KRYPTO
HIGH SECURITY CARD READERS

KRYPTO Mifare DESFire EV2 readers combined with CDVI EV2 credentials work right out of the box. No tedious and complicated programming required! Factory-programmed encryption keys ensure end-to-end encryption between the card, reader and A22K door controller. *KRYPTO – High Security Made Easy!*

K1

HIGH SECURITY CARD READER

- FULLY secure RS-485 connection (4 wires) with ATRIUM A22K module and CDVI DESFire EV2 credentials using authentication with diversified keys.
- Reads 13.56 MHz Mifare Classic and DESFire EV2
- OSDP compatible
- NFC Ready for mobile credentials
- 10 cm (4 in) read range
- Power requirements: 12VDC
- Current consumption : 200mA

ATRIUM
ACCESS CONTROL

High Security Kits

A22K1
2-Door High Security Reader Kit

- 1 x A22K controller
- 2 x K1 High Security Reader
- 1 x pack of 25 TAG-EV2 DESFire credentials

A22K1DS
2-Door Reader and Door Strike Kit

- 1 x A22K controller
- 2 x K1 High Security Reader
- 2 x Door Strike (ROFU 2400 Kit)
- 1 x pack of 25 TAG-EV2 DESFire credentials

ATRIUM
ACCESS CONTROL

High Security Made Easy

No tedious and complicated programming required!

FULLY ENCRYPTED

CDVI
Security to Access

www.cdvi.ca

ATRIUM
ACCESS CONTROL

A22K
2-DOOR / 4-READER FULLY ENCRYPTED IP CONTROLLER

Module Type Jumper Settings

Controller (Default)
EX — CT
Module will act as a controller (IP connection)

Expander
EX — CT
Module will act as an expander (RS-485 connection)

Lock Output Jumper Settings

Lock Output= 0V (Default)
0V — 12V
Toggles to 12VDC during unlock time (Typical use: door strike)

Lock Output= 12V
0V — 12V
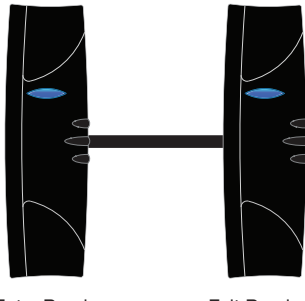Toggles to 0VDC during unlock time (Typical use: maglock)

FULLY ENCRYPTED

IP Connection
Use for A22K set as "Controller" ONLY.
100m (328 ft) max.

CDVI

TB1 LINK   RX TX 12V   24V BATT   STAT MODE   LOCK1 LOCK2 0V 12V 0V 12V
TYPE EX CT

+12V DC
A+
B-

Input 1
Input 2
Output 1
+12V DC
Output 2

READERS 1 2

Extra Inputs & Outputs
2 inputs (4 using zone doubling) and 2 outputs

K1
High Security Card Reader

White Green Black Red

Entry Reader
(Blue wire NOT connected)

Exit Reader
(Blue wire connected to GND)

READER DOOR 1
BUZ GRN RED D1 D0 GND 12V

READER DOOR 2
BUZ GRN RED D1 D0 GND 12V

INPUT DOOR 1
C1 GND REX1 12V

INPUT DOOR 2
C2 GND REX2 12V

ENCLOSURE TAMPER SWITCH INPUT
GND TMP

LOCK DOOR 1
LK+ LK-

LOCK DOOR 2
LK2+ LK2- C2 NO2 NC2

LOCK 1 2   RLY 1 2

C1 NO1 NC1

Remove the jumper to connect door contact

Door Contact
(Default Setting: N.C.)

REX
(Default Setting: N.C.)

Exit Button
N.C. — PRESS TO EXIT — C.

Motion Detector
C. N.C. — +12V
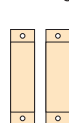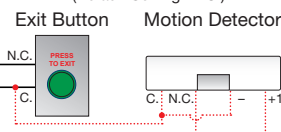
Pre-assembled Universal Plugin Power Supply (120/240V)

+24V DC + −

Optional PoE+ module available (A22KPOE)

+12V DC + −

Recommended Battery: 12V, 7Ah
(UL/ULC: YUASA #NP7-12 or Europe: CDVI B7AH)
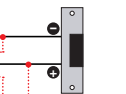
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UL 294

The diagram shows the connection of the various devices for Door # 1.

Lock Outputs
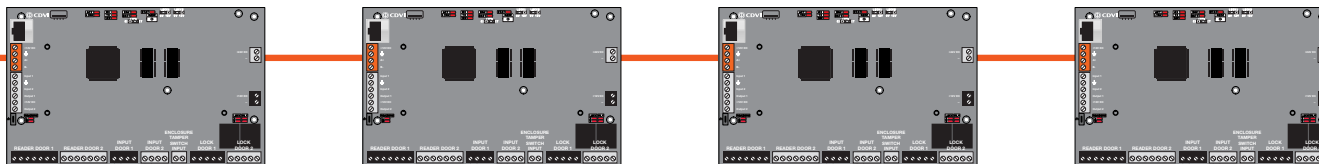Each lock output provides 750mA @ 12VDC
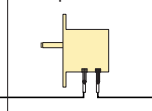
Door strike

Maglock

A22K set as "Expanders"
Connect up to four **A22K set as "Expanders"** on the RS485 bus, max. distance 1220m (4000 ft)
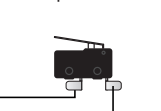*Do NOT connect A22K set as "Expander" to IP port.*

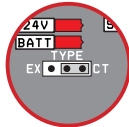**Enclosure Tamper Switch**

Wall Tamper Switch

Door Tamper Switch

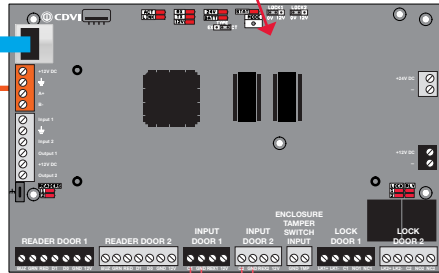# A22K 2 in 1 module, same product, two functions

#1: A22K set as "Controller"

Module Jumper Setting must be set at **"CT"** (Default)

EX ▢ CT

LAN or WAN

IP Port:
100m (300 ft) max.

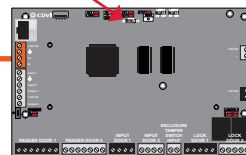**RS485 Port:**
1220m (4000 ft) max.

IP Port

The IP port is used to connect an **A22K set as "Controller"** on a network (LAN or WAN). System administrators configure, manage and monitor the system using the ATRIUM software (PC only) or web browser (PC or Apple) connected on the network.

One controller must be configured as a **"Master"** in a multi-controller site. All other **A22K set as "Controller"** must be added as **"Sub-Controllers"** (max. one master + 49 sub-controllers per site). See the ATRIUM software manual on how to designate an A22K as a **"Master"** Controller and add **"Sub-Controllers"**.

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Intertek

#2: A22K set as "Expander"

Module Jumper Setting must be set at **"EX"**

EX ▢ CT
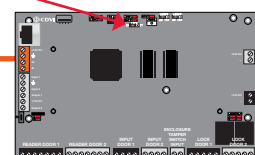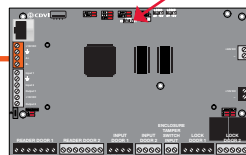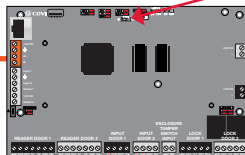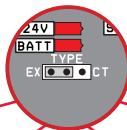
⚠ **Do NOT connect an A22K set as an "Expander" on the IP port**

RS485 BUS
Up to 4 **A22K set as "Expander"** can be connected on the RS485 port.

ATRIUM ACCESS CONTROL

SYSTEM OVERVIEW

LAN/WAN (TCP/IP)

WiFi

Computer

Tablet

Smartphone

Manage up to 500 doors
Supports any combination of A22K, A22KEC and/or ADH10 controllers (max. 50)

A22K
Encrypted Web-Based IP 2-Door Controller
(A22K set as a controller)

CDVI

A22K Set as Expander	**A22K** Set as Expander	**A22K** Set as Expander	**A22K** Set as Expander

RS485

High Security Card Reader (Door #1)

High Security Card Reader (Door #2)

A22KEC
Elevator Controller
Manages 2 elevator cabs
(A22K convert to A22KEC with free firmware)

CDVI

CA-A480-A Cab #1: Floor 1-16	**CA-A480-A** Cab #1: Floor 11-32	**CA-A480-A** Cab #1: Floor 33-48	**CA-A480-A** Cab #1: Floor 49-64
CA-A480-A Cab #2: Floor 1-16	**CA-A480-A** Cab #2: Floor 11-32	**CA-A480-A** Cab #2: Floor 33-48	**CA-A480-A** Cab #2: Floor 49-64

RS485

High Security Card Reader (Door #1)

High Security Card Reader (Door #2)

ADH10
Door Handle Controller
(Manages up to 10 door handle locks)

CDVI

Each **GWE can** manage up to 10 locks.
One ADH10 manages up to 10 **GWE**.
(ADH10 firmware version 3.2.111 or higher)

RS485

Bluetooth Low Energy

Range up to 100' in typical building construction

GWE
Gateway

NDE
Wireless Lock