注意 | **製品の作動前に必ずマニュアルを熟知してください。**
実際製品の色相とカタログ上の製品の色相は多少違う事もあります。
本カタログの内容は事前予告無しに変更される場合があります。

M2I Corporation
Man · Machine · Interface

SMART DEVICE

SMART DEVICE

Product Catalog

M2I Corporation

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SMART DEVICE

CONTENTS

MIO SERIES

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

Coupler Module

I/O, Expansion Module

MIO REMOTE I/O

特長点

Compact

超小型サイズで最小空間に最大接点管理

Module

モジュールを欲しい分用途に合わせ脱付し構成
(最大32スロット)

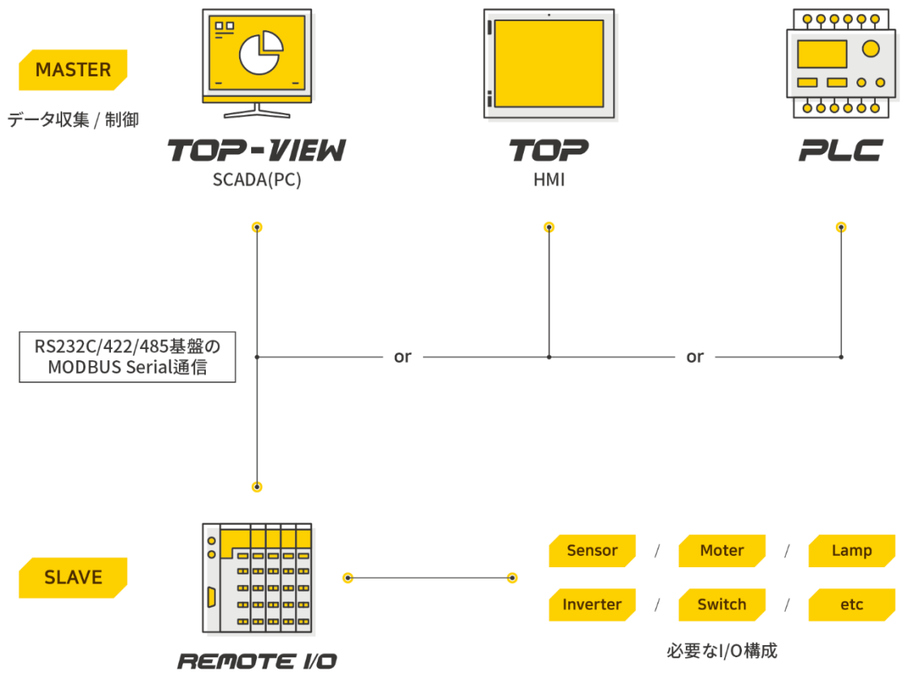
Hot Swap

電源OFFなしで便利にI/Oモジュール交替、
故障時部分交替で効率的メンテナンス

Easy

誰でもしやすく設定できるソフトウェアMIO Master

Remote I/O 接続図



MIO-CMR0A SPECIFICATIONS COUPLER MODULE

Functional		MIO-CMR0A	MIO-END-01
Type	Protocol	MODBUS RTU/ASCII	-
Power	Input Voltage	24Vdc(19.2 ~ 28.8Vdc)	-
	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(℃)	-10 ~ +50	
	Storage Temperature(℃)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No Dew)	
	Atmosphere	No Corrosive Gas	
	Vibration Endurance	Amplitude: 10≤F < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)	
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)	
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4㎸	
	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 < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)				
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)				
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4㎸				
	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			
Other	Wiring	AWG 26 to 20			
	Pin No.	Removable Terminal Block 16P			
	Indicator	17 LED 16 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 < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)			
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)			
	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

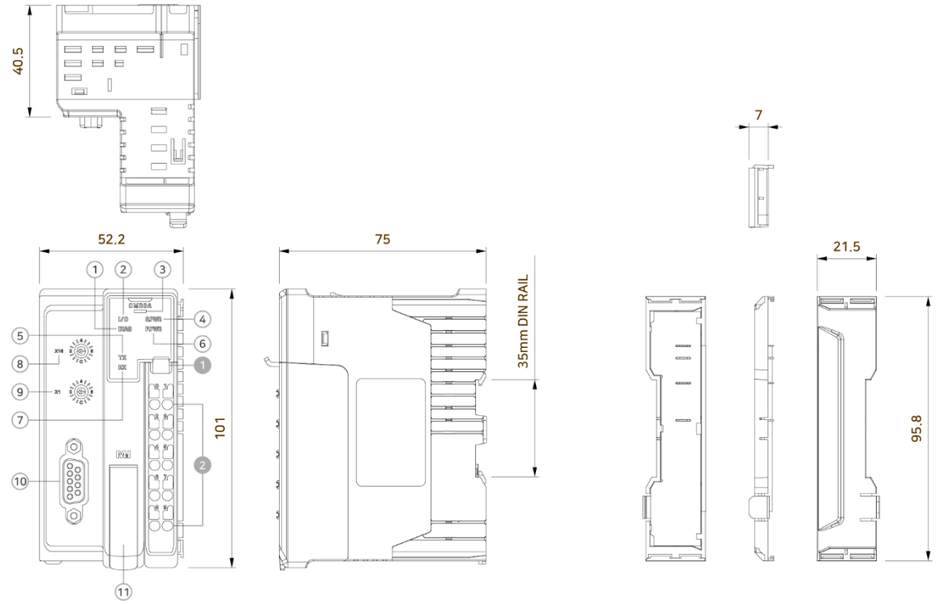
Functional		MIO-AIR02-01	MIO-AIV04-01	MIO-AIC04-01	MIO-AOV04-01	MIO-AOC04-01
Type	Input/Output Type	2 Channels Analog RTD Type	4 Channels Analog Voltage Type	4 Channels Analog Current Type	4 Channels Analog Voltage Type	4 Channels Analog Current Type
	Sensor Type and Input /Output Range	PT100 * -200.0 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 < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)				
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)				
	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 < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)				
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)				
	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)				

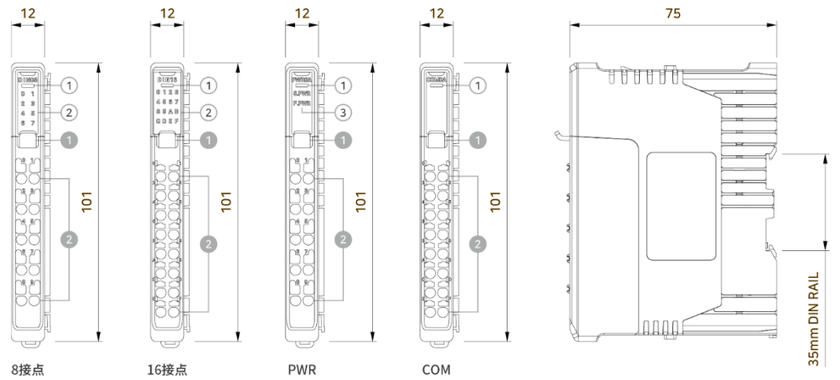
DRAWING

COUPLER MODULE MIO-CMR0A, MIO-END-01



① MODBUS状態表示LED ④ システム電源状態LED ⑦ RX状態表示LED ⑩ MODBUS通信ポート 1 分離フック
② I/Oモジュール状態表示LED ⑤ TX状態表示LED ⑧ ノード番号設定スイッチ16倍率 ⑪ USBコネクトカーバ 2 チャンネル接点
③ リモートI/Oカプラー状態表示LED ⑥ フィールド電源状態LED ⑨ ノード番号設定スイッチ1倍率

I/O MODULE, EXPANSION MODULE



① 状態表示LED ② 接点入力状態LED ③ システム電源、フィールド電源状態LED 1 分離フック 2 チャンネル接点

MIO SERIES

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

MIO LoRa

特長点

LoRa通信技術を利用し 自体プロトコール及びネットワーク網構成

別当の通信費用なしに使用可能

一つのLoRa EndNodeで多様な 入出力を提供

デジタルIN/OUT、リレー接点、アナログ電流/電圧

多様なテストを合格した産業用製品で 安全で強い性能

衝撃、ノイズ、静電気、温度等多様なテスト合格

便利な環境設定方式提供

MODEボタンを使うLoRa Gateway/EndNode間
自動環境設定可能

製品上段のスイッチで周波数とSF設定を即時変更可能

LoRa 使用方法

* 詳細使用方法はマニュアルをご覧ください。

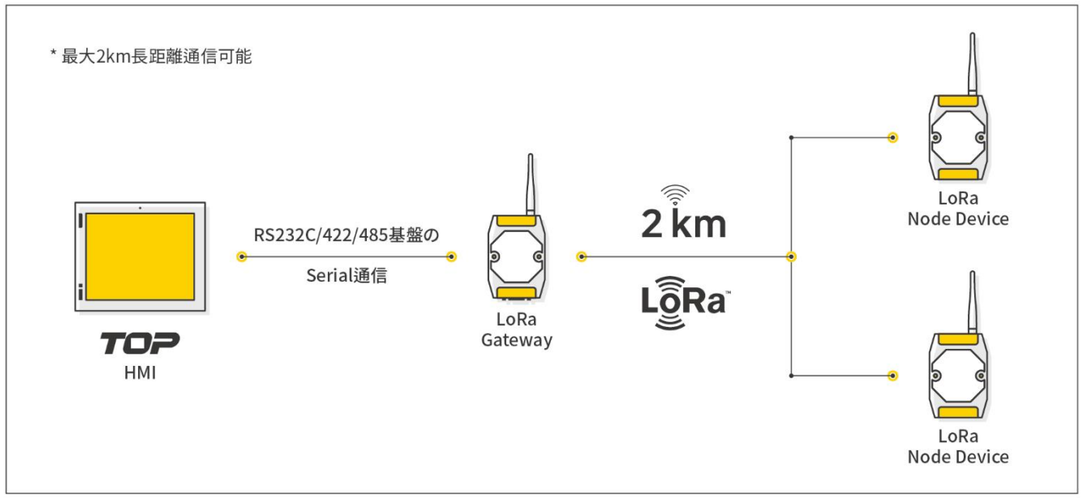
01 **[M2I LoRa 設定機]**からLoRa Gateway/EndNodeの環境設定をUSBケーブルでダウンロードします。

02 TOP製品とLoRa Gatewayを**シリアル通信(RS-232C/422/485)**で接続します。

03 **TOP Design Studio**で当シリアルポートにLoRa Gatewayを追加し、
通信オプションでLoRa EndNodeの数だけDevice IDを登録します。

! TOPでLoRa Gatewayのデータをモニタリング/制御可能で、
LoRa GatewayはLoRa通信でLoRa EndNodeのデータを送受信できます。

LoRa 接続図



LoRa SPECIFICATIONS GATEWAY

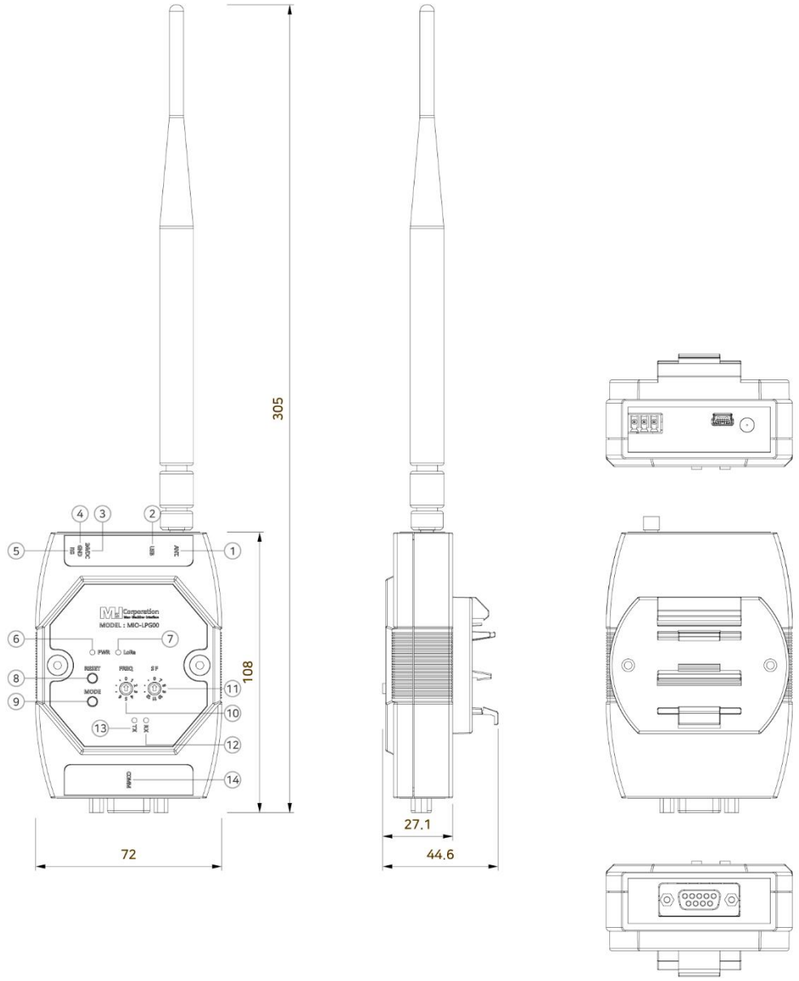
Functional		MIO-LPG00
Power	Input Voltage	24Vdc(20 ~ 28Vdc)
	Power Dissipation	3W
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 10MΩ
LoRa RF	RF Frequency	TX: 922.1 ~ 923.1 MHz, RX: 923.3 MHz
	Output Power	Max. 25mW(+14dBm, With Antenna)
	Communication Distance	Within 2Km
	Antenna	1T1R 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(℃)	-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	KC
Structure	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
	Security Setting		AES-128
I/O Interface	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: 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		KC
Structure	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

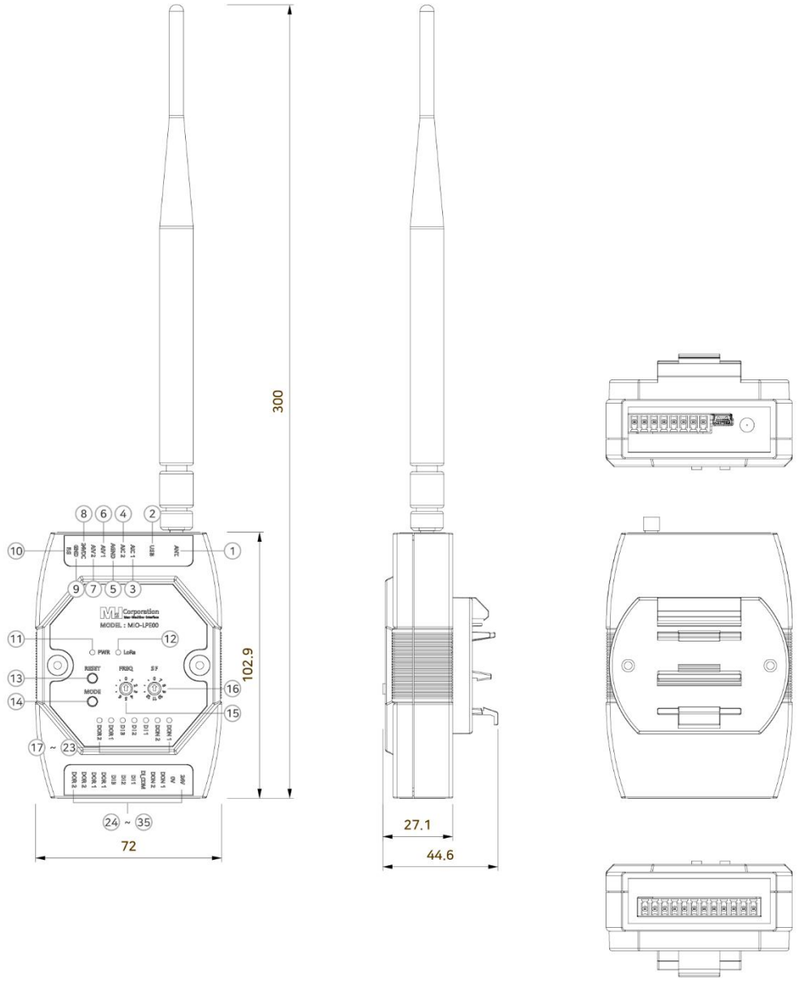
MIO-LPG00



① LoRaアンテナ締結部
② USB設定コネクト
③ システム電源DC 24V入力端子
④ システム電源GND端子
⑤ F.G端子
⑥ システム電源状態表示
⑦ LoRa通信状態表示
⑧ システムリセットスイッチ
⑨ MODE動作スイッチ
⑩ 周波数チャンネル[0 ~ 6]変更スイッチ
⑪ SF設定[0]、[7 ~ 12]変更スイッチ
⑫ COMM通信の受信状態表示
⑬ COMM通信の送信状態表示
⑭ シリアル通信コネクト

DRAWING

MIO-LPE00



① LoRaアンテナ締結部
② USB設定コネクト
③ アナログ電流入力1番チャンネル端子
④ アナログ電流入力2番チャンネル端子
⑤ AIC 1、2/AIV 1、2共通端子
* フィールド電源(0V)接続端子
** ソースタイプで接続時使用
⑥ アナログ電圧入力1番チャンネル端子
⑦ アナログ電圧入力2番チャンネル端子
⑧ システム電源DC 24V入力端子
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⑮ 周波数チャンネル[0 ~ 6]変更スイッチ
⑯ SF設定[0]、[7 ~ 12]変更スイッチ
⑰ ~ ㉓ 動作状態表示LED
㉔ ~ ㉟ I/O入出力端子

MGW SERIES

IoT Gateway

MGW

特長点

通信プロトコールコンバーター機能提供 (複数の通信ドライバサポート)

HMIと同様な専用通信プロトコール(アドレス方式PLC)
ライブラリ提供

標準DIN Rail / VESAホール提供

標準DIN Railでどこにでも簡単に装着
標準VESA固定ブラケット(*オプション)
でモニターと簡単に結合

TOP Design Studioソフトウェアで具現可能

自社HMI/SCADAを使用したユーザーが
同じソフトを使い簡単に具現可能

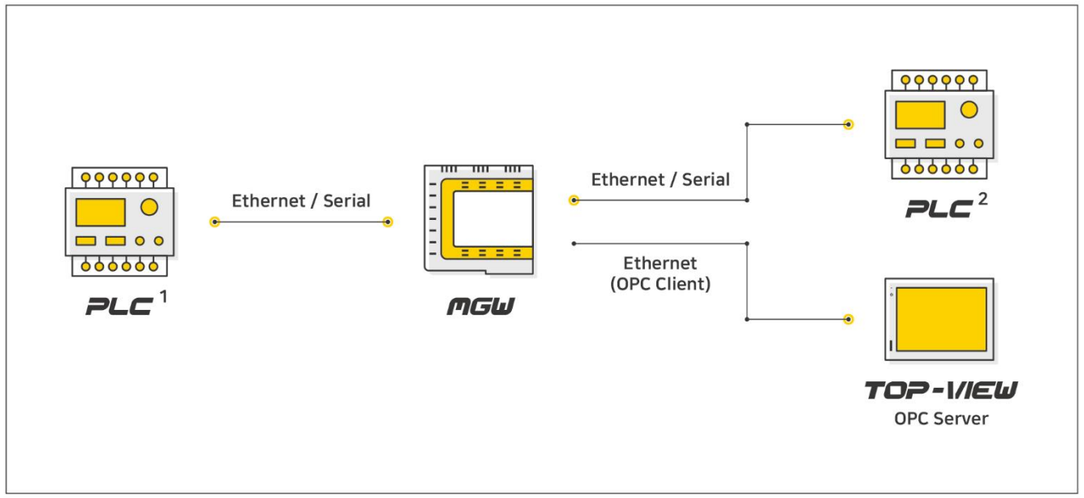
イーサネット、シリアル2ポート支援

お互い違うIPをもつ異機種ネットワーク支援
COM1/2 DSUB 9ピン提供(RS-232C、RS-422/485)

HDMI出力

多様なモニターをHDMIで便利に接続
M2I専用タッチモニター(MDP)と互換

MGW 接続図

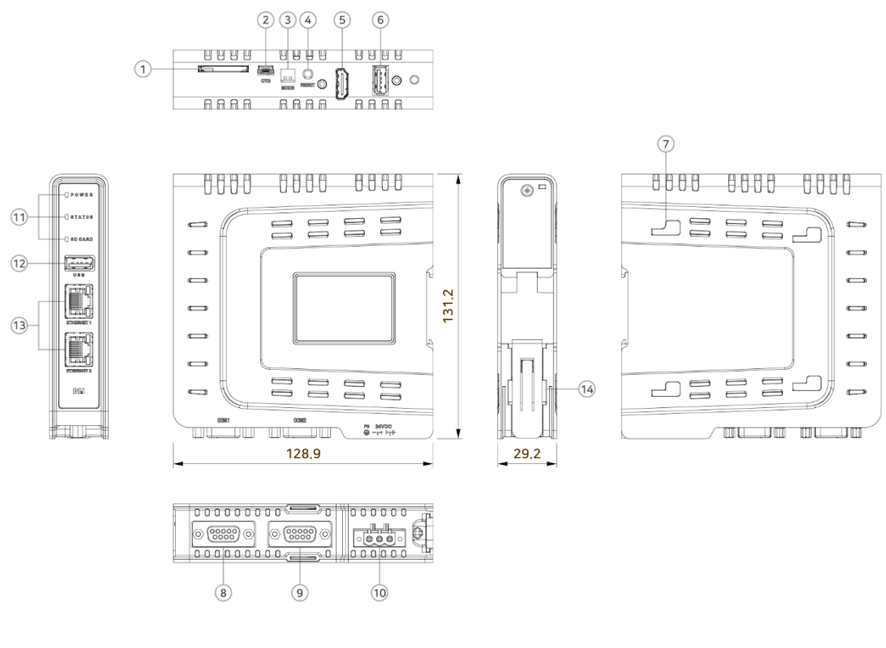


MGW SPECIFICATIONS

	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<25㎐(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1㎲)
	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
	Certification	CE, KC, UL, cUL
Structure	External Dimension(㎜)	128.9x131.2x29.2
	Weight(㎏)	0.23
	Installation Method	Standard DIN Rail(35mm), VESA
	Cooling System	Natural air circulation
	Case Material	Plastic

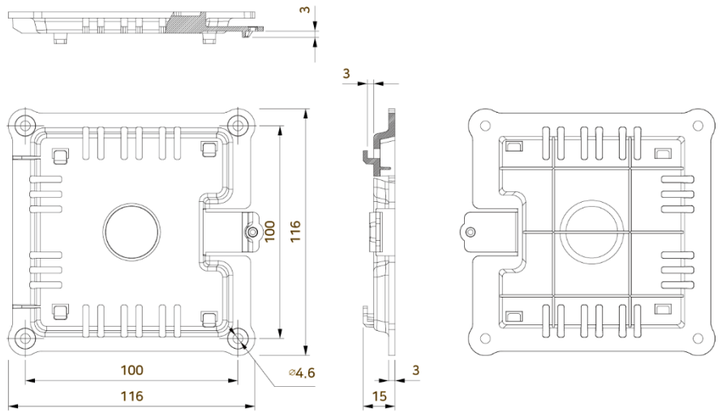
DRAWING

MGW-BH1000D



① SDカードソケット
② USB OTG
③ モードスイッチ
④ リセットスイッチ
⑤ HDMI
⑥ USB Host #1
⑦ Vesaブラケット
⑧ Serial COM1
⑨ Serial COM2
⑩ 電源入力
⑪ 状態LED
⑫ USB Host #2
⑬ Ethernet Port
⑭ DIN Rail

VESA Braket(*Option)



MSR SERIES

MSR-B2MWA / MSR-B2MWB

(完了)

(進行中)

MSR

特長点

強くて便利なデザイン

衝撃に強い設計とウレタン外形

グリップ感が優秀で携帯性が高い小型デザイン

固定ストラップ提供

有無線の多様なインターフェース

2.4GHz RF 無線通信(USBドングル接続)

USB通信(USBケーブル接続)

IrDA赤外線通信(自社HMIとI専用通信)

バーコードデータの安全な管理

1D、2Dバーコード支援

最大25,000個バーコードを保存できるメモリー搭載で
安全なデータ管理

効率的動作時間運用

完充時13時間動作可能なバッテーリー提供

節電機能提供

インターフェース

2.4Ghz RF無線通信

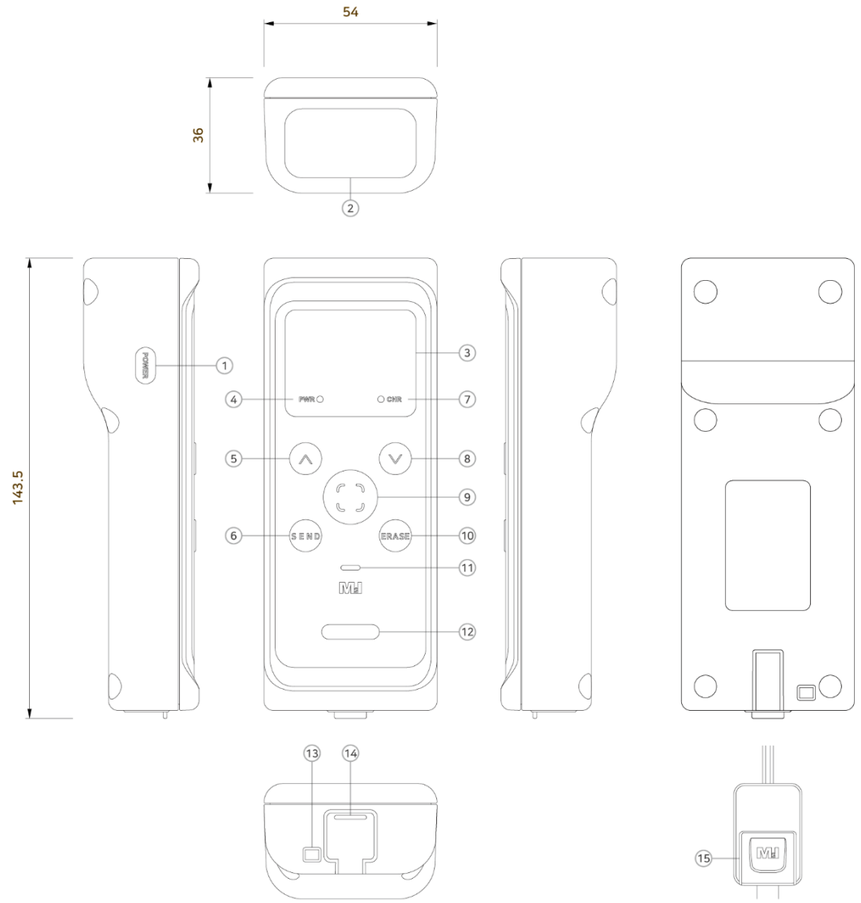
2.4GHz RF IEEE802.15.4, Range Up to 15M+ in Open Space

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)		-
Memory	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		-
Environment	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 < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)		
	Static Electricity Discharge	Connective Discharge from EN61000-4-2: ±4㎸		
	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 電源スイッチ
② スキャナーウインドウ及び赤外線送受信
③ OLED
④ 電源表示灯
⑤ Upスイッチ
⑥ Sendスイッチ
⑦ 充電状態表示灯
⑧ Downスイッチ
⑨ Scanスイッチ
⑩ Eraseスイッチ
⑪ ブザー穴
⑫ 状態表示灯
⑬ ストラップ固定穴
⑭ 後部カバー
⑮ USBドングル
(ストラップに含む)

MSR SERIES

MSR-B2MWA-Ex

(完了)

(進行中)

MSR

特長点

KCs(Ex ib IIC T4 Gb)、Zone1使用可能

安全防爆構造

UL/cUL: Class 1, Division 2 Groups A,B,C,D, T6
IECEx, ATEX, KCs: Ex ic ec IIC T6(進行中)

強くて便利なデザイン

衝撃に強い設計とウレタン外形
グリップ感が優秀で携帯性が高い小型デザイン
固定ストラップ提供

無線インターフェース

ブルートゥース通信
IrDA赤外線通信(自社HMIとI専用通信)

バーコードデータの安全な管理

1D、2Dバーコード支援
LEDで伝送状態確認
最近10個までのバーコードデータ保存

インターフェース

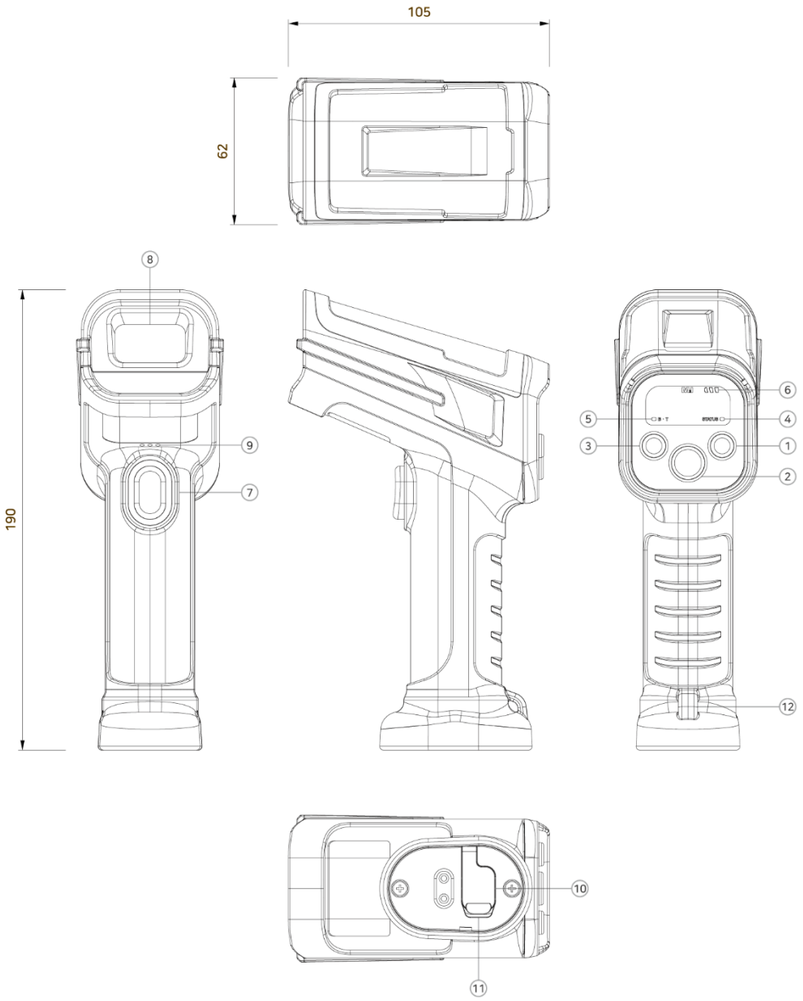
2.4GHzブルートゥースLE無線通信
2.4GHz Bluetooth LE, Range Up to 5M+ in Open Space

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
Environment	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 < 25㎐(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 電源スイッチ
② Sendスイッチ
③ ブルートゥーススイッチ
④ 状態表示灯
⑤ ブルートゥース表示灯
⑥ バッテーリーレベル
⑦ Scanスイッチ
⑧ スキャナーウインドウ及び赤外線送受信
⑨ ブザー穴
⑩ 下部カバー
⑪ USB-Cポート充電端子
⑫ ストラップ固定穴