AVENTEK

MAX PUMP GURU

The most Innovative Technology

With Simple Operation

go green

Key Features

- Excellent Control
- High Reliability
- Efficient motor control
- Compact in size
- Easy To operate (Start Stop push button)
- Auto Manual Switch
- Over load & Dry run Settings on Display
- LED Indications

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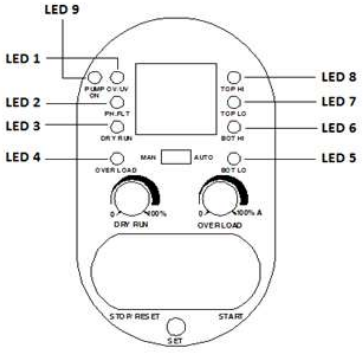
Operation Manual of Three Phase Max Pump Guru :

Display:



SWITCHES/KEYS -

Max Guru is the ONLY product which offers 3 Phase & 3 Current Monitoring and Protection to PUMP. Max Guru is an ELECTRONIC PUMP STARTER which works on 3 Phase supply. It has 3 keys namely START, STOP & SET along with 9 LEDs to shows various faults and different status. It provides following types of protections:

- Over / Under voltage Protection
- Pump Stalled
- Dry Run Protection
- Current Imbalance
- Phase Loss
- Phase Unbalance
- Overload Protection
- Phase Reversal

START KEY - User can start the pump by using START KEY. Mini Pump Guru will not allow the user to start pump if any one of the fault is generated. START Key is remain disable for 20 seconds after POWER ON that means User can not start Pump after first 20 seconds of power on. When LED 9 glows it means that Pump is in run condition.

STOP KEY - User can stop operation by using STOP KEY. When Overload fault occurs then it shows this fault on LED4. User wants to reset above condition, then either user must press Stop key for 5 seconds or provide POWER CYCLE (ie power on/off once).

SET KEY - If user want to set or change Overload, dry run and can watch current mode of operation ie auto/manual, for that he/she must press SET key. This key is enable in STOP condition. User can not set above parameters in RUN condition of PUMP.

KNOBS - Both Knobs are active or enable when user in their respective setting.

OVERLOAD Knob - Value of OVERLOAD current can be set by using OVERLOAD knob and this value is in AMPERE and shows on Green 7-segment (Disp2) display. User has to press SET key once to enter into setting mode and set value of Overload value and save that value by pressing Stop Key.

Display - OL disp1(RED) 07.8 disp2(GREEN)

DRY RUN Knob - Dry Run can be set once user set overload value. Value of DRY RUN current can be set by using DRY RUN knob and this value cannot be more than overload value and display in Ampere and stop key to press to store above value.

Display - drY disp1(RED) 04.3 disp2(GREEN)

Auto/Manual Mode - User can watch running mode of operation in last option of setting mode and again press Stop Key to come out of Setting Mode.

Manual mode - User must press Start key to turn On pump provided that controller sense levels of both tanks and require all voltage-current related conditions are stable. Pump starts in Manual mode only when there is at least low level of bottom tank is full and top tank level is not completely full.

Display - MAn disp1(RED) MOd disp2(GREEN)

Auto mode - If controller is in Auto Mode, auto-recovery option is enabled to all faults excepts Overload and Current Imbalance faults. Whenever both levels of top tank are full or bottom tank is empty then Controller stops pump operation and for Pump Run(start) condition, bottom tank levels are full and top tank completely empty(not partially empty). Pump start-stop actions continuously manage and operate by controller as per levels of top and bottom tank. LED 9 shows status of Pump and turn On whenever Pump starts and goes low when it is stop condition.

Display - AUt disp1(RED) MOd disp2(GREEN)

INDICATORS - LED 1 - states Over and Under Volt Fault
LED 2 - shows Phase Fault
LED 3 - indicates Dry Run Fault
LED 4 - states Over Load Fault
LED 5 - shows Low Level of Bottom Tank
LED 6 - shows High Level of Bottom Tank
LED 7 - shows Low Level of Top Tank
LED 8 - shows High Level of Top Tank
LED 9 - states Pump On/Off status

Over / Under voltage Protection - Max Guru offers Over/Under voltage protection and indicate such fault on LED. When supply voltage goes above 480 volt then it generates over voltage fault on LED1 and halts pump and operates it only when supply voltage goes below 460 volt. It shows Under Volt fault on LED1 when supply voltage goes below 360 volt and under voltage fault recover as soon as line voltage goes above 380 volt . Max Guru continuously monitors supply voltage and provides protection against such voltage faults. If pump is in Running state and any voltage fault is generated then it stops the pump automatically and starts the pump only if supply voltage is stable and normal.

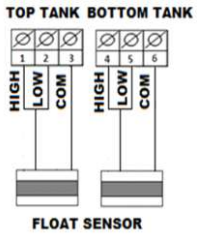
Phase Protection - Max Guru detects 3 types of Phase fault ie Phase imbalance, Phase Reversal and Phase Loss. If voltage difference between any 2 phase of 3 phase is more than 25% or phase sequence of 3 phase supply is not correct or any one of the phase is missing then it shows Phase fault on LED2. If current imbalance condition occurs during RUN time then same LED glows. For current imbalance, there has to be 50% current difference among three phase current.

Dry Run Protection - Max Guru not only provides voltage protection but also offer actual current monitoring and protection. If Pump draws low current while running state and this current is less than SET DRY RUN value which is set by DRY RUN knob then it shows Dry Run fault on LED3. If Dry Run fault occurs then it stops the pump and restarts the pump after 10 minutes and again starts monitoring the Pump current.

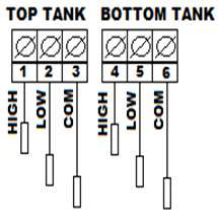
Overload Protection - This feature provides protection to the pump in case of an overload. If the current flowing through the Pump is more than SET OVERLOAD value during Run state then it generates OVERLOAD fault on LED4 and halts the pump from such high current. Max Guru will not restart pump unless and until user presses STOP key for five seconds or power ON/OFF.

Optional*:

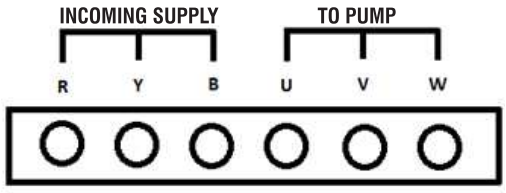
Connection Float Sensor -



Connection Level Sensor



Power Terminal & Pump Connections:



Installation Procedure –

* Make 3 Phase Supply connections as per above diagram at the bottom of panel. Do not connect pump directly.
* Turn the supply ON then Voltage shows on Disp1(Red) and starting timer on Disp2(green). After that if the Max Guru shows Phase Fault in case of Phase Reverse then turn OFF supply and make appropriate RYB Connections.
* After making correct RYB connections and not shown any voltage related fault then user correctly connect RYB connection to MAX GURU. After that turn off supply and connect pump. Set appropriate dry run and over load value by adjusting respective knobs as per pump actual condition.
* User has to follow above procedure for correct installation. Whenever any abnormal condition arises then pump will be turn off by Max Guru.

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