INSTALLATION QUALIFICATION

FOR

HVAC BMS

PHARMA DEVILS	INSTALLATION QUALIFICATION REPORT FOR HVAC BMS	PROTOCOL No.:

PRE -APPROVAL PAGE:

INSTALLATION QUALIFICATION

DOCUMENT No: ……..

“HVAC BMS”

REPORT FOR APPROVAL (……..)

Name	Designation	Department	Signature	Date

REPORT APPROVAL FOR EXECUTION (……...)

Name	Designation	Department	Signature	Date

TABLE OF CONTENT

INSTALLATION QUALIFICATION

1.0 Qualification panel

Department	Name	Designation	Sign & Date
Functional Department			
Engineering			
Quality Assurance			

2.0 Objective

The purpose of this procedure is to present an outline for the Installation of instrument to verify & ensure that

- The instrument is installed as per the designed specification.
- Each installed subcomponent complies with the engineering design.
- No unauthorized or unrecorded modification has taken place.
- All critical instrumentation has been identified for calibration of the equipment.
- All supporting utilities are properly connected.

3.0 Equipment Description & Identification

Name of the equipment/instrument: HVAC BMS

Description:

The **HVAC BMS** is intended for the monitoring, logging and controlling of AHU parameters. Modules are designed using state of art technology and uses factory calibrated sensors for highest accuracy. Modules are scalable and provide ease of installation. A wireless connections option provides layout flexibility across the install site.

TECHNICAL SPECIFICATION:

DESCRIPTION	
Body	MS Powder Coated Panel
Gross weight	50 Kg Approx
Overall Dimension	850 mm x 570 mm x 200 mm
230V input supply by MCB	
Electrical - 5V DC	

- **Equipment Master File**
  - ❖ Manuals
  - ❖ Schematic drawings
  - ❖ IQ/OQ/DQ/PQ protocol

4.0 Major components

Basic unit

Description	Specified	Checked by	Sign /Date
General	Machine No. 1		
Controller Differential Bus Transreciever;	IC name: **……..** Manufacturer:……. Speed grades: 0 - 16 MHz Operating Voltages: 4.5-5.5 V Qty.: 1 No. IC number: **……..** Manufacturer: Texas Instruments Bidirectional Transceivers **Operating Voltages**: 4.5-5.5 V Qty : 1 No.		
Real Time Clock	IC Number**: ……** **Manufacturer: ……** **Operating Voltages**: 4.5-5.5 V Two wire interface Auto power fail to detect and switch		

Description	Specified	Checked by	Sign /Date
	circuitry Qty : 1 No.		
Temperature Sensor	IC Number**: …….** **Manufacturer: …….** Two wire interface Operating range : -40 to +125 ℃ **Operating Voltages**: Qty: 1 No. In Each Module		
RH Sensor	IC Number**: …….** **Manufacturer: ……** Two wire interface Operating range : 0 to 100% **Operating Voltages**: Qty: 1 No. In Each Module		
Differential Pressure Sensor	IC Number: **……** **Manufacturer: …….** Two wire interface Operating range : 0.3 PSI to 1.5 PSI **Operating Voltages**: Qty: 1 No. In Each Module		
Digital Display Room Temperature Sensor	IC Number**: ……** **Manufacturer: ……..** Two wire interface Operating range : -40 to +125 ℃ **Operating Voltages**: Qty: 1 No. In Each Module		
Digital Display Room RH Sensor	IC Number**: ……** **Manufacturer: ……** Two wire interface Operating range : 0 to 100%		

Description	Specified	Checked by	Sign /Date
	Operating Voltages: Qty: 1 No. In Each Module		
Digital Display Room Differential Pressure Sensor	IC Number: **……** **Manufacturer: …….** Two wire interface Operating range : 500 Pa **Operating Voltages**: Qty: 1 No. In Each Module		

Description	Specification	Actual	Checked by / Date
Identification plate	Name of the equipment and/or suppliers name to be available on the equipment.		
Any physical damage to the equipment	No physical damage should be observed		
General method of the electrical wiring	A. No loose hanging cables B. Well-insulated electrical wirings. C. Located in a safe place well protected from water seepage during machine or floor cleaning and also safe for operator during operation		

5.0 Utilities

Voltage : 230 Volts

Phase : 1 phase

Frequency : 50 Hz

6.0 Safety Features and Alarms

S.No.	Name of the safety item	Specified function	Identified by
1	If Alarm goes beyond user's preset value.	1. Buzzer will be turned ON in module and LED changing colour red for upper alarm yellow for lower alarm and green for no alarm accordingly. 2. Alarm notification will be displayed on monitor screen 3. Buzzer will be on in device so user can verify the beep sound.	
2	Authorised user access	1. Every user will be given permission to display data room wise / Area wise. 2. Only Authorised user will be given permission to modify set values of alarms, updating area and description. 3. Authorise user will be allowed to manage users. 4. Software Version is 1.23. 5. There are 3 level of User access Administrator, Supervisor, Operator.	

7.0 Identification of SOP's

S.No.	Title of SOP	SOP No.	Identified by

8.0 Deviations & Justifications

Deviation (If any)

Justifications (If any)

CONDUCTED BY :	DATE:
AUTHORIZED BY:	DATE:

9.0 Summary and Installation Verification

SUMMARY

INSTALLATION VERIFICATION

PREPARED BY : DATE:

CHECKED BY: DATE:

10.0 Acceptance Criteria

- All major components have been installed properly, according to Design specification. & manufacturer recommendations.
- No physical damage has been observed.
- All electrical wires are properly insulated

11.0 Appendix

LIST OF APPENDIX

S.No.	TITLE	APPENDIX No.

 PHARMA DEVILS	**INSTALLATION QUALIFICATION REPORT FOR HVAC BMS**	**PROTOCOL No.:**

POST - APPROVAL PAGE

Name	Department	Signature	Date
Checked By			
Approved By			