

SMART POLYHOUSE & HYDROPONICS SYSTEM

Integrated Monitoring, Automation & Control with Multiple I/O

1. POLYHOUSE SHED



2. HYDROPONICS SHED



MULTIPLE I/O IMPLEMENTED

ANALOG INPUTS (AI)

1. Temperature (Polyhouse)
2. Humidity (Polyhouse)
3. Soil Moisture
4. Light Intensity (Polyhouse)
5. CO₂ Level (Optional)
6. pH (Hydroponics)
7. EC / Conductivity (Hydroponics)
8. Water Level (Tank)
9. Nutrient Tank Level
10. Water Pressure
11. Flow Rate (Irrigation)
12. Outside Temperature
13. Outside Humidity
14. Light Intensity (Hydroponics)
15. Spare AI

DIGITAL INPUTS (DI)

1. Door Open/Close (Polyhouse)
2. Manual / Auto Mode (Polyhouse)
3. Emergency Stop
4. Water Flow Switch
5. Low Pressure Switch
6. High Pressure Switch
7. Tank Low Level Switch
8. Tank High Level Switch
9. Motor Overload (Feed Pump)
10. Motor Overload (RO Pump)
11. Motor Overload (Fans)
12. Power Failure
13. System Fault
14. Fire / Smoke Alarm
15. Spare DI

DIGITAL OUTPUTS (DO)

1. Exhaust Fan
2. Circulation Fan 1
3. Circulation Fan 2
4. Fogger / Misting System
5. Evaporative Cooling Pad Pump
6. Irrigation Pump
7. Solenoid Valve (Irrigation)
8. RO System Pump
9. Feed Pump (Hydroponics)
10. pH Dosing Pump
11. Nutrient Dosing Pump
12. Light (Hydroponics)
13. Light (Polyhouse)
14. Alarm / Buzzer
15. Spare DO

ANALOG OUTPUTS (AO)

1. Fan Speed Control (Exhaust)
2. Fan Speed Control (Circulation)
3. Fogger Intensity Control
4. Evaporative Pad Speed Control
5. Irrigation Speed / Flow Control
6. Light Dimmer (Hydroponics)
7. pH Setpoint Control (Optional)
8. EC Setpoint Control (Optional)
9. CO₂ Dosing Control (Optional)
10. Spare AO

SYSTEM HIGHLIGHTS

- ✓ Real-time Monitoring & Control
- ✓ Environmental Automation
- ✓ Nutrient & Water Management
- ✓ Energy Efficient Operation
- ✓ Data Logging & Reports
- ✓ Remote Access (WiFi / GSM / Cloud)
- ✓ Alarms & Notifications (SMS / Email)

