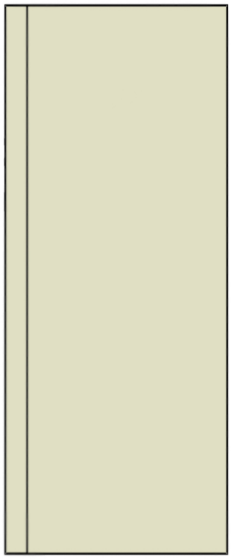
SIMPLY ASTERO
WITH BUILT IN TDS AND
16 X 2 LCD DISPLAY



260mm

230mm

Cut out size: 190mm (H) x 222 mm (V)

Simply **Astero**

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1. If level of permeate tank is low the RWP (Raw Water Pump) will start and reject solenoid valve will open for the programmed time period.
2. After flush time over, the processor will check for low pressure input. If input is ON (short), HPP (High Pressure Pump) will start.

Stopping Sequence:Under following conditions processor will stop its operation

1. If stop key is pressed
2. If treated water tank is full(open)
3. If high pressure switch is ON(short)
4. If raw water tank is empty (short)

If any one of the above condition occurs, then

-HPP stops

-Reject solenoid valve will open for the programmed time.

-RWP stops & STATUS is displayed on MIMIC

Trip sequence: Under following conditions processor will trip,at that time press start to resume operation.(The Hooter relay will be energized in these conditions & can be reset by pressing START)

1. High pressure
2. Dry Run, Single phase, Overload

Instructions for Setting the PanelUse the following keys for setting the panel as per given instructions.

- START: This key is used to start the operation and move the curser forward
- STOP: This key is used to end the operation and increase the value
- MENU:This key is used to go to next step (Enter).
  System A/M:This key is used to put system in Auto or Manual mode

Maximum recommended HP ratings:

Panel Configuration:	**11**	**13**	**33**
Raw water Pump:	2 HP Single phase	2 HP Single phase	5 HP Single phase
High Pressure Pump:	3 HP Single phase	5 HP Three phase	5 HP Three phase

Solenoid valve: Normally closed type(230 V A.C.) Client's Scope.

Terminal Connections:

SIMPLY ASTERO 13

POWER WIRING
@ PANEL TERMINALS

INCOMING WIRE SHOULD BE OF 2.5 sqmm											
INPUT				HPP			RWP		FLUSH VALVE		DOSER	
R	Y	B	N	R	Y	B	P	N	P	N	P	N

SIMPLY ASTERO 33

POWER WIRING
@ PANEL TERMINALS

INCOMING WIRE SHOULD BE OF 2.5 sqmm											
INPUT				HPP			RWP			FLUSH VALVE		DOSER	
R	Y	B	N	R	Y	B	R	Y	B	P	N	P	N

SIMPLY ASTERO 11:

POWER WIRING
@ PANEL TERMINALS

INCOMING WIRE SHOULD BE OF 2.5 sqmm									
INPUT		HPP		RWP		FLUSH VALVE		DOSER	
P	N	P	N	P	N	P	N	P	N

CONTROL WIRING
@ PCB TERMINALS

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Terminal	Description	Connections
HPP	High Pressure Pump	RYB/P- Phase N–Neutral
RWP	Raw Water Pump	P- Phase N–Neutral
FLUSH VALVE	Solenoid Valve #	P-Phase N-Neutral
LPS	Low Pressure Switch	C-Common NO-Normally Open
HPS	High Pressure Switch	C-Common NO-Normally Open
FLT	Floaty	C-Common NC-Normally Closed

NOTE: Connections for flushing solenoid valve is directly from terminal as P for Phase and N for Neutral.**Ensure that the solenoid valve coil voltage is 230 V AC and the valve is normally closed type.**

TO VIEW THE FACTORY SETTINGS	
Key Pressed	**Display**
MENU	VIEW?
Display scrolls through all the settings set by factory.	
MENU	LO PRESS. SW : ON
	TIME :015
	HI PRESS. SW : ON
	TW LEVEL SW: ON
	RW LEVEL SW: ON
	SETTINGS?

TO SET OVERLOAD CURRENTS(SEC--1.1)

Why to set overload current?
When the motor draws more current than the normal running current then it is said to be an overload current which is an abnormal condition which leads to motor burns or failures. To take care of it we set overload currents, the panel trips when the current drawn by the motor is more than the overload current value set by us (20% more than actual running current)

How to know normal(actual) running motor current?
There are two methods (1)With the Clamp Meter check the output currents of individual phases(R/Y/B).(2) Using our control panel Refer section 1.7

MENU	RWP OVL CRT?
MENU	RWP OVL CRT?15.0
USE STOP AND START KEY TO SET DESIRED VALUE	
MENU	HPP OVL CRT?
MENU	HPP OVL CRT?15.0
USE STOP AND START KEY TO SET DESIRED VALUE	
MENU	FLUSHING VLV :
MENU	TIME :015 S

What is this time? (in seconds)
This is amount of time for which flushing should be done during Starting and Stopping of plant

USE STOP AND START KEY TO SET DESIRED VALUE	
MENU	LO PRESS. SW
MENU	TIME :015 S

What is this time?(in seconds)
This is the debounce time, which helps in avoiding unnecessary chattering of High pressure pump contactor due to initial dipping in the suction pressure The High pressure pump will start after set debounce time.

USE STOP AND START KEY TO SET DESIRED VALUE

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MENU	EXIT?
MENU	SCROLL?
MENU	SCROLL? OFF
Why to make scroll ON/OFF? **This scrolling facility provided to the users who want to see only CONDUCTIVITY & plant status on display during plant operation they have to make scroll OFF otherwise display will show permeate flow rate & Volume,Operation hours along with plant status & conductivity in scrolling.**	
USE STOP KEY TO MAKE IT ON	
MENU	COND DISP
MENU	COND DISP usm
USE STOP KEY TO MAKE IT PPM IF REQUIRED	
MENU	EXIT?

TO SET DRY RUN CURRENTS(SEC--1.2)	
Why to set Dry Run current? **If the pump is running without any water, is termed as motor dry running and current drawn by the motor is lesser than the normal running current.** **The controller avoids the dry running of motor by tripping the RWP / HPP.** **Dry running can lead to pump failures and therefore there is a need to trip pump/motor in such a condition** **How to know dry running motor current?** **Run the motor without any load and check the phase currents with Clamp meter.** **The set point must be kept between normal running current and actual dry running current**	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 123 WITH START & STOP KEY	
MENU	PHASE UNBAL :
MENU	PHASE UNBAL :40
USE STOP AND START KEY TO SET DESIRED VALUE	
MENU	DRY RUN OPRN:
MENU	DRY RUN OPRN:OFF
USE STOP KEY TO MAKE IT ON	
MENU	RWP DRY CRT?
MENU	RWP DRY CRT?01.5
USE STOP AND START KEY TO SET DESIRED VALUE BELOW WHICH THE PUMP MUST TRIP	
MENU	HPP DRY CRT?
MENU	HPP DRY CRT?01.5
USE STOP AND START KEY TO SET DESIRED VALUE BELOW WHICH THE PUMP MUST TRIP	
MENU	EXIT?
CONDUCTIVITY CALIBRATION (SEC--1.3)	
Why to calibrate? **If there is mismatch between actual and required value of conductivity then there is need for recalibration.For that 1) Dip the sensor in standard known solution and set the required value.** **Ex.If actual value is 400µs/cm and required value is 450µs/cm then calibrate as:**	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 234 WITH START & STOP KEY	
MENU	CALIB.COND ?
MENU	ACT VAL 400
STOP	REQ VAL 450
USE STOP AND START KEY TO SET DESIRED VALUE	

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MENU	CALIB CMPL (calibration complete)
MENU	COND. OFFSET?
MENU	COND. OFFSET? 000
USE STOP AND START KEY TO SET DESIRED VALUE	
MENU	EXIT?
MENU	
TO CONFIGURE INPUTS (SEC--1.4)	
Panel has 4 inputs (potential free switch) available **input 1:-LPS** **input 2:-HPS** **input 3:-Treated Water Tank Floaty** **input 4:-Raw Water Tank Floaty**	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 678 WITH START & STOP KEY	
MENU	LO PRESS. SW:
MENU	LO PRESS. SW:ON
USE STOP KEY TO MAKE IT OFF	(only if LPS needs to be bypassed)
MENU	HI PRESS. SW:
MENU	HI PRESS. SW:ON
USE STOP KEY TO MAKE IT OFF	(only if HPS needs to be bypassed)
MENU	TW LEVEL SW:
MENU	TW LEVEL SW:ON
USE STOP KEY TO MAKE IT OFF	(only if no level control required)
MENU	RW LEVEL SW:
MENU	RW LEVEL SW:ON
USE STOP KEY TO MAKE IT OFF	(only if no level control required)
MENU	EXIT?
MENU	
TO CONFIGURE OUTPUT (SEC--1.5)	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 191 WITH START & STOP KEY	
MENU	MP TYPE :1-3
USE STOP KEY TO MAKE IT 1-1/1-3	
MENU	EXIT?
TIME BASED AUTOFLUSHING SETTINGS (SEC--1.6)	
What is time based autoflushing? **Normally our panel comes with facility of flushing during starting and stopping of panel but somebody wants to flush besides this on timely manner this feature also provided with us. For that you have to make FLUSH OPRN ON and provide span between flush time for which flushing should go on.**	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 345 WITH START & STOP KEY	
MENU	FLUSH OPRN:
MENU	FLUSH OPRN:OFF
USE STOP KEY TO MAKE IT ON	
MENU	FLUSH DELAY
MENU	TIME : 060 m
MENU	FLUSH TIME
MENU	TIME : 015 S
MENU	EXIT?
MENU	

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CURRENT CHECKING(SEC--1.7)	
What is CURRENT CHECKING feature? **If you want to check normal running currents of motor then use this feature**	
START & STOP SIMULTANEOUSLY	PASSWORD:000
ENTER PASSWORD 456 WITH START & STOP KEY	
MENU	SELECT PUMP
START	RWP
USE STOP KEY TO SELECT RWP/HPP FOR WHICH YOU ARE GOING TO CHECK THE CURRENT	
MENU	R:0.9
MENU	MANUAL STOP
PRESS START KEY TO START THE PLANT.	

TROUBLESHOOTING

LED Blinking	Message ON Display	Cause & Action
LPS	LOW PRESSURE!!	→ Check, is it C NO contact? If not make it.
		→ Pressure Lower than set value. Increase pressure or reduce set point
		→ LPS not connected
HPS	HI PRESSURE!!	→ Pressure higher than the set value. Reduce pressure or increase set point
		→ Check, is it C NO contact? If not make it.
FLOATY (level)	TW TANK FULL!!	→ Actually tank is full.
		→ Floaty is not connected. Short FLOATY terminal by an external wire link.
		→ Check, is it C NC contact? If not make it.
RWP	RW OVERLOAD	→ More current than the normal ratings. Set Overload current accordingly.
		→ Motor is drawing more current than normal. Check Motor
	RW DRY RUNNING	→ If current drawn by the pump is less than the set value. If tank is empty. SET current as given in instructions section. ***Refer:section1.2***
HPP	HPP OVERLOAD	→ More current than the normal rating. Set Overload current accordingly. ***Refer:section1.1***
		→ Motor is drawing more current than normal. Check Motor
	HPP SINGLE PH	→ If there is mismatch between the R-Y-B phase currents drawn by the pump. Increase the phase unbalance value.
	HPP DRY RUNNING	→ If current drawn by the pump is less than the set value. SET current as given in instructions section. ***Refer:section1.2***

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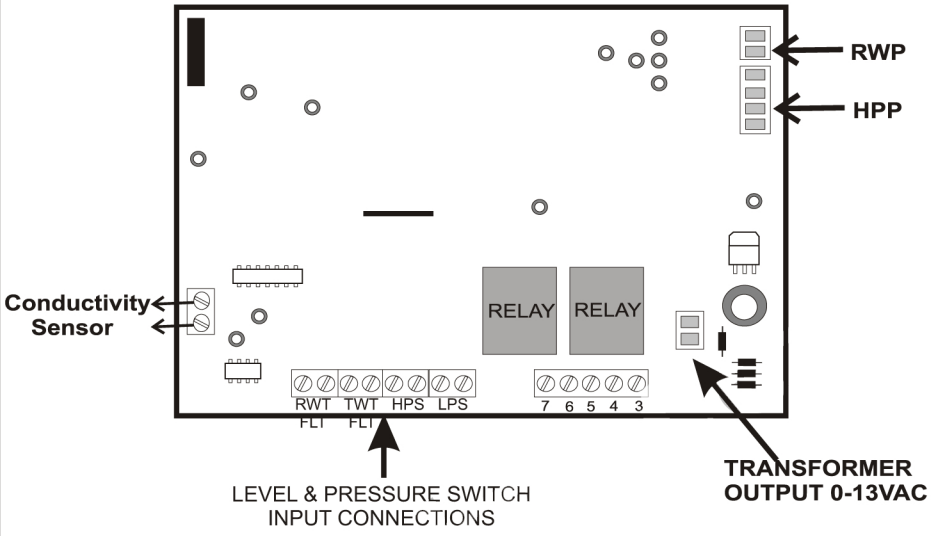
CONNECTIONS ON PCB



HOW TO CHANGE OPERATION MODE (AUTO/MANUAL)

Panel has AUTO/MANUAL key which can be used to change its operation mode. When system is in AUTO mode LED will be ON and when its in MANUAL mode LED will be OFF & display will show 'MANUAL MODE ON'.Even in MANUAL mode motor protection (like pump overload/dry running etc.)doesn't get bypassed.

When system is in MANUAL mode, left switch will be used to switch ON/OFF RWP & right switch will be used to switch ON/OFF HPP. HPP will switch ON only when RWP is ON.If both switches are in ON position and operation mode is changed from Auto to manual,HPP will start after five seconds of RWP ON.

REV 1 : A/M SWITCH ADDED

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