- Installing The Acceleration Sensor
- Usability In Extreme Environments
- Sensors Also Operate In Noise
- Real-time Measurement
- DC(RMS) Transform Output
- 3Axis Vibration Detection
- Microvibration Detection

IP66, IP65

So!Gnee

Smart Sensor

So!Gnee smart sensor for monitoring of vibration & temperature through existing PLC.

- Senses vibration changes by using an acceletation sensor
- Converts analog signals of vibration outputs into DC for printout
- Can be used for strong vibration as well as high-temperature environments
- Senses vibrations in X-axis, Y-axis, and Z-axis
- Maintains the performance even in noise environments
- Measures vibration and temperature in real time
- Senses micro vibrations (1mg)

So!Gnee smart sensor is capable of simulaneous monitoring of temperature and vibration states for efficient operation and management of a smart factory.

Application Strengths

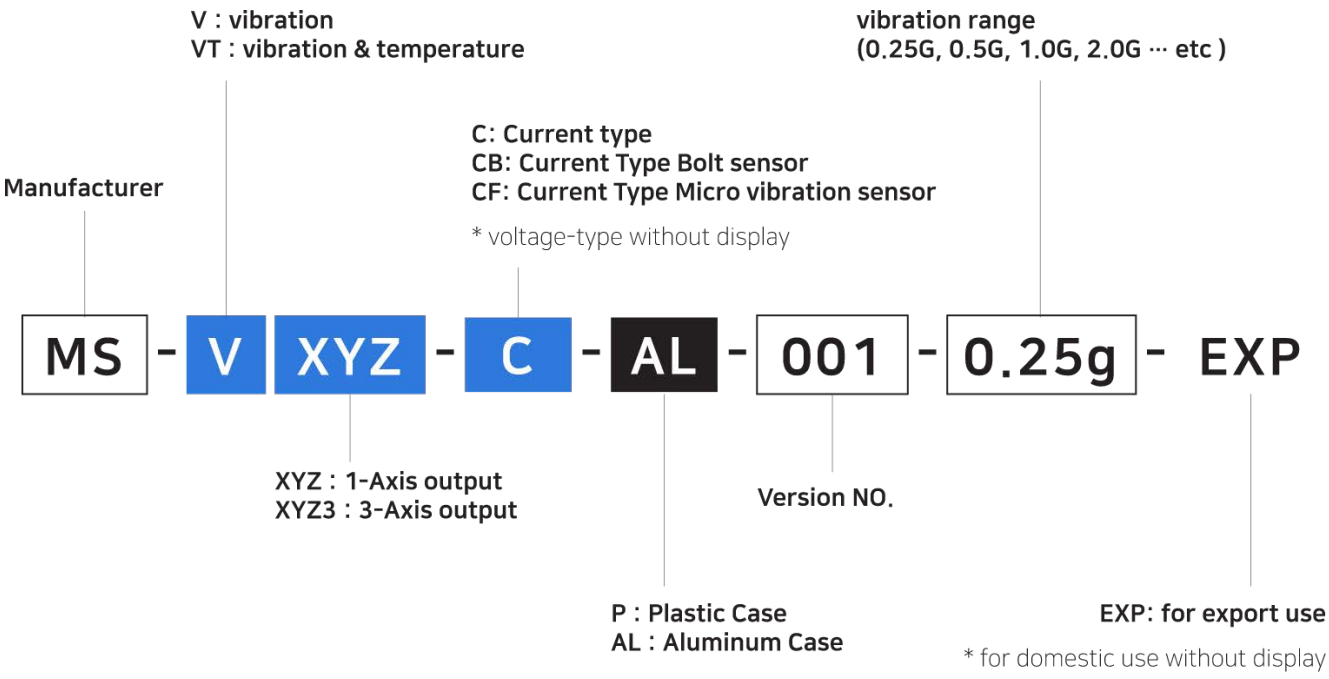
▲ So!Gnee sensor (IP65)

- Development optimized for monitoring through PLC
- Monitoring capability with utilization of universal HMI
- Simultaneous monitoring of temperature and vibration states after installation of sensors per equipment section
- Capable of minimum-delivery response as well as development response according to field situations

- Optimum monitoring and alarm functions with minimum investment
- Equipped for such responses as Application DB, pilot operation after installation, control, electrical construction, HMI monitoring, pilot operation, maintenance & repair, etc. as a business capable of performing control construction
- Sensor application enabled at rational prices

▲ Aluminum waterproof case (IP66)

Guide for product selection



Specification

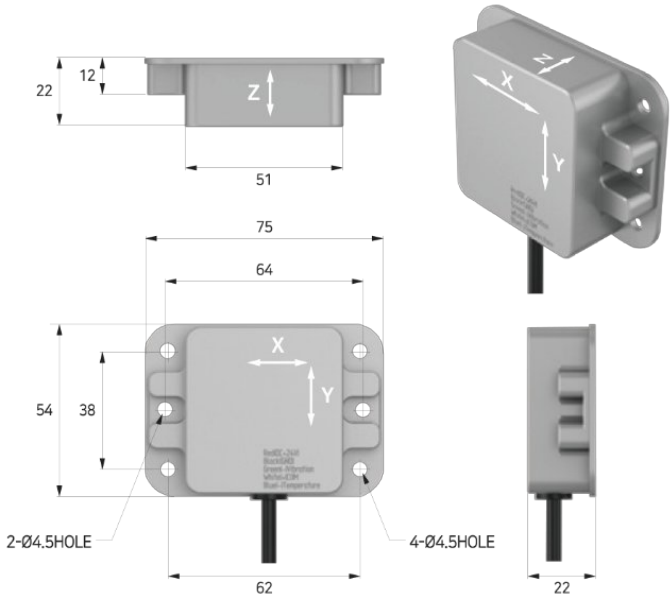
Type	V (Voltage)	C (Current)	CB (Bolt Type)
Measuring Range (g)	0.25~1G : universal (3~50G : order production)		
Sensitivity	±1mg (X-axis, Y-axis, Z-axis)		
Frequency Range	~1.6kHz, ~11kHz		
Resonance Frequency	5.5kHz, 21kHz		
Bandwidth (Hz)	60Hz, 240Hz	60Hz, 240Hz, 1kHz	
Power	Input Voltage 24±4VDC @ 30mA or less	Input Voltage 24±4VDC @ 50mA or less	
Housing	Aluminium & ABS Plastic		
Operating Temperature	-30°C ~ 100°C		
Weight	200g or less		
Output	0 ~ 5.0V (vibration & temperature outputs)	4 ~ 20mA (vibration & temperature outputs)	

※ Type CF : 0.1Hz ~ 60Hz (low-frequency micro vibration)

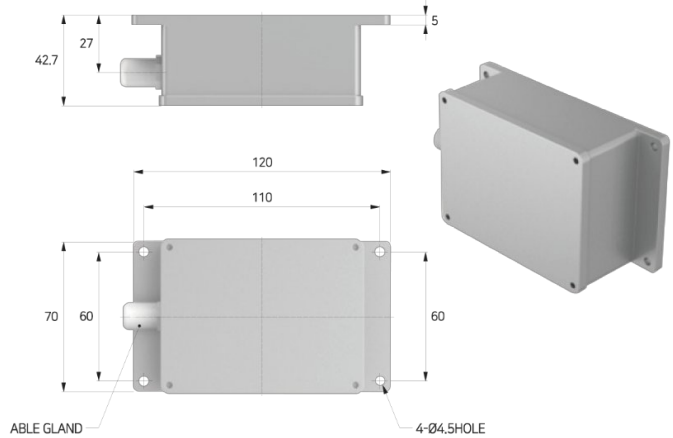
	V (Voltage)	C (Current)
Red	Input Voltage (+20V ~ +28V)	Input Voltage (+20V ~ +28V)
Black	GND	GND
White	Temperature Analog Voltage	COM Vibration(+) Temperature(+)
Green	Vibration Analog Voltage	Vibration(-)
Blue		Temperature(-)

Outline

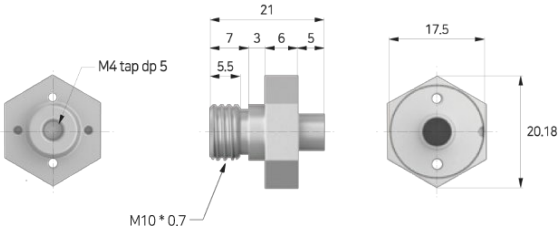
▼ So!Gnee smart sensor



▼ Aluminum waterproof case



▼ Bolt Probe Type



Installation Cases

- Applied to Bugang plant of Company H (Applied to 15 places in September, 2018
- Applied to 5 places of cooling tower, 15 places of pump room including underwater pump, etc. for predictive maintenance

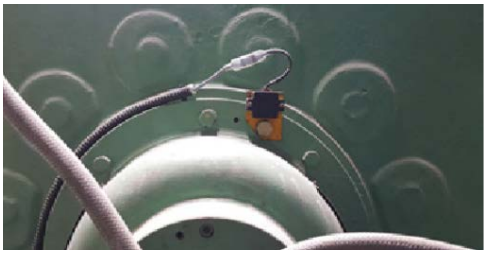


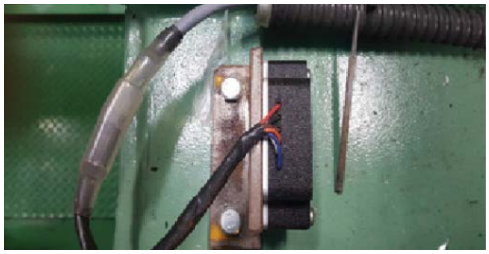
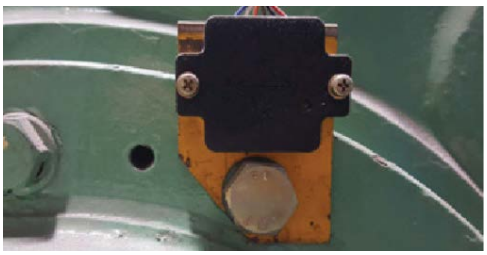
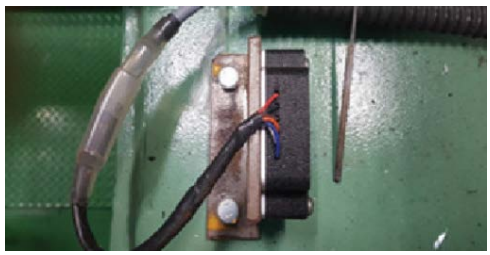
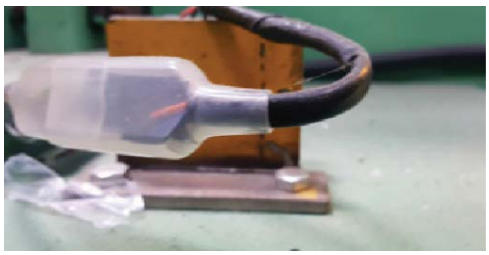
Application cases for 5 places of cooling tower






Application cases for 15 places of pump room



Extruder

Winder

Mixer

Monitoring screen for vibration sensor

Vibration sensor can be monitored on a screen when used at the field of a smart factory.

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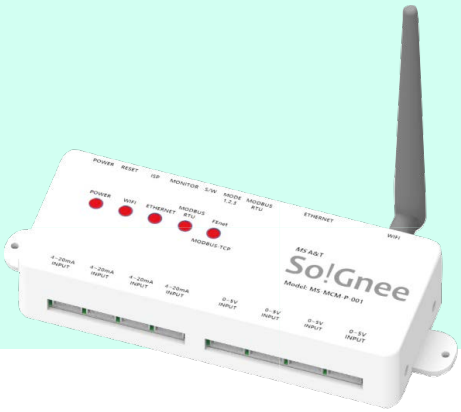
Tel: (82-43)715-9580 Fax: (82-505)345-9580 E-mail : rnd@msant.co.kr sales@msant.co.kr Website : sognee.net



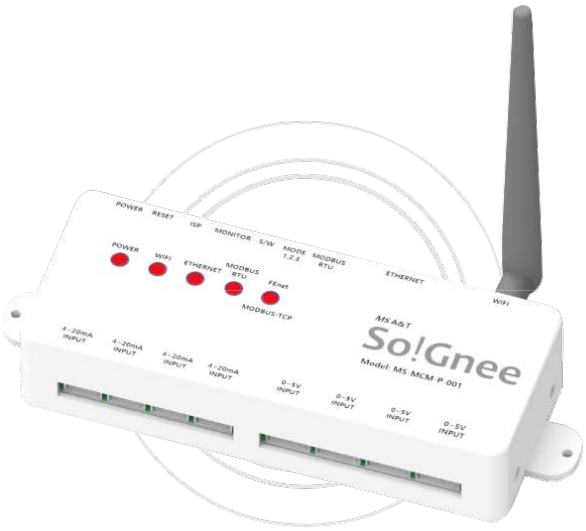
So!Gnee

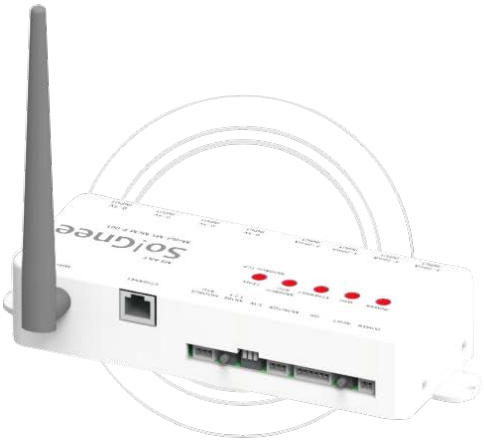
Smart Multi-Channel Communication Module

Multi-Channel Communication Module

- Connect 8 vibration/temperature modules
- 16 analog input channels
- Supports various communication methods
- User can choose communication method
- Voltage and current type sensors available
- PLC and HMI (SCADA) communication
- SSID, PASSWORD, IP , MAC Address Set via Monitor

Mode		
No.	FUNCTION	
	H	**L**
1	WIFI	Ethernet
2	FEnet	Modbus-TCP/IP
3	WIFI/Ethernet	Modbus-RTU

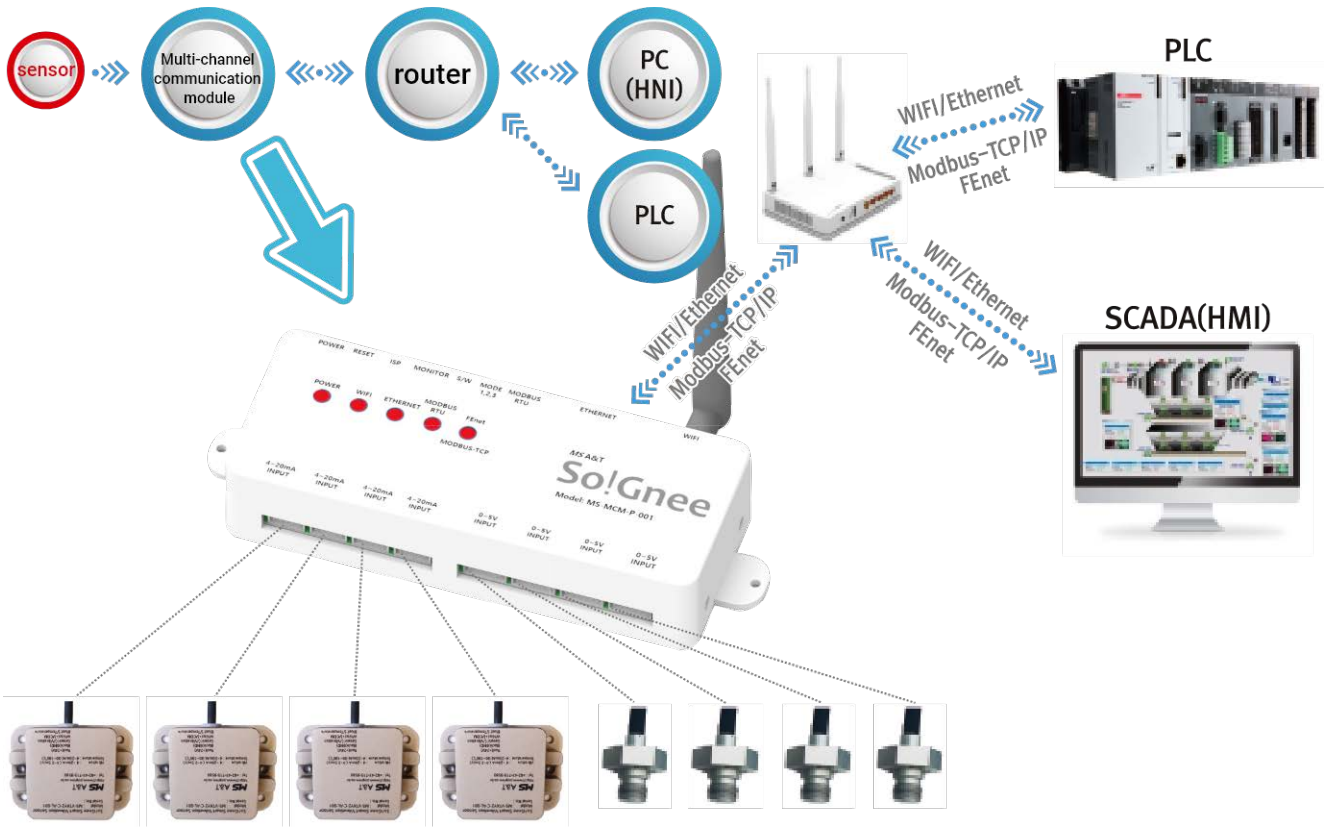




Specification

Item	MS-MCM-P-001	Unit
INPUT POWER	DC 20 ~ 26	V
WIFI	802.11b/g/n, 2.4GHz	
Ethernet	10/100 base-T	
Modbus-RTU	19600(RS485communication infrastructure)	BPS
Modbus-TCP	Industrial Network	
FEnet	LS dedicated communication (XGT,XGK)	
Analog Voltage Input	0 ~ 5 (8-Channel)	V
Analog Current Input	4 ~ 20 (8-Channel)	mA
Monitor	Communication status monitoring / Setup	V
S/W (Switch)	Setup Mode	
Reset	reboot / reset	

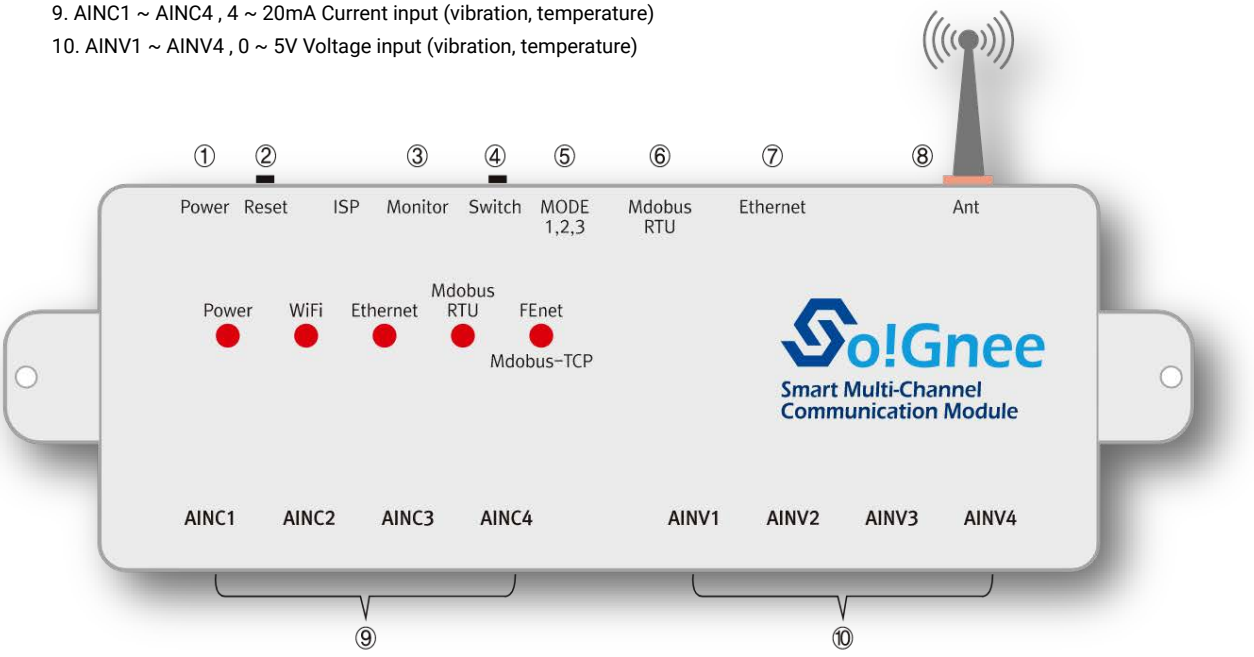
System configuration diagram using multi-channel communication module



Description of each port

1. Power : 24V input
2. Reset : Reset processing after setting up MODE and Monitor
3. Monitor : Setup settings, IP and Mac address settings, communication output status monitoring
4. Switch : Entering the setting mode from the monitor state is done through the 'q' or "Switch" button.
5. MODE 1,2,3 : see MODE
6. Modbus RTU : Modbus RTU communication port 19600 (based on RS485 communication)
7. Ethernet : Ethernet communication port
8. ANT : Antenna for WiFi
9. AINC1 ~ AINC4 , 4 ~ 20mA Current input (vibration, temperature)
10. AINV1 ~ AINV4 , 0 ~ 5V Voltage input (vibration, temperature)

Mode		
No.	FUNCTION	
	H	L
1	WIFI	Ethernet
2	FEnet	Modbus-TCP/IP
3	WIFI/Ethernet	Modbus-RTU



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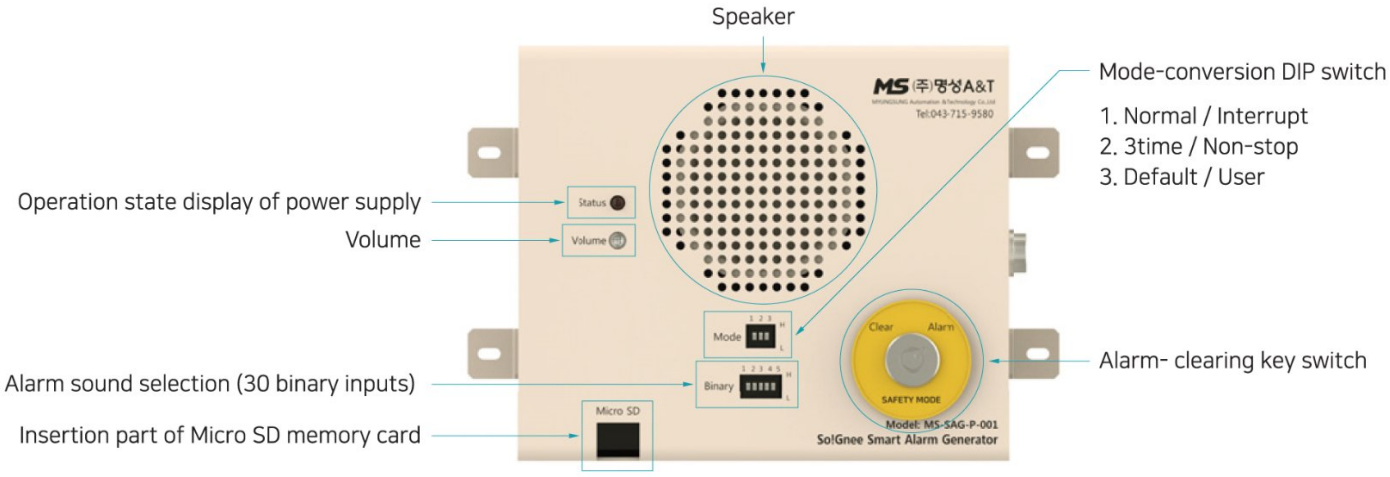
So!Gnee

Smart Alarm Generator

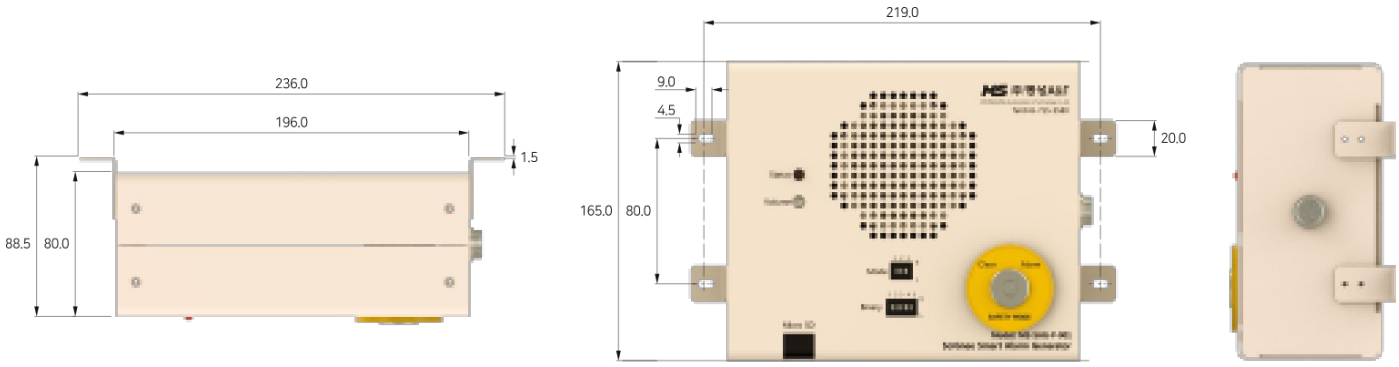
So!Gnee smart alarm generator is

- Alarm produced by external switching
- 30 basic alarm sounds mouted
- Micro SD memory card (Alarm sound setting)

Description of each part in the front face panel



Outline

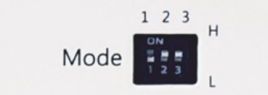


Specification

Items	Contents
Power	Input Voltage : 18V ~ 36V @ 350mA(Typical 24V)
Volume	Default sound source 102dB (1m)
User mode selection (DIP switch)	Default mode (Low) User mode (High)
Sound source selection (5 code_DIP switch)	Selection of sound source through selection of default sound source binary code Selection of sound source through selection of user sound source binary code
Replay mode selection (DIP switch)	3-time replay mode (Low) Non-stop replay mode (High)
Micro SD memory	Can be used up to the maximum of 32G
No. of sound sources	Currently 100 each accommodated for user sound source, Possible up to the maximum of 9999
Sound volume control	Lineal volume control
Weight	850g

How to use

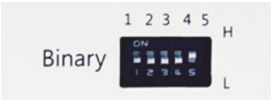
• "Mode" DIP switch selection



MODE	1	2	3
L (LOW)	No use of external input (contact point)	Alarm sounds 3 times	30 default alarm tones
H (HIGH)	Use of external input (contact point)	non-stop alarm sound	User alarm tone

Category	1	2	3	external input	Play type	Alarm sound type
Mode DIP Switch Interpretation	L	L	L	without	Play 3 times	default tone
	L	L	H	without	Play 3 times	user sound
	L	H	L	without	non-stop play	default tone
	L	H	H	without	non-stop play	user sound
	H	L	L	with	Play 3 times	default tone
	H	L	H	with	Play 3 times	user sound
	H	H	L	with	non-stop play	default tone
	H	H	H	with	non-stop play	user sound

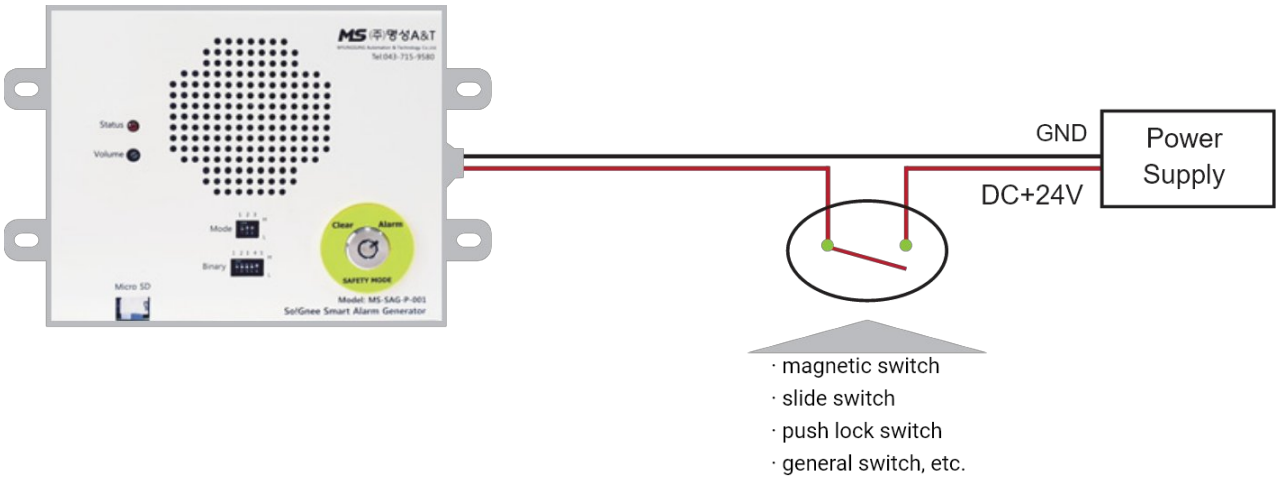
• "Binary" DIP switch selection
(Alarm sound selection: see binary code)



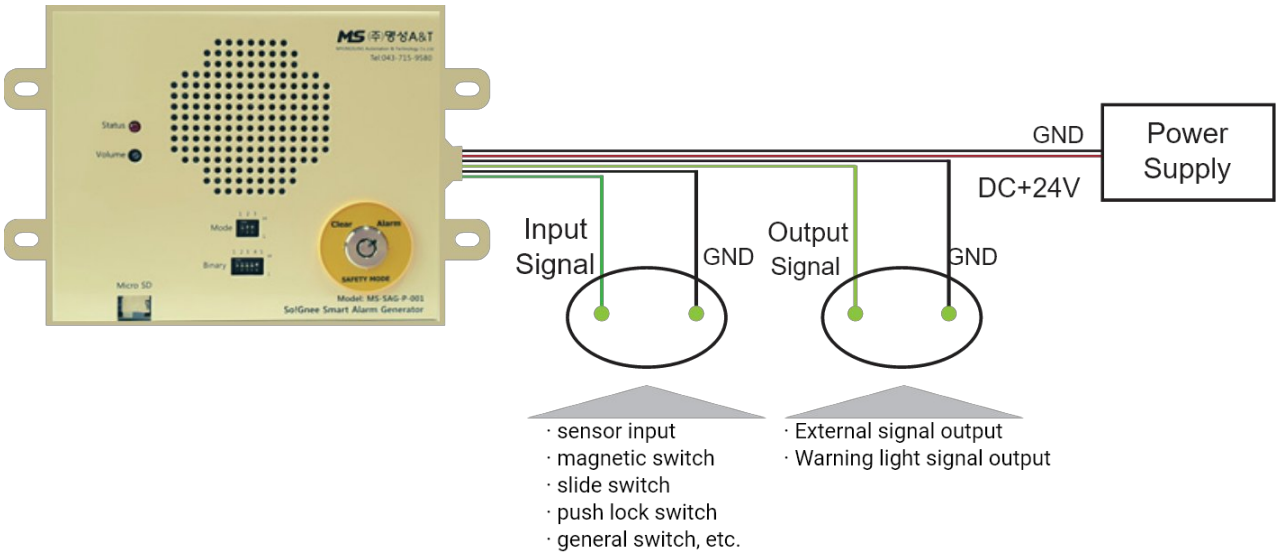
No.	binary code					note
	1	2	3	4	5	
0	0	0	0	0	0	no sound
1	0	0	0	0	1	sound 1
2	0	0	0	1	0	sound 2
3	0	0	0	1	1	sound 3
4	0	0	1	0	0	sound 4
5	0	0	1	0	1	sound 5
6	0	0	1	1	0	sound 6
7	0	0	1	1	1	sound 7
8	0	1	0	0	0	sound 8
9	0	1	0	0	1	sound 9
10	0	1	0	1	0	sound 10
11	0	1	0	1	1	sound 11
12	0	1	1	0	0	sound 12
13	0	1	1	0	1	sound 13
14	0	1	1	1	0	sound 14
15	0	1	1	1	1	sound 15
16	1	0	0	0	0	sound 16
17	1	0	0	0	1	sound 17
18	1	0	0	1	0	sound 18
19	1	0	0	1	1	sound 19
20	1	0	1	0	0	sound 20
21	1	0	1	0	1	sound 21
22	1	0	1	1	0	sound 22
23	1	0	1	1	1	sound 23
24	1	1	0	0	0	sound 24
25	1	1	0	0	1	sound 25
26	1	1	0	1	0	sound 26
27	1	1	0	1	1	sound 27
28	1	1	1	0	0	sound 28
29	1	1	1	0	1	sound 29
30	1	1	1	1	0	sound 30

System Connection

Application_A



Application_B



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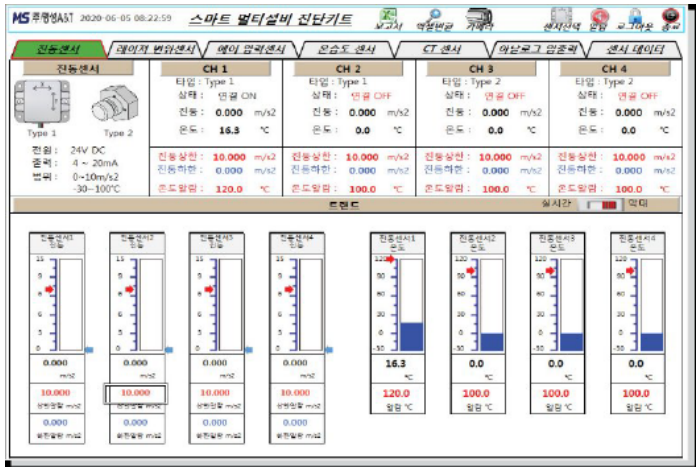
So!Gnee

Smart Multi Facity

Diagnostic Kit

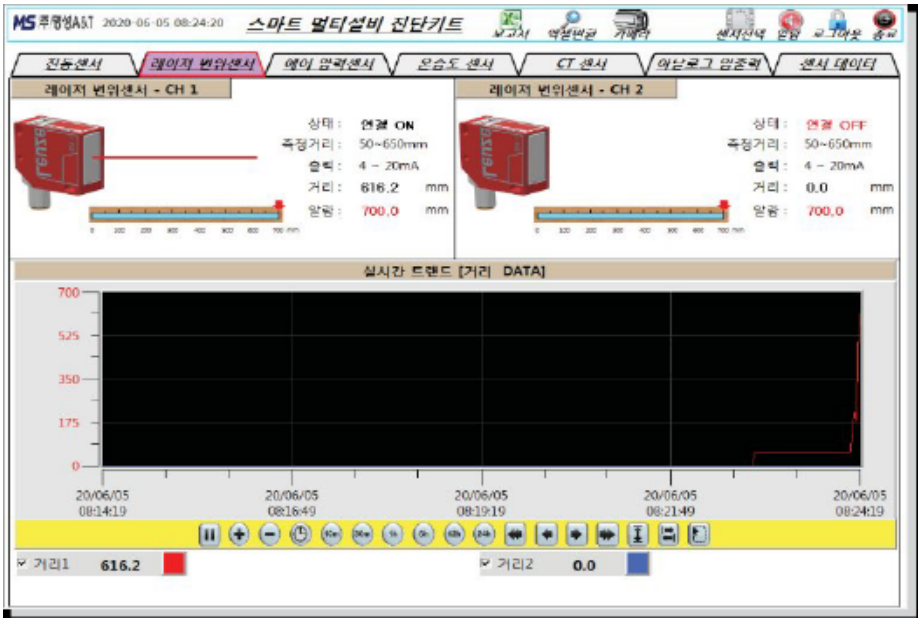
Vibration seonsor

Vibration trend



Bar display

Laser displacement sensor



Alarm list

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So!Gnee

Panel Dehumidifie

Panel dehumidifier insulation performance maintenance device

- Removal of condensation and water vapor in switchgear, high-pressure panel, automatic control panel, etc.
- Perfect panel temperature and humidity management that replaces space heater and cooling fan
- Use at sites that require humidity management other than bus ducts
- Perfect cover for panel and busbar whitening
- Temperature and humidity control function through the product's built-in LED indicator
- Permanent dust removal function
- Order specifications such as fire detection temperature management through additional options, heater function, evaporator control function, etc.

Select product function (basic function)

dehumidification + remove dust + Insulation performance maintenance

Appropriate humidity 45% automatic operation management

dust is dehumidified drain with water

isolator

+ No trouble
+ No filter change required
+ Semi-permanent (perfect circuit design technology)
+ Easy maintenance after product installation

Product Specification	
Power	Single-phase AC220V (50Hz/60Hz) combined (order specification
Power Consumption	Power saving operation (Max: 90W) Standby (Min: 25W), including active power consumption 1.3A (90W)
Appearance standard	302(H) X 140(W) X 100(D)
Dehumidification ability	50ccHr / 35℃ / RH70%
Used area	2㎡ ~ 3㎡
Operating temperature and humidity range	Temperature setting range : -55.0~99.9℃ / Humidity setting range : 0~99.9%
How it works	AUTO (MCU circuit automatic management) (LED function indicator)
Weight	4Kg
Product function	Dehumidification, dust removal, insulation performance maintenance, fire detection, temperature drop, evaporator control
Self-function display diagnosis	The LED indicator for each function is ON during normal operation, and if there is a malfunction or malfunction, the LED indicator corresponding to the function is displayed as OFF (ON, OFF automatic control function)
Product function selection	Insulation performance maintenance device or fire detection function

- Dehumidification, dust removal, and insulation performance maintenance are basic!
- Fire detection, temperature drop, and evaporator control~

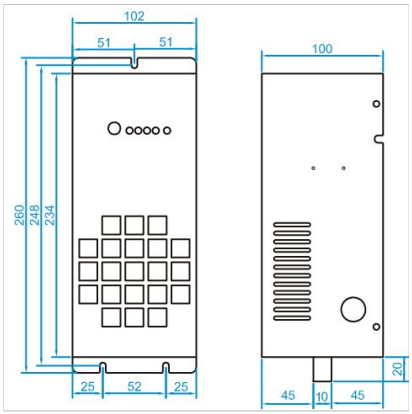
Product line up

MS0171AUTO (small type)

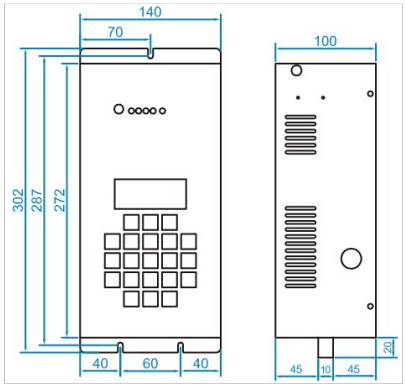
MS017DIGITAL (medium type)

MS072DIGITAL (large type)

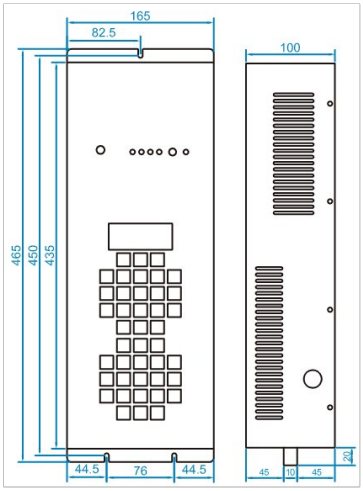
Outline



MS0171AUTO



MS017DIGITAL



MS072DIGITAL

Installation Cases

- Application examples of electrical panel (incoming panel & distribution board, automatic control panel)

- Application examples of bus duct



- Installation example in Hyundai Oil Bank


(Inside mounting type)

(Outside mounting type)

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