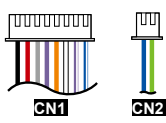


Content

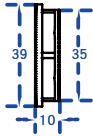
1 Product



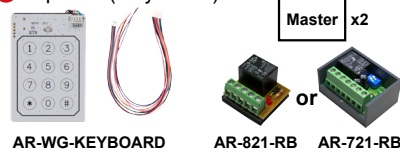
2 Terminal Cables



3 Black ABS



4 Optional(only 101H)

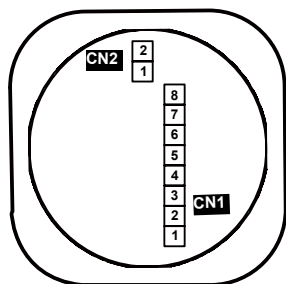
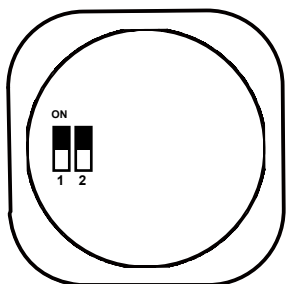


5 Feature



Product & Feature

Position



※Dip_switch must adjust at 2nd layer of mainboard.

Highly suggest to fixed WG34/26 before order

Features

101H

- Selectable working frequencies: 13.56MHz
- Including the input of door contact, offering the alarm system of both door opening too long and being forced to open
- Built-in Multi-Output: Door Lock/ Alarm/ Security trigger signal
- Have the "MASTER CARD" functions, convenient operation
- Mini Flush-Mounted design gives neat installation
- Elegant design with colorful Edge Indicator

101U (RS485/WG)

- Selectable working frequencies: 125KHz/13.56MHz
- From the DIP switch to select to be RS485 or WG output reader
- Flexible to integrate with SOYAL or other access control system
- Interface of the Proximity Reader have WG26/34 (By order)
- Elegant design with colorful Edge Indicator
- Flush-Mounted Design gives neat installation

Connector Table


AR-101H CN1 8PIN Cable

Function	Wire	Color	Description
WG Input	1	Blue White	WG DATA 1 Input
	2	Green White	WG DATA 0 Input
Lock	3	White	Transistor Output Max. 24V/1.5A (Open Collector Active Low)
Door Contact	4	Orange	Negative Trigger Input
Exit Switch	5	Purple	Negative Trigger Input
Alarm	6	Gray	Transistor Output Max. 12V/100mA (Open Collector Active Low)
Power	7	Thick Red	DC 12V
	8	Thick Black	DC 0V

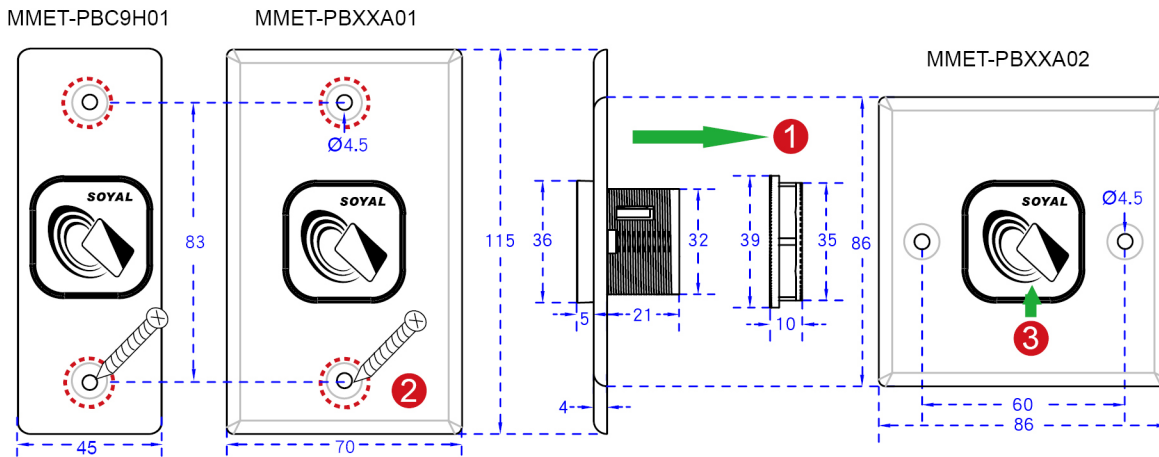
AR-101H/U CN2 2PIN Cable

Function	Wire	Color	Description
RS-485 for Lift Controller	1	Thick Green	RS-485(B-)
	2	Thick Blue	RS-485(A+)

AR-101U CN1 8PIN Cable

Dip-switch 	Function						
	RS-485 Mode		WG Mode				
SW1	ON	OFF	ON	OFF	Wire	Color	Description
SW2	ON	ON	OFF	OFF			
Description	Enable auto open zone after flashed 1st Tag	Enable auto open zone w/o flashed 1st Tag	WG34	WG26			
CN1 Main			WG Output		1	Blue White	WG DATA 1 Output
					2	Green White	WG DATA 0 Output
	Door Lock Output				3	White	Transistor Output Max. 24V/1.5A (Open Collector Active Low)
	Door Sensor		LED R		4	Orange	Negative Trigger Input
	Exit Button		LED G		5	Purple	Negative Trigger Input
	Buzzer				6	Gray	Transistor Output Max. 12V/100mA (Open Collector Active Low)
	Power				7	Thick Red	DC 12V
					8	Thick Black	DC 0V

Installation

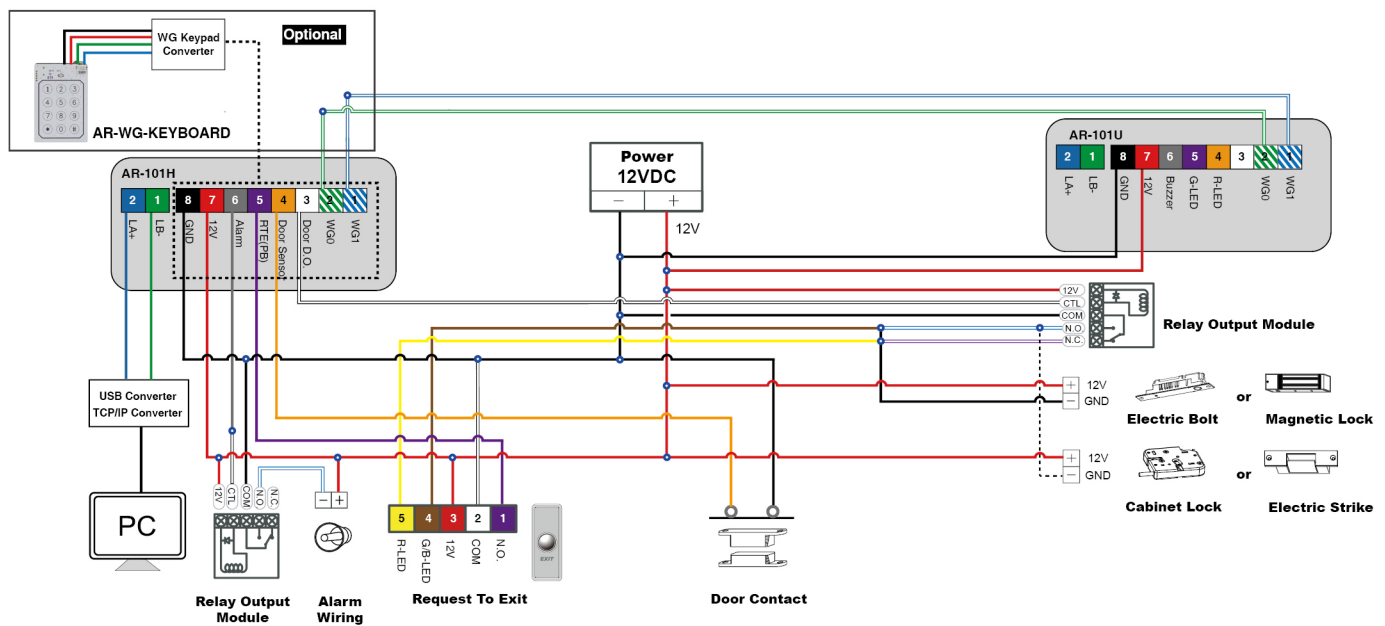


Installation:

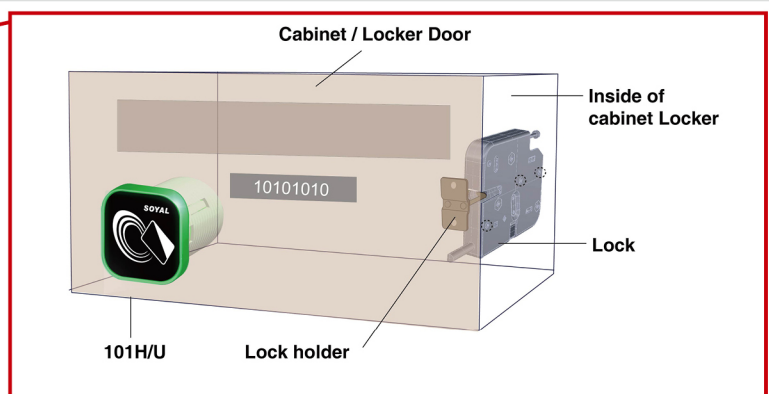
- 1 Take off the black ABS screw nut from behind
- 2 Use a screwdriver to screw the plate to the wall
- 3 Paste the label sticker

Model. LED Color: GR	AR-101USXBNB1 36.3X36.3 Mini Reader Module	MMET-PBC9H01 115X45 (US T2.0Stainless Steel)	MMET-PBXXA01 115X70 (US T1.0 Stainless Steel)	MMET-PBXXA02 86X86 (EU T1.0 Stainless Steel)
AR-101USXBNB1	V	----	----	----
Narrow US Type	V	V		
US Type	V		V	----
EU Type	V	----	----	V

Diagram



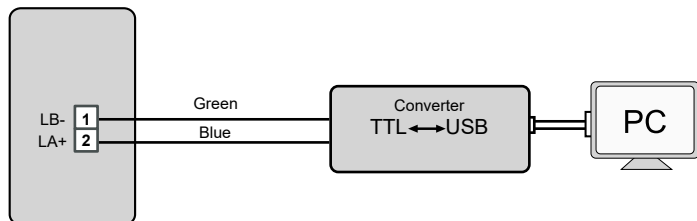
Application



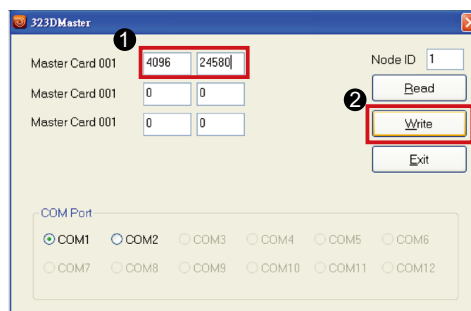
About Master Card

MASTER CARD Setting for Stand-Alone

- Plug in **P2** cable, the wire connection is as below figure. After connection, then have power transmission to controller.

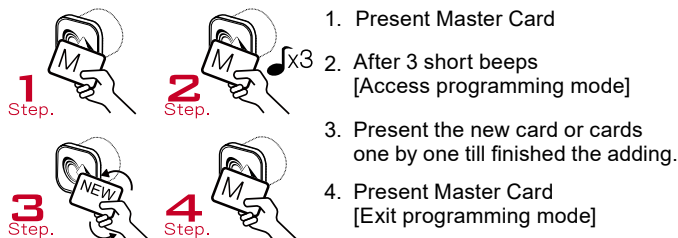


- Use the MASTER CARD software

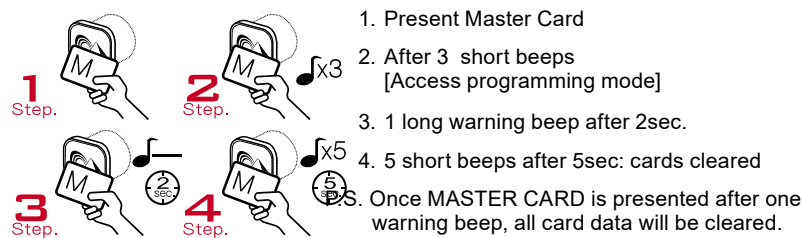


- Input the MASTER CARD number, and press [Write].
- Cut off and then transmit the power, the master card number will be activated.
- Present the card, and the reader will flash green light 3 times and sound 3 beeps. Then the card becomes MASTER CARD and accesses programming mode. If MASTER CARD is presented again, it will exit programming mode.

Adding Tag



Deleting All Tags



Operation process

A. Enter/ Exit Program Mode

- Enter the program mode

Input *123456 # or *PPPPPP #

[e.g.] The Default Value= 123456, if already changed the Master Code= 876112, input *876112 # → program mode accessed

- Exit the program mode

Input * #

- Master Code modification

Access programming mode → 09 *PPPPPPRRRRR # [Input the 6-digit new master code twice.]

[e.g.] Set the Master code to be 876112, input *123456 # → 09 *876112876112 #

B. Set up the password [Only for connect to external K-series reader]

- M4/M8: Individual pass code

Card or PIN: Access programming mode → 12 *UUUUU *PPPP # [e.g. User address: 00001 and pass code: 1234, input 12 *00001 *1234 #]

Card and PIN: Access programming mode → 13 *UUUUU *PPPP # [e.g. User address: 00001 and pass code: 1234, input 13 *00001 *1234 #]

- M6: Public pass word

Card or PIN: Access programming mode → 15 *PPPP # [Input 4-digit pass code, default value: 4321]

Card and PIN: Access programming mode → 17 *PPPP # [Input 4-digit pass code, default value: 1234; PPPP=0000: change into Card Only]

C. Lift control

Connect with AR-401RO16B to control floors which the user will be able to access.

- Enable

Access programming mode → 24 *002 # [002= enable lift control]

- Single floor

Access programming mode → 27 *UUUUU *FF #

UUUU=User Address FF=Floor number (01~32 floor)

[e.g.] User address NO. 45, allow to access the 24th floor: 27 *00045 *24 #

- Multi floors

Access programming mode → 21 *UUUUU *S *FFFFFFF #

[UUUU=User address S: 4 sets of lift control (Input: 0~3) FFFFFFFF: 8 floors setting (F=0=Disable, F=1=Enable)]

[e.g.] User address NO. 168, only to the 6th and the 20th floor:

Access programming mode → 21 *00168 *0 *00100000 # → 21 *00168 *2 *00001000 #

Set	Floor/ Stop							
	F	F	F	F	F	F	F	F
0	8	7	6	5	4	3	2	1
1	16	15	14	13	12	11	10	9
2	24	23	22	21	20	19	18	17
3	32	31	30	29	28	27	26	25

D. Setting Up the Arming [Only for connect to external K-series reader]• **Alarm conditions:**

1. Arming is enabled
2. Alarm system connected

• **Application:**

1. **Door open too long:** Door is open longer than door relay time plus door close time.
2. **Force open** (Opened without a valid user card): Access by force or illegal procedure.
3. **Door position abnormal:** Arming is enabled and the power is suddenly off then on.

• **Enable/Disable Arming status (for M4/M8; Factory default armingcode is: 1234) :**

Standby Mode	
After door open	Do not open the door
The normal procedure to open door → Input 4 digit arming code → #	* → Input 4 digit arming code → Present valid card
Enter Program Mode	
Enable: Access programming mode → * * #	Disable: Access programming mode → * #

※ [The normal procedure to open door] can refer to [Access Mode].

Function Default Value**20 * DDD #** ※Default Value

Function	Selection		Value	Application
Attendance	※0: Yes	1: No	001	Networking
Auto Re-lock	※0: Disable	1: Enable	002	Networking/Stand-Alone
Auto Open	※0: Disable	1: Enable	004	Networking/Stand-Alone
Door open button input	0: Disable	※1: Enable	016	Networking/Stand-Alone
Master Controller of Network	※0: Slave	1: Mater	032	Networking

24 * DDD # ※Default Value

Function	Selection		Value	Application
Auto-open door without cards at auto open zone	※0: Disable	1: Enable	001	Networking/Stand-Alone
Alarm Output/ Lift Control	※0: Alarm Output	1: Lift Control	002	Networking/Stand-Alone
Stop Alarm by door close or by push button	0: None	※ 1: Yes	064	Networking/Stand-Alone

28 * DDD # ※Default Value

Function	Selection		Value	Application
Dual Door Control	※0: Disable	1: Enable	064	Networking/Stand-Alone
Force Open Alarm Output	※0: Disable	1: Enable	128	Networking/Stand-Alone

Selection= 0(none value)/ 1(1 x each value)

[e.g.] DDD value of Enable "Auto Open" + "Exit by Push Button" + "Anti-pass-back"

= (0x1)+(0x2)+(1x4)+(1x16)+(0x32)+(0x64)+(1x128)=148 ; As a result of that, the command will be 20 * 148 #

Mode4 / Mode6 / Mode8

Mode	Networking/ Stand-Alone	User Capacity	Access Mode	Auto-show Duty time	Event log Capacity	120 Holidays	Anti force	Time Zone	Lift Control	Anti-pass- back
M4	Networking/ Stand-Alone	1,024	1.Card only 2.Card and PIN (4-digit PIN)+ # 3.Card or User address (5-digit) + Individual PIN (4-digit individual PIN) + #	Yes	1,200	Yes	Yes	No	32	Yes
M6	Stand-Alone	65,535	1.Card only 2.Card and PIN (4-digit public PIN= Arming PWD)+ # 3.Card or PIN (4-digit public PIN= Duress code)	No	No	No	No	No	No	No
M8	Networking/ Stand-Alone	1,024	1.Card only 2.Card and PIN (4-digit individual PIN)+ # 3.Card or PIN (4-digit individual PIN)	Yes	1,200	Yes	Yes	No	32	Yes

※ **Mode 6**, the number of users up to 65535, since it reads **CARD CODE**(5 digits) only, unlike that Mode4/Mode8 read **SITE CODE** and **CARD CODE**(10 digits).
If Access Mode setting to use the PIN, it need to external the K-series Readers.

Factory Reset by its commands• **When the device is stand-alone (not networking)**

Access programming mode → 20 * 016 # → 24 * 064 # → 26 * 00000 * 01023 * 1 # → 28 * 000 # → 29 * 29 * #

※Note: After the Master Code is changed, factory reset doesn't restore the Master Code back to 123456.

Command List

Function		Command	Description	Mode
Entering programming mode		* PPPPPP #	PPPPPP=Master Code, default value=123456	M4/M6/M8
Exiting programming mode		* #		M4/M6/M8
Exiting programming mode and enabling arming status		* * #		M4/M8
Node ID setting (Connecting to 716E)		00 * NNN #	NNN=Node ID, range: 001~254	M4/M8
Node ID setting (Connecting to PC directly without via 716E)		00 * NNN * VVV * nnn #	NNN=Node ID of Access Controller, VVV=Virtual 716E Node ID, nnn=Door number; range:001~254	M4/M8
Mifare tag / card format (Optional)		01 * N #	N: 0=ISO14443A; 1=ISO14443B; 2=ISO15693; 3=I Code1; 4=I Code2 PS.1. Please select the compliance,first. 2. Make sure reader and card using the same compliance.	M4/M8
Door relay time setting		02 * TTT #	TTT=Door relay time 000= Output constantly 001~600=1~600 sec. 601~609=0.1~0.9 sec.	M4/M6/M8
Alarm relay time setting		03 * TTT #	TTT=Alarm relay time 001~600=1~600 sec.	M4/M6/M8
Control mode setting		04 * N #	N=Mode 4=Mode4; 6=Mode6; 8=Mode8	M4/M6/M8
Arming delay time setting		05 * TTT #	TTT=Alarm relay time 001~600=1~600 sec.	M4/M6/M8
Alarm delay time setting		06 * TTT #	TTT=Alarm delay time 001~600=1~600 sec.	M4/M6/M8
Master card setting		07 * SSSSS * EEEEE #	SSSSS-EEEE=00000-01023 (00000-03000 for AR-725H); SSSSS=Starting user address; EEEEE=Ending user address	M4/M8
Auto-open time zone setting		08 * N * HHMMh:mm * 6543217H #	N= 0(1st time zone) / 1(2nd time zone) HHMM= Starting time; h:mm= ending time (i.e.: 08301200=08:30 to 12:00) 6543217H= 7 days of week (Sat/Fri/Thu/Wed/Tue/Mon/Sun)+ Holiday (F= 0: disable; 1: enable); Holidays establish by the software.	M4/M6/M8
Master code setting		09 * PPPPPRRRRRR #	PPPPPP=New master code RRRRRR=Repeat the new master code	M4/M6/M8
Setting	Suspend tag(M6)	10 * SSSSS * EEEEE #	* =Suspend 9 =Delete;	M4/M6/M8
	Delete tag(M4)	10 * SSSSS 9 EEEEE #	SSSSS=Starting user address, EEEEE=Ending user address	M6
Set a sequence of cards as "read and access"		11 * SSSSS * EEEEE #	SSSSS=Starting card number; EEEEE=Ending card number	M4/M8
Active the suspended cards		11 * SSSSS * EEEEE #	SSSSS=Starting user address; EEEEE=Ending user address	M4/M8
Set the cards as Card mode OR PIN mode by user address		12 * UUUUU * PPPP #	Access mode: Card or PIN ; UUUUU=user address; PPPP=4-digit pass code 0001~9999	M4/M8
Set the cards as Card AND PIN mode by user address		13 * UUUUU * PPPP #	Access mode: Card and PIN ; UUUUU=user address; PPPP=4-digit pass code 0001~9999	M4/M6/M8
M4: Duress code setting M6: Public PIN setting (Card or PIN)		15 * PPPP #	PPPP=4-digit pass code (default value=4321) P.S. Duress code will be unavailable and become a public PIN at access mode " Card or PIN " of M6	M4/M8
Card number modification		16 * UUUUU * SSSSSCCCCC #	UUUUU= User address; SSSSS=5-digit site code; CCCCC=5-digit card code	M4/M6/M8
M4: Arming pass code setting M6: Public PIN setting (Card and PIN)		17 * PPPP #	PPPP=4-digit pass code (default value=1234; disable Arming PWD=0000) P.S. Arming PWD code will be unavailable and become a public PIN at access mode " Card PIN " and of M6	M4/M6/M8
Door open waiting time		18 * TTT #	TTT=Door open waiting time: 001~600=1~600 sec.; default value: 15 sec.	M4/M8
Add card by presenting (M4)		19 * UUUUU * QQQQQ #	UUUUU=User address; QQQQQ=Card quantity(00001=Continuously inducting)	M4/M6/M8
Reader additional setting		20 * DDD #	Please refer to function default value for details.	M4/M6/M8
Lift control setting: multi-doors		21 * UUUUU * S * FFFFFFFF #	UUUUU=User address, S=4 sets of lift control(0~3); FFFFFFFF=8 assigned floor (F=0: Disable, 1: Enable)	M4/M8
Add/Delete tag by induction (M6 only)		22 * N #	N=0(Delete tag); N=1(Add tag)	M6
AR-401ROsite number dip switch		23 * NNN * TTT #	NNN=site number, TTT= relay time: 000~600=1~600 sec.	M4/M8
Controller parameter setting		24 * DDD #	Please refer to function default value for details.	M4/M6/M8
Controller time clock setting		25 * YYMMDDHHmmss #	YYMMDDHHmmss: Year/ Month/ Day/ Hour/ Min./ Sec.	M4/M6/M8
Anti-pass-back (Enable user)		26 * SSSSS * EEEEE * N #	SSSSS=Starting user address; EEEEE=Ending user address; N=0/Enable; N=1/Disable; N=2/Initial	M4/M8
Single floor setting		27 * UUUUU * FF #	UUUUU=User Address; FF=Floor (01~32 floor)	M4/M8
Dual door control/ Active or inactive arming for force open		28 * DDD #	Please refer to function default value for details.	M4/M6/M8
Delete all tags		29 * 29 * #		M4/M6/M8
Enable the security trigger signal (with AR-721RB)		34 * 064 # (Enable) 34 * 000 # (Disable)	To Change the "Door Lock" become the security trigger signal, when controller is connected with AR-721RB.	M4/M6/M8