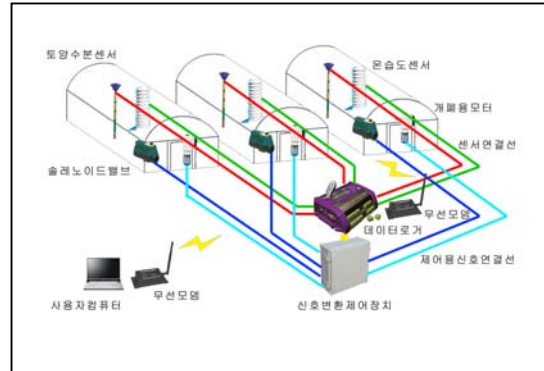


Application Note Data logger monitors greenhouses and controls irrigation system in fruit crops experiment station in Korea.

Customer Requirements The client needed to remotely monitor, control and irrigate, measuring soil moisture content and temperature in a number of greenhouses. Also the control of the Greenhouses windows by opening and closing automatically to ensure the appropriate temperature is maintained. The client then needed the data to automatically download.

Equipment

dataTaker DT80 (4 units)
Solenoid valve for irrigation
Controlling the windows in the green house
Wireless LAN modules



Application Note

Sensors

Soil moisture profiling sensor (3 units)
Temperature & Humidity sensor (15 units)

Datataker Solution

The *dataTaker DT80* data loggers are connected to the sensors, soil water content, temperature and humidity, also to control the windows and the solenoid valve for irrigation.



Each Greenhouse has a *DT80* collecting the data. Humidity is controlled by a combination of water sprays (solenoids or pumps) or drip irrigation controlled by the *DT80* relay or digital outputs. Temperature is by ON/OFF control of either fans or windows (vents) via *DT80* relay or digital outputs.

In some instances the irrigation control can be different as drip feed or pumping to the soil may be used if the humidity level is high but the soil moisture is low.

In these cases they have separate control of sprays (rapid effect on humidity) and irrigation to soil (lesser effect on humidity).

Sometimes the vents are opened or fans turned on to lower the humidity while also irrigating the soil directly. Combinations of Alarms are used to determine the output action.

The data is sent via wireless LAN modules to the main computer. All of data from the *DT80s* was visible on the website and specific data was alarmed. Using *dataTaker DeLoad* software, the data was collected automatically.

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