

# MAGNUM<sup>®</sup>

More Power, Better Controls

## USER MANUAL

SINGLE PHASE

## SUBMERSIBLE PUMP PANEL - MANUAL CSCR

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### KALP CONTROLS

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

Website: [www.magnumswitchgear.com](http://www.magnumswitchgear.com)

For queries and suggestions mail us to [info@magnumswitchgear.com](mailto:info@magnumswitchgear.com)

**Customer Care No: +91-8884759222**

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## INTRODUCTION

Dear Customer,

Congratulations on purchase of MAGNUM Submersible Pump Panel 'MANUAL' CSCR. This is made with heavy duty components, which protects your pump from hazards caused due to over-current.

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 SINGLE PHASE 'MANUAL' CSCR PANEL:

Magnum submersible control panels are controlling devices for your submersible pumps. These are made from quality raw materials, enabling it to protect and control your motor consistently.

### Functions:

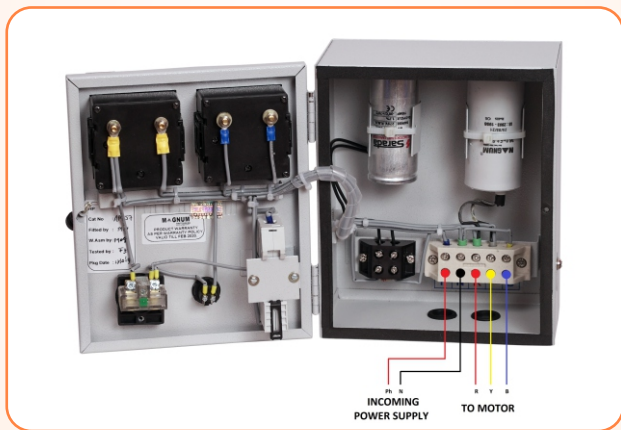
1. Switches your pump/motor on and off.
2. Protects the pump from over current.
3. Provides extra torque when the pump is being started.
4. Maintains torque level while the pump is running.
5. Indication of current drawn by the motor.
6. Indication of voltage supplied to the panel.

## **Salient Features:**

1. Powder coated MS enclosure for complete corrosion resistance & sturdiness.
2. Heavy Duty Start & Run Capacitors.
3. Fitted with Miniature Circuit Breaker for reliable overload and short circuit protection.
4. Easy & quick mounting.
5. Ergonomic design with aesthetic looks.
6. No screw protrusion from the panel, hence additional safety from water, dust, corrosion and electric shock.

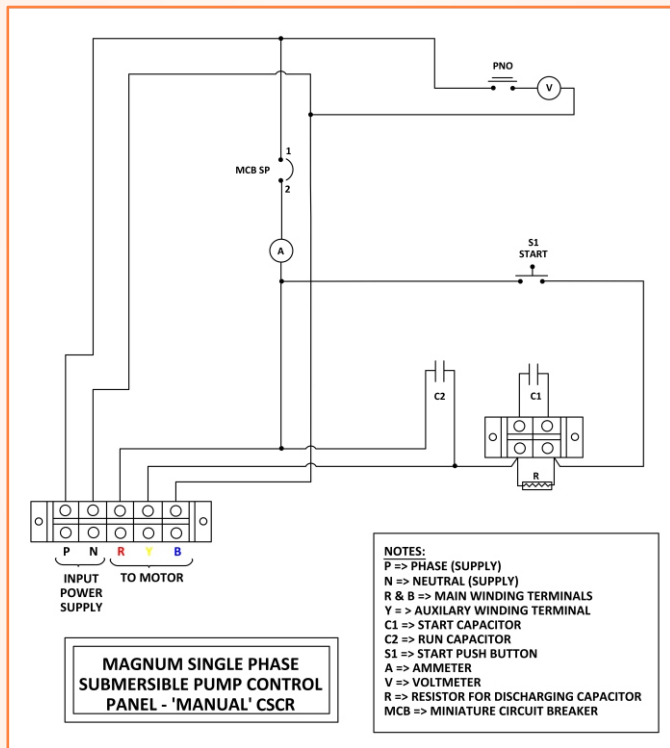
## INSTALLATION INSTRUCTIONS :

1. This Control Panel is designed to run only a Single-Phase Submersible Pump.
2. It is very important to ensure the current rating (power in H.P) of your motor and Control Panel are same.
3. Drill holes as per the given Mounting Templates.
4. Control Panel to Submersible Pump connection,



- i. Connect the incoming power supply to P and N terminals of the connector as shown in the above picture.
- ii. 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)



## SWITCHING AND OPERATING:

1. Switch on the supply.
2. Ensure MCB is in ON position (Upwards)
3. Press the PNO button to read incoming voltage and only when voltage is in the range of 170V to 240V, try to start the motor.
4. To start the motor press the START (green) button for 3 - 4 seconds and immediately releases the button after motor starts. **(Not more than 4 seconds) (Never attempt to press the green button when the motor is running)**
5. You can now read the ammeter for motor current.
6. The motor can be switched off by MCB.
7. 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.



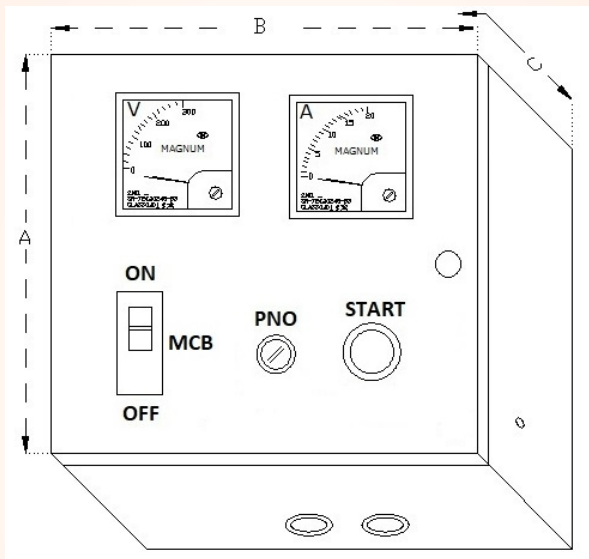
## TECHNICAL SPECIFICATIONS:

1. Power range : 0.5/1/1.5/2 HP
2. MCB : Up to 20A
3. Area : (185\*220\*135) mm
4. Net Weight : 2.1 – 2.5 KG
5. Frequency : 50Hz
6. Insulation Voltage Ac (Vi) : 660V
7. Ambient Temperature : -25°C to +55°C
8. Terminal Capacity : 1 \* 16 (mm)<sup>2</sup> or 2 \* 10 (mm)<sup>2</sup>

### Normal Configuration of the Panel:

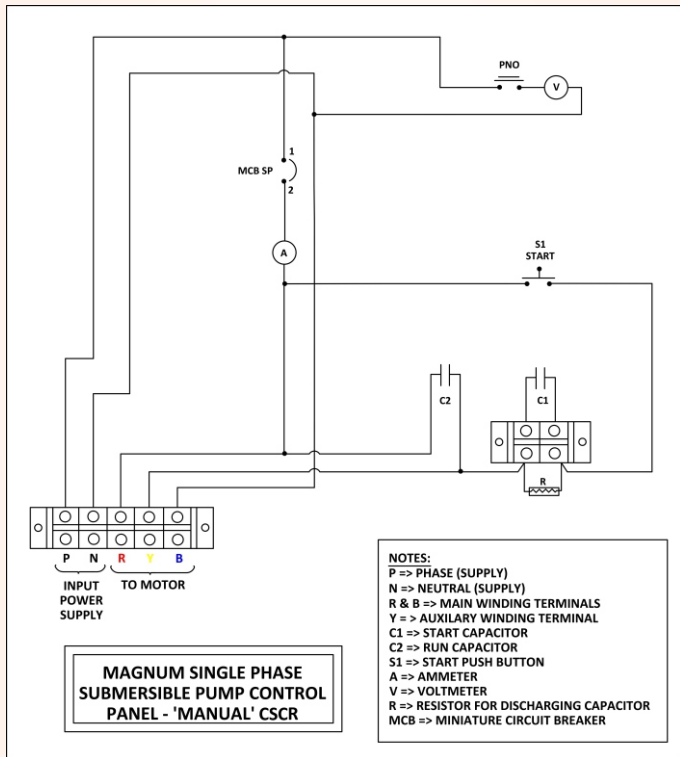
Sl. No.	Power (HP)	Catalogue No.	Run Capacitor (in $\mu\text{F}$ )	Start Capacitor (in $\mu\text{F}$ )	MCB Range (A)
1	0.5	PSMH	25	60 – 80	6
2	1	PSM1	36	100 – 120	10
3	1.5	PSM1H	50	120 – 150	16
4	2	PSM2	72	150 – 200	20

## PANEL DIMENSIONS :



A (mm)	220
B (mm)	185
C (mm)	135

## CIRCUIT DIAGRAM:



## PRECAUTIONS & MAINTENANCE:

1. It's best that a qualified electrician installs the panel and repairs it in case of any problem.
2. 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.

## TROUBLE SHOOTING:

1. If motor/pump does not start:
  - Reset the MCB and then try starting again
  - Ensure adequate supply voltage.
  - Check the start capacitor, it might have burnt.
2. If motor draws excess current:
  - Absence of water or load in the pump.

## SPARES AND ASSEMBLIES AVAILABLE FOR THIS PANEL:

Part Description	Specification	Part No.
Magnum SR-72 Ammeter Magnum SR-72 Voltmeter	0-30 A 0-500 V	AM723 AM725
Magnum Start Capacitor	60-80 $\mu$ f 80-100 $\mu$ f 100-120 $\mu$ f 120-150 $\mu$ f 150-200 $\mu$ f 200-250 $\mu$ f	CS80 CS100 CS120 CS150 CS200 CS250
Magnum Run Capacitor	25 $\mu$ f 36 $\mu$ f 50 $\mu$ f 72 $\mu$ f 100 $\mu$ f	CR25 CR36 CR50 CR72 CR100
Terminal Block 2W Close Terminal Block 5W Close	30A 30A	CPC32 CPC35
Start Button PNO Button	Hi + Low Green	BSTA BPN

## 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.