

• Product Catalog 2021

FARMSCUBE

Smart Farm & Smart Weather System



- High Quality
- Responsible After-Service
- Integrated Control with One Controller
- Complex Control System
- Smart Farm Sensor
- Smart Weather Solution

VISION

Creating Value for the Future, Dreaming for Tomorrow. **Korea Digital Co., Ltd.**

We serve farmers to become experts in the smart farm field.

Korea Digital leads the smart farm field with precision agriculture technology with honest and transparent management and excellent technology.

We support "High-tech Digital Farm" with precision sensing technology.

- 2020. 10 Launched Plant Farm (Vertical Farm) Complex Environment Control System
- 08 Launched Livestock Environment Monitoring Equipment
- 06 Launched Korean Smart Farm Standard Product (KSX 3266~KSX 3269)
- 2019. 12 Launched Mushroom Cultivation Environment Control System
- 2018. 03 CEO: Jong Bin, Kim Inaugurated
- 02 Launched Open Smart Farm Platform
- 01 Developed Multi-Measurement Temperature-Humidity Sensor (Patent Applied)
- 2017. 10 Development of Automatic Weather Equipment with Broadcasting Function (World's First)
- 2016. 12 Development of Smart Weather Systems for Smart Farm
- 10 Smart Farm Complex Environment Control System Development
- 2010. 01 Developed Precision Multi-Channel Temperature Controller
- 2005. 05 Awarded the International Standard Grand Prize (Korea Management Association)
- 2004. 03 Specialized in Industrial Sensor Manufacturing (Organized Sensor Division)
- 2003. 06 Headquarters Relocated (Guro-dong, Guro-gu, Seoul)
- 2002. 01 ISO9001, ISO14000 Certified
- 2001. 05 Developed MBL(Micro-Computer Based Laboratory) Science Experiment Equipment
- 2000. 07 Developed Hot Runner-Temperature Controller
- 1999. 12 Developed Air Conditioner Controller (3P: UTC CARRIER)
- 1998. 08 Establishment of R&D Center
- 1997. 11 Established Korea Digital Co., Ltd. (Location: Daerim-dong, Yeongdeungpo-gu, Seoul)





2018 India IMC Smart Farm Exhibition with Samsung Electronics

• Certificate



ISO-9001 (No.FM 590789)



ISO-14001 (No.EMS 590790)



100PPM(No.1-12-4-643)



NEP-MOCIE-2006-060

INNO-BIZ

INNO-BIZ(No.3012-0190)

RoHS





Convenience

Easy to install and convenient to move and place.



Economics

We offer all products at an economical price as a manufacturer of all sensors and controllers

**The application used for FARMSCUBE is free.*



Mobile

Sensor monitoring, control and setting, data storage and analysis can be used quickly and easily through a smartphone.



Scalability

Able to control various equipment with one controller since it supports 24-channel relay port and 12-channel switchgear dedicated port.



Wireless

Able to easily connect to the device anytime, anywhere through LoRa wireless communication, LTE modem and Bluetooth.

FARMSCUBE

FARMSCUBE is the most outstanding
Complex Environment Control System
 that combines precise sensor technology,
 control technology,
 and advanced wireless technology.
 It is convenient and easy.

• System Configuration

- CCTV
- Soil Moisture Content
- Liquid Pen
- Sprinkler
- Front Window Switch
- Sensor Node
- Piper
- External Weather Equipment
- CO2 Generator
- Side Window Switch
- Nutrient Solution Supplier
- Unmanned Control System

• Main Controller (SFC-2800MD)



- 32 Sensor Nodes Manageable
- 7 Sub-Controllers Manageable
- 24 Relay Channels (AC220/40A)
(Under 60% Rated Current: 24A Recommended)
- Switchgear Channel 12 Channels (DC24/10A)
(Under 60% Rated Current: 6A Recommended)
- Built-in Earth Leakage Breaker 30A
- Built-in Lightning Protector (SPD)

• Sub Controller (SFC-2800S)



- 24 Relay Channels (AC220/40A)
(Under 60% Rated Current: 24A Recommended)
- Switchgear Channel 12 Channels (DC24/10A)
(Under 60% Rated Current: 6A Recommended)
- SMPS: 2KW built-in
- Built-in Earth Leakage Breaker 30A
- Built-in Lightning Protector (SPD)



• IOT Remote Control System Linked Perfectly with the Smart Farm System

- Irrigation Control
- Air Conditioner/Heater
- Fluid Fan
- Warm and Waterproof Control
- Motor Control
- Nutrient Liquid Control

** App available on mobile phones, pads, and Chromebooks*

• Automatic Setting System that Implements Smart Farm Automation

The labor and time required for farming is reduced by more than half.

** Including Simultaneous Use Restriction and Sequential Control Function*

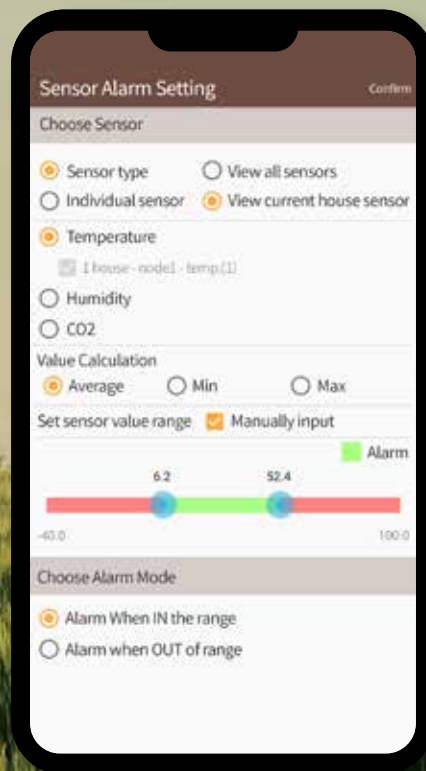




Real-Time Alarm

Urgent alarms for desired information such as temperature, humidity, soil temperature, soil moisture content, soil EC, etc. of all sensors.

Able to respond to emergencies through remote control or automatic setting.



Alarm
Setting

Alarm
Received

Emergency
Response

Thermo-Humidity

CO2

Solar Radiation

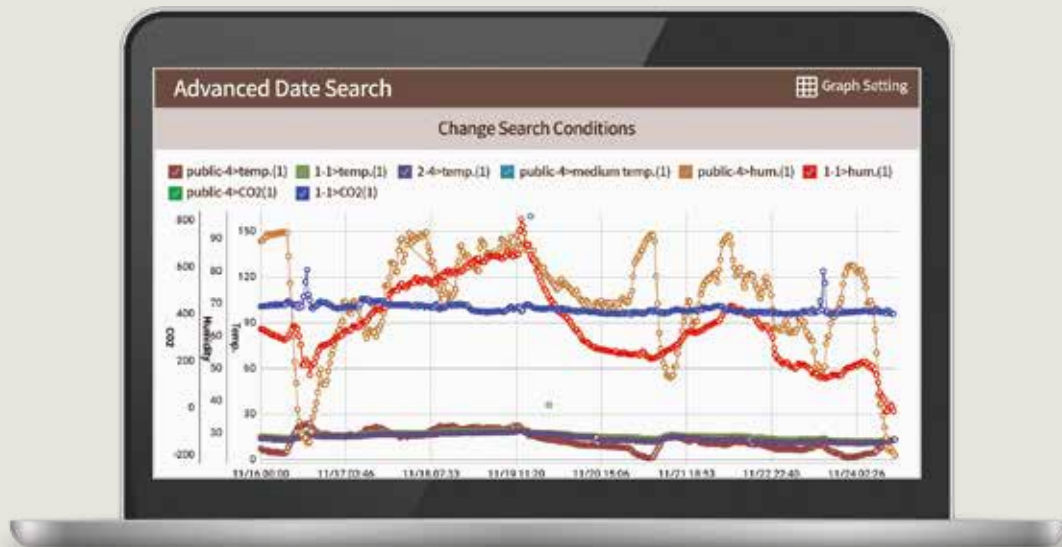
Soil Moisture Content

pH / EC

Wind Direction

Wind Speed

Rainfall Detection



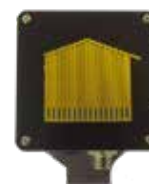
Real-time data is monitored and recorded in order to identify and solve problems in farming such as temperature and humidity, CO2, solar radiation, soil moisture content, pH / EC, wind direction, wind speed, rainfall detection, etc.



Product	Sensor Node	Pyrheliometer	CO2 Sensor
Model	SSN-220	SWSR-7500	KCD HP 100 3F
Specification	Korean KS standard	Measuring the intensity of sunlight	IP 65 Class Waterproof Filter / NDIR
Communication	RS485 (Mod-bus)	0~2,000 W/m ²	0~3,000ppm
Connected Sensor	4 sensors	± 5%	± 3%
Smart Function	PnP (sensor automatic recognition)		



Product	Thermo-Humidity Sensor	Soil Moisture Content Sensor	pH/EC Sensor
Model	KSH-7310	KSM-8900	PE-350
Specification	IP 65 Class Waterproof Filter / 4 humidity cells	Measure Earth Temp. / Humidity / Conductivity	Measure pH/EC for nutrient solutions
Measuring Range	Temp. -40~60°C	Temp. -40~60°C	pH : 0~14
	Hum. 0~100% RH	Hum. 0~50% vol Conductivity 0~10 dS/m	EC : 0~5 dS/m
Accuracy	Temp. ± 0.3°C	Temp. ± 0.3°C	pH ± 0.05 (@pH3~pH8)
	Hum. ± 3%	Hum. ± 3% Conductivity ± 5% F.S	EC ± 3%F.S



Product	Weather Vane	Wind Speed Sensor	Rainfall Detection Sensor
Model	SWAP-7300	SWWS-7320	SWRS-7481
Specification	Measure Wind Direction	Measure Wind Speed	Measure Rainfall
Measuring Range	0~360°	0 ~ 70m/s	on /off
Accuracy	± 5°	± 5%	

FARMSCUBE | Function I
Smart Farm Weather Observation System

LoRa

LoRa

Within 1Km Radius

LoRa



• Common Agricultural Meteorological Observation Equipment

- External Weather Observation for Complex Environment Control
- Installed at Agricultural Technology Center, Farmers Purchase Receivers
- Receive Precise Weather Data minute by minute. Precise Environment Control
- Free Communication Cost, Smart Farm System Cost Reduction

• Leading the World's First “Smart Farm Cost Innovation with SWS Broadcasting”

Necessity

- Data Monitoring from External (Atmospheric) Weather Observation Equipment
- Cost Reduction of Smart Farm Complex Environment Control System by Common Use of Meteorological Observation Equipment
- Energy Cost Reduction through Observation Accuracy and Optimal Environmental Control at the Level of the Meteorological Agency AWS

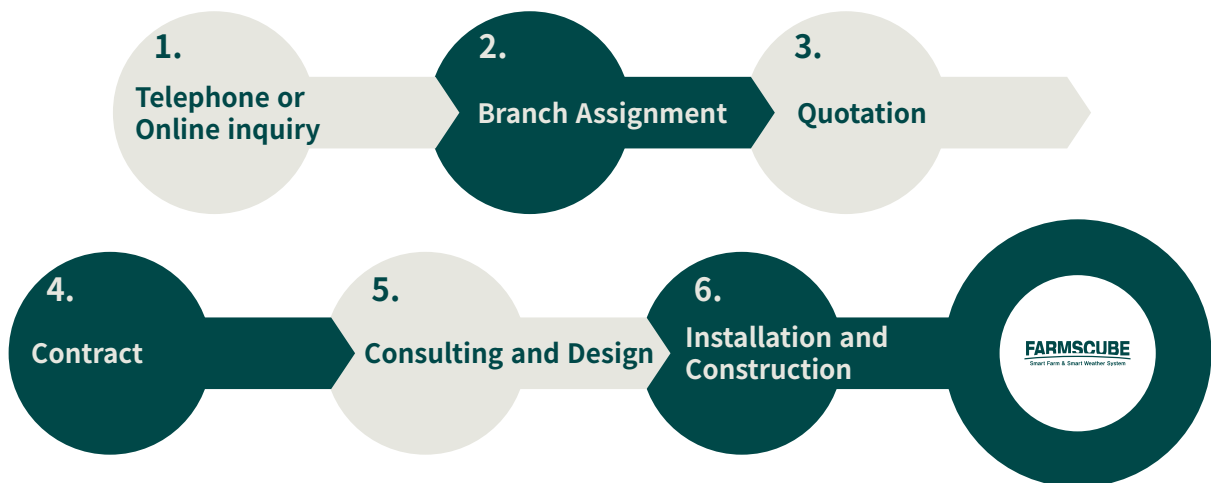
SWS Features

- High accuracy: SWS sensor is a certified product of the Meteorological Administration and is highly accurate and reliable.
- Fully digital: sensor ID assignment, sensor automatic recognition, calibration/correction
- Data transmission per minute: Observation data is broadcast in a radius of 2km via LoRa wireless communication
- Inexpensive SWS data receiver: Receives precise SWS data every minute
- Automatic control: Automatic control in conjunction with Korea Digital smart farm complex control system
- No power Supply required: Ultra-low power design using solar cell and rechargeable battery
- Free monitoring app: Download to a smartphone (receiver required)
- Excellent economical efficiency: Multi-use within 2km radius of SWS installation site, free communication cost

• Application



• Purchase Process and Consultation



FARMSCUBE is a trademark for Korea Digital's smart farm business, established in 1997. Based on 20 years of expertise and manufacturing experience in various smart sensors, FARMSCUBE provides a complex environmental control system in the smart farm field optimized for customer needs.



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