

Your vision, automated



MCOM400DOL

IOT BASED DOL STARTER



The MCOM400DOL is an advanced electronic DOL starter equipped with inbuilt GSM/GPRS technology, enabling complete remote operation of pumps from anywhere through mobile, SMS, call, web, or mobile app. Designed with high-precision protection features and intelligent control, it functions like a traditional DOL starter in local mode while providing powerful IoT-based monitoring in auto mode. The unit includes comprehensive motor protections such as phase failure, reverse phase, voltage and current imbalance, overload, dry-run, and high/low voltage. With a built-in ARM microcontroller, real-time data logging, voice alerts, and multiple user access, the MCOM400DOL delivers reliable performance for agricultural, irrigation, and domestic motor applications.

➤ FEATURES

- Built-in 32-bit ARM Micro controller
- Built-in Watchdog
- HP: 1-80 HP
- Built-in seven segment display: Digital Voltmeter 180 – 520 V and GSM Network availability in Percentage.
- Push button for Auto and Manual selection
- Two Mode operations: -Auto (online) and Manual (local)
- Manual Mode: - Users can operate pump through local ON/OFF push button with Protections.
- Auto Mode: Users can operate pump through Mobile (SMS/Call/Web and Mobile App)
- Start / Stop / Monitor / Set your motor from any phone
- Real time IOT based data monitoring web and mobile app for pump status.
- Talks Online in Local Language
- Four Authorized users can be added
- SMS and online Real time reports
- Online Parameter Settings by SMS and web /mobile App.
- Call Auto Lift and Auto Cut
- Hour Meter, Total Hour
- Meter Site Settable Four Digit Password with SIM Tracking
- Missed Call/SMS and web & Mobile app based ON / OFF pump operation.
- Web Based Android Application
- Receive Phone Call for Fault & Power Return (Call Back)
- Select Auto / Manual Mode by SMS, Web & Mobile app.
- Real time Verbal Voltage & Current Information on web and Mobile APP.
- Multi Location with Fault and SMS Log in web /Android App.
- IOT Based Web Data Logging on Server.

➤ PROTECTIONS

- Phase Failure (Supply Side)
- Phase Failure (Motor Side)
- Reverse Phase (Supply Side)
- Voltage and Current Unbalance
- Electronic Overload (Site Settable)
- Remote Sensing Dry run (Site Settable)
- High / Low Voltage (Site Settable)
- Extreme High Current (Fixed at 26 Amps.)

➤ TIMERS

- Power ON Timer for Auto Start (Site Settable)
- Star Delta Timer (Site Settable)
- Dry run Auto Start Timer OFF – 5 – 720 minutes. (Site Settable)
- Clock Based 4 ON & 4 OFF Timers (MTC)
- Motor OFF Timer OFF – 5 – 720 minutes. (Site Settable)
- Repeat Run Timer OFF – 5 – 999 minutes. (Site Settable)
- Time Compensation Enable / Disable Facility

➤ SPECIFICATIONS

1) System Settings

- Input Voltage (AC) : 250 – 470 VAC, 50 Hz
- On voltage (Cold Start): 250 VAC
- Auto Off voltage: 200 VAC

2) Protections / Setting Parameters

Pump Current Range : 3 – 22 Amp.

PARAMETER	SETTING RANGE	DEFAULT SETTING	TRIP TIME DELAY	DISPLAY	LED
Phase Failure	Fixed	Fixed	4 Sec. ± 1 Sec.	SPP	YES
Reverse Phase	Fixed	Fixed	4 Sec. ± 1 Sec.	SPP	YES
Voltage Unbalanced	Fixed	Fixed	4 Sec. ± 1 Sec.	SPP	YES
Current Unbalanced	20 – 70 %	50 %	4 Sec. ± 1 Sec.	CUB	YES
Overload	20 – 60 %	>140 %	15 Sec.	OL	YES
Dry Run	60 – 95 %	<75 %	15 Sec.	DRN	YES
High Voltage	450 – 500 V	480 V ± 2 V	Fixed	HIU	YES
Low Voltage	180 – 350 V	250 V ± 2 V	Fixed	LOU	YES
Extremely High Current	Fixed	26 Amp.	3 Sec.	EHC	NO

3) Timer Setting

PARAMETER	SETTING RANGE	DEFAULT SETTING	DISPLAY	LED
Power ON timer	3 Sec. – 300 Sec.	60 Sec. ± 3 Sec.	PONT	YES
Motor ON timer	5 – 720 min	OFF	OFF	YES
Repeat run timer	5 – 999 min	OFF	RRT	YES
Dry run auto start timer	5 – 720 min	OFF	DRAT	YES
Clock based 4 MTC timer	As per 24 hrs.	OFF	OFF	YES
Cyclic timer	Clock 24 hrs.	OFF	CYC	YES

4) Monitoring Display

- Digital Voltmeter : 180 – 520 V
- Digital Ammeter : 3 – 22 Amp

5) Monitoring Web and Mobile app:

- Real time monitoring for all parameters.

6) RESET

- Resetting mode : Manual by OFF switch, SMS, WEB, Mobile app.

7) Output Relay Contact

- Relay Mechanical life : 10 lac operations
- Dielectric Strength : 2.2 KV , 50 Hz for 1 min

8) Enclosure & Mounting

- Enclosure Material : MS powder coated Enclosure
- Mounting : Wall Mounting with 4 screw M4 × 15 mm
- Temperature : 5 to 60°C
- Humidity : Up to 90% RH

9) Dimensions & Weight

- L × W × D (mm) : 300 x 160 x 74mm
- Power Consumption : Less than 4 Watts
- Weights : 1.2kg

10) Connection Diagram

INPUT 415 VOLT			MOTOR OUTPUT		
R	Y	B	U	V	W

➤ APPLICATIONS

- Agriculture
- Irrigation
- Domestic