

Wiegand Reader



Main Features

- Various programmable output formats WG26/34, ABA-II, ASYNC & OMRON.
- Anti-pass-back available, depending upon system configuration.
- Built-in watchdog to prevent the system from locking up.
- Easily integrated with Eclipse or other access control systems.

Specification (AR-721U/AR-721K/AR-661U)

Item	AR-721U	AR-721K	AR-661U
RF Frequency	125kHz / 13.56MHz		125kHz
Power Requirement	9-16VDC		12-18VDC
Power Consumption	50mA(125kHz) 70mA(13.56MHz)	80mA(125kHz) <1W(13.56MHz)	350mA
Communication Interface	WG 26 / 34 ABA-II ASYNC		
Baud Rate	9600 bps (N, 8, 1)		
Environment	-20°C to +75°C		
Proximity Reading Range	5-8cm(125kHz) 3-5cm(13.56MHz)	10-18cm(125kHz) 3-8cm(13.56MHz)	33-60cm
Indicator	1 bi-color LED and 1 beeper		3 LED and 1 beeper
Keypad	-	Yes	-
Waterproof	Option	-	Yes
Color	Gray / Silver		Gray
Dimensions (mm)	81Lx43Wx18H	111Lx77Wx26H	228Lx228Wx38H
N.W.(g)	40±5	90±10	1,000±50
Housing Material	ABS		

AR-721U's protocol description

EX: Card Number 01234:56789

Echo	Value	Description
Head	7E	Initial Value
Length	09	Data Length Indicator which destination the length from Node to the end including XOR and SUM
Node	00	The value 00 is fixed, the message would be sent to PC from the device
Function	71	Data receiving from AR-721U
Data Field	04	Site H Site Code - High Site Hi Site Lo = 0x4D2
	D2	Site L Site Code - Low Site Code : 01234
	DD	Card H Card Code - High Card Hi Card Lo = 0xDD5
	D5	Card L Card Code - Low Card Code : 56789
	01	CID ID Code(Bits(39-32))
XOR	51	XOR=FF^00^71^04^D2^DD^D5^01 =51
SUM	4B	SUM=(00+71+04+D2+DD+D5+01+51) FF=4B(LSB)

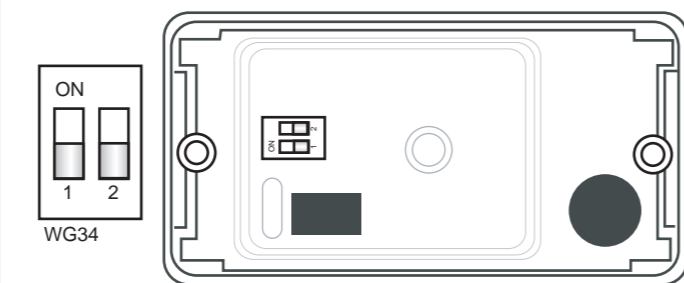
AR-721U 13.56 MHz Terminal Cable

Table 1 - Color CoWire Application

Wire Application	Wire	Color	Description
Power	1	Black	DC Power 0V
	2	Red	DC Power 12V
Beeper	3	Purple	Beeper Input (Low Sound)
	4	Green	Wiegand DAT:0
Wiegand	5	White	Card Present
	6	Blue	Wiegand DAT:1
LED	7	Yellow	LED Red Input
	8	Brown	LED Green Input
Networking Module	9	Gray	RS-485(A+)
	10	Orange	RS-485(B-)

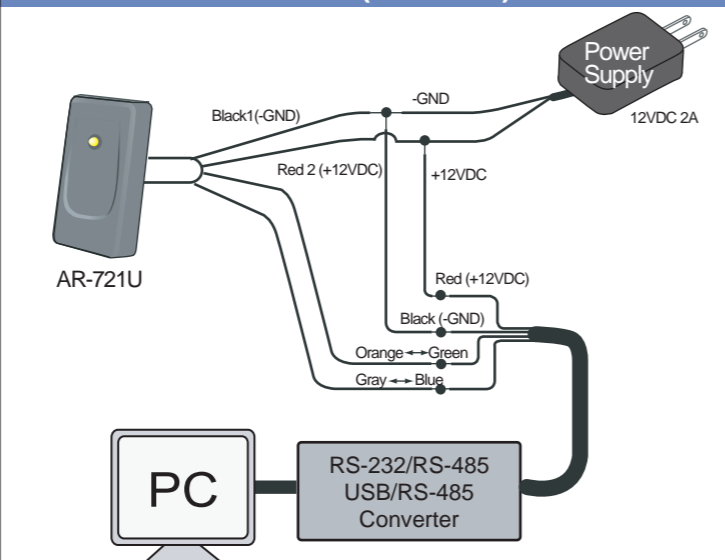
Output Selection

Output	26/34(DIP_SW1)	232(TTL)/ABA(DIP_SW1)
WG26	ON	OFF
WG34	OFF	OFF
ABAI	OFF	ON
RS-232(TTL)	ON	ON



AR-721U 13.56MHz

AR-721U connects to PC (13.56MHz)



AR-721U Terminal Cable (125kHz)

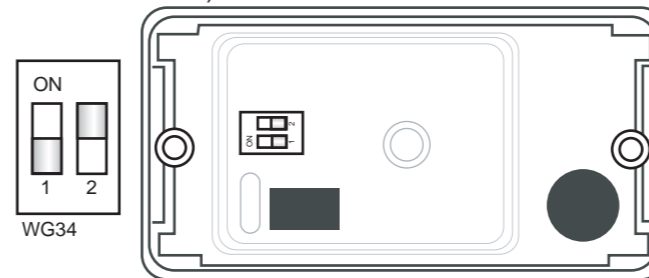
Color Coding

Wire Application	Wire	Color	Description
Power	1	Red	DC Power 12V
	2	Black	DC Power 0V
LED	3	Yellow	LED Red Input (Low Bright)
	4	Brown	LED Green Input (Low Bright)
Wiegand	5	Blue	Wiegand DAT:1
	6	Green	Wiegand DAT:0
Beeper	7	Purple	Beeper Input (Low Sound)
Beeper	8	White	Card Present
Beeper	9	Gray	Beeper Output

Output Selection

Output	232 (TTL)/ABA (DIP_SW1)	26/34 (DIP_SW2)
WG26	OFF	OFF
WG34	OFF	ON
RS-232 (TTL)	ON	OFF
ABA II	ON	ON

AR-721U RS-232 (TTL) Format: 9600,N, 8, 1
 DAT:0:TTL Inverted Serial Output.(Connect to PC COM port)
 DAT:1:TTL Serial Output.
 (Connect to PC COM port through RS-232 invert driver)



AR-721U 125kHz

AR-721K Terminal Cable (125kHz)

Table 1 - Connector P1 Color Coding

Wire Application	Wire	Color	Description
Power	1	Thick Red	DC Power 12V
	2	Thick Black	DC Power 0V

Table 2 - Connector P2 Color Coding (Wiegand Read Head)

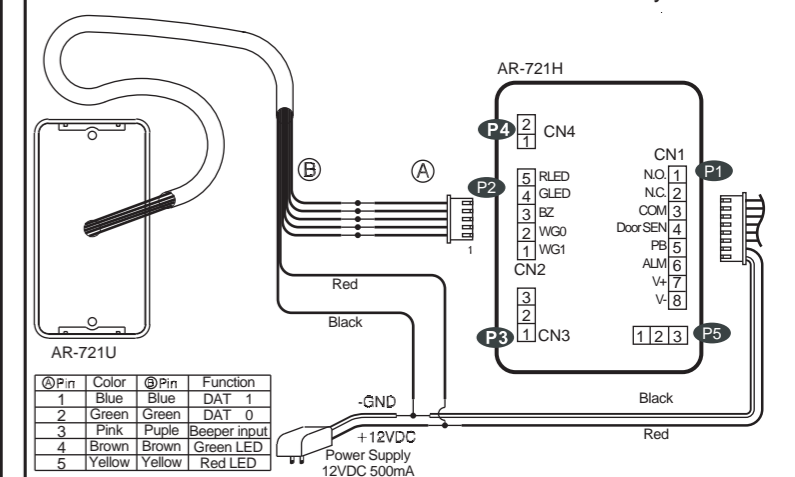
Wire Application	Wire	Color	Description
Wiegand/ABA	1	Thin Blue	Wiegand DAT:1 Input ABA Format:Clock
	2	Thin Green	Wiegand DAT:0 Input ABA Format:Data
	3	Orange	ABA Format Card Present No Connection
	4		
Beeper	5	Pink	Beeper Input (Low Sound)
LED	6	Brown	LED Green Input (Low Bright)
	7	Yellow	LED Red Input (Low Bright)

Table 3 - Connector P3 Color Coding (Tamper Switch)

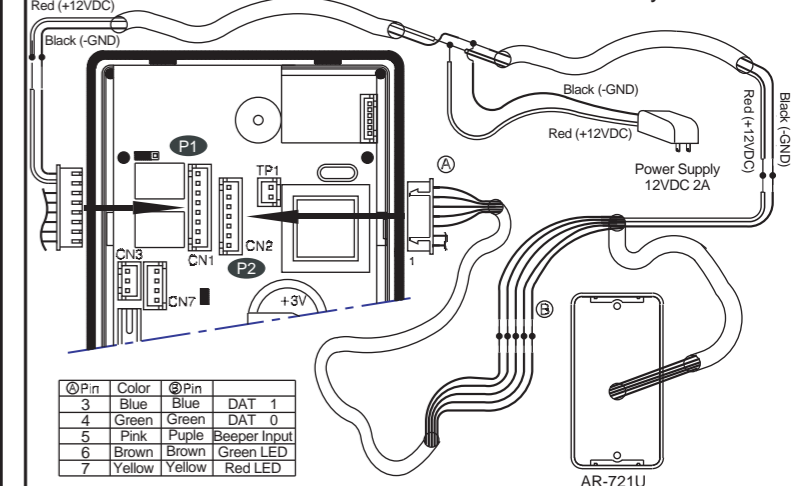
Wire Application	Wire	Color	Description
Tamper Switch	1	Red	N.C.
	2	Orange	COM
	3	Yellow	N.O.

AR-721U Installation

The installation of 721H and auxiliary reader 721U

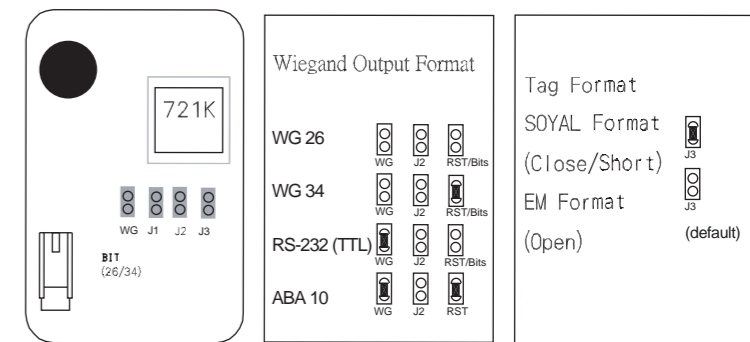


The installation of 829E and auxiliary reader 721U



Output Selection

Output	Wiegand Output Format	BITS	Output
WG Open	Wiegand	Open	Wiegand 26 Bit
		Short	Wiegand 34 Bit
WG Short	ABA-II	Open	Magnetic (ABA 8 Digital)
		Short	Magnetic(ABA 10 Digital)



Default Format WG34

