J mechatronic **Jm**

# JM IBOT
# WiFi Version
# Industry 4.0 ready



**M a n u a l   V e r s i o n   1 . 1 0**

**J M I B O T 0 0 0 1**

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## Operating Manual Index:

**Technical Specifications / Features :**

1. Supply voltage to the monitor 20 to 30 VDC; 2 Amp

2. Ambient temperature 50 Degrees C maximum.

3. IP protection rating IP20.

4. Digital inputs 4 DI (24 VDC, PNP, 0 VDC common with power supply). Device supply voltage for external devices to be given externally if the device works only on 24 VDC. For devices working on 20 to 24 VDC power supply can be given from JMIBOT0001 itself (max quiescent current of all devices together must not exceed 0.5 Amp in this case)

5. Analogue inputs 4 AI (4-20mA, 0 VDC common with power supply);
   Additional feature : Built in device temperature sensor.

6. Any change in digital inputs And Deviation of +/- X% of the analogue inputs will trigger an "LOG" record. The hysteresis of Analogue Input X% can be set through JM_App. (Please refer separate manual for JM_App)

7. logging of these input as well as output status on the cloud (jmibot.com; after the registration)

8. The system can also be programmed to send the LOGs of Inputs and outputs at a regular "Time Intervals".
   This time interval can be set for the system through JM_App. This enables:
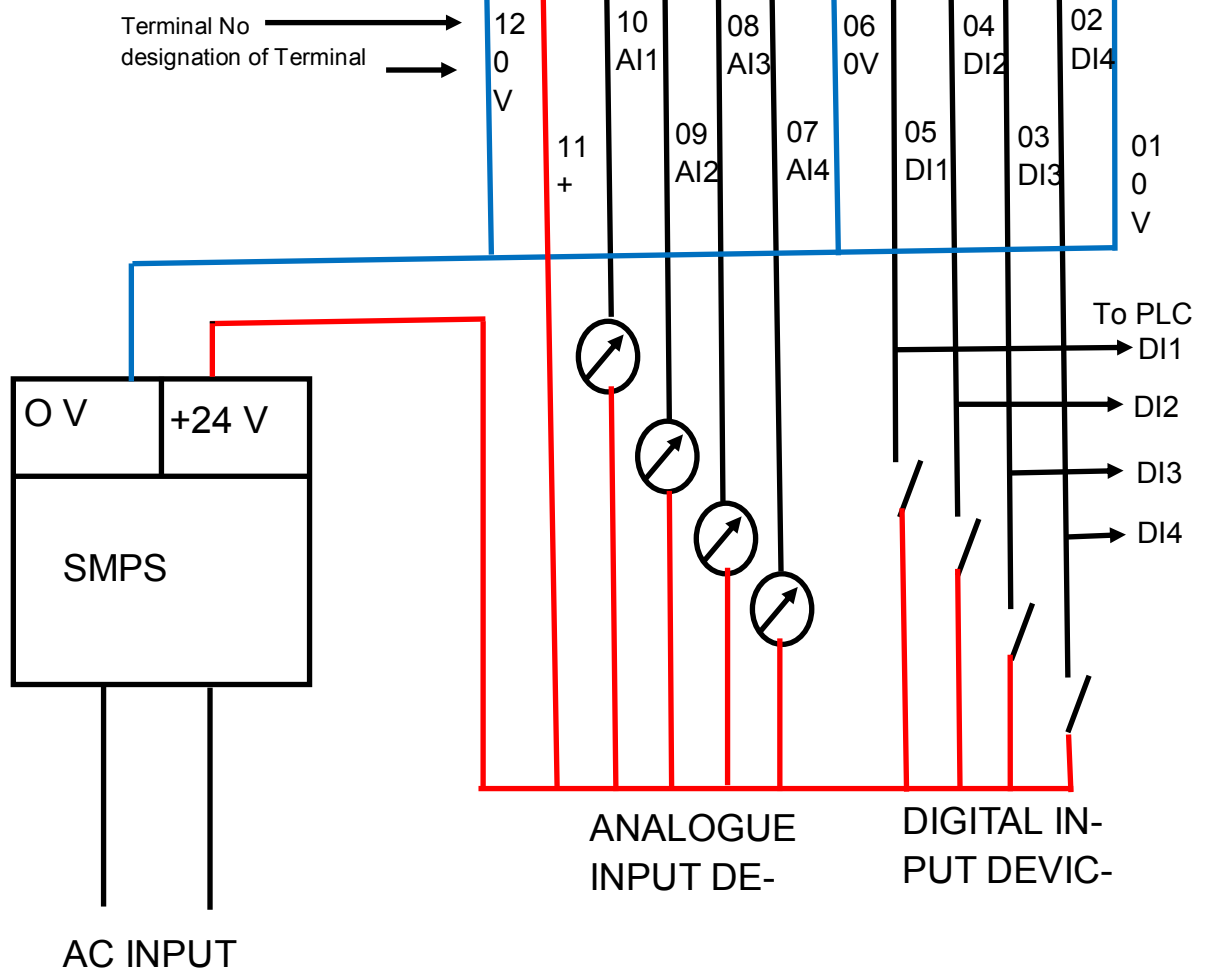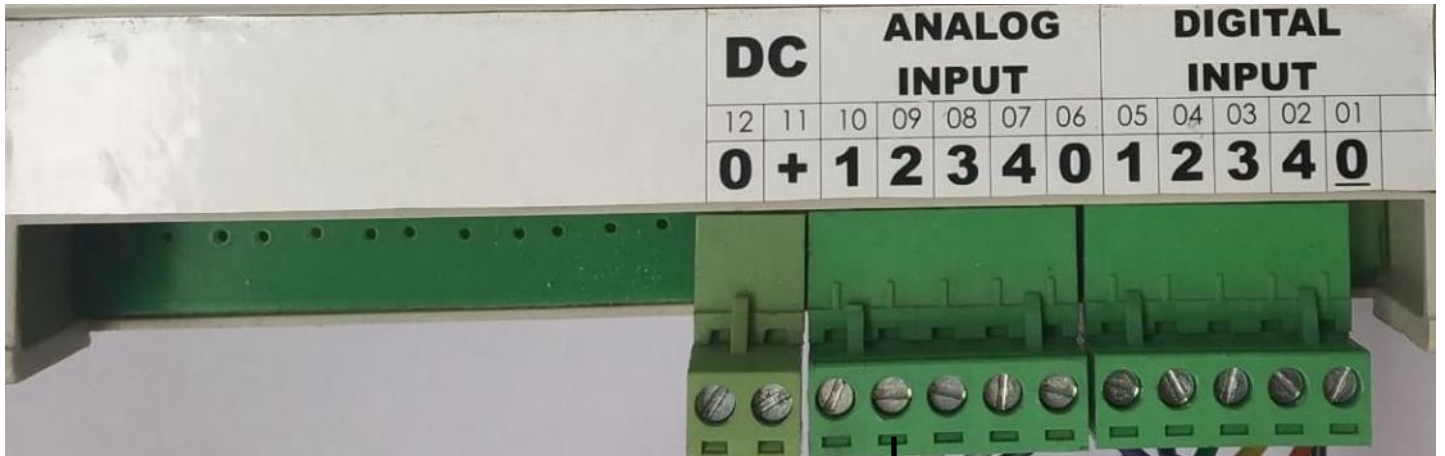   - logging of the status of inputs on the cloud at programmed time intervals

1. Connect the power supply adapter output wires to JMIBOT0001 pin connection no POWER SUPPLY (+)(0) as shown in the diagram.

2. If you wish to connect more than 2 user devices to be monitored by JMIBOT0001, please use pin (+) of DSM002 as common connection for all the user devices (maximum 4 digital inputs (pins DI1,DI2,DI3,DI4 )and max 4 analogue inputs 4-20mA (Pin AI1,AI2,AI3,AI4). please refer the connection diagram as shown in the diagram.

3. **Wiring Diagram Example:**
   **Please refer next Page**

# JMIBOT DIGITAL AND ANALOGUE INPUT WIRING

| DC | | ANALOG INPUT | | | | | DIGITAL INPUT | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 11 | 10 | 09 | 08 | 07 | 06 | 05 | 04 | 03 | 02 | 01 |
| 0 | + | 1 | 2 | 3 | 4 | 0 | 1 | 2 | 3 | 4 | 0 |

Terminal No →
designation of Terminal →

12
0
V

11
+

10
AI1

09
AI2

08
AI3

07
AI4

06
0V

05
DI1

04
DI2

03
DI3

02
DI4

01
0
V

To PLC

DI1

DI2

DI3

DI4

O V    +24 V

SMPS

AC INPUT

ANALOGUE INPUT DE-

DIGITAL IN-PUT DEVIC-

DIGITAL INPUT DEVICES can be connected to JMIBOT DIs as well as PLC DI s in Parallel provided the DI devices have sufficient Output Current Rating to cater to BOTH

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# JMIBOT ANALOGUE OUTPUT WIRING
# For THROUGH CONNECTION TO PLC

**DEFAULT WIRING WITHOUT THOUGH CONNECTION TO**



```
1 2 3 4 0
30 29 28 27 26
ANALOG
OUTPUT
```

Analogue Input Card Of PLC

AI1    0V    AI2    0V    AI3    0V    AI4    0V

Terminal No ➜

designation of Terminal ➜

| 30 | 29 | 28 | 27 | 26 |
|----|----|----|----|----|
| AI1 | AI2 | AI3 | AI4 | 0 V |

**WIRING WITH THOUGH CONNECTION TO**



```
1 2 3 4 0
30 29 28 27 26
ANALOG
OUTPUT
```

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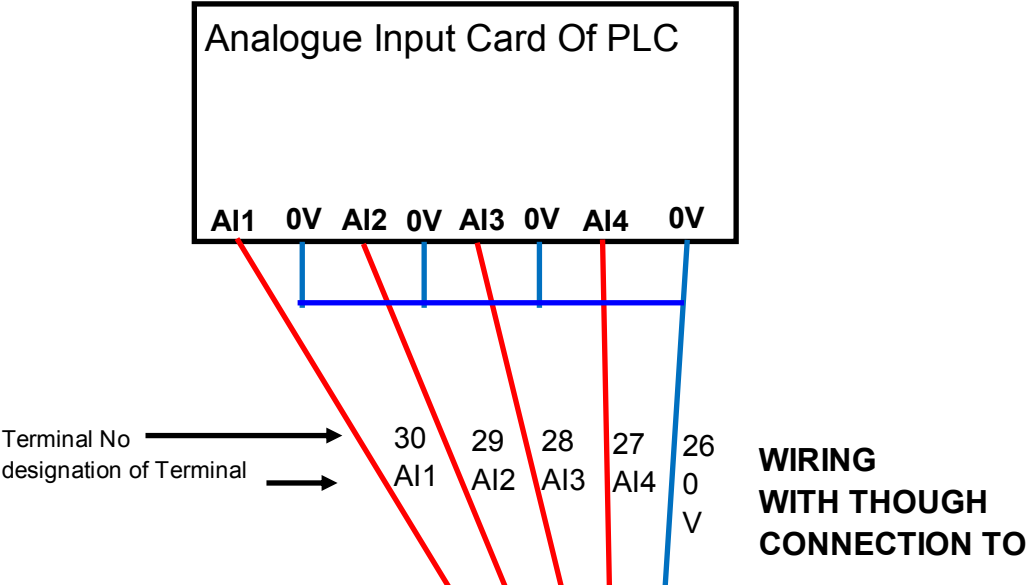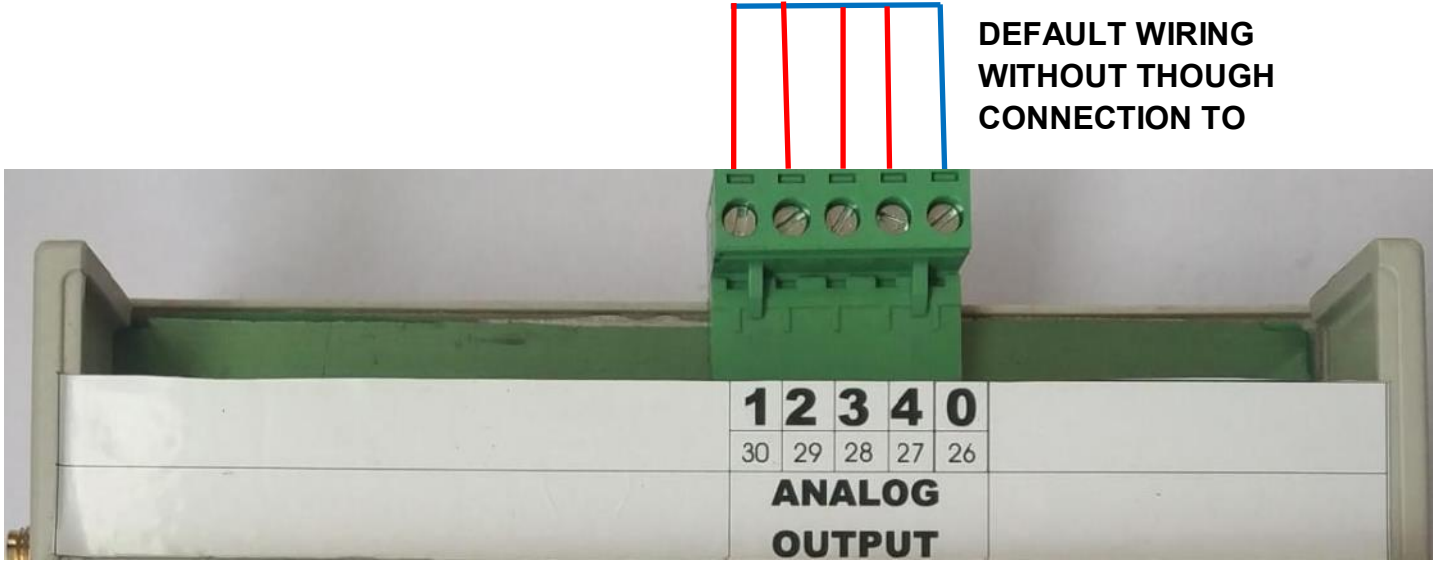
# Settings / programming procedure

Please Refer JM_App_Manual_WiFi

## ERROR CODES:

1:   Network LED OFF And System error LED Blinks with Frequency 1 Hz :
     This indicates that  the hotspot for JM_iBot device is not present or error in login to
     particular hotspot (Please check hotspot password).

2:   Network LED blinking And System error LED Blinks with Frequency 1 Hz:
     This indicates that the Internet connection of hotspot is not present or data transfer rate is
     too low. (Please check hotspot).

3:   Network LED blinking And System error LED Blinks with Frequency 2 Hz:
     This indicates that the HOST web address / server / Port address is invalid or offline.

     Note: For error 2 and 3 after the trouble shooting done and corrected; JM_iBot Device
     have to be restarted by making power supply OFF at least 10 sec and then again switch
     ON.

# LED Indications / Feedback codes

**Power ON**

**Network LED**:
LED OFF no network
LED Blinking with 1 Hz weak network
LED Blinking with 2 to 4 Hz moderate network strength
LED Blinking with 5 Hz strong WiFi / Hotspot network

**System Busy LED**:
GLOWING when the system is sending data to cloud

**Digital input 1/2/3/4 LEDs**
GLOWING if the respective input is HIGH

**Digital input error 1/2/3/4 LEDs**
GLOWING as complement of respective Digital Input

**Analogue input 1/2/3/4 LEDs**
LED OFF No Analogue Input present (OR AI current less than 3.7 mA)
LED Blinking with 1 Hz (AI current between 1 to 20% = 3.8mA to 7.2mA)
LED Blinking with 2 Hz (AI current between 21 to 40% = 7.3mA to 10.4mA)
LED Blinking with 3 Hz (AI current between 41 to 60% = 10.5mA to 13.8mA)
LED Blinking with 4 Hz (AI current between 61 to 80% = 13.9mA to 17.6mA)
LED Blinking with 5 Hz (AI current between 81 to 100% = 17.6mA to  20mA

## Interface to the cloud / data logging on the internet:

The JMIBOT is having built in feature to log all the data / status of inputs on the cloud through the website **www.jmibot.com**

Detailed process is as follows:

1.  Registration of the JMIBOT device on the website:
    For registration you need the Device Code of the JMIBOT, which you get along with the unit.

2.  After registration with J Mechatronic office, and paying the requisite fees, you can access the data on the cloud from any Android Cell phone device with access to internet and JM_App installed on it.

3.  **The DEVIDE CODE acts as the PASSWORD for the JMIBOT device data to access the data on the cloud and MUST BE HANDELED CONFEDENTIALLY.**

For any further support, please contact:

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