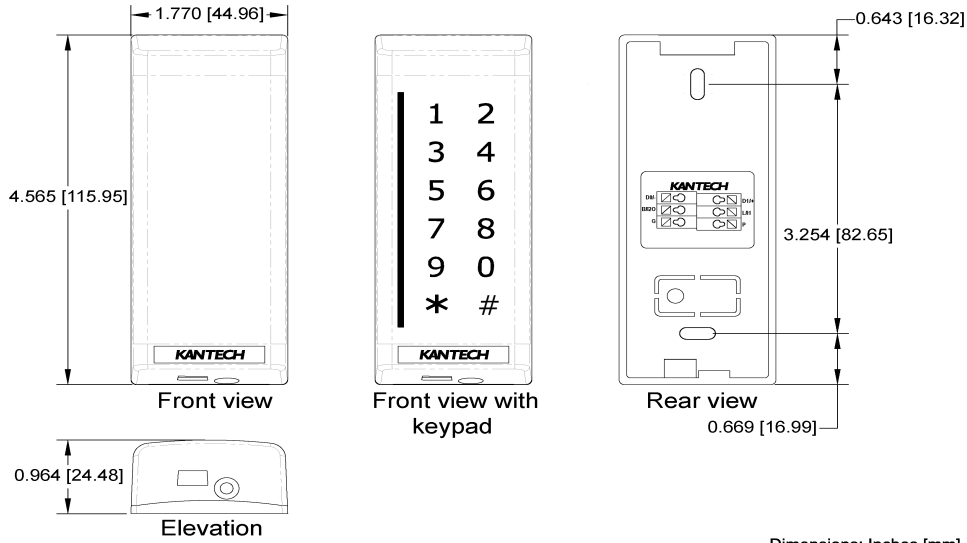


## Mullion / Meneau de porte



Dimensions: Inches [mm]

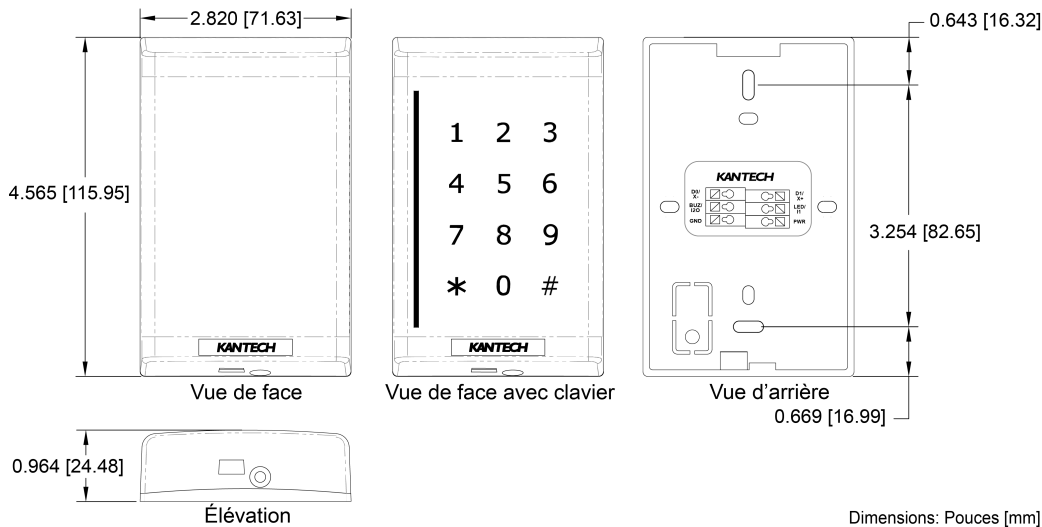
### Technical Specifications

Model	Mullion				Single Gang			
	KT-MUL-MT-KP2	KT-MUL-MT2	KT-MUL-SC2	KT-MUL-SC-KP2	KT-SG-MT-KP2	KT-SG-MT2	KT-SG-SC2	KT-SG-SC-KP2
<b>RF technologies</b>	13.56 MHz 125 kHz	13.56 MHz 125 kHz	13.56 MHz	13.56 MHz	13.56 MHz 125 kHz	13.56 MHz 125 kHz	13.56 MHz	13.56 MHz
<b>Power consumption (mA) @ 12 VDC Peak / AVG</b>	210 mA / 100 mA	190 mA / 100 mA	190 mA / 100 mA	210 mA / 100 mA	210 mA / 100 mA	190 mA / 100 mA	190 mA / 100 mA	210 mA / 100 mA
<b>Weight</b>	110 g (0.24 lb)	110 g (0.24 lb)	105 g (0.23 lb)	110 g (0.24 lb)	175 g (0.4 lb)	170 g (0.37 lb)	165 g (0.36 lb)	175 g (0.4 lb)
<b>Capacitive Touch Keypad with backlighting</b>	Yes	No	No	Yes	Yes	No	No	Yes
<b>Read range 125 kHz ioProx ID-1 credentials (Cards)</b>	Up to 5.0 cm (1.9 in.)			--	Up to 7.5 cm (2.9 in.)		--	
<b>Read range 13.56 MHz MIFARE Plus EV1, encrypted sector, ID-1 credentials (Cards)</b>	Up to 4.5 cm (1.7 in.)				Up to 5.9 cm (2.3 in.)			
<b>Mounting</b>	Mullion				Single Gang, North America / Europe			
<b>Dimension (H x W x D)</b>	115.8 x 44.6 x 24.7 mm (4.56 x 1.75 x 0.97 in.)				115.8 x 71.5 x 24.7 (4.56 x 2.81 x 0.97 in.)			
<b>Supported credentials 125 kHz</b>	Kantech ioProx XSF cards HID Prox cards		--		Kantech ioProx: XSF cards HID Prox cards		--	
<b>Supported credentials 13.56 MHz</b>	ioSmart SSF. 32-bit CSN/UID: Mifare Plus EV1 (ISO-14443A), Mifare Desfire (ISO-14443A), Mifare Desfire EV1 (ISO-14443A), Mifare Classic (ISO-14443A), and ISO-14443B. OSDP: CSN/UID output is 56-bit.							
<b>Supported credentials BLE (Bluetooth low energy) 2.4 GHz</b>	ioSmart mobile credentials and smart keys							
<b>Wiring terminal</b>	6 screwless poles							
<b>Tamper</b>	Optical							
<b>Wiegand communication formats</b>	Kantech SSF/XSF 26/34bits and HID Prox							
<b>Sounder</b>	Integrated							
<b>Security</b>	AES- 128 bit encryption: Between the ioSmart card, the reader, and the controller (RS-485 or OSDP). AES-256 bit encryption: Between the ioSmart Mobile Credential (BLE) and reader. See the <i>ioSmart Card Reader Installation Guide</i> for more information.							
<b>Output</b>	RS-485 or BLE panel-less: 1 supervised open-drain, up to 750 mA							
<b>Operating temperature</b>	- 40°C to +70°C (- 40°F to +158°F). - 35°C to +66°C (- 31°F to +151°F) for UL listed product.							
<b>Operating humidity</b>	0 to 95% non-condensing. UL verified at 85% Rh.							
<b>LED indicator</b>	Multi-color bar: Red, green, yellow, blue. Configurable.							
<b>Inputs in Wiegand mode</b>	LED and buzzer							
<b>Inputs in RS-485</b>	2 to 4, configurable							
<b>Inputs in BLE panel-less</b>	2 configurable							
<b>Input voltage</b>	8.5 VDC to 16 VDC (provided by UL 2610, UL 294, or UL 603 listed, power limited power source).							
<b>Housing</b>	Polycarbonate, smoked black							
<b>Flammability rating</b>	UL94 V-2							
<b>Firmware</b>	Fully upgradable using RS-485							
<b>Ingress protection rating</b>	IP66. See the <i>ioSmart Card Reader Installation Guide</i> for more information.							
<b>Communication</b>	RS-485, Wiegand, OSDP, or BLE							
<b>Cabling</b>	3 twisted pairs AWG 22 unshielded or CAT5, up to 150 m (500 ft)							
<b>Warranty</b>	Limited lifetime							
<b>Certifications</b>	FCC, IC, CE, UKCA, UL 294, UL 2610, FIPS 197, RoHS, WEEE. For RS-485, NIST CAVP validation number AES 3667, key length 128.							
<b>Altitude</b>	2000 m (6561 ft), maximum							
<b>Pollution degree, per IEC 62368-1</b>	3							

**Note:** For more information about wiring distances, refer to the *ioSmart Card Reader Installation Guide*.

# Smart card readers / Lecteurs de cartes à puce

## Single Gang / Boîte électrique simple



### Spécifications techniques

Modèle	Meneau de porte				Boîte électrique simple			
	KT-MUL-MT-KP2	KT-MUL-MT2	KT-MUL-SC2	KT-MUL-SC-KP2	KT-SG-MT-KP2	KT-SG-MT2	KT-SG-SC2	KT-SG-SC-KP2
Fréquences de transmission	13,56 MHz 125 kHz	13,56 MHz 125 kHz	13,56 MHz	13,56 MHz	13,56 MHz 125 kHz	13,56 MHz 125 kHz	13,56 MHz	13,56 MHz
Consommation (mA) à 12 V c.c. (pointes / moyenne)	210 mA / 100 mA	190 mA / 100 mA	190 mA / 100 mA	210 mA / 100 mA	210 mA / 100 mA	190 mA / 100 mA	190 mA / 100 mA	210 mA / 100 mA
Poids	110 g (0,24 lb)	110 g (0,24 lb)	105 g (0,23 lb)	110 g (0,24 lb)	175 g (0,4 lb)	170 g (0,37 lb)	165 g (0,36 lb)	175 g (0,4 lb)
Clavier tactile capacitif avec rétroéclairage	Oui	Non	Non	Oui	Oui	Non	Non	Oui
Distance de lecture moyenne à 125 kHz ioProx, carte type ID-1	Jusqu'à 5.0 cm (1,9")		--		Jusqu'à 7.5 cm (2,9")		--	
Distance de lecture moyenne à 13,56 MHz Mifare Plus EV1, secteur crypté, carte type ID-1	Jusqu'à 4.5 cm (1,7")				Jusqu'à 5.9 cm (2,3")			
Compatibilité d'installation	Meneau de porte				Boîte électrique simple pour l'Amérique du Nord / Europe			
Dimension en millimètres (en pouces) (H x L x P)	115,8 x 44,6 x 24,7 mm (4,56 x 1,75 x 0,97")				115,8 x 71,5 x 24,7 mm (4,56 x 2,81 x 0,97")			
Format de cartes supporté 125 MHz	Cartes Kantech ioProx XSF Cartes HID Prox		--		Cartes Kantech ioProx XSF Cartes HID Prox		--	
Format de cartes supporté 13,56 MHz	ioSmart SSF. 32-bit CSN/UID: Mifare Plus EV1 (ISO-14443A), Mifare Desfire (ISO-14443A), Mifare Desfire EVI (ISO-14443A), Mifare Classic (ISO-14443A), et ISO-14443B. OSDP: La sortie CSN/UID est de 56-bits.							
Format de cartes supporté BLE 2.4 GHz	Identifiants mobiles et clés intelligentes ioSmart							
Bornes de câblage	6 pôles sans vis							
Anti-sabotage	Optique							
Formats de Communication Wiegand	Kantech SSF/XSF 26/34bits et HID Prox							
Avertisseur sonore	Intégré							
Sécurité	Cryptage AES-128 bits : Entre la carte ioSmart, le lecteur et le contrôleur (RS-485 ou OSDP). Cryptage AES-256 bits : Entre la carte ioSmart Mobile Credential (BLE) et le lecteur. Consultez le <i>Guide d'installation du Lecteur de Cartes ioSmart</i> pour plus d'informations.							
Sortie	RS-485: 1 supervisée drain ouvert, jusqu'à 750 mA							
Température de fonctionnement	- 40°C à +70°C (- 40°F à +158°F). - 35°C à +66°C (- 31°F à +151°F) pour les produits UL listed.							
Taux d'humidité	0 à 95% sans condensation. 85% sans condensation pour les produit UL listed.							
Voyant DEL	Barre multicolore : Rouge, verte, jaune, bleue et couleurs obtenues par configuration							
Entrées en mode Wiegand	DEL et avertisseur sonore							
Entrées en mode RS-485	2 à 4, configurable							
Entrées en mode BLE panel-less	2 configurable							
Alimentation	8,5 V c.c. à 16 V c.c. (fournie par une source d'alimentation à puissance limitée, référencée UL 2610, UL 294, ou UL 603).							
Boîtier	Polycarbonate, noir fumé							
Indice d'inflammabilité	UL94 V-2							
Micrologiciel	Facilement mis-à-jour via le bus RS-485.							
Indice de protection	IP66. Consultez le <i>Guide d'installation du Lecteur de Cartes ioSmart</i> pour plus d'informations.							
Communication	RS-485, Wiegand, OSDP, ou BLE							
Câblage	3 paires torsadées, 22 AWG, non blindé ou CAT5, jusqu'à 150 m (500 pi) de long.							
Garantie	À vie limitée							
Certifications	FCC/IC, CE, UKCA, UL 294, UL 2610, FIPS 197, RoHS et WEEE. Pour RS-485, NIST CAVP numéro de validation AES 3667, longueur de clé 128.							
Altitude	2000 m (6561 ft), maximum							
Degré de pollution, par IEC 62368-1	3							

Remarque: Reportez-vous au manuel d'installation pour plus de détails sur les distances de câblage.

# Smart card readers / Lecteurs de cartes à puce

## Mounting instructions

To install the reader, complete the following steps:

1. Pull the cable from the wall through the hole of the mounting plate.
2. Attach the mounting plate to the wall with #6 (3.5 mm) screws. Screw length depends on wall surface and thickness.
3. For tamper detection, cut the plastic tab from the mounting plate.
4. Fasten the white reflector tab back on the wall.
5. After installing the wiring using the wiring diagrams, insert the hook at the top of the cover into the mounting plate tab and press the bottom of the cover until the bottom hook snaps into place.
6. Use the provided Phillip's head screw to secure the bottom of the reader.

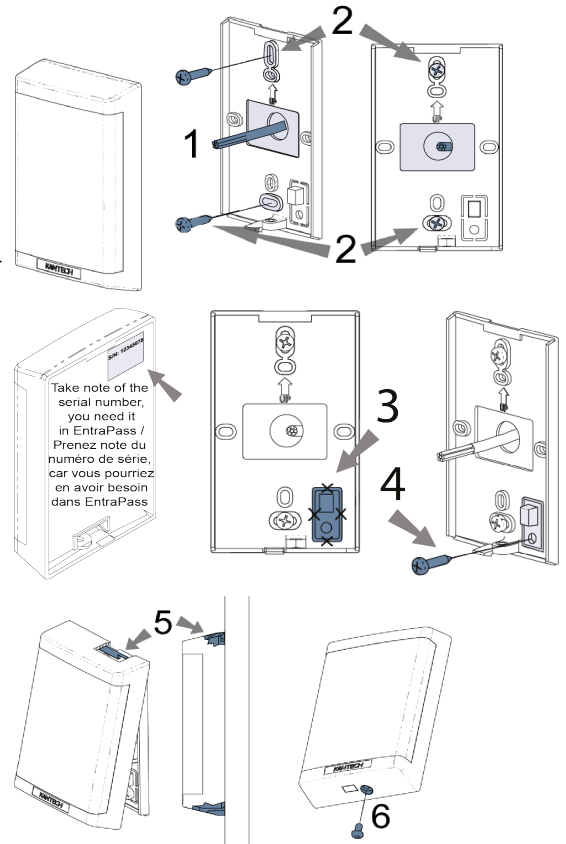
**Note:** If using CAT5 cable, use two wires for GND, and two wires for PWR.

## Instructions pour montage

Pour installer le lecteur:

1. Tirez le câble du mur et le passer à travers la plaque de montage.
2. Fixez la plaque de montage au mur en utilisant des vis #6 (3,5 mm). La longueur de vis requise dépend de la surface et de l'épaisseur du mur.
3. Pour une détection d'anti-sabotage, coupez la languette en plastique à partir de la plaque de montage.
4. Refixez la languette blanche du réflecteur sur le mur.
5. Après l'installation du câblage conformément aux schémas de câblage, insérez le crochet en haut du couvercle dans la languette de la plaque de montage et appuyez sur le bas du couvercle jusqu'à ce que le crochet inférieur s'enclenche.
6. Utilisez la vis à tête Phillips pour fixer la partie inférieure du lecteur.

**Note:** Si vous utilisez un câble CAT5, utilisez deux fils pour GND et deux fils pour PWR.



## FCC COMPLIANCE STATEMENT

**CAUTION:** Changes or modifications not expressly approved by KANTECH could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

## RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.8 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

## ISED CANADA STATEMENT

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-3 (B) / NMB-3 (B).

## RF Exposure Statement (ISED)

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.6 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Pour se conformer aux exigences de conformité ISED RSS-102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

### Mullion MT (with or without keypad)

FCC ID: V8515KTMULMTKP2  
ISED: 5690B-KTMULMTKP2

### Mullion SC (with or without keypad)

FCC ID: V8515KTMULSCKP2  
ISED: 5690B-KTMULSCKP2

### Single Gang MT (with or without keypad)

FCC ID: V8515KTSGMTKP2  
ISED: 5690B-KTSGMTKP2

### Single Gang SC (with or without keypad)

FCC ID: V8515KTSGSCKP2  
ISED: 5690B-KTSGSCKP2

## UL294 Performance Levels and Requirements:

Destructive Attack: Level I (no attack test)

Line Security: Level III via RS-485 communication and EntraPass reader template having Buzzer enabled for Comm fail alarm; Level 1 via Wiegand communication.

Endurance: Level IV (100,000 cycles)

Standby Power: Level I (no integral standby power)

Installation location and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70. There is no maintenance required and there are no replacement parts required for these devices.

## UL 2610 Requirements:

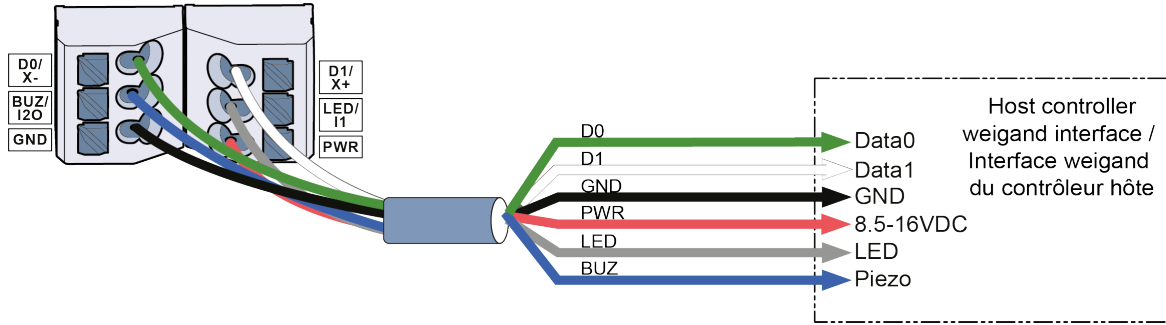
- For alarm signals, the end-of-line resistor shall be UL listed 5.6Kohm, 5%, 1/2 W with 18 AWG wire leads six (6) inches minimum. It shall be securely fastened with no means to open circuit, short to an adjacent circuit node, or cause a risk of electrical shock.
- ioSmart readers that are wired to controller's Wiegand interface and used for arming and disarming shall be configured to mode 8 to enable Wiegand mode tamper reporting.

For BLE mobile credential installations, BLE v4.2 or higher, Android OS 9.0 or higher, Apple iOS 9 or higher, and EntraPass go Pass 2.00.xx or higher are supported.

# Smart card readers / Lecteurs de cartes à puce

## Wiegand wiring diagram / Schéma de câblage Wiegand

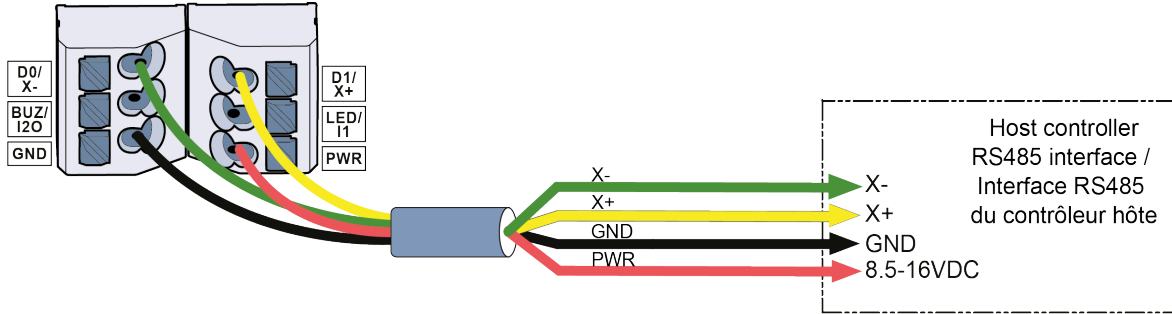
The following diagram shows how to connect the reader to the host controller using Wiegand wiring. / Le schéma suivant démontre comment connecter le lecteur au contrôleur hôte à l'aide du câblage Wiegand.



**Note:** If using CAT5 cable, use two wires for GND, and two wires for PWR. / Si vous utilisez un câble CAT5, utilisez deux fils pour GND et deux fils pour PWR.

## RS-485 wiring diagram / Schéma de câblage RS-485

The following diagram shows how to connect the reader to the host controller using RS-485 wiring. / Le schéma suivant démontre comment connecter le lecteur au contrôleur hôte à l'aide du câblage RS-485.

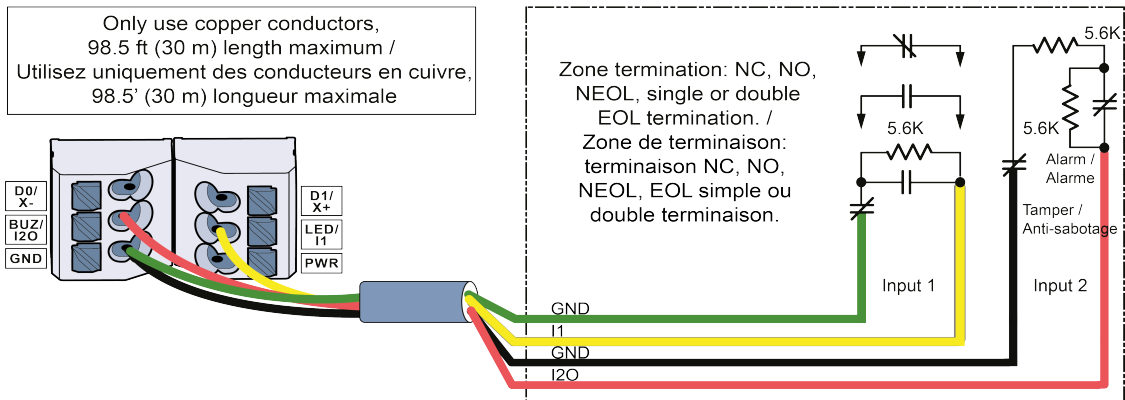


**Note:** If using CAT5 cable, use two wires for GND, and two wires for PWR. / Si vous utilisez un câble CAT5, utilisez deux fils pour GND et deux fils pour PWR.

The RS-485 mode is supported by two access controllers, the KT-400 and the KT-1 (COM2). / Le mode RS-485 est supporté par deux contrôleurs d'accès, le KT-400 et le KT-1 (COM2).

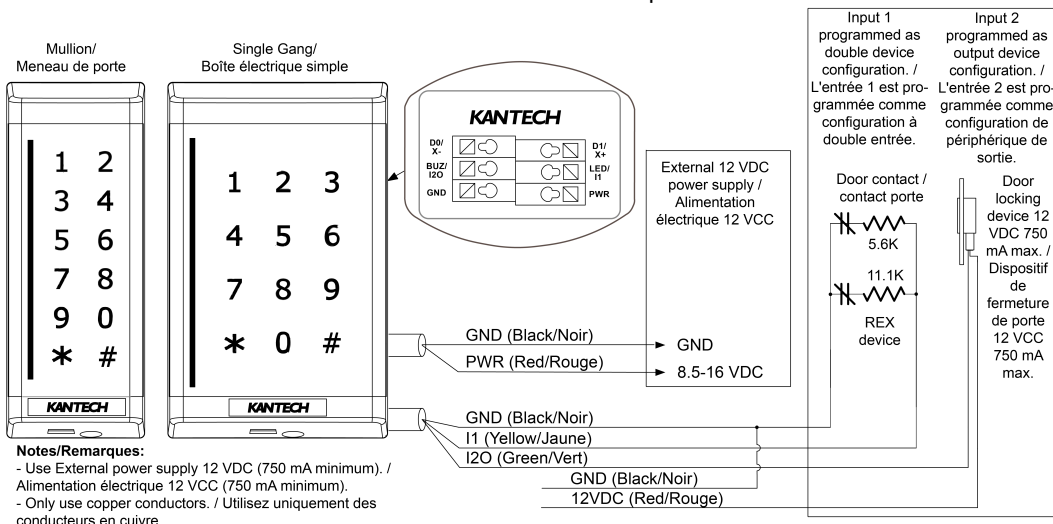
## Optional input wiring connections RS-485 only / Schéma de câblage des entrées facultatives en RS-485 seulement

The following diagram shows how to connect the reader for optional input connections. This wiring is in addition to connecting to the host controller. This is not currently available in EntraPass when using OSDP. / Le schéma suivant démontre comment connecter le lecteur pour les connexions d'entrées facultatives. Ce câblage s'ajoute à la connexion au contrôleur hôte. Ceci n'est pas disponible dans EntraPass quand le lecteur est configuré en mode OSDP.



## BLE lock output wiring diagram / Schéma de câblage du verrou en BLE

The following diagram shows how to connect the BUZ input to a lock output in BLE panel-less mode, with optional input contact. / Le schéma de câblage suivant démontre comment connecter l'entrée BUZ comme une sortie de verrouillage en mode BLE sans panneau, avec contacts d'entrée en option.



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