Motor Starter v1

Customer guide - any SIM card

General description

KSN Mobile makes this SMS and GSM pump controller. Control the pump from your smartphone with the free Android app. Any SIM works: Airtel, Jio, Vi, BSNL, Nepal, or any other network.

Features

- Set up everything from the app
- Up to five mobile numbers can control the device
- A phone alert on every important event
- Up to five on/off times in a day
- Start and stop the pump from the app
- Password protection
- Single-phasing protection
- Dry-run protection
- Any SIM with data and SMS balance

Quick installation

1. Keep the power switch off.
2. Insert any SIM that has data and SMS balance.
3. Connect 3-phase R, Y, B to the preventer. Red/yellow (15 V AC) goes to the GSM unit. Red/black goes to the preventer input.
4. Bench test only: use a 12 V DC, 1.5 A adapter.

5 Fit the GSM antenna.

6 Join the START and STOP wires to your existing panel.

7 Turn the power switch on.

8 Download the Android app.

9 Enter the serial number on the unit. First login name and password match that number. Change the password right after login.

LED indication

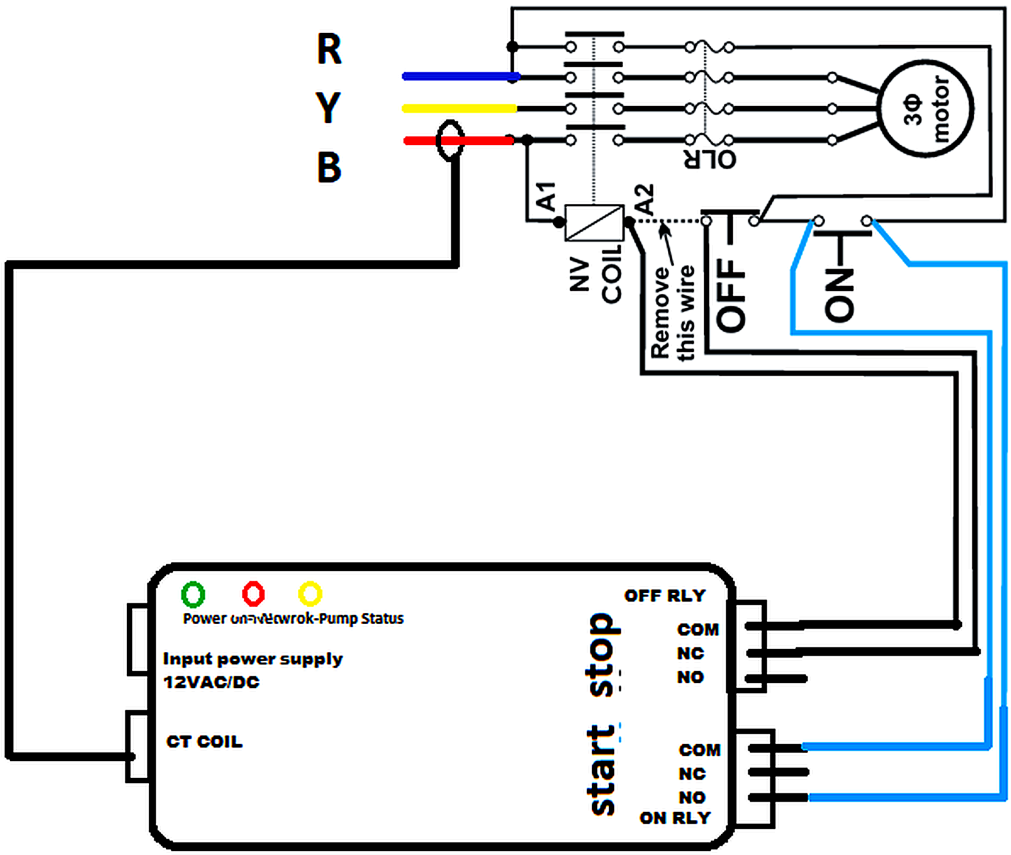
Green - Power
Stays on while the unit has power.

Red - Network
Stays on when the network is OK. Off means not connected.

Yellow - Motor
Shows whether the motor is on or off.

Connection diagram

Power must be off before you join any wire. The GSM box uses 12V AC/DC only. Do not put 230V or 415V into the box.



What each connection is

R, Y, B — 3 phase

Supply into the existing starter. In the picture R is blue, Y is yellow, B is red. They go on to the motor, not into the GSM box.

CT coil — On B

The ring is on the B wire. The other end goes to CT COIL on the box. This is how motor current is read.

12V AC/DC — Box power

Only supply for the GSM box, at the port marked 12VAC/DC. Bench test can use a 12V DC, 1.5 A adapter.

OFF relay — COM NC NO

Black wires. Join COM, NC and NO to the OFF button. OFF is stop.

ON relay

COM NC NO

Blue wires. Join COM, NC and NO to the ON button. ON is start.

Remove this wire

On the starter

Take out the short link marked Remove this wire, beside OFF, so the relays can use the buttons.

Coil A1 A2

Leave it

Leave the starter coil on A1 and A2. Only the marked link is removed.

Green light on the box is power. Red light is the network. Yellow light is the motor.

Use the app

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Open the app

Sign in. Your motor is in the list. Online means the starter can hear the phone. Live means your phone is connected. Tap the card.



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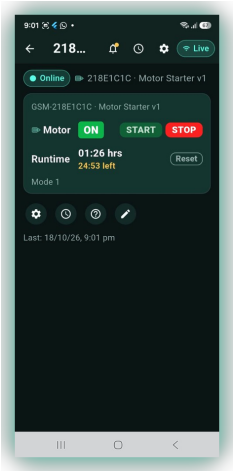
If it says Offline

Offline means the starter is not on the network yet. Wait, then open the screen again. Do not keep tapping START until it says Online.



3 Start and stop

Tap the green START button. ON in green means the motor is running. The yellow time is the countdown left. Tap the red STOP button to stop. Runtime is the hours the motor has been used.



4 Timer on the motor screen

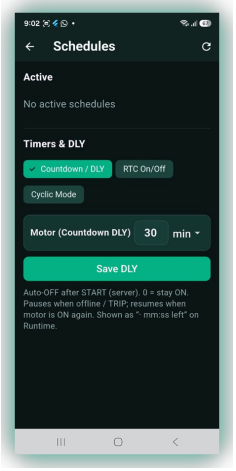
While the motor is ON, the countdown shows time left, such as 24:53 left. While it is OFF, that time waits. Your own STOP clears the saved time. After a power cut, the leftover time continues when the motor starts again.

Timers

On the motor screen, tap the clock icon. The page is Schedules. The three buttons are Countdown / DLY, RTC On/Off, and Cyclic Mode.

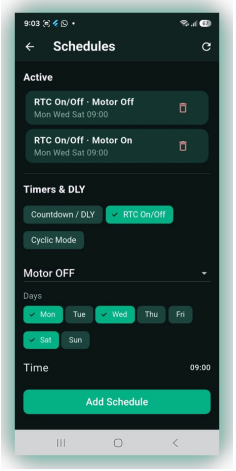
1 Countdown timer

Tap Countdown / DLY. Type a time and choose sec or min, then tap Save DLY. After you tap START, that time counts down and the motor stops at zero. Type 0 if the motor should stay on until you tap STOP.



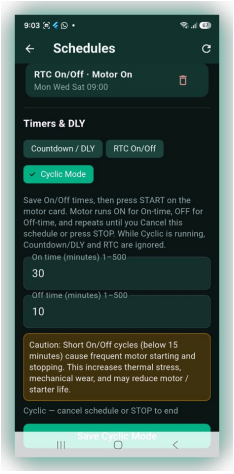
2 RTC timer

Tap RTC On/Off. Choose Motor ON or Motor OFF, tick the days, set the clock time, then tap Add Schedule. Make one schedule to start and another to stop. You can keep up to 10. At that time the motor starts or stops. The starter should say Online.



3 Cyclic timer

Tap Cyclic Mode. Set how many minutes the motor stays on, and how many minutes it stays off (1 to 500). Tap Save Cyclic Mode, go back, and tap START. It repeats until you tap STOP or delete that schedule. While cyclic is running, countdown and RTC are not used. Times under 15 minutes start and stop the motor very often.



5 Power returns

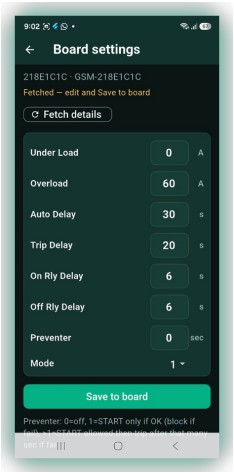
If Auto Delay is set, the motor can start by itself after that many seconds, even if the phone still says Offline. Auto Delay 0 means it waits for you to tap START.

6 If START does nothing

Wait until the screen says Online. If you see TRIP, tap that line to clear it, then tap START. Overload or dry run (under load) also stops the motor for safety.

7 Board settings

Tap the gear icon. Tap Fetch details. When it says Fetched, change a number, then tap Save to board. The screen must say Online.



Board settings - Motor Starter v1

A new unit leaves the factory with the numbers below. Change them only if your installer asks. Under Load 0 or Overload 0 turns that safety check off.

Under Load

Factory 0 A

Dry-run. Stops the motor if current stays below this. 0 turns the check off.

Overload

Factory 60 A

Stops the motor if current stays above this. 0 turns the check off.

Auto Delay

Factory 30 s

After power returns, the motor starts itself after this many seconds. 0 waits for START. Works even if the phone says Offline.

Trip Delay

Factory 20 s

How long a fault must stay before the motor stops. 0 means stop at once.

On Relay Delay

Factory 6 s

How long START is held. The current check waits this long after start, at least 5 seconds.

Off Relay Delay

Factory 6 s

How long STOP is held.

Preventer

Factory 6 s

0 = ignore phase fail. 1 = do not start if it has already failed. Above 1 = start, then stop if the fail lasts that many seconds.

Mode

Factory 1

Mode 1: short START, then the motor keeps running. Mode 2: START stays held while the motor is on. STOP is a short press in both.

After a trip

Preventer, overload, or under load stops the motor and shows TRIP. It stays off until you clear that trip in the app. A new START also clears the trip.

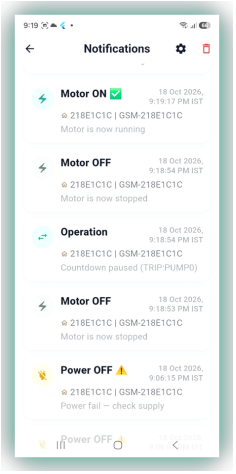
Notifications

Tap the bell on the motor screen or on the device list. Each line is one event, with the time. The bin icon clears the list.

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What the lines mean

Motor ON means the motor is running. Motor OFF means it has stopped. Motor ON (Auto mode) means it started itself after power returned. Manual Motor On means it was started at the panel. Power OFF means the supply failed. Power Restored means the supply is back. Countdown paused means a trip stopped the motor and the remaining time is waiting.



Tips and troubleshooting

Screen says Offline

Green power light must be on. Red network light off means no network. Check the SIM has data balance, the antenna is fitted, then wait one minute and open the app again.

Live, but the motor is Offline

Your phone has internet. The starter does not. Fix the SIM and network first. START will not work until the chip says Online.

START does nothing

Wait until Online, then tap START once. If the red network light goes off, wait until it comes back, then try again.

TRIP on the screen

The starter stopped the motor to keep it safe. Clear the trip, then tap START. If it trips again, check overload, dry run, and the phase preventer.

Countdown is not moving

The time counts only while the motor is ON. While OFF it shows the saved time. Your own STOP clears that saved time.

RTC did not start the motor

The starter must say Online at that clock time. Check the days and the time. You can keep up to 10. Use the bin icon to delete one.

Cyclic does not repeat

Tap Save Cyclic Mode, go back, then tap START. Tap STOP, or delete that schedule, to end it. Times under 15 minutes start and stop the motor very often.

Save to board did not keep

The screen must say Online. Tap Fetch details first. If it keeps waiting, the starter is not on the network.

Motor starts after power by itself

Auto Delay is set. It can start even when the phone still says Offline. Set Auto Delay to 0 if you want it to wait for START.

Box supply

The GSM box is 12V AC/DC only. Do not connect 230V or 415V to it. 230V and 415V stay on the MCB, contactor, and motor.