.5sqnm 6 core ON/OFF & SDL cable - 0.5sqmm 7 core

CT Coil   : 30/5 for three phase (external CT optional)

Battery   : Li-on 3.7v & 2100mAh

Antenna   : 5dbi External

Enclosure   : PC ABS with FR

Network support   : All GSM Carriers

SIM   : Micro

Dimension   : 17cm x 14cm x 8.8cm

Weight   :