



LEVEL CONTROL INSTRUMENTS

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1. LEVEL CONTROL INSTRUMENTS

1.1 PROCESS CONTROLLER - DLC1001

This micro controller - based instrument is basically a process controller, which accepts a Universal 4~20mA input and displays the corresponding process value as per configured. It has four individual set points, all configurable as control outputs or Alarm function. It has a facility for changing the resolution of the input process value, control logic, alarm logic and offset calibration in the configuration mode. In the normal user setting mode, the Set point, corresponding hysteresis & output Delay time settings can be accessed.



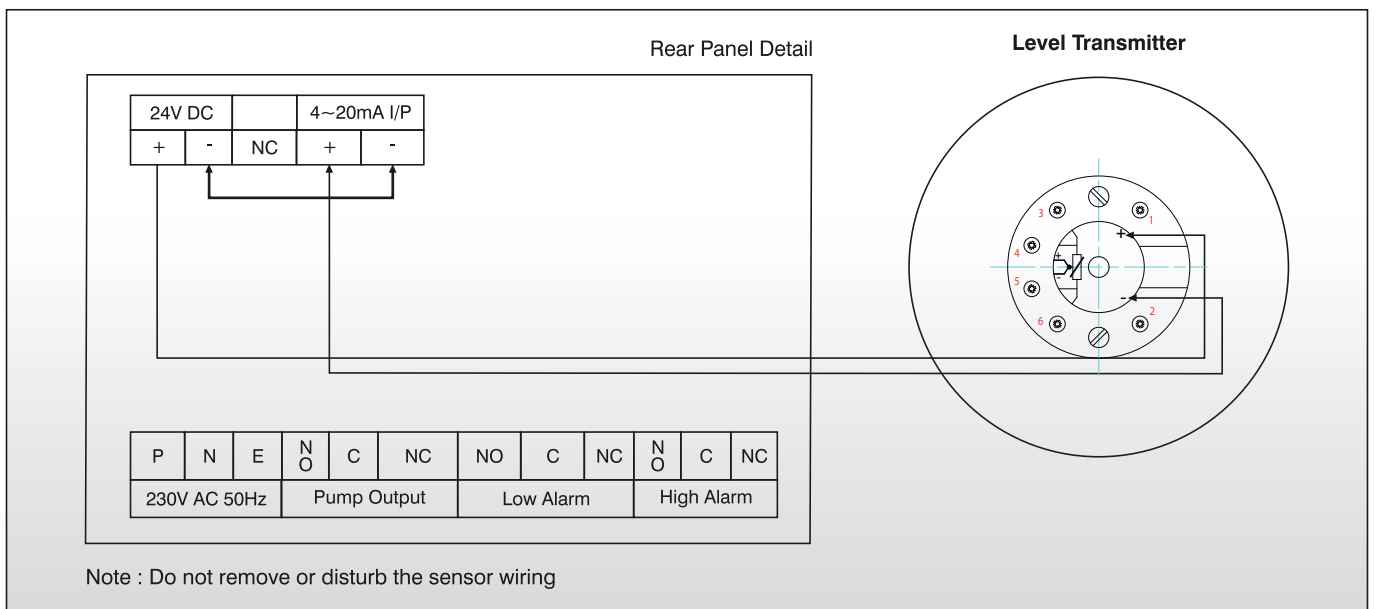
Process Controllers are used with Level Transmitters for display of variable outputs in terms of Linearity/ Volume/Percentage of Tank Liquids/Gases.

Options of Providing Multiple indicators for various tank monitoring applications within a Panel Enclosure/ Explosion proof Enclosures are possible.

SPECIFICATIONS

Input	:	4 to 20mA DC current
Range	:	-1000 to 3500 Counts (Programmable) (Programmed for 0 to 500mm WC)
Set Points	:	3 Set Points (1 No. Configured as Control output & 2Nos. as Alarms)
Resolution	:	Programmable from 0.001 counts to 1 count by changing the "D-Pt" parameter (1 mmWC)
Control Action	:	ON / OFF for all set points
Memory Supply	:	EEPROM memory with 100 years memory retention
Supply	:	230V AC, 10%, 50Hz.
Cutout Size	:	92mm (W) x 92mm (H)
Overall Size	:	96mm (W) x 96mm (H) x 115mm (D)
Options	:	With Ex-Proof enclosure Gr. IIA, IIB, IIC, Zone 1 & Zone 2

WIRING DETAIL WITH LEVEL TRANSMITTER

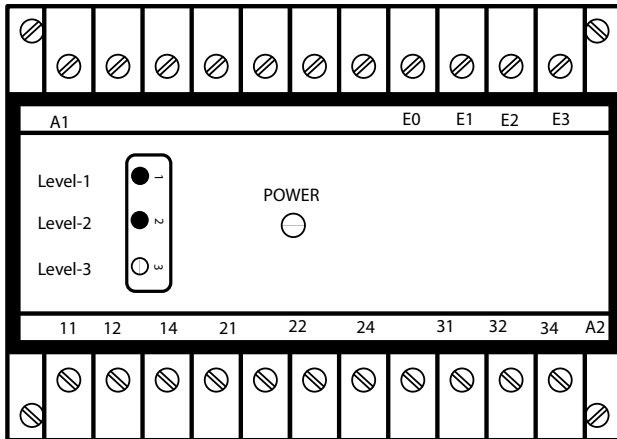


1.2 LIQUID LEVEL MONITORING RELAY FOR THREE LEVELS

3LLMR Controllers are used for Connecting Conductivity level switch probes and providing respective relay outputs from the circuitry for operating a pump, provide an alarm, operate a valve etc., As a Standard, we can provide multiple logic controls for various applications, which takes up most level control options for a process plant.

3 outputs are standard - More output options are possible on application basis.

1.2.A 3 - LLMR - 110V



SPECIFICATIONS :

SUPPLY VOLTAGE-110VAC+/-20%50HZ

Power Consumption: 3VA

SENSOR TYPE : Conductive Probes

Sensitivity: 33K Ohms

OUT PUT : 3Relay contacts 1C/O type
rated 7A@250V AC

CONNECTION DETAILS

A1,A2:Supply Voltage

DIMENSION DETAILS

LENGTH- L: 100mm

BREADTH- B: 70mm

HEIGHT- H: 112mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

INPUTS:

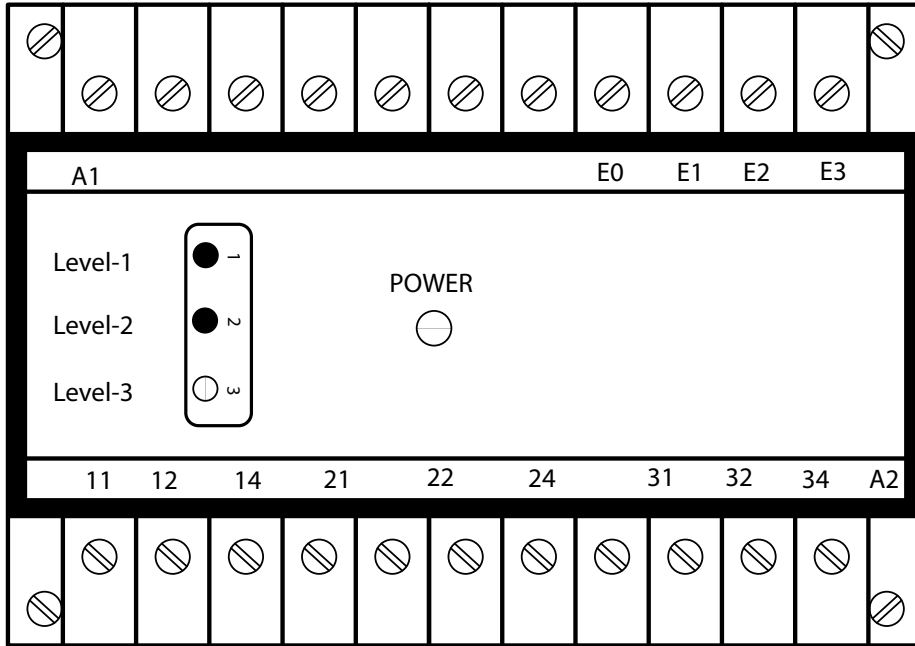
Eo -Common Probe

E1,E2,E3-3Level sensing Probes

OUTPUT:

11-COM	}	Level Relay Contact Corresponding to E1
12-NC		
14-NO	}	Level Relay Contact Corresponding to E2
21-COM		
22NC	}	Level Relay Contact Corresponding to E3
24-NO		
31-COM		
32-NC		
34-NO		

1.2.B 3 - LLMR - 230V



SPECIFICATIONS :

SUPPLY VOLTAGE-230VAC+/-20%50HZ

Power Consumption: 3VA

SENSOR TYPE : Conductive Probes

Sensitivity: 50K Ohms

OUT PUT : 3Relay contacts 1C/O type
rated 7A@250V AC

CONNECTION DETAILS

A1,A2 :Supply Voltage

DIMENSION DETAILS

LENGTH- L: 100mm

BREADTH- B: 70mm

HEIGHT- H: 112mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

INPUTS:

Eo -Common Probe

E1,E2,E3-3Level sensing Probes

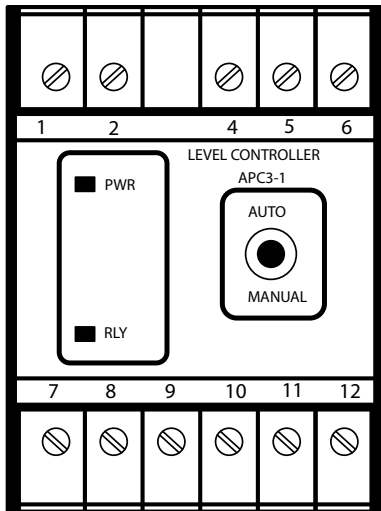
OUTPUT:

- 11-COM } Level Relay Contact
- 12-NC } Corresponding to E1
- 14-NO }
- 21-COM } Level Relay Contact
- 22NC } Corresponding to E2
- 24-NO }
- 31-COM } Level Relay Contact
- 32-NC } Corresponding to E3
- 34-NO }

1.3 LEVEL CONTROLLER - APC3 - 1

APC3 Level controllers are used for Overhead tank and Sump monitoring level control, Auto/Manual changeover toggle switches help in providing flexibility for operation.

APC3 controllers are the simplest level control instruments, which are economical, rugged and serve most purposes of level controllers in almost every application.



SPECIFICATIONS :

SUPPLY VOLTAGE-230VAC+/-20%50HZ

OUT PUT : 2 C/O Contact rated
5A@250V AC (resistive)

SUPPLY VOLTAGE

TO FLOAT SWITCH :24V DC

DIMENSION DETAILS

LENGTH- L: 70mm

BREADTH- B: 51mm

HEIGHT- H: 112mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

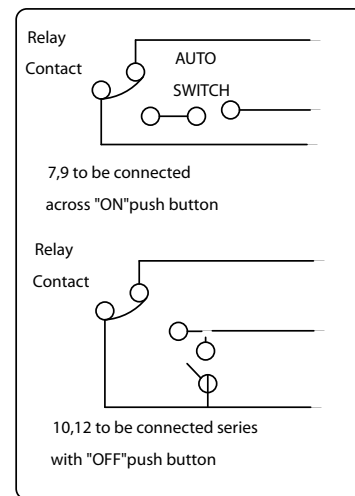
CONNECTION DETAILS-Type-APC-3

1,2-230V AC SUPPLY

4-HIGH } FROM
5-LOW } FLOAT SWITCH
6-COM }

7-COM }
8-NC }
9-NO }

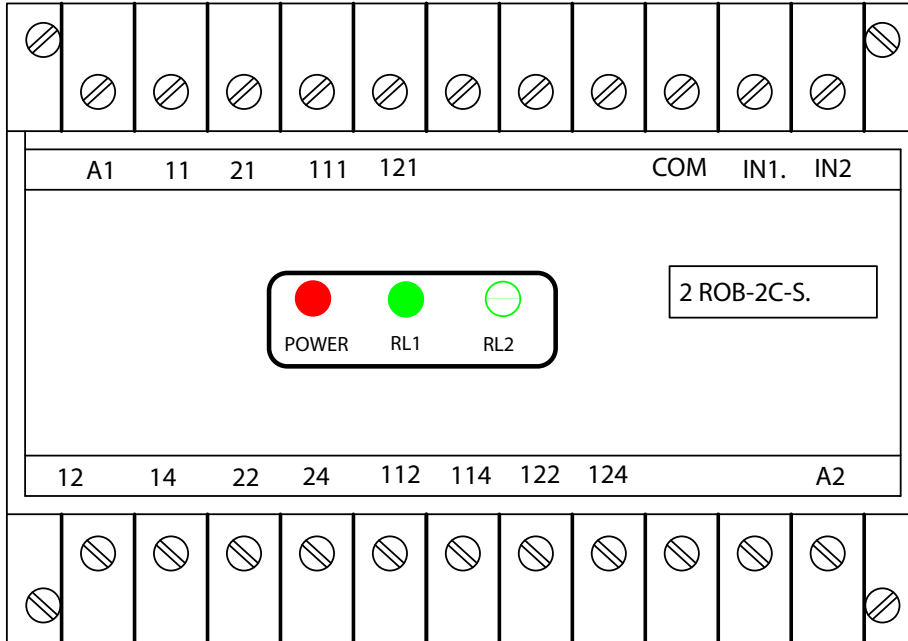
10-COM }
11-NC }
12-NO }



1.4 CONTACT DUPLICATOR - CD - 2 ROB - 2C - S

CD2ROB Level controllers are used for Changeover contacts applicable for Dual operations (Alarm/Valve/ Pump control). In Special applications, each potential free contact from the level switch can be converted to Dual Changeover contacts (DPDT). All relay outputs provided can be helpful in most pump control applications.

1.4.A CD - 2 ROB - 2C - S



SPECIFICATIONS :

SUPPLY VOLTAGE-A1,A2 :230V AC $\pm 20\%$, 50HZ

OUT PUT RELAY CONTACTS :All 2 C/O Rated 5A
@250V AC (Resistive)

SUPPLY VOLTAGE TO SENSOR :12V DC

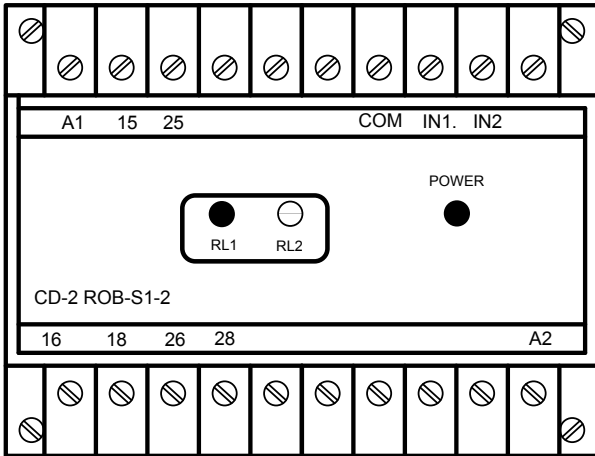
SENSOR TYPE :MAGNETIC FLOAT SWITCHES

CONNECTION DETAILS

INPUT TERMINALS	RELAY INDICATIONS	OUT PUT RELAY CONTACTS		
		COM	NC	NO
IN1	RL1	11	12	14
		21	22	24
IN2	RL2	111	112	114
		121	122	124

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

1.4.B CD - 2ROB - S1 - 2



SPECIFICATIONS :

SUPPLY VOLTAGE-A1,A2 :110VAC+/-20%50HZ

OUT PUT RELAY CONTACTS :All 2 C/O Rated5A
@250V AC (Resistive)

SUPPLY VOLTAGE TO SENSOR :12VDC

SENSOR TYPE :MAGNETIC FLOAT SWITCHES

CONNECTION DETAILS

INPUT TERMINALS	RELAY INDICATIONS	OUT PUT RELAY CONTACTS		
		COM	NC	NO
IN1	RL1	15	16	18
IN2	RL2	25	26	28

DIMENSION DETAILS

LENGTH- L: 100mm

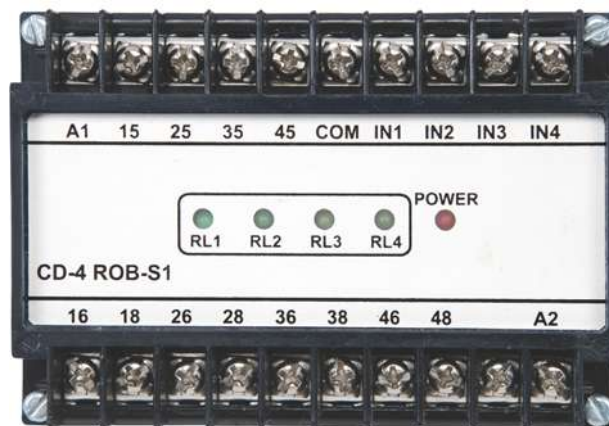
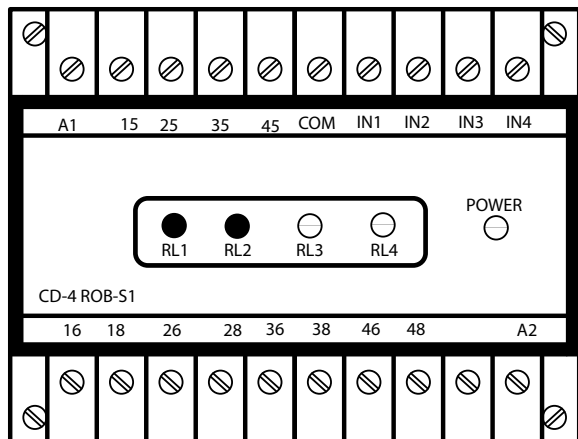
BREADTH- B: 70mm

HEIGHT- H: 112mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

1.5 CONTACT DUPLICATOR - CD - 4ROB - S1

CD4ROBS Level controllers are used for Changeover contacts applicable for Dual operations (Alarm/Valve/ Pump control). In Special applications, each potential free contact from the level switch can be converted to Dual / Four Changeover contacts (DPDT). All relay outputs provided can be helpful in most pump control applications. In these controllers - upto 4 Changeover contacts can be provided



SPECIFICATIONS :

SUPPLY VOLTAGE-A1,A2 :90-280 V AC, 50 HZ.

OUT PUT RELAY CONTACTS :All Rated 10A
@250V AC (Resistive)

SUPPLY VOLTAGE TO SENSOR :24VDC

SENSOR TYPE :MAGNETIC FLOAT SWITCHES

CONNECTION DETAILS

INPUT TERMINALS	RELAY INDICATIONS	OUT PUT RELAY CONTACTS		
		COM	NC	NO
IN1	RL1	15	16	18
IN2	RL2	25	26	28
IN3	RL3	35	36	38
IN2	RL4	45	46	48

DIMENSION DETAILS

LENGTH- L: 100mm

BREADTH- B: 70mm

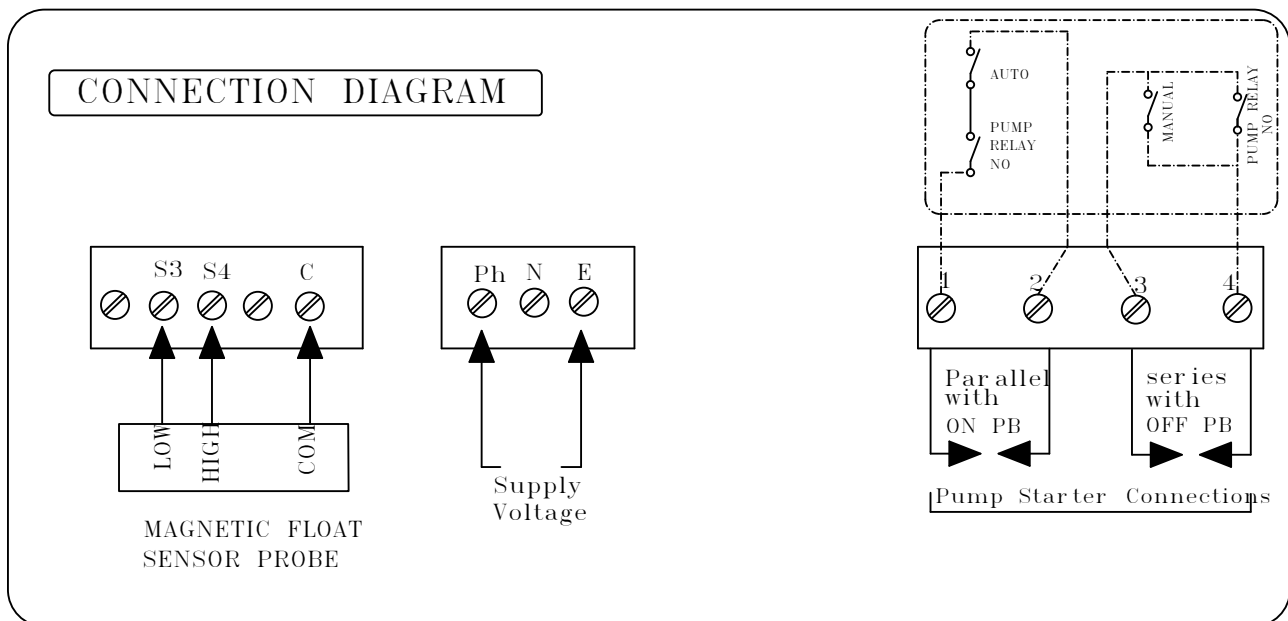
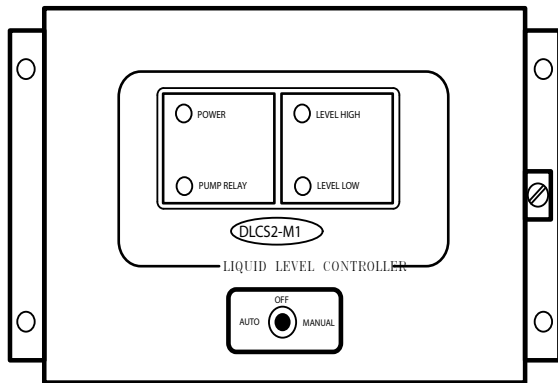
HEIGHT- H: 112mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

1.6 LIQUID LEVEL CONTROLLER - DLCS2 - M1

DLCS2 Level Controllers are used for Overhead tank and Sump monitoring level control. Auto / Manual changeover toggle switches help in providing flexibility for operation.

DLCS2 Controllers are the simplest level control instruments, which are used for outdoor applications, rugged and serve most purposes of level controllers in almost every industry.



DIMENSION DETAILS

LENGTH- L: 245mm

BREADTH- B: 90mm

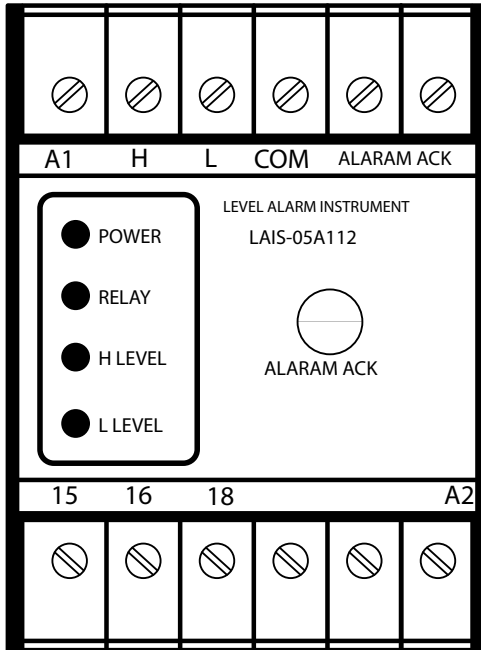
HEIGHT- H: 180mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

1.7 LEVEL ALARM INSTRUMENT - LAIS -05A112- 230V

LAIS 05A112 Level controllers are used for overhead tank and sump monitoring level control. Alarm Acknowledgement Push Buttons help in providing flexibility for operation. The unique feature would be the individual control instrument requirement for each level switch.

LAIS 05A112 controllers are the simplest level control instruments, which are economical, rugged and serve most purposes of level controllers in almost every application.



SPECIFICATIONS :

SUPPLY VOLTAGE-230VAC+20%,50HZ.

Power Consumption: 3VA

Out put:1C/O Realy Contact Rated

10A @ 250V AC Resistive Load.

Input :High Level-Magnetic Float Switch NO Type.

Low Level-Magnetic Float Switch NC Type.

Alarm ACK-Alarm Acknowledge Remote S/W Input,NO Typr.

CONNECTION DETAILS

A1,A2 :Supply Voltage

HIGH-
LOW-
COM- } Liquid Level Inputs From
Level Sensing Probe.

15-Common
16-Normally Closed
18-Normally Open } Out put Relay
Potential
Free contacts.

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

DIMENSION DETAILS

LENGTH- L: 70mm

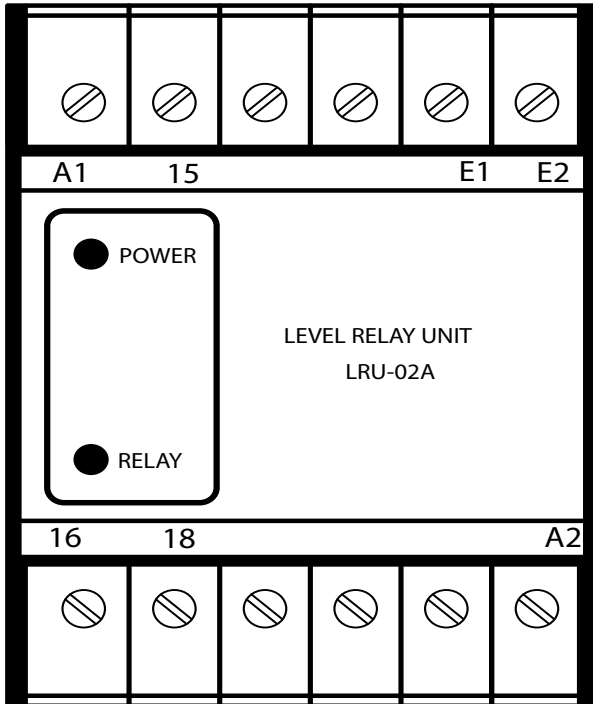
BREADTH- B: 51mm

HEIGHT- H: 112mm

1.8 LEVEL RELAY UNIT - LRU - 02A

LRU02A Controllers are used for Connecting Conductivity level switch probes and providing respective Relay outputs from the circuitry for operating a pump, provide an alarm, operate a valve etc., As a standard, we can provide multiple logic controls for various applications, which takes up most level control options for a process plant.

2 outputs are standard - More output options are possible on application basis.



SPECIFICATIONS :

SUPPLY VOLTAGE-110VAC+/-20%50HZ

Power Consumption: 3VA

Out put:c/o Relay contacts Rated

5A@250V AC resistive Load

Sensitivity: <33K Ohms

Function: Relay switched "ON" when
the level of water is sensed

CONNECTION DETAILS

A1,A2 :Supply Voltage

E1,E2 :Sensor Electrodes

15-Common

16-Normally closed

18-Normally open

Out put Relay

contacts

(Potential free)

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2

DIMENSION DETAILS

LENGTH- L: 70mm

BREADTH- B: 51mm

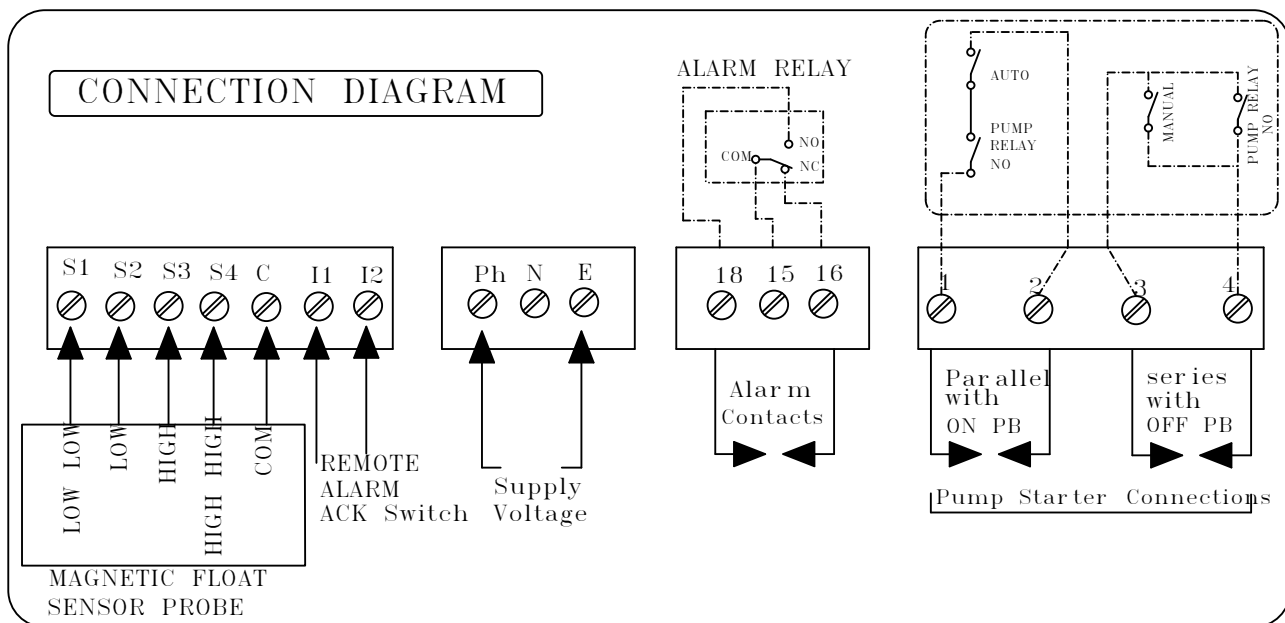
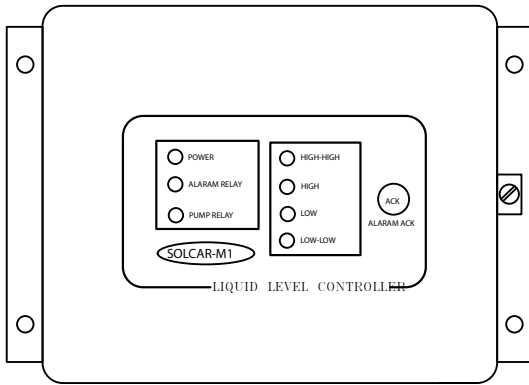
HEIGHT- H: 112mm

1.9 LIQUID LEVEL CONTROLLER - SOLCAR - M1

SOLCAR M1 Level Controllers are used for Overhead tank and Sump monitoring level control. Auto/Manual changeover toggle switches help in providing flexibility for operation.

SOLCAR is the highest feature based level controller which has all options - Alarm acknowledgement, Toggle switches, Highest Relay ratings.

SOLCARM1 controllers are the simplest level control instruments, which are used for outdoor applications, rugged and serve most purposes of level controllers in almost every industry.



DIMENSION DETAILS

LENGTH- L: 245mm

BREADTH- B: 90mm

HEIGHT- H: 180mm

Options: With Ex-Proof enclosure Gr IIA/IIB/IIC, Zone 1 & Zone 2



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