

MAGNUM[®]

More Power, Better Controls

USER MANUAL

THREE PHASE SUBMERSIBLE PUMP PANEL - GOLD

To find more about us and our products, scan below QR codes



Facebook



Videos



Website

KALP CONTROLS

Unit 1 : #40, 2nd Main Road, Pete Chennappa Industrial Estate,
Kamakshipalya, Magadi Road, Bangalore-560079. (India)

Website: www.magnumswitchgear.com

For queries and suggestions mail us to info@magnumswitchgear.com

Customer Care No: +91-8884759222

INDEX

SL. NO.	TOPIC	PG.NO.
1	Introduction	3
2	About Magnum TP Gold Panel	3
3	Installation and Instructions	6
4	Mounting Template	7
5	Switching and Operating	8
6	Technical Specifications and Configuration	9
7	Panel Dimensions	11
8	Circuit Diagram	12
9	Precautions and Maintenance	13
10	Trouble Shooting	13
11	Spares and Assemblies Available	14
12	Warranty Card and Policy	15

INTRODUCTION

Dear Customer,

Congratulations on purchase of MAGNUM D.O.L Submersible Pump Panel - Three Phase GOLD. This is made with heavy duty components, a powerful product helping you exercise more control over your motor or pump.

Located in Bangalore, Kalp Controls commenced its operations in the year 2009. At Kalp Controls, we are focused on offering you heavy duty

1. Submersible Pump Panel - DOL & Star Delta
2. Open Well Pump Panel
3. Starters - DOL & Start Delta
4. Single Phasing Preventer & Auto Start Unit.
5. Spares like Contactor, Relay, Capacitor, Meters etc.

ABOUT MAGNUM TP GOLD PANEL

Magnum Three Phase Submersible Pump Controller **GOLD** is a powerful controlling device for your submersible pump made with heavy duty components; it switches and protects your pump from hazards caused due to over-current.

Functions

1. Switches your pump/ motor on and off.
2. Protects the pump from:
 - Over – Current
 - Single phasing condition
 - Short Circuit
3. Indication of power supply to the panel.
4. Indicates current drawn by the motor.
5. Indicates voltage supplied to the panel

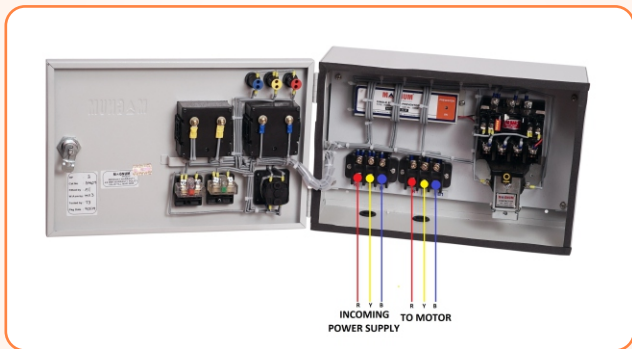
Salient Features

1. Power coated MS enclosure for complete corrosion resistance & sturdiness.
2. Rugged MaK-1 Contactor with wide voltage band (250V to 440V).

3. Fitted with MaK-1 type relay for reliable overload protection.
4. Fitted with Toroidal type preventer (current sensing) used to protect the motor against single phasing.
5. Ergonomic design with aesthetic looks.
6. Easy and quick mounting.
7. Fitted with ammeter to inspect the motor current and voltmeter to inspect the incoming power supply.
8. Indication lamps for voltage between the phases.
9. No screw protrusion from the panel, hence additional safety from water, dust, corrosion and electric shock.

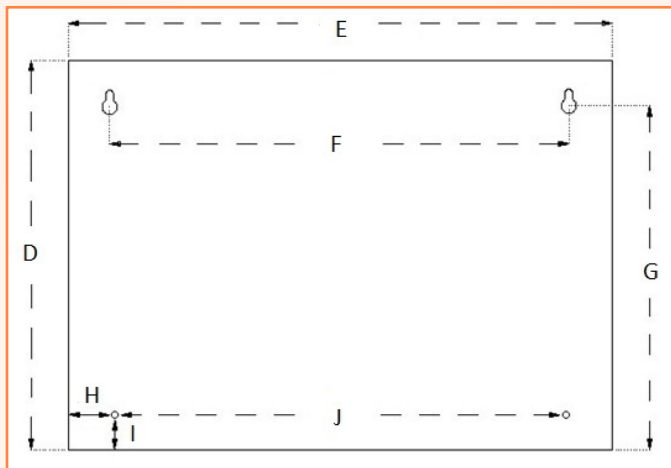
INSTALLATION INSTRUCTIONS

- Ensure the current rating (power in H.P) of your motor and this Panel matches.
- Drill holes with the help of the given Mounting Template.
- Mount the controller tight and straight.
- Control Panel to Submersible Pump Connection,



- Connect the incoming power supply to R, Y and B terminals of the connector as shown in the above picture.
- Connect the motor cable Red to R of the connector, Yellow to Y of the connector and Blue to B of the connector.

MOUNTING TEMPLATE (Not to scale)



D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)
230	348	290	205	30	20	275

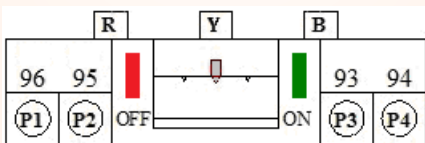
SWITCHING AND OPERATING

- Ensure the over load relay range matches to the ampere rating in your motor.

Switching On and Off

- Switch on the supply and Indicators will glow.
- To start the motor, press the START (green) button for 3 - 4 seconds and immediately release the button after motor starts. **(Not more than 4 seconds) (Never attempt to press the green button when the motor is running)**
- You can now read the ammeter for motor current and voltmeter for incoming power supply voltage between the phases by rotating the rotary switch.
- Rubber Bushes are provided near the connecting terminals. Just make holes in the rubber bushes for connection and don't remove it. They offer a degree of ingress protection.
- The motor can be switched off by pressing STOP (Red) button.
- If the motor/pump switches off automatically, (may be due to over-current) please press the reset button on the overload relay inside the panel which is in red colour as shown below.

MaK-1 Controller:



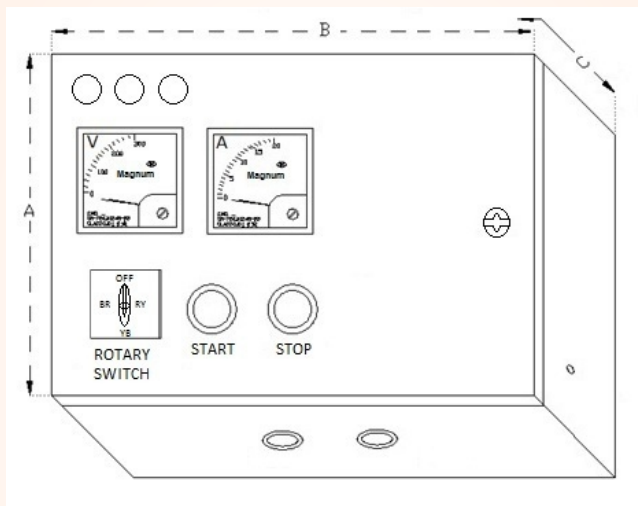
TECHNICAL SPECIFICATIONS

1. Power range : 2/3/5/7.5/10 HP
2. Coil Voltage : 440 V
3. Operating Voltage : 70% to 110% of coil voltage
4. Pick up voltage : Minimum 70% of coil voltage
5. Drop off voltage : Below 50% of coil voltage
6. Contactor 4P : MaK-1 /MaK-1 Heavy Duty (4P)
7. Relay 4P : MaK-1 4P
8. Area : (348 * 230 * 167) mm
9. Net Weight : 5.1 – 5.6 Kilo grams
10. Frequency : 50Hz
11. Insulation Voltage Ac (Vi) : 660V
12. Ambient Temperature : -25°C to +55°C
13. Terminal Capacity : 1*16mm² or 2*10 mm²

Normal Configuration of the Panel

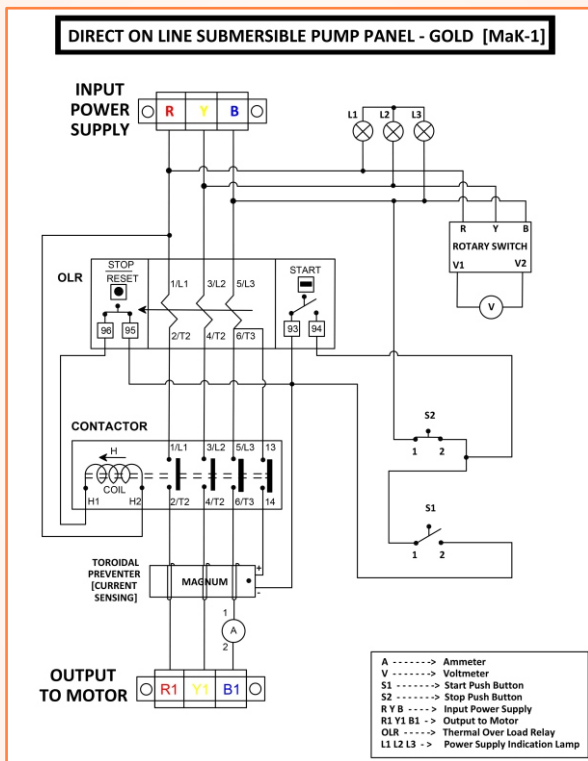
Sl. No.	Power (HP)	Catalogue No.	Relay Range (A)	Recommended Fuse/MCB (HRC) (A)
1	1.5	PTGK1H	2.5-4	6
2	2	PTGK2	4-6.5	10
3	3	PTGK3	6-10	20
4	5	PTGK5	9-14	25
5	7.5	PTGK7H	13-21	32
6	10	PTGK10	20-32	40

PANEL DIMENSIONS



A (mm)	230
B (mm)	348
C (mm)	167

CIRCUIT DIAGRAM



- A -----> Ammeter
- V -----> Voltmeter
- S1 -----> Start Push Button
- S2 -----> Stop Push Button
- R Y B -----> Input Power Supply
- R1 Y1 B1 -> Output to Motor
- OLR -----> Thermal Over Load Relay
- L1 L2 L3 -> Power Supply Indication Lamp

PRECAUTIONS & MAINTENANCE

- It's best that a qualified electrician installs the panel and repairs it in case of any problem.
- A dust free environment is vital for long run of the control Panel. It is very important to keep the control Panel away from water or moisture. In very humid places it is strongly recommended to keep it in a closed setting.
- The best way for prolonged life of the control Panel is to periodic inspection of the contactor contacts and keeping them free of dust and water.

TROUBLE SHOOTING

- 1.) If motor/pump does not start:
 - Reset the relay and then try starting again.
 - Ensure adequate supply voltage.
 - Check the contacts of the contactor.
- 2.) If motor draws excess current:
 - Absence of water or load in the pump.
- 3.) If motor trips after sometime:
 - Ensure that the relay range and setting is correct.

SPARES AND ASSEMBLIES AVAILABLE FOR THIS PANEL

Part Description	Specification	Part No.
Magnum MaK-1 Contactor 4P 415V	7mm 8mm	CTK7 CTK8
Magnum SR-72 Ammeter Magnum SR-72 Voltmeter	0-30 A 0-500 V	AM723 AM725
Magnum Coil 440V	MaCH MaK-1	C22 C53
MaK-1 Relay	2.5-4 A 4-6.5 A 6-10 A 9-14 A 13-21 A 20-32 A	RTK4 RTK6 RTK10 RTK14 RTK21 RTK32
Terminal Block 3 Way Porcelain Connector	30A	CPC33
Start Button Stop Button	Green Red	BSTA BSTO
Preventer	Toroidal type (Current Sensing)	PRTT

Warranty Policy

1. This product carries a warranty, against manufacturing defects only for a period of **12 months** from the **date of** manufacturing.
2. The warranty is however subject to provision of proper usage, efficient maintenance and **does not cover** defects arising out of **fire accident, Voltage Surge, Inefficient maintenance, faulty operation and willful or accidental damage**. Warrant is not covered for charred or burnt components at all.
3. The company will not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.
4. We believe in our products and hence provide you with product guarantee, should it prove to be defective due to faulty workmanship or otherwise, we will remedy the defect or replace the faulty parts or the whole product at our discretion, as soon as possible, free of cost.
5. This product is made from quality raw materials and skilled assemblers. We believe in our product and hence provide you with this warranty of 12 months.
6. Proof of purchase (Invoice) is to be produced to avail the warranty.