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* Voir conditions de garantie à vie limitée. / Refer to Limited Lifetime Warranty.

SOLARKPW SOLARKPB



Lecteur double technologie Proximité/Digicode® - Wiegand
Dual Technology Digicode®/Proximity Reader - Wiegand

Range: Integrated Access Control / **Gamme :** Contrôle d'Accès Intégré

MANUEL D'INSTALLATION
INSTALLATION MANUAL

CDVI Group Products

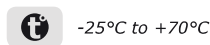
SOLARKPW-SOLARKPB

Dual Technology Digicode®/Proximity reader - Wiegand

1] PRODUCT PRESENTATION

- **Dual technology:** Proximity reader and/ or Digicode® keypad.
- **Wiegand 26, 30 or 44 bit.**
- **Sensitive touch keypad.**
- **Direct connection.**
- **PCB sealed in epoxy.**
- **Audible and visual feedback.**

- **Versions available:** white or black.
- Technology: 125 KHz.
- Multi card protocol reader - Marin/HD.
- Input voltage: 12V dc.
- Consumption: 150mA.



2] REMINDERS AND RECOMMENDATIONS

Operating mode

SYSTEME	MODE		
	KEYPAD	PROXIMITY	DUAL TECHNOLOGY
TELACCESS	✓	✓	✓
TERENA	✓	✓	-
CENTAUR	✓	✓	✓
ATRIUM	✓	✓	-

Cable

- Programming your installation before installing products on site.
- The distance between a CENTAUR and ATRIUM controllers or an INTBUSW reader interface should not exceed more than 50 meters.
- Make sure that the cable is not near by a high voltage cables (ex: 230 V AC).
- Recommended cable 2 twisted pairs SYT1 0.8MM (AWG 20).

Back EMF protection

To secure the system from back electromagnetic fields do not forget to mount the varistor in parallel on the lock terminals.

Security Advice

- For security reasons, change the factory default master code.
- When selecting a master code and user code avoid simple codes (example : 3 4 5 6 7).

Mounting recommendations

Mount the keypad on a flat surface to avoid any vandalism and to insure the best mounting.

Recommended power supplies

ARD12 & BS60. These products must be powered in 12Vdc and the power supply should be certified EN60950-1:2006/A11:2009 standards and should be designed to be a low power supply source.

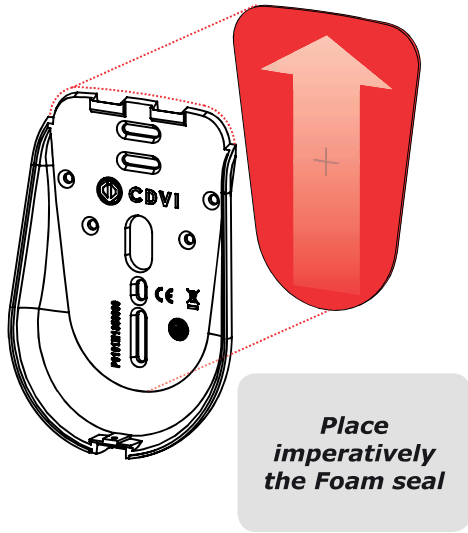
3] MOUNTING KIT

Foam seal	3x30 TF screw	S5 Plastic anchor	TORX® bit	3x8 TORX® screw	Varistor
GAMME SOLARKP	1	2	1	1	1

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4] MOUNTING



6] WIRING DIRECT CONNECTION TO A CONTROLLER

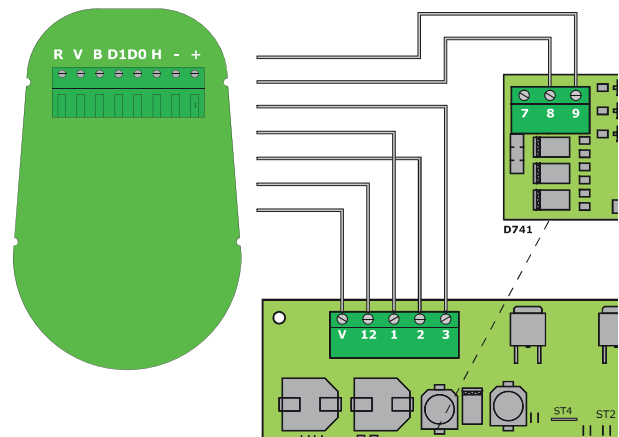
Terminal	Wiegand format outputs
+	12VDC Input
-	0V
B	Buzzer command input
D0	DATA 0
D1	DATA 1
H	CLOCK
V	GREEN LED
R	RED LED

Controller terminal wirings	
Wiegand	
CTV900A	ATRIUM
+12V	12V
R1/0V R2/0V	GND
OUT5 OUT6	BUZ
R1/D0 R2/D0	D0
R1/D1 R2/D1	D1
-	-
OUT1 OUT3	GRN
OUT2 OUT4	RED

6] WIRING CONNECTION WITH DOOR CONTROLLER (INTBUSW)

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+	12VDC
-	0V
B	Buzzer command input
D0	Data 0
D1	Data 1
H	Clock
V	Green LED
R	Red LED

INTBUSW	
12	
V	
7	
1	
3	
2	
8	
9	



6] FONCTIONNEMENT

Input LED management		
Green LED	Red LED	Status
OFF	OFF	Off
OFF	ON	red
ON	OFF	green
ON	ON	blue

When powered up

- Green LED illuminates for 1 second.
- RED LED illuminates for 1 second.
- Blue LED illuminates for 1 second with beep for 1 second

Operating mode

- Buzzer activated with 0V input.
- LEDs activated with 0V input.

Standard Mode

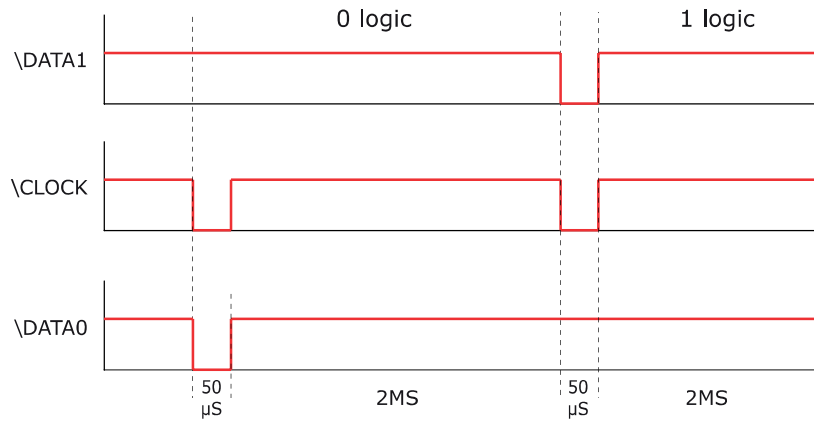
- Badge recognized: the orange LED illuminates and the buzzer activates for 150 milliseconds.

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7] 26-BIT WIEGAND FORMAT

Chronograms



Interface

- The output format is 26-bit Wiegand (Signals: DATA1, DATA0 and CLOCK),
- Output signal in open collectors (pull up of 2.2K in +5V) 26-bit hexadecimal output format.

The frame is made of 26-bit and built as follow:

- First parity: 1-bit – even parity for the first 12-bit,
- User Code: 3 half of a byte represent the code entered. Each byte is transferred from bit 7 to bit 0,
- Second parity: 1-bit – odd parity for the last 12-bit.

Bit 1	Bit 2 ... bit 25	Bit 26
Even parity on bit 2...bit13	Data (24 bits)	Odd parity on bit 14...bit 25

KEYPAD CODE

Example with a 4-Digit keypad code: « 1 3 7 A » Then « B » & « 1 3 7 5 » Then « B »

	1	0000	0000	0001	0011	0111	0101	0
Direct	Parity 1	0	0	1	3	7	A	Parity 2
Hexadecimal	Parity 1	0	0	0	5	5	F	Parity 2

Example with a 5-Digit keypad code: « 7 1 3 7 A » Then « B » & « 7 1 3 7 5 » Then « B »

Direct	Parity 1	0	7	1	3	7	A	Parity 2
Hexadecimal	Parity 1	0	1	1	6	C	F	Parity 2

Example with a 6-Digit keypad code: « 6 7 1 3 7 A » Then « B » & « 6 7 1 3 7 5 » Then « B »

Direct	Parity 1	6	7	1	3	7	A	Parity 2
Hexadecimal	Parity 1	0	A	3	E	8	F	Parity 2

- **Parity 1:** «0» if the number of 1 in bit 2 to bit 13 is even, «1» if the number of 1 in bit 2 to bit 13 is odd.
- **Parity 2:** «0» if the number of 1 in bit 14 to bit 25 is odd, «1» if the number of 1 in bit 14 to bit 25 is even.

BADGE CODE EX: 0F01198AAD

Parity 1	1	9	8	A	A	D	Parity 2
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Dual Technology Digicode®/Proximity reader - Wiegand

8] 30-BIT WIEGAND FORMAT

Signals output in open collectors with pull up in 30-bit hexadecimal format. The output format from the proximity reader is 30-bit wiegand (Signal: DATA1, DATA0 and CLOCK) and is structured as follow:

- **Parity 1:** 1 bit – even parity for the first 14-bit, Code : A code is formed from 7 half byte, Each byte is transferred from bit 7 to bit 0.
- **Parity 2:** 1 bit – odd parity for the last 14-bit.

Bit 1	Bit 2 à bit 29	Bit 30
Even Parity from bit 2 to bit 15	Data (28-bit)	Odd Parity from bit 16 to bit 29

KEYPAD + BADGE CODES

Example: Badge 0F01198AAD + 6-DIGIT Keypad code: « 6 7 1 3 7 5 » Then « B ».

		1	0001	0001	1001	1000	1010	1010	1101	0
KEYPAD CODE	BADGE	Parity 1	1	1	9	8	A	A	D	Parity 2
	Direct	Parity 1	0	6	7	1	3	7	5	Parity 2
	Hexadecimal	Parity 1	0	0	A	3	E	8	F	Parity 2

- **Parity 1:** «0» if the number of 1 in bit 2 to bit 15 is even, «1» if the number of 1 in bit 2 to bit 15 is odd.
- **Parity 2:** «0» if the number of 1 in bit 16 to bit 29 is odd, «1» if the number of 1 in bit 16 to bit 29 is even.

9] 44-BIT WIEGAND FORMAT

44-bit hexadecimal format. The output format from the proximity reader is 44-bit (Signal: DATA1, DATA0 and CLOCK) and is structured as follow:

- **Data:** 10 digit code number hexadecimal MSByte first. Each hexadecimal digit = 4 bit, MSBit first
- **LRC :** 4 bit = or restricted in between the digit of the data, MSBit first.

Bit 1 to bit 40	Bit 41 to bit 44
Badge code	LRC

KEYPAD + BADGE CODES

Example: Badge 0F01198AAD + 8-DIGIT Keypad code: « 6 7 1 3 7 5 » Then « B »

		0000	1111	0000	0001	0001	1001	1000	1010	1010	1101	...
KEYPAD CODE	BADGE	0	F	0	1	1	9	8	A	A	D	LRC
	Direct	0	0	0	0	6	7	1	3	7	5	LRC
	Hexadécimal	0	0	0	0	0	A	3	E	8	F	LRC

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10] LED MANAGEMENT ON CENTAUR SYSTEM

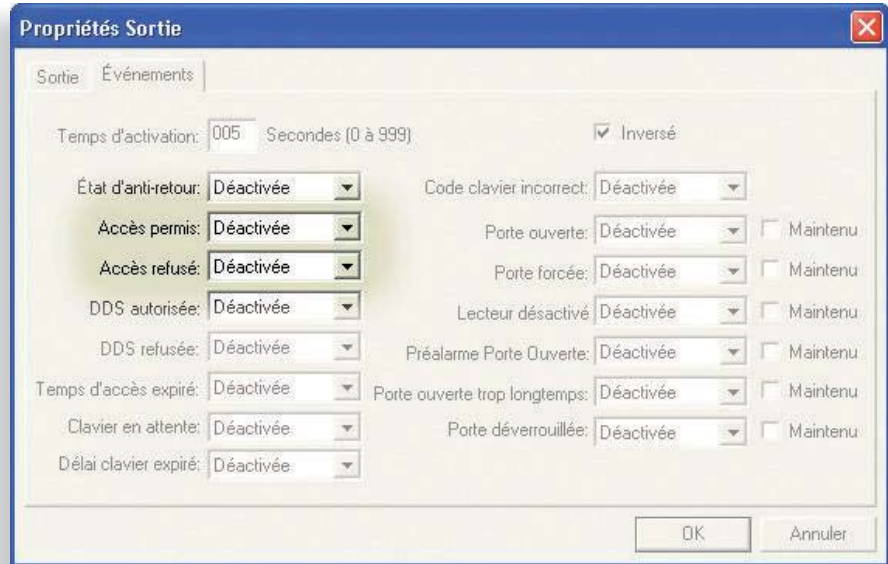
LED ACTUATION :
GREEN ACCESS ALLOWED
RED ACCESS DENIED
BLUE STAND-BY

RED LED SETTINGS

Accès permis: **Activée** ▼
 Accès refusé: **Déactivée** ▼

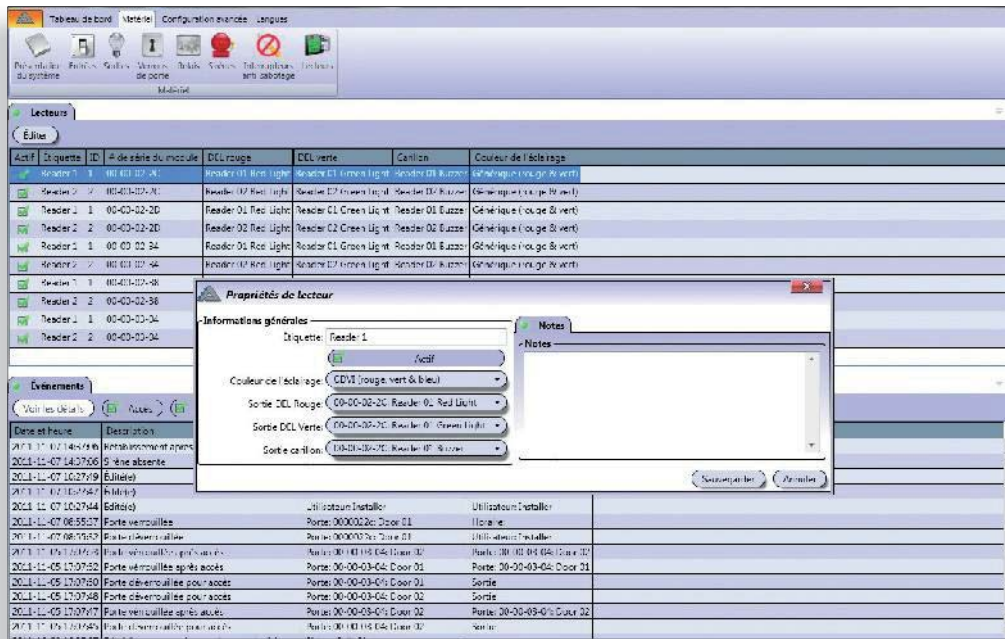
GREEN LED SETTINGS

Accès permis: **Déactivée** ▼
 Accès refusé: **Activée** ▼



11] LED MANAGEMENT ON ATRIUM SYSTEM*

LED ACTUATION
GREEN ACCESS ALLOWED / **RED** ACCESS DENIED / **BLUE** STAND-BY



* In Dicode® keypad mode only or Proximity mode only.

