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SMART DEVICE



SMART DEVICE

Product Catalog

M2I Corporation

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SMART DEVICE

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MIO SERIES

MIO-CMR0A / MIO-DI, DO / MIO-AI, AO / MIO-PWR / MIO-COM



MIO REMOTE I/O

FEATURES

Compact

Maximum Contact Management in Minimum Space

Module

Figuring the Modules as Needed by Attach/Detach (Maximum 32 Slots)

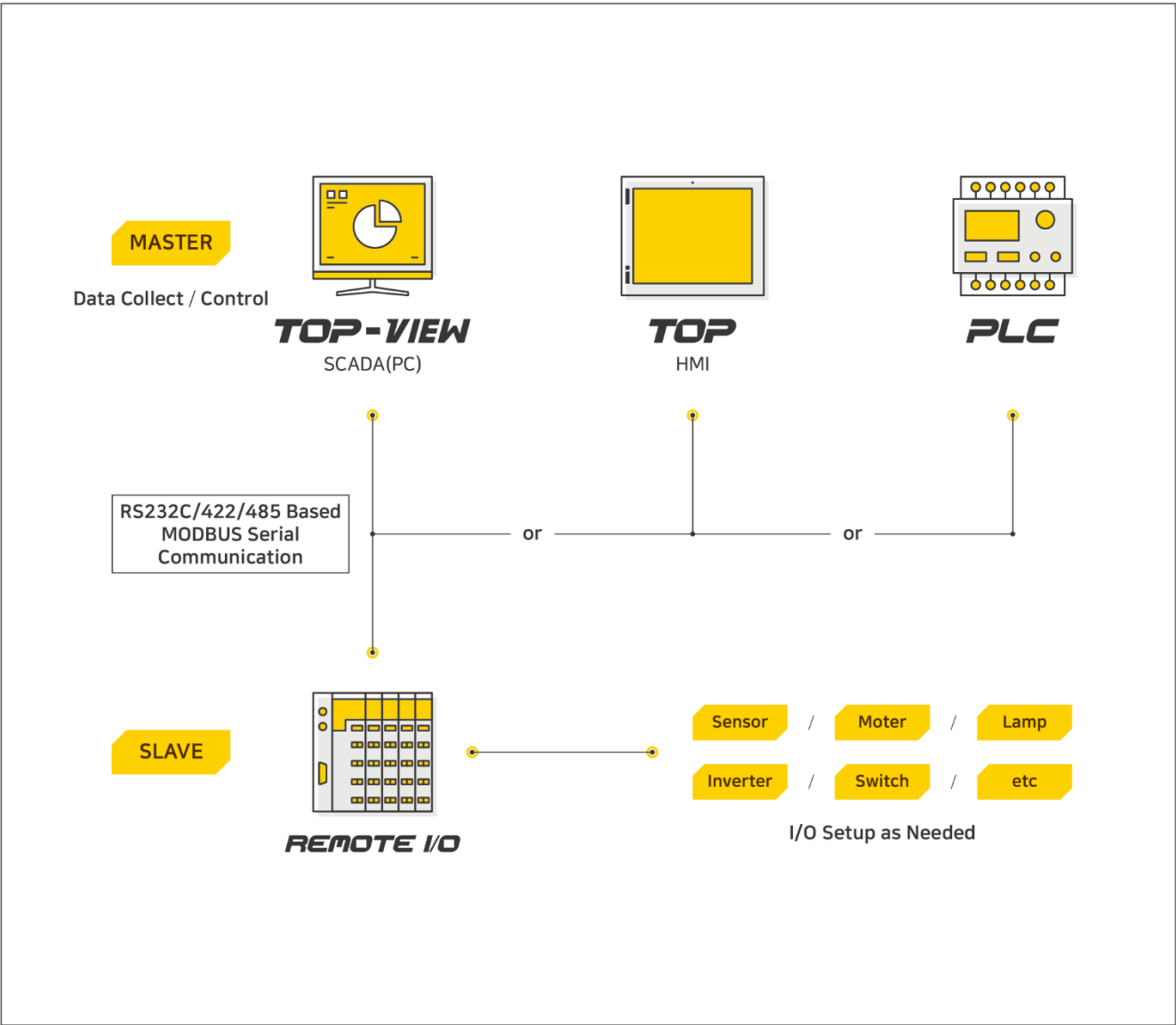
Hot Swap

I/O Module Replacing without Power OFF, Efficient Maintenance by Partial Replacement

Easy

MIO Master: Easy to use and set for everyone

INTERFACE



MIO-CMROA SPECIFICATIONS

COUPLER MODULE

Functional		MIO-CMROA	MIO-END-01
Type	Protocol	MODBUS RTU/ASCII	-
	Input Voltage	24Vdc(19.2 ~ 28.8Vdc)	-
Power	Power Dissipation	50mA Typical@24Vdc	-
	Voltage Sag	24Vdc, Within 10ms	-
	Insulation Resistance	500Vdc, 10MΩ	-
	Current for I/O Module	1.4A@5Vdc	-
	Isolation	System Power to Internal Logic: Isolation System Power I/O Driver: Isolation	-
	Field Power	Supply Voltage: 24Vdc Typ. Supply Voltage Range: 11 ~ 28.8Vdc	-
	Max. Current Field Power Contact	Max. 7A@24Vdc	-
Interface	Interface Connector	Connector: DSUB 9Pin x 1	-
	Physical Interface	RS-232C, 485/422 Asynchronous Data Bit: 7/8 Bits, Stop Bit: 1/2 Bits, Parity Bit: None/Odd/Even Baud Rate: 2400 ~ 187.5kbps	-
	Max. Length Bus Line	500m@RS-485/422, 10m@RS-232C	-
	Max. Expansion Module	32 Slots	-
	Max. Nodes	255 Nodes@RS-485/422	-
	Node Setting	1 ~ 255	-
	Baud Rate	Max. 187.5kbps	-
	USB	Connector: USB Mini - B x 1	-
Memory	Max. Input Size	Input + Output Max. 256 Byte	-
	Max. Output Size	Input + Output Max. 256 Byte	-
Other	Indicator	7 LED MODBUS Status, I/O Module Status, Coupler Status, System Power Status, RX/TX Status, Field Power Status	-
	Wiring	AWG 26 to 20	-
Environment	Operation Temperature(°C)	-10 ~ +50	
	Storage Temperature(°C)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No Dew)	
	Atmosphere	No Corrosive Gas	
	Vibration Endurance	Amplitude: 10≤F < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)	
	Noise Immunity	1000Vp-p(Pulse Width 1μs)	
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV	
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)	
	Ground Connection	Class 3(100Ω Under)	
	Protection Classification	IP20	
	Certification	CE, KC, UL	-
Structure	External Dimension(mm)	52.2 x 101 x 75	95.8 x 21.5 x 6.4
	Weight(kg)	0.16	0.01
	Cooling System	Natural Air Circulation	
	Case Material	PC(Resistance to Flame)	

MIO-DI, DO SPECIFICATIONS

I/O MODULE

Functional		MIO-DIN08-01	MIO-DIP08-01	MIO-DON08-01	MIO-DOP08-01	MIO-DOR04-01
Type	Input/Output Type	8 Channels Sink Type, Input	8 Channels Source Type, Input	8 Channels Sink Type, Output	8 Channels Source Type, Output	4 Channels Relay Type, Output
Power	Input/Output Voltage	24Vdc Typ. On-State Min. 10.2Vdc ~ Max. 28.8Vdc, Off-State Max. 5Vdc		24Vdc Typ. Min. 11.0Vdc ~ Max. 28.8Vdc, On-State Voltage Drop: Max. 0.3Vdc@25℃ Off-State Leakage Current: Max. 50uA		A Contact, 24Vdc
	Power Dissipation	Max. 70mA@5.0Vdc		Max. 90mA@5.0Vdc		Max. 200mA@5.0Vdc
	Input/Output Current in On State	Max. 6mA/ Channel@28.8Vdc		Max. 0.5A/ Channel@28.8Vdc		2A/Channel@24Vdc
Interface	Max. On-State Voltage Drop	-		Max. 0.3Vdc@25℃		0.5V@2.0A, Resistive Load, 24Vdc
	Off-State Leakage Current	-		Max. 50uA		Max. 1.5mA
	Typ. Input Impedance	Typ. 4.7KΩ		-		
	Input/Output Signal Delay	Off to On: Max. 0.1ms On to Off: Max. 0.5ms		Off to On: Max. 0.3ms On to Off: Max. 0.5ms		Off to On: Max. 3ms On to Off: Max. 3ms
	Input Filter(Digital)	0.5ms		-		
	Isolation	Photocoupler				Relay Coil/ Contact Isolation
	Common Type	2COM(Single Common), 24Vdc	2COM(Single Common), 0Vdc	2COM(Single Common), 24Vdc	2COM(Single Common), 0Vdc	4COM(1COM/1Channel)
	Field Power	Supply Voltage: 24Vdc Typ. Supply Voltage Range: 11 ~ 28.8Vdc				-
	Other	Wiring	AWG 26 to 20			
Pin No.		Removable Terminal Block 10P				
Indicator		9 LED 8 Channel States, 1 Operating State				5 LED 4 Channel States, 1 Operating State
Environment	Operation Temperature(℃)	-10 ~ +50				
	Storage Temperature(℃)	-20 ~ +60				
	Operation Humidity(%RH)	0 ~ 90(No dew)				
	Atmosphere	No Corrosive Gas				
	Vibration Endurance	Amplitude: 10≤F < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)				
	Noise Immunity	1000Vp-p(Pulse Width 1μs)				
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV				
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)				
	Ground Connection	Class 3(100Ω Under)				
	Protection Classification	IP20				
	Certification	CE, KC, UL				
Structure	External Dimension(mm)	12 x 101 x 75				
	Weight(kg)	0.06				
	Cooling System	Natural Air Circulation				
	Case Material	PC(Resistance to Flame)				

MIO-DI, DO SPECIFICATIONS

I/O MODULE

Functional		MIO-DIN16-01	MIO-DIP16-01	MIO-DON16-01	MIO-DOP16-01
Type	Input/Output Type	16 Channels Sink Type, Input	16 Channels Source Type, Input	16 Channels Sink Type, Output	16 Channels Source Type, Output
Power	Input/Output Voltage	24Vdc Typ. On-State Min. 10.2Vdc ~ Max. 28.8Vdc, Off-State Max. 5Vdc		24Vdc Typ. Min. 11.0Vdc ~ Max. 28.8Vdc, On-State Voltage Drop: Max. 0.3Vdc@25℃ Off-State Leakage Current: Max. 50uA	
	Power Dissipation	Max. 70mA@5.0Vdc		Max. 120mA@5.0Vdc	
	Input/Output Current in On State	Max. 6mA/ Channel@28.8Vdc		Max. 0.5A/ Channel@28.8Vdc	
Interface	Max. On-State Voltage Drop	-		Max. 0.3Vdc@25℃	
	Off-State Leakage Current	-		Max. 50uA	
	Typ. Input Impedance	Typ. 4.7KΩ		-	
	Input/Output Signal Delay	Off to On: Max. 0.1ms On to Off: Max. 0.5ms		Off to On: Max. 0.3ms On to Off: Max. 0.5ms	
	Input Filter(Digital)	0.5ms		-	
	Isolation	Photocoupler			
	Common Type	Not Support			
	Field Power	Supply Voltage: 24Vdc Typ. Supply Voltage Range: 11 ~ 28.8Vdc			
	Wiring	AWG 26 to 20			
	Pin No.	Removable Terminal Block 16P			
Other	Indicator	17 LED 16 Channel States, 1 Operating State			
	Operation Temperature(℃)	-10 ~ +50			
Environment	Storage Temperature(℃)	-20 ~ +60			
	Operation Humidity(%RH)	0 ~ 90(No dew)			
	Atmosphere	No Corrosive Gas			
	Vibration Endurance	Amplitude: 10≤F < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)			
	Noise Immunity	1000Vp-p(Pulse Width 1μs)			
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV			
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)			
	Ground Connection	Class 3(100Ω Under)			
	Protection Classification	IP20			
	Certification	CE, KC, UL			
Structure	External Dimension(mm)	12 x 101 x 75			
	Weight(kg)	0.06			
	Cooling System	Natural Air Circulation			
	Case Material	PC(Resistance to Flame)			

MIO-AI, AO SPECIFICATIONS

I/O MODULE

Functional		MIO-AIR02-01	MIO-AIV04-01	MIO-AIC04-01	MIO-AOV04-01	MIO-AOC04-01	
Type	Input/Output Type	2 Channels Analog RTD Type	4 Channels Analog Voltage Type	4 Channels Analog Current Type	4 Channels Analog Voltage Type	4 Channels Analog Current Type	
	Sensor Type and Input /Output Range	PT100 * -200.0 to +850.0℃	0 ~ 5 Vdc	0 ~ 20mA	0 ~ 5 Vdc	0 ~ 20mA	
Power	Power Dissipation	Max. 70mA@5.0Vdc	Max. 200mA@5.0Vdc				
	Field Power	Max. 60mA@24Vdc					
Characteristic	Typ. Input Impedance	-	Min. 500KΩ	Max. 250Ω	-		
	Load	-	-	-	Min. 1KΩ	Max. 500Ω	
	Data Format	16bits Integer					
	Resolution	0.0312℃/1bit	16bits, 0.076mV/1bit	16bits, 0.3uA/bit	16bits, 0.076mV/1bit	16bits, 0.3uA/bit	
	Conversion Time	Approx. 70ms, All Channel@50Hz	4ms/All Channel				
	Module Error	±0.1% Full Scale@+25℃, ±0.3% Full Scale@-10℃, +50℃					
	Isolation	I/O to Logic: Capacitive Isolation, External Power : Transformer Isolation					
	Common Type	2COM (1Common/1Channel)	4COM (Single Common)				
	Other	Wiring	AWG 26 to 20				
		Pin No.	Removable Terminal Block 10P				
Indicator		3 LED 2 Channel States, 1 Operating State	5 LED 4 Channel States, 1 Operating State				
Environment	Operation Temperature(℃)	-10 ~ +50					
	Storage Temperature(℃)	-20 ~ +60					
	Operation Humidity(%RH)	0 ~ 90(No dew)					
	Atmosphere	No Corrosive Gas					
	Vibration Endurance	Amplitude: 10≤F < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)					
	Noise Immunity	1000Vp-p(Pulse Width 1μs)					
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV					
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)					
	Ground Connection	Class 3(100Ω Under)					
	Protection Classification	IP20					
	Certification	CE, KC, UL					
Structure	External Dimension(mm)	12 x 101 x 75					
	Weight(kg)	0.06					
	Cooling System	Natural Air Circulation					
	Case Material	PC(Resistance to Flame)					

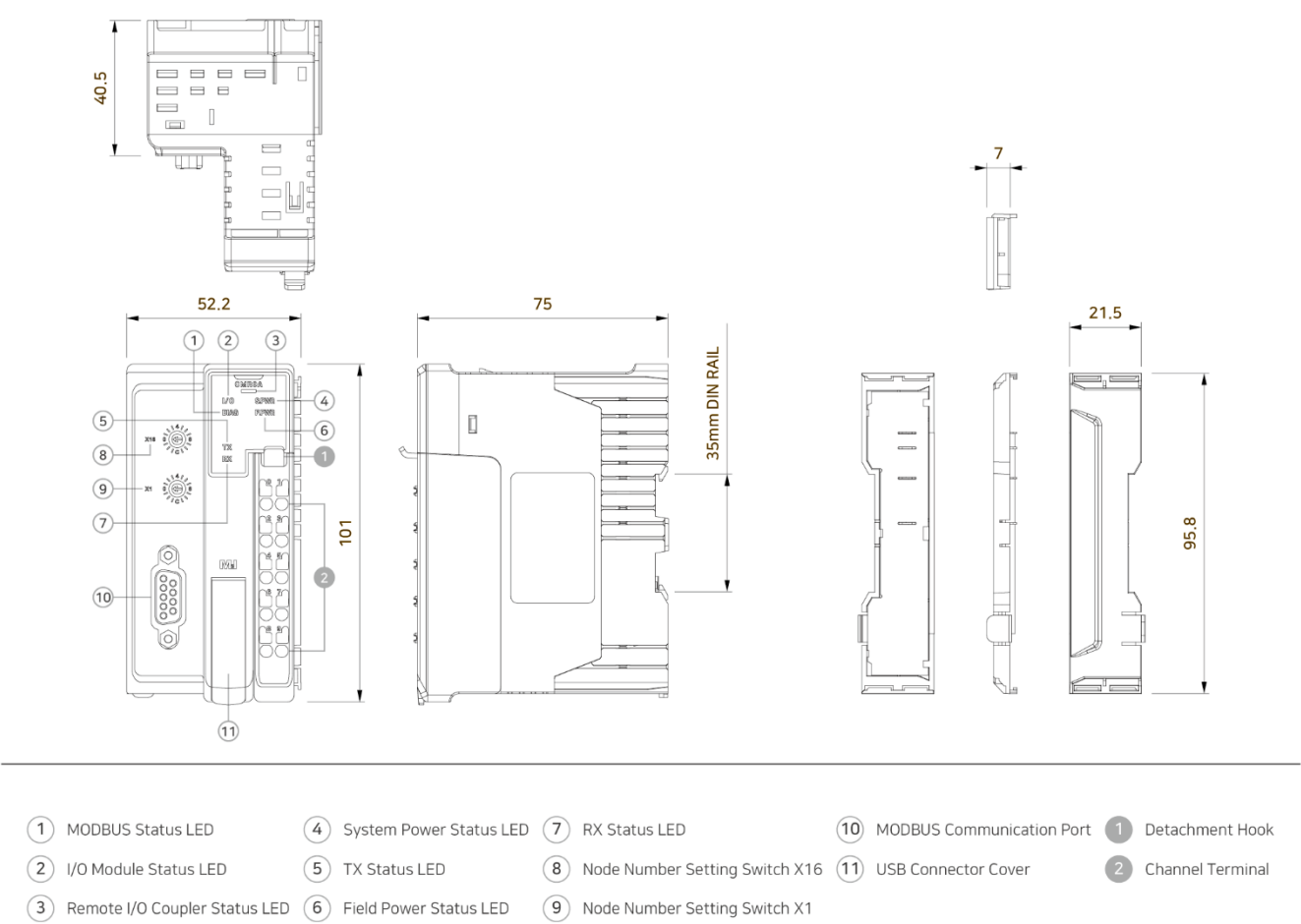
MIO-PWR, COM SPECIFICATIONS

EXPANSION MODULE

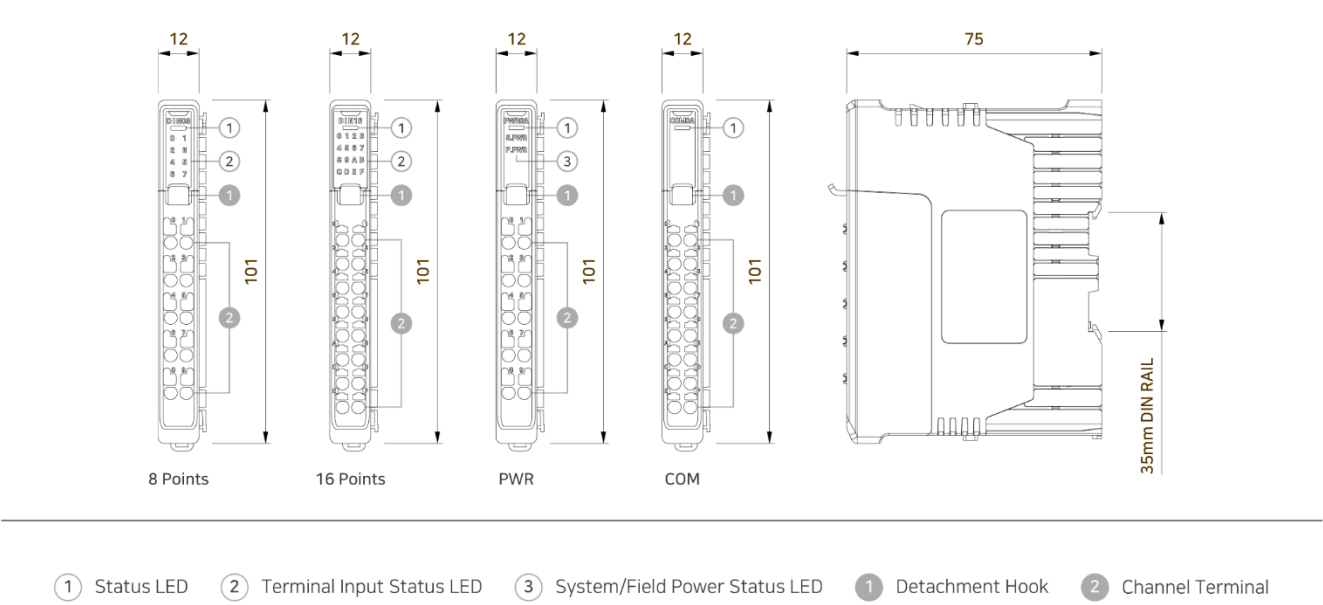
	Functional	MIO-PWR0A	MIO-PWR0B	MIO-COM0A	MIO-COM0B	MIO-COM0C
Power	Input System Voltage	24Vdc Typ.(20V ~ 28V)		-		
	Voltage Sag	24Vdc, Within 10ms		-		
	Insulation Resistance	500Vdc, 10MΩ		-		
	Current for I/O Module	1.4A@5Vdc		-		
	Isolation	System Power to Internal Logic: Isolation System Power I/O Driver: Isolation		-		
	Field Power	Supply Voltage: 24Vdc Typ. Supply Voltage Range: 11 ~ 28.8Vdc				
	Max. Current Field Power Contact	Max. 7A@24Vdc				
Characteristic	Common Type	Not Support		16COM(Single Common) 24Vdc	16COM(Single Common) 0Vdc	8COM(Single Common) 24Vdc, 0Vdc
Other	Wiring	AWG 26 to 20				
	Pin No.	Removable Terminal Block 10P		Removable Terminal Block 16P		
	Indicator	3 LED System Power Status, Module Status, Field Power Status	2 LED Module Status, Field Power Status	1 LED Module Status		
Environment	Operation Temperature(℃)	-10 ~ +50				
	Storage Temperature(℃)	-20 ~ +60				
	Operation Humidity(%RH)	0 ~ 90(No dew)				
	Atmosphere	No Corrosive Gas				
	Vibration Endurance	Amplitude: 10≤F<25Hz(2G) X, Y, Z each Direction(for 30 Minutes)				
	Noise Immunity	1000Vp-p(Pulse Width 1μs)				
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV				
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)				
	Ground Connection	Class 3(100Ω Under)				
	Protection Classification	IP20				
	Certification	CE, KC, UL	CE, UL			
Structure	External Dimension(mm)	12 x 101 x 75				
	Weight(kg)	0.06				
	Cooling System	Natural Air Circulation				
	Case Material	PC(Resistance to Flame)				

DRAWING

COUPLER MODULE MIO-CMR0A, MIO-END-01



I/O MODULE, EXPANSION MODULE



MIO SERIES

Gateway(MIO-LPG00) / EndNode(MIO-LPE00)



MIO LoRa

FEATURES

Own Network and Protocols by LoRa Technology

No Extra Charges for Communication

Various I/O Supported in One LoRa EndNode

Digital IN/OUT, Relay Contacts, Analog Current/Voltage

Industrial Product Passed Multiple Tests Safe and Powerful Functions

Pass Multiple Tests (Impact, Noise, Static, Temperature, etc)

Convenient Method for Settings

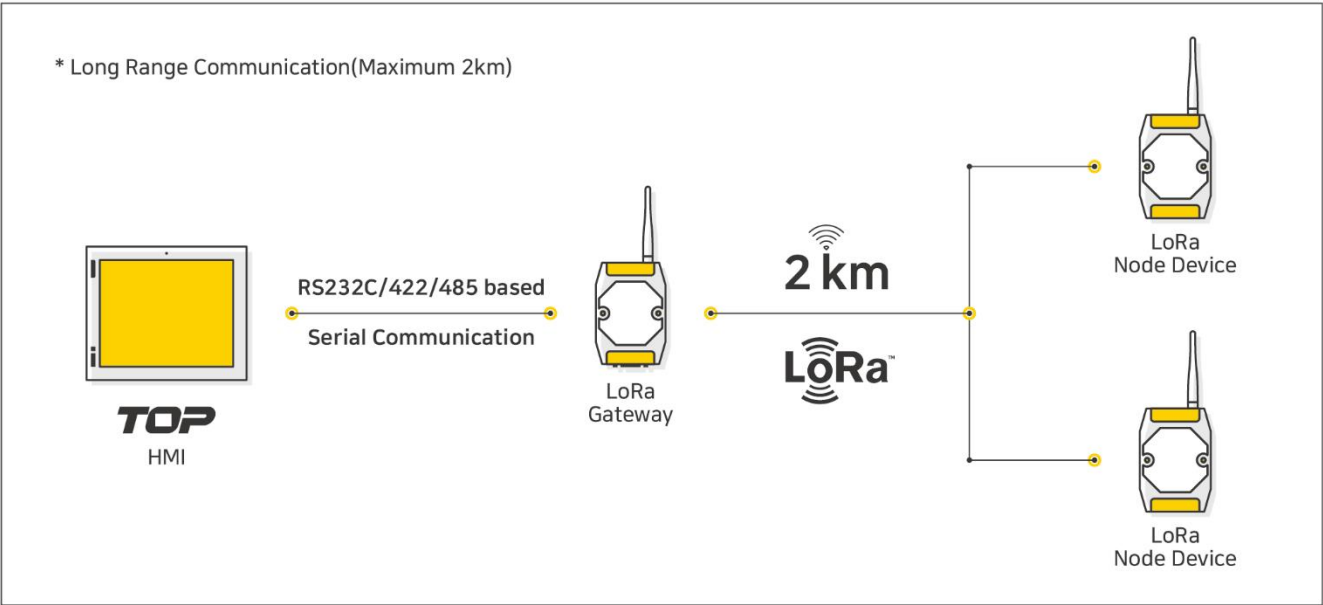
Auto Switching between LoRa Gateway and EndNode by MODE button
Immediate Change of Frequency and SF Setting with Top-side Switch

USER GUIDE

* Please check manual for detail guide

- 01 Download the settings of LoRa Gateway/EndNode with USB Cable in [M2I LoRa Configurator] program
- 02 Connect TOP and Lora Gateway by Serial Communication(RS-232C/422/485)
- 03 Add 'LoRa Gateway' on Serial Port list in [TOP Design Studio] program and register Device ID in 'Communication Setup' as many as the number of LoRa EndNode
- ! TOP can monitor and control a data of LoRa Gateway, and LoRa Gateway can transmit and receive a data with LoRa EndNode by LoRa communication

INTERFACE



LoRa SPECIFICATIONS

GATEWAY

Functional		MIO-LPG00
Power	Input Voltage	24Vdc(20 ~ 28Vdc)
	Power Dissipation	3W
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 10MΩ
LoRa RF	RF Frequency	TX: 922.1 ~ 923.1 MHz, RX: 923.3 MHz
	Output Power	Max. 25mW(+14dBm, With Antenna)
	Communication Distance	Within 2Km
	Antenna	1T1R Dipole, +3.2dBm
	Security Setting	AES-128
Interface	Serial Comm.	RS-232C, 485/422 Asynchronous Data Bit: 7/8 Bits, Stop Bit: 1/2 Bits, Parity Bit: None/Odd/Even, Baud Rate: 2400 ~ 115.2kbps Connector: DSUB 9Pin x 1
	USB	Connector: USB Mini - B x 1
Other	Status LED	4 LEDs(Power, LoRa, Serial TX, RX) Built in
	Frequency Selection	Rotary Switch, Select 1 Out of 6 Channels
	SF Selection	Rotary Switch, Select 7 Out of 12 Setting
	Reset Button	Support
	Mode Button	Support
Environment	Operation Temperature(°C)	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No Dew)
	Atmosphere	No Corrosive Gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)
	Noise Immunity	1000Vp-p(Pulse Width 1μs)
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)
	Ground Connection	Class 3(100Ω Under)
	Protection Classification	IP20
Structure	Certification	KC
	External Dimension(mm)	72 x 305 x 44.6(*With Antenna)
	Weight(kg)	0.14
	Cooling System	Natural Air Circulation
	Case Material	ABS(Resistance to Flame)

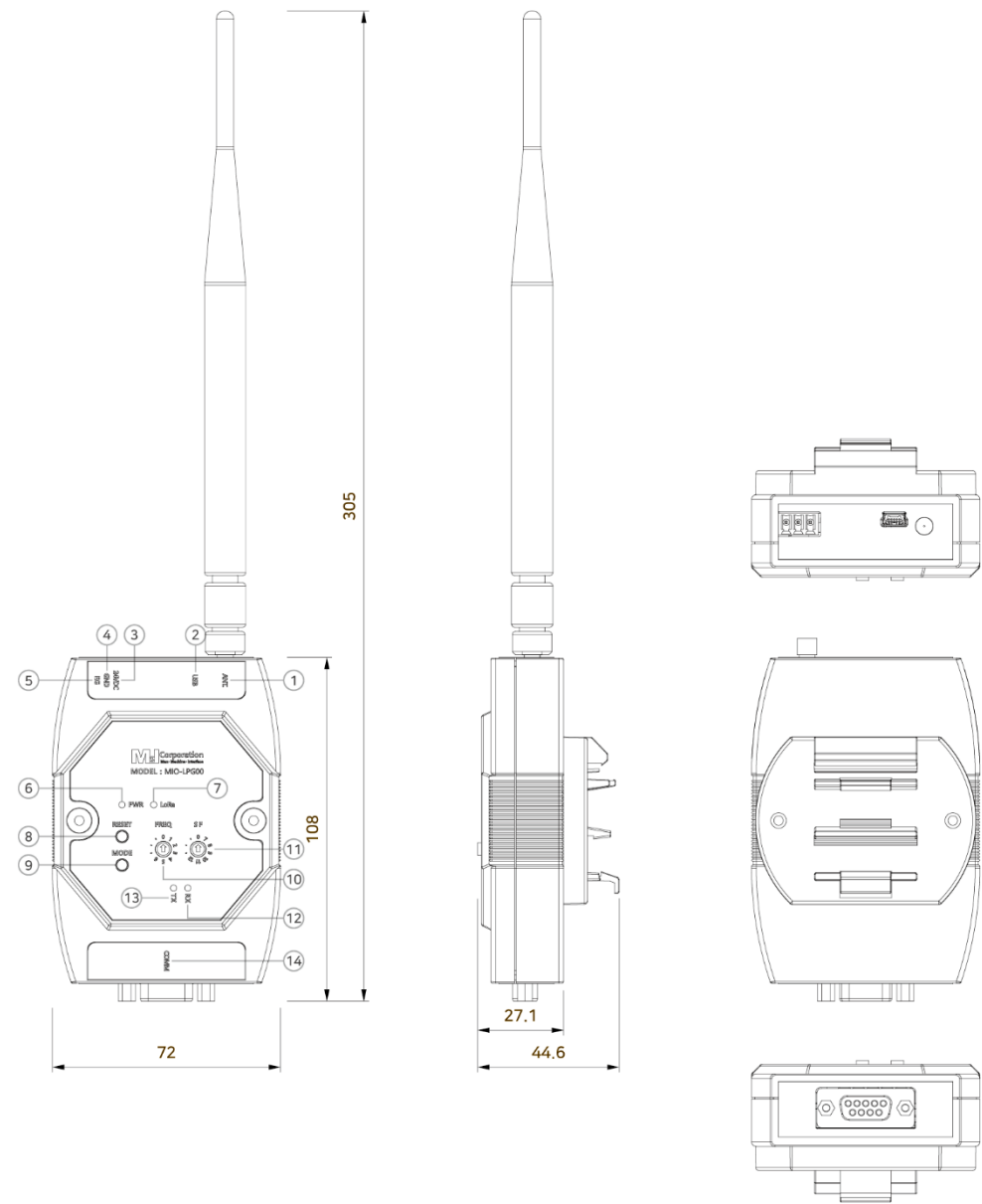
LoRa SPECIFICATIONS

ENDNODE

Functional			MIO-LPE00
Power	Input Voltage		24Vdc(20 ~ 28Vdc)
	Power Dissipation		3W
	Voltage Sag		24Vdc, Within 10ms
	Insulation Resistance		500Vdc, 10MΩ
LoRa RF	RF Frequency		TX: 922.1 ~ 923.1 MHz, RX: 923.3 MHz
	Output Power		Max. 25mW(+14dBm, With Antenna)
	Communication Distance		Within 2Km
	Antenna		1T1R Dipole, +3.2dBm
I/O Interface	Security Setting		AES-128
	Serial Comm.		-
	USB		Connector: USB Mini - B x 1
	Analog Current Input	Connector	3.5mm TB
		Assigned Channel	2 Channel
		Input Range	4 ~ 20 mA
		Resolution and Accuracy	16-bit, ±0.1%@25℃ or better
	Analog Voltage Input	Connector	3.5mm TB
		Assigned Channel	2 Channel
		Input Range	0 ~ 5Vdc
		Resolution and Accuracy	16-bit, ±0.1%@25℃ or better
Digital Input	Connector	3.5mm TB	
	Type	3 Channel Source or Sink	
	Output Current in On State	Max. 4mA/Channel @24Vdc	
	Digital Output	Connector	3.5mm TB
		Type	2 Channel Sink
		Output Current in On State	Max. 0.5A/Channel @24Vdc
Relay Output	Connector	3.5mm TB	
	Type	2 Channel Relay	
	Output Current in On State	1A/30Vdc, 0.3A/125Vac	
Other	Status LED		9 LEDs(Power, LoRa, Each I/O: 7LEDs) Built in
	Frequency Selection		Rotary Switch, Select 1 Out of 6 Channels
	SF Selection		Rotary Switch, Select 7 Out of 12 Setting
	Reset Button		Support
	Mode Button		Support
Environment	Operation Temperature(℃)		-10 ~ +50
	Storage Temperature(℃)		-20 ~ +60
	Operation Humidity(%RH)		0 ~ 90(No Dew)
	Atmosphere		No Corrosive Gas
	Vibration Endurance		Amplitude: 10sF < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)
	Noise Immunity		1000Vp-p(Pulse Width 1μs)
	Static Electricity Discharge		Connective Discharge from EN61000-4-2: ±4kV
	Shock Endurance		10G X, Y, Z each Direction(for 3 Times)
	Ground Connection		Class 3(100Ω Under)
	Protection Classification		IP20
	Structure	Certification	
External Dimension(mm)		72 x 300 x 44.6(*With Antenna)	
Weight(kg)		0.14	
Cooling System		Natural Air Circulation	
Case Material		ABS(Resistance to Flame)	

DRAWING

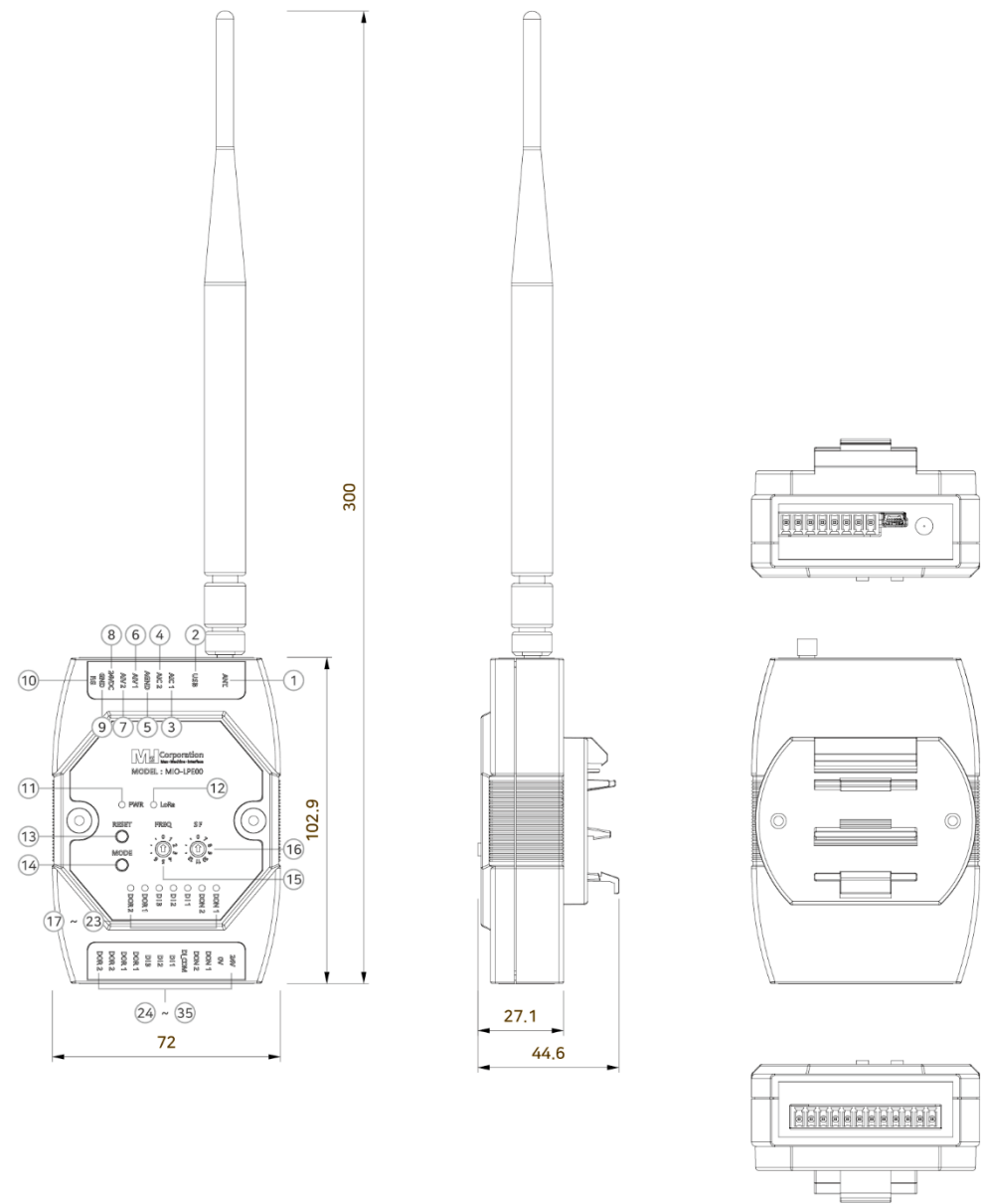
MIO-LPG00



- ① LoRa Antena Joint
- ② USB Setting Connector
- ③ System Power Input(DC24V)
- ④ System Power GND
- ⑤ F.G
- ⑥ System Power Indicator
- ⑦ LoRa Communication Indicator
- ⑧ System RESET Switch
- ⑨ MODE Switch
- ⑩ Frequency Channel Switch [0 ~ 6]
- ⑪ SF Setting Switch [0], [7 ~ 12]
- ⑫ Communication Receive Indicator COMM
- ⑬ Communication Transmit Indicator COMM
- ⑭ Serial Communication Connector

DRAWING

MIO-LPE00



- ① LoRa Antena Joint
- ② USB Setting Connector
- ③ Analog Current Input Terminal for Channel 1
- ④ Analog Current Input Terminal for Channel 2
- ⑤ AIC 1, 2/AIV 1, 2 Common Terminal
* Field Power(0V) Connection Terminal
** Use when it is connected as Source Type
- ⑥ Analog Voltage Input Terminal for Channel 1
- ⑦ Analog Voltage Input Terminal for Channel 2
- ⑧ System Power Input(DC24V)
- ⑨ System Power GND
- ⑩ F.G
- ⑪ System Power Indicator
- ⑫ LoRa Communication Indicator
- ⑬ System RESET Switch
- ⑭ MODE Switch
- ⑮ Frequency Channel Switch [0 ~ 6]
- ⑯ SF Setting Switch [0], [7 ~ 12]
- ⑰ ~ ⑳ Operation Status LED
- ㉑ ~ ㉓ I/O Terminal

MGW SERIES

IoT Gateway



FEATURES

Communication Protocol Converter (Multiple Communication Driver)
Same Dedicated Communication Protocol as HMI (Address Based PLC) Communication Library

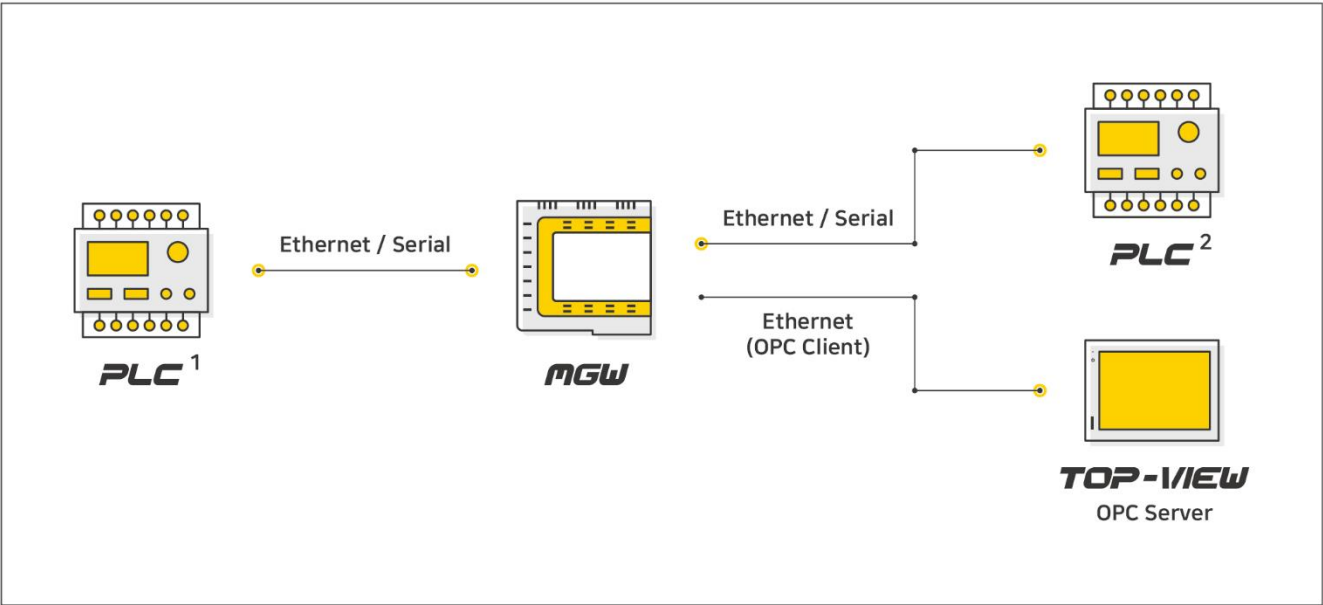
Standard DIN Rail / VESA Hall Supported
Easy installation by standard DIN rail
simple assemble with monitors by standard VESA bracket(*Option)

Operating on TOP Design Studio Software
Easy Design with Same Software
For M2I's HMI/SCADA User

Ethernet 2 Ports / Serial 2 Ports
Ethernet 2 Channels with Independent IP
COM1/2 DSUB 9Pin (RS-232C, RS-422/485)

HDMI Output
Connection with various monitors through HDMI and DP
M2I's exclusive touch monitor(MDP) compatible

INTERFACE

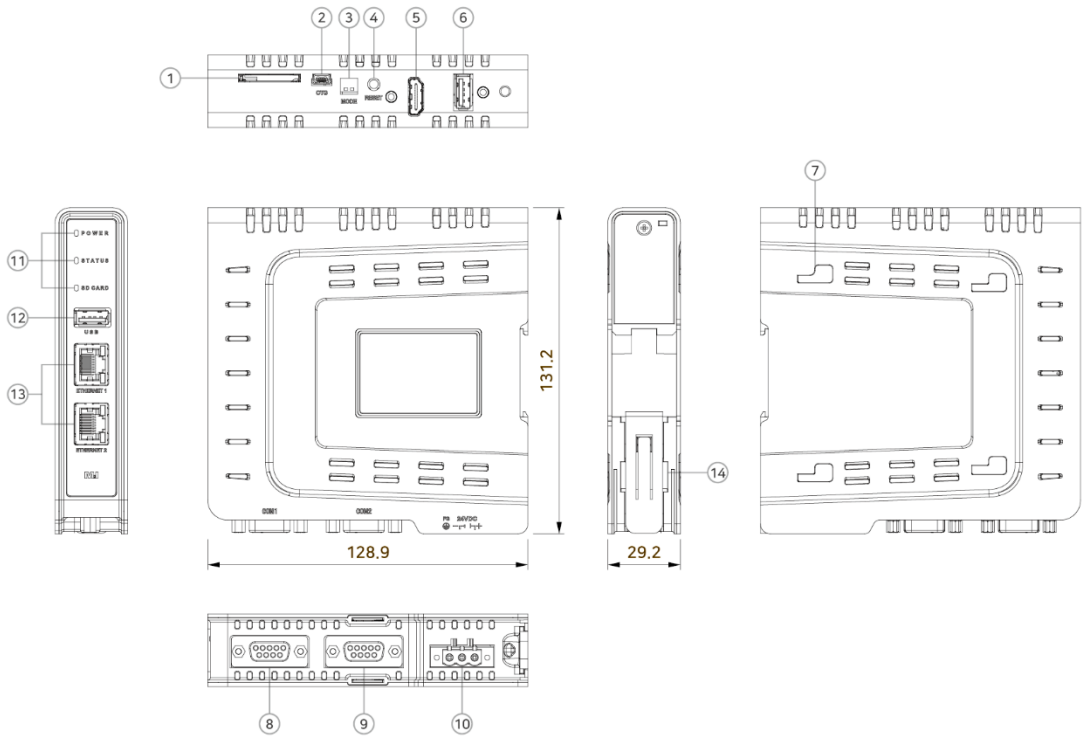


MGW SPECIFICATIONS

Functional		MGW-BH1000D
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	Serial COM2	RS-232C, RS-422/485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B x 1
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	HDMI Output	HDMI v1.4, HDMI Output, Max. Resolution: 1280x720 at 60Hz Connector: HDMI x 1
	Printer	Roll Printer(EPSON protocol)
Memory & Others	Screen Memory	128MB
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
	Status LED	3 LEDs(Power, Operation, SD Card) Built in
Power	Input Voltage	20~28Vdc
	Power Consumption	10W
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 10MΩ
Environment	Operation Temperature(℃)	-10 ~ +50
	Storage Temperature(℃)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10≤F<25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Electrostatic Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Ground Connection	Class 3(100Ω or less)
	Protection Classification	IP20
Structure	Certification	CE, KC, UL, cUL
	External Dimension(mm)	128.9x131.2x29.2
	Weight(kg)	0.23
	Installation Method	Standard DIN Rail(35mm), VESA
	Cooling System	Natural air circulation
	Case Material	Plastic

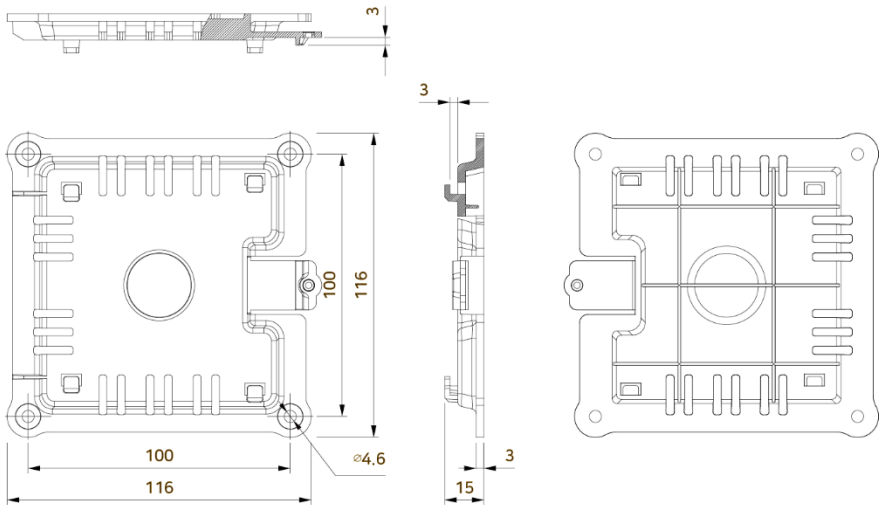
DRAWING

MGW-BH1000D



- ① SD Card Socket
- ② USB OTG
- ③ Mode Switch
- ④ Reset Switch
- ⑤ HDMI
- ⑥ USB Host #1
- ⑦ Vesa Bracket
- ⑧ Serial COM1
- ⑨ Serial COM2
- ⑩ Power Input
- ⑪ Status LED
- ⑫ USB Host #2
- ⑬ Ethernet Port
- ⑭ DIN Rail

VESA Braket(*Option)



MSR SERIES

MSR-B2MWA / MSR-B2MWB

 (Completed)
 (In Progress)



FEATURES

- Strong / Comfort Design**

 - Impact-proof Design and Urethane Case
 - Good Grip and Portable Design
 - Holding Strap Included
- Wire / Wireless Interface**

 - 2.4GHz RF Wireless Communication(by USB Dongle)
 - USB Communication(by USB Cable)
 - IrDA Communication
(Dedicated Communication with M2I's HMI Products)
- Safe Management of Barcode Data**

 - 1D/2D Barcode
 - Safe Data Management Storage for Maximum 25,000 Barcode Data
- Effective Operation Time**

 - Maximum 13 Hours Operation Time Battery
 - Power Saving Function

INTERFACE

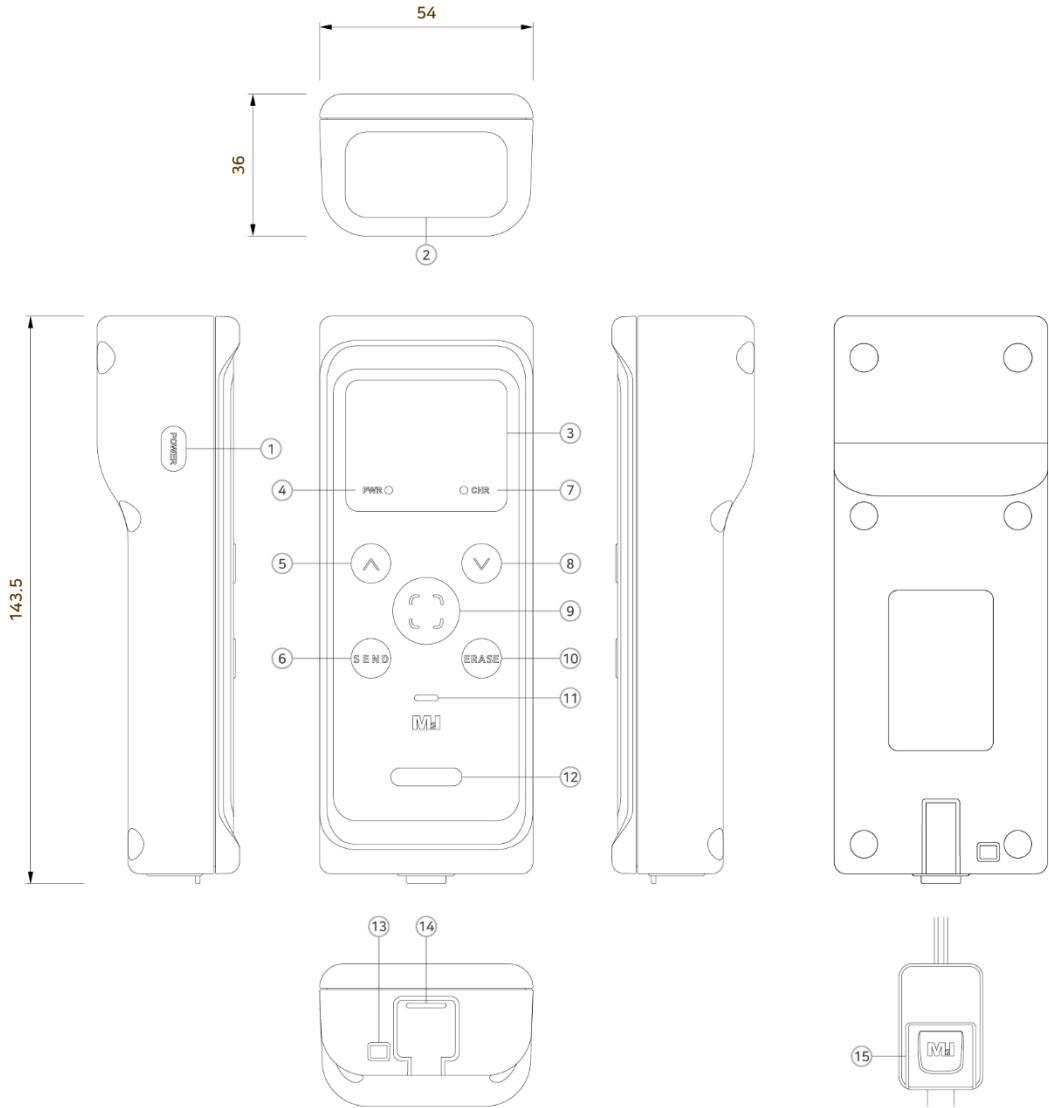


MSR-B2MWA/B SPECIFICATIONS

	Functional	MSR-B2MWA	MSR-B2MWB	MSR-B2MWA-DONGLE
Display	Display Type	1.3" OLED		-
	Color	Gray		Gray
	Display Area(mm)	31.42 x 16.7		-
	Resolution(dot)	128 x 64		-
	Display Life	50,000 Hours		-
Barcode	Type	640 x 400, 1D/2D Barcode	1280 x 960, 1D/2D Barcode	-
	Symbologies	Code 39, Code 128, PDF417, UPC, Data Matrix, QR Code		-
Interface	USB	USB Type C, V1.1 Compatible 1 Channel		USB A Type, V1.1 Compatible 1 Channel
	IrDA	Compliant to IrDA Physical Layer Standard Up to 115.2 kbit/s(SIR), Range Up to 1.0M in Open Space Connection with M2I HMI Equipment		-
	2.4GHz RF	2322MHz to 2527MHz, IEEE 802.15.4, Range Up to 15M in Open Space		-
	Function Key	Unlock Type Push Switch 6EA (Power/Scan/Send/Erase/Up/Down)		-
	Storage Memory	512KB		-
Battery	Rechargable Battery	Single Li-ion 3.7Vdc 1800mAh Operating Time: 13 Hours Charging Time: 5.5 Hours(Non-Operating)		-
Power	Consumption	3W		1W
Other	Status LED	2 LEDs(Power, Charge) Built in		-
	Operation Temperature(℃)	+10 ~ +45		-10 ~ +50
	Storage Temperature(℃)	-20 ~ +60		-20 ~ +60
	Protection Classification	Product Body IP67		-
	Operation Humidity(%RH)	0 ~ 90(No Dew)		-
	Atmosphere	No Corrosive Gas		-
	Vibration Endurance	Amplitude: 10≤F < 25Hz(2G) X, Y, Z each Direction(for 30 Minutes)		-
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV		-
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)		-
	Certification	KC, UL(Completed) / CE(In Progress)		-
Structure	External Dimension(mm)	143.5 x 54 x 36		28.8 x 18 x 8
	Weight(kg)	0.18		0.03
	Case Material	PC, Urethane		PC

DRAWING

MSR-B2MWA / MSR-B2MWB



- | | | | |
|--|----------------------|----------------|----------------------------------|
| ① Power Switch | ⑤ Up Switch | ⑨ Scan Switch | ⑬ Strap Holding Hole |
| ② Scanner Window and IrDA Trasnmit/Receive | ⑥ Send Switch | ⑩ Erase Switch | ⑭ Rear Case |
| ③ OLED | ⑦ Charging Indicator | ⑪ Buzzer Hall | ⑮ USB Dongle (Included in Strap) |
| ④ Power Indicator | ⑧ Down Switch | ⑫ Status LED | |

MSR SERIES

MSR-B2MWA-Ex



FEATURES

KCs(Ex ib IIC T4 Gb), Zone1 Korean Certificates

Safety Explosion-Proof Structure
UL/cUL: Class 1, Division 2 Groups A,B,C,D, T6
IECEX, ATEX, KCs: Ex ic ec IIC T6(In progress)

Strong / Comfort Design
Impact-proof Design and Urethane Case
Good Grip and Portable Design
Holding Strap Included

Wireless Interface
Bluetooth Communication
IrDA Communication
(Dedicated Communication with M2I's HMI Products)

Safe Management of Barcode Data
1D/2D Barcode
Transmission Status LED
Barcode Data Storage for the Latest 10 Scans

INTERFACE



2.4GHz Bluetooth LE Wireless Communication
2.4GHz Bluetooth LE, Range Up to 5M+ in Open Space

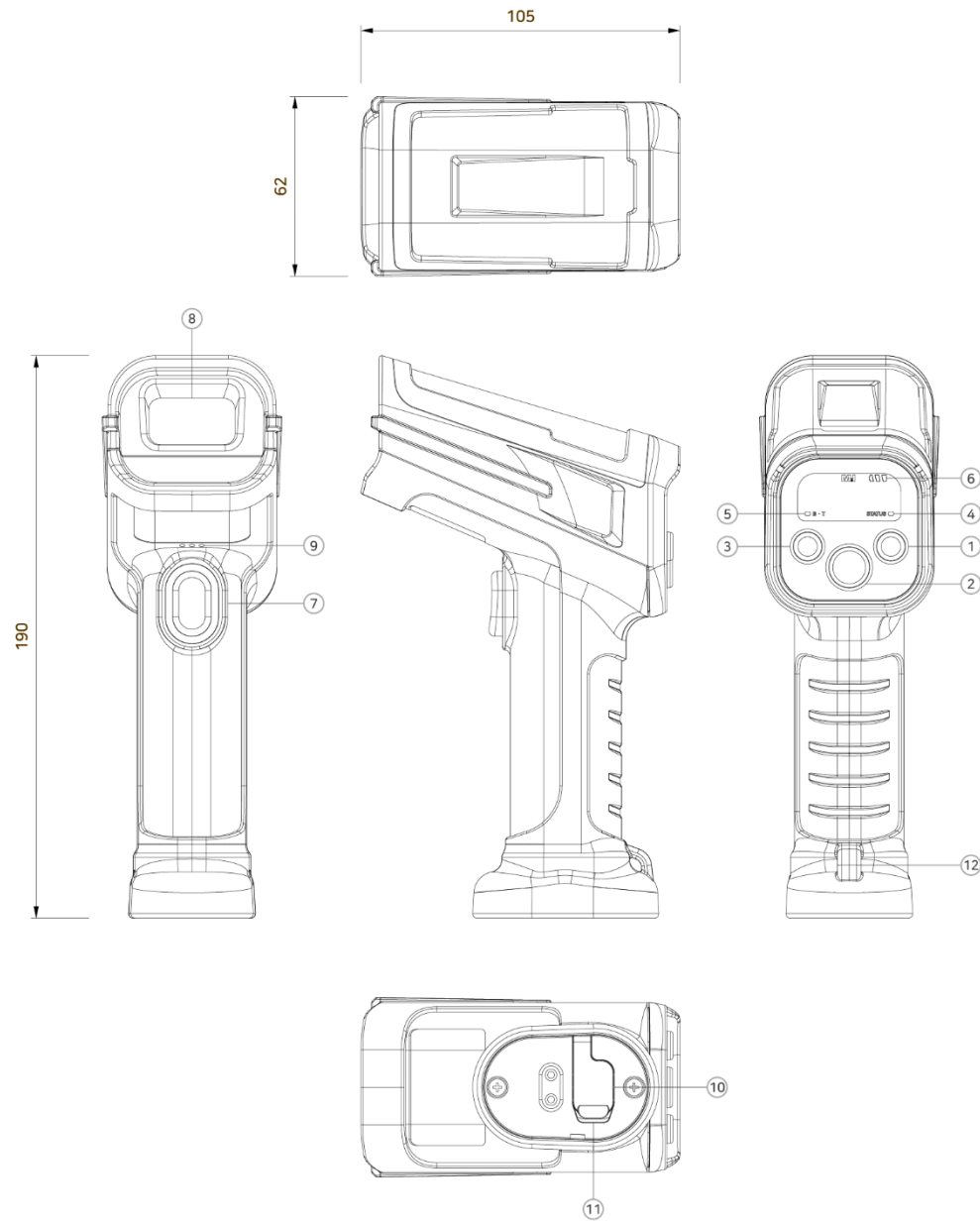


MSR-B2MWA-Ex SPECIFICATIONS

Functional		MSR-B2MWA-Ex
Display	Display Type	LED
	Indicators	Bluetooth, Status, Battery Gauge
Barcode	Type	640 x 400 1D/2D CMOS Barcode
	Symbologies	Code 39, Code 128, PDF417, UPC, Data Matrix, QR Code
Interface	USB	USB Type C, Charge Only
	IrDA	Compliant to IrDA Physical Layer Standard Up to 115.2 kbit/s(SIR), More than 0.5M in Open Space Connection with M2I HMI Equipment
	2.4GHz RF	2402MHz to 2480MHz, Bluetooth 5.2 LE, Range Up to 5M in Open Space
	Function Key	Unlock Type Push Switch 4EA(Power/Bluetooth/Send/Scan)
Battery	Rechargable Battery	Single Li-ion 3.6Vdc, 2500mAh Operating Time: 6+ Hours(18000+,1Second interval) Charging Time: 5 Hours(Non-Operating) Standby On: 29+ Hours
Power	Consumption	3W
	Operation Temperature(℃)	-10 ~ +50
	Storage Temperature(℃)	-20 ~ +60
	Protection Classification	IP66
	Operation Humidity(%RH)	0 ~ 90(No Dew)
	Atmosphere	No Corrosive Gas
	Vibration Endurance	Amplitude: 10≤F<25Hz(2G) X, Y, Z each Direction(for 30 Minutes)
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X, Y, Z each Direction(for 3 Times)
	Certification	KC, CE, UL/cUL in Hazloc(Completed) IECEX, ATEX, KCs(In Progress)
Structure	External Dimension(mm)	188.9 x 100.1 x 60.3
	Weight(kg)	0.416
	Case Material	PC, Urethane

DRAWING

MSR-B2MWA-Ex



- ① Power Switch

② Send Switch

③ Bluetooth Switch

④ Status LED
- ⑤ Bluetooth Status LED

⑥ Battery Level

⑦ Scan Switch

⑧ Scanner Window and IrDA Trasnmit/Receive
- ⑨ Buzzer Hall

⑩ Bottom Cover

⑪ USB-C Port for Charging

⑫ Strap Holding Hole