

DEW POINT CONTROLLER



AIDP 18C80+S80

USER MANUAL

VER. 1.2

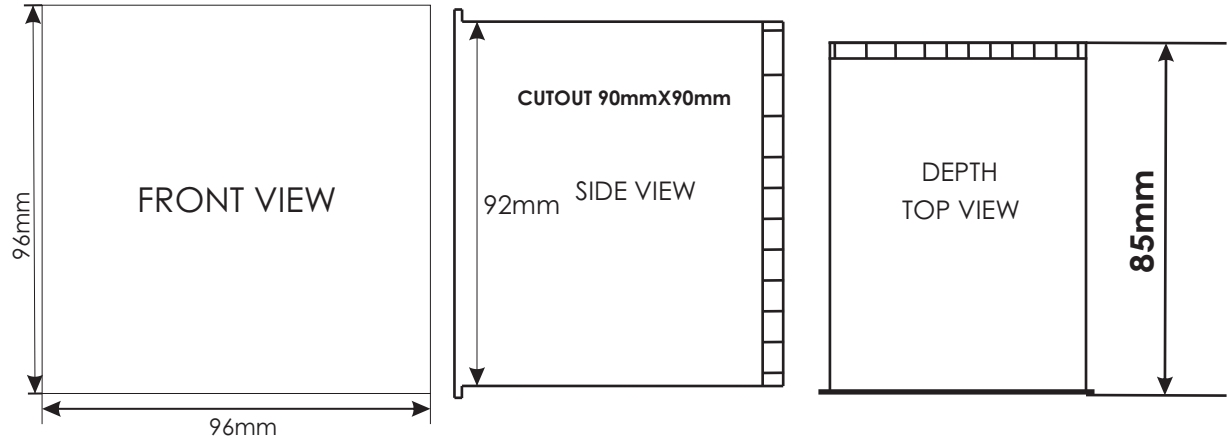


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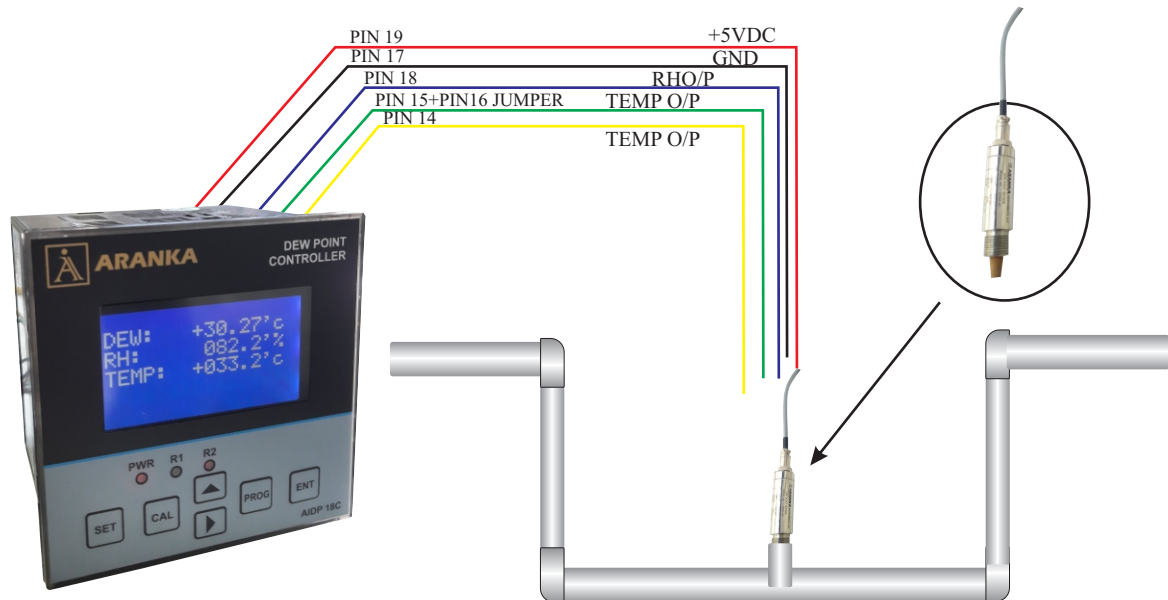
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DIMENSION



TERMINAL DIAGRAM



TERMINAL DISCRPTION

- 1 L [90~260VAC]
- 2 N [90~260VAC]
- 3 -NA-
- 4 -NA-
- 5 -NA-
- 6 -NA-
- 7 NO [RELAY 2]
- 8 C [RELAY 2]
- 9 NO [RELAY 1]
- 10 C [RELAY 1]
- 11 GND
- 12 -4~20mA [DEW POINT OUTPUT]
- 13 +4~20mA[DEW POINT OUTPUT]
- 14 YELLOW WIRE [TEMPERATURE SENSOR PT-100]
- 15 GREEN WIRE [TEMPERATURE SENSOR PT-100]
- 16 GREEN JUMPER WIRE [TEMPERATURE SENSOR PT-100]
- 17 GROUND BLACK WIRE FOR DEW POINT SENSOR POWER

- 18 BLUE WIRE HUMIDITY SENSOR INPUT
- 19 +VDC RED WIRE FOR DEW POINT SENSOR POWER
- 20 -NA-
- 21 -NA-
- 22 -NA-
- 23 -NA-
- 24 -NA-
- 25 -NA-
- 26 -NA-
- 27 -NA-
- 28 -NA-
- 29 RS485 + [COMMUNICATION OPTIONAL]
- 30 RS485 - [COMMUNICATION OPTIONAL]

SPECIFICATIONS

POWER : 90~260VAC @ 50Hz

TEMPERATURE RANGE : -40~60'C,

HUMIDITY RANGE : 0~100%RH

DEW POINT RANGE : -80~60'C

DISPLAY : LCD [16X4]

SENSOR MOC : S.S304

SENSOR CONNECTION : 1/2" BSP MALE

FILTER : BRASS SINTERED FILTER

SENSOR ELECTRIC CONNECTOR : M12

INTERFACE CABLE LENGTH : 6 METER SHIELDED

ACCURACY : +/- 3 ' C

INSTRUMENT MOC : ABS

OPERATING TEMPERATURE : -40~55'C

OPERATING HUMIDITY : 0~85%RH

KEY FUNCTIONS



TO SET POINT RELAY FUNCTION



TO CALIBRATE INSTRUMENT



TO INCREASE VALUE &
IT WILL SCROLL 0 TO 9



TO SHIFT DIGIT

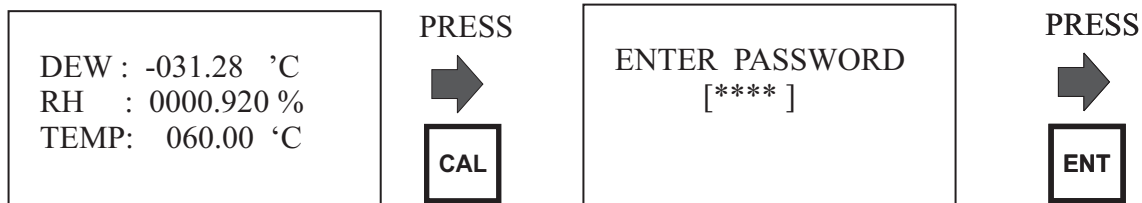


TO SET PARAMETER SETTING

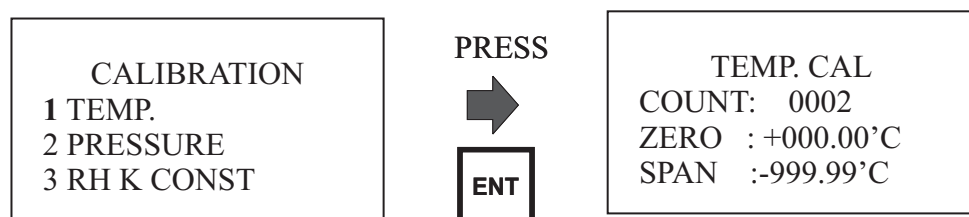


TO SAVE DATA
&EXIT TO MAIN DISPLAY

CALIBRATION FUNCTIONS



PRESS CAL KEY ENTER PASSWORD FOR CALIBRATION SCREEN. USING INCREASE & SHIFT KEY ENTER PASS WORD ****. PRESS ENT KEY FOR NEXT SCREEN



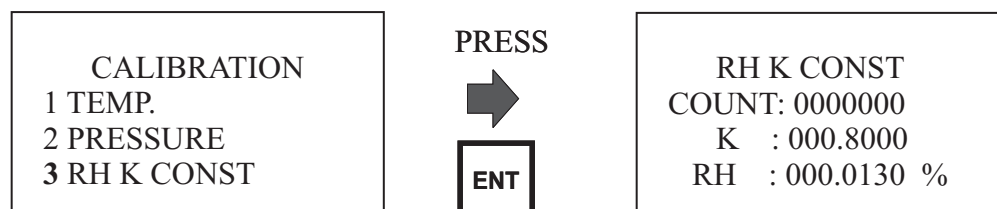
USING SHIFT KEY SELECT UNIT TO BE CALIBRATED. THE CURSER WILL BLINK WHICH UNIT IS SELECTED FOR CALIBRATION. PRESS ENTER FOR UNIT CALIBRATION.

TEMPERATURE CALIBRATION [TEMP CAL] :

CONNECT RTD SIMULATOR. FEED SIMULATION OHMS FOR MINIMUM TEMPERATURE RANGE REQUIRE. ENTER VALUE OF MINIMUM RANGE WAIT FOR ABOVE COUNT FOR STABLE. PRESS ENT KEY TO SAVE VALUE.

FEED SIMULATION OHMS FOR MAXIMUM TEMPERATURE RANGE REQUIRE. ENTER VALUE OF MAXIMUM RANGE WAIT FOR ABOVE COUNT FOR STABLE. PRESS ENT KEY TO SAVE VALUE.

PRESS CAL KEY TO BACK MAIN CALIBRATION MANU.



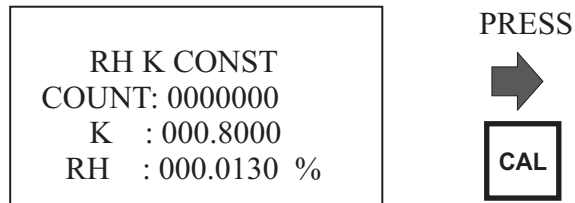
HUMIDITY CALIBRATION [RH CAL] :

TO CALIBRATE KEEP MASTER DEW POINT AND AIDP18C IN PARALLEL TUBING THAN KEEP PRESSURE 1 BAR CONSTANT USING PRESSURE REGULATOR. NOW CHECK THE HUMIDITY VALUE IN MASTER DEW POINT AND MAKE CORRECTION IN AIDP18C AT [RH : 000.0130 %] MOVE CURSOR TO RH USING ENT KEY.

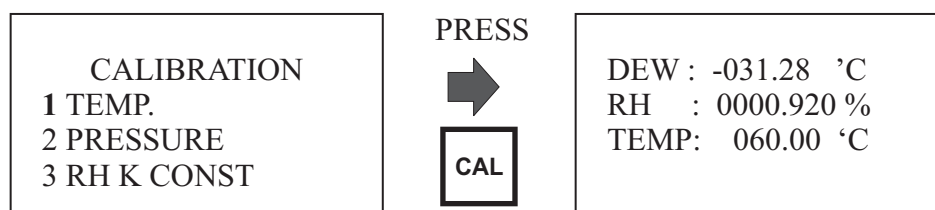
CALIBRATION FUNCTIONS

UP KEY & SHIFT KEY CHANGE RH VALUE, AFTER CORRECTION OF RH VALUE PRESS ENT KEY. IT WILL SAVE CHANGED VALUE DATA OF RH.

NOTE: DO NOT CHANGE CONST K VALUE



AFTER COMPLETIONS OF RH CALIBRATION PRESS CAL KEY TO BACK CALIBRATION SCREEN & PRESSING AGAIN CAL KEY TO BACK MAIN SCREEN.



NOTE: TO MAKE RH & TEMPERATURE FINE TUNING YOU CAN ALSO USE OFFSET CALIBRATION FROM SETTING MANU.

RELAY FUNCTIONS

PRESS



DEW SET_POINT
R1: +040.00 °C
R2: -000.00 °C

PRESS



DEW SET_POINT
R1: +040.00 °C
R2: -000.00 °C

PRESS SET KEY TO SET RELAY1 CONTROL VALUE USING INCREASE & SHIFT KEY SET DESIRE VALUE.

PRESS ENT KEY AGAIN TO SET RELAY2 CONTROL VALUE USING INCREASE & SHIFT KEY SET DESIRE VALUE..

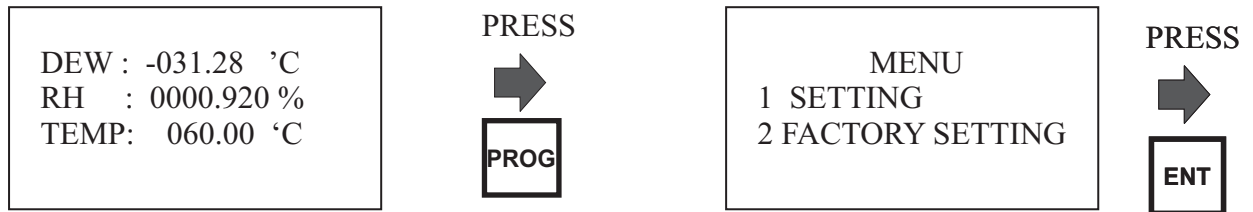
PRESS



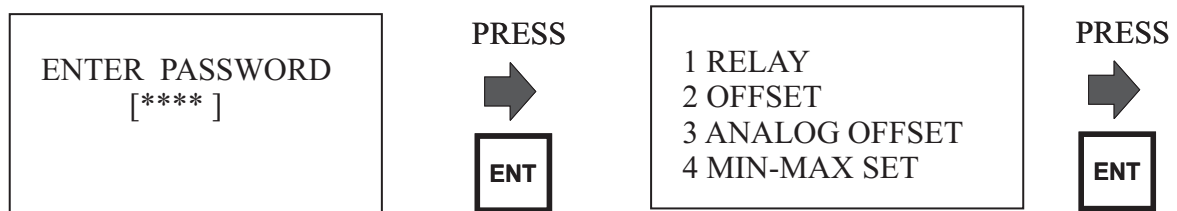
DEW : -031.28 °C
RH : 0000.920 %
TEMP: 060.00 °C

PRESS SET KEY TO BACK MAIN SCREEN.

PARAMETER SETTING

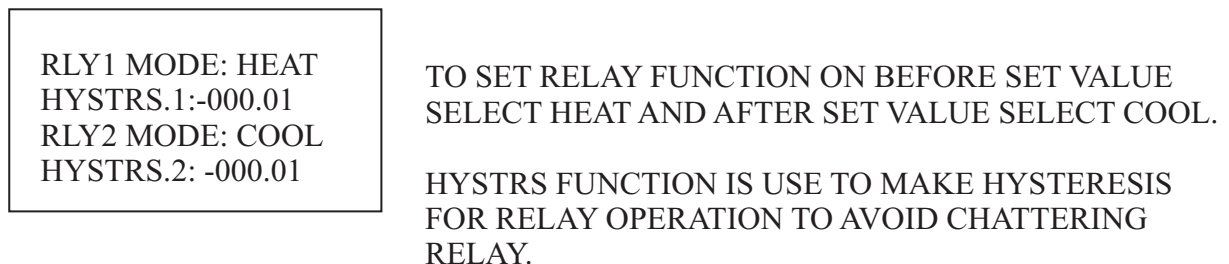


PRESS PROG KEY TO ENTER SETTING PARAMETER . SELECT CURSOR AT 1 SETTING
PRESS ENT KEY. SCREEN ASK FOR PASSWORD. ENTER PASSWORD 6789 TO
ENTER KEY. USING INCREMENT AND SHIFT KEY.



RELAY :

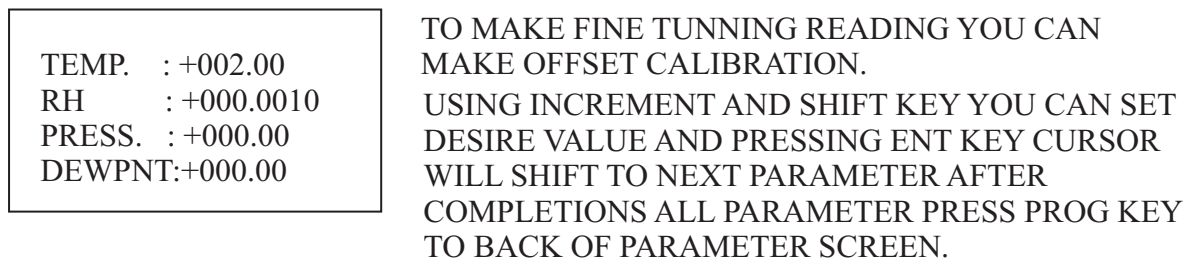
TO SET RELAY FUNCTION ON BEFORE SET VALUE OR AFTER SET VALUE.



USING INCREMENT AND SHIFT KEY YOU CAN SET DESIRE VALUE AND PRESSING
ENT KEY CURSOR WILL SHIFT TO NEXT PARAMETER AFTER COMPLETIONS
ALL PARAMETER PRESS PROG KEY TO BACK OF PARAMETER SCREEN.

OFFSET :

TO SET OFFSET FUNCTION SET CALIBRATION OFFSET VALUE.



PARAMETER SETTING

ANALOG OFFSET :

TO SET CALIBRATION OFFSET 4~20mA OUTPUT THIS FUNCTION WILL USE.

ANALOG O/P

OFFSET:+000.00mA

TO MAKE FINE TUNNING ANALOG 4~20mA OUTPUT. YOU CAN MAKE OFFSET CALIBRATION.

USING INCREMENT AND SHIFT KEY YOU CAN SET DESIRE VALUE AND PRESSING ENT KEY CURSOR WILL SHIFT TO NEXT PARAMETER AFTER COMPLETIONS ALL PARAMETER PRESS PROG KEY TO BACK OF PARAMETER SCREEN.

MIN-MAX SET :

TO SET ALL PARAMETER MINIMUM AND MAXIMUM RANGE.

1 **TEMPERATURE**
2 PRESSURE
3 RH
4 DEW POINT

PRESS



ENT

TEMPERATURE
MIN : +000 ' C
MAX : +000 ' C

USING INCREMENT AND SHIFT KEY YOU CAN SET DESIRE VALUE AND PRESSING ENT KEY CURSOR WILL SHIFT TO NEXT PARAMETER AFTER COMPLETIONS ALL PARAMETER PRESS PROG KEY TO BACK OF PARAMETER SCREEN.

1 TEMPERATURE
2 PRESSURE
3 **RH**
4 DEW POINT

PRESS



ENT

RH
MIN : 001 %
MAX : 000 %

USING INCREMENT AND SHIFT KEY YOU CAN SET DESIRE VALUE AND PRESSING ENT KEY CURSOR WILL SHIFT TO NEXT PARAMETER AFTER COMPLETIONS ALL PARAMETER PRESS PROG KEY TO BACK OF PARAMETER SCREEN.

1 TEMPERATURE
2 PRESSURE
3 RH
4 **DEW POINT**

PRESS



ENT

DEW POINT SET
MIN : + 001 'C
MAX : +000 'C

USING INCREMENT AND SHIFT KEY YOU CAN SET DESIRE VALUE AND PRESSING ENT KEY CURSOR WILL SHIFT TO NEXT PARAMETER AFTER COMPLETIONS ALL PARAMETER PRESS PROG KEY TO BACK OF PARAMETER SCREEN.

MODBUS ADDRESS

		READING VALUE			
NO		Register	Bytes	PLC ADDRESS	TYPE
1		Dew Point	4	40151	FLOAT
2		Relative Humidity	4	40153	FLOAT
3		Temperature	4	40155	FLOAT
		SET POINT			
NO		Register	Bytes	PLC ADDRESS	TYPE
1		Relay 1 Set Point	4	40009	FLOAT
2		Relay 2 Set Point	4	40011	FLOAT
3		Relay1_Hystersis	4	40039	FLOAT
4		Relay2_Hystersis	4	40041	FLOAT
5		RLY1 Mode Parameter [Heat / Cool]	1	40101	UINT
6		RLY2 Mode Parameter [Heat/Cool]	1	40102	UINT
		Calibration offset			
NO		Register	Bytes	PLC ADDRESS	TYPE
1		Temperature Offset	4	40029	FLOAT
2		RH Offset	4	40031	FLOAT
3		Pressure Offset	4	40033	FLOAT
4		Dew Point Offset	4	40035	FLOAT
5		Analog Output mA Offset	4	40037	FLOAT
		Communication RS485			
NO		Register	Bytes	PLC ADDRESS	TYPE
1		Slave ID	1	40122	UINT
2		Baud Rate Select	1	40123	UINT
		[9600/19200/28800/57600/76800/115200]			
		[Parity : None/ Stop Bit : 1/ Data Bit: 8 FIX]			

APPLICATION

COMPRESSED AIR / GAS LINE



WARRANTY CERTIFICATE

AIDP18C SR. NO. : _____

AIDP18S SR. NO. : _____

DATE : _____

AUTHORISED SIGN : _____



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USER MANUAL

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