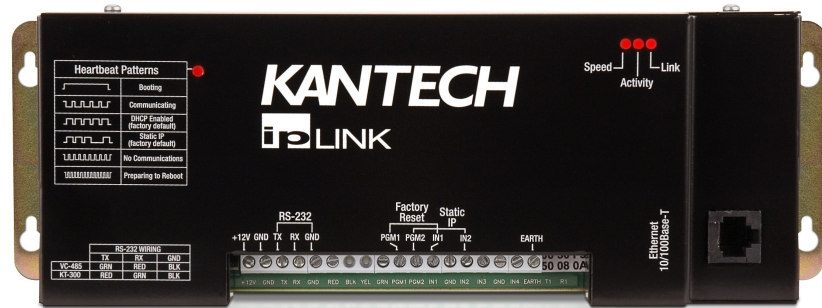
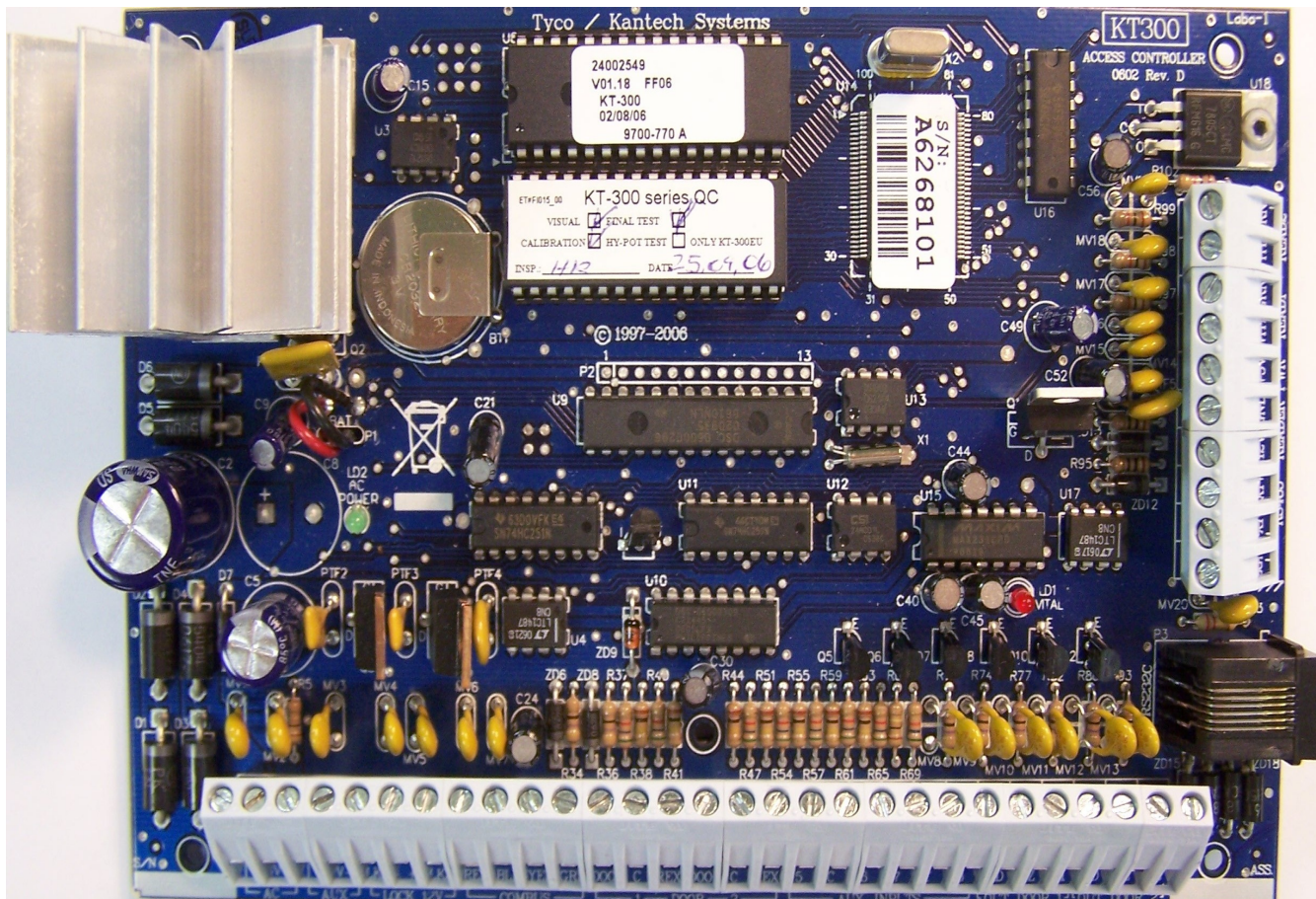


Hardware

These are the steps for installing the hardware components.



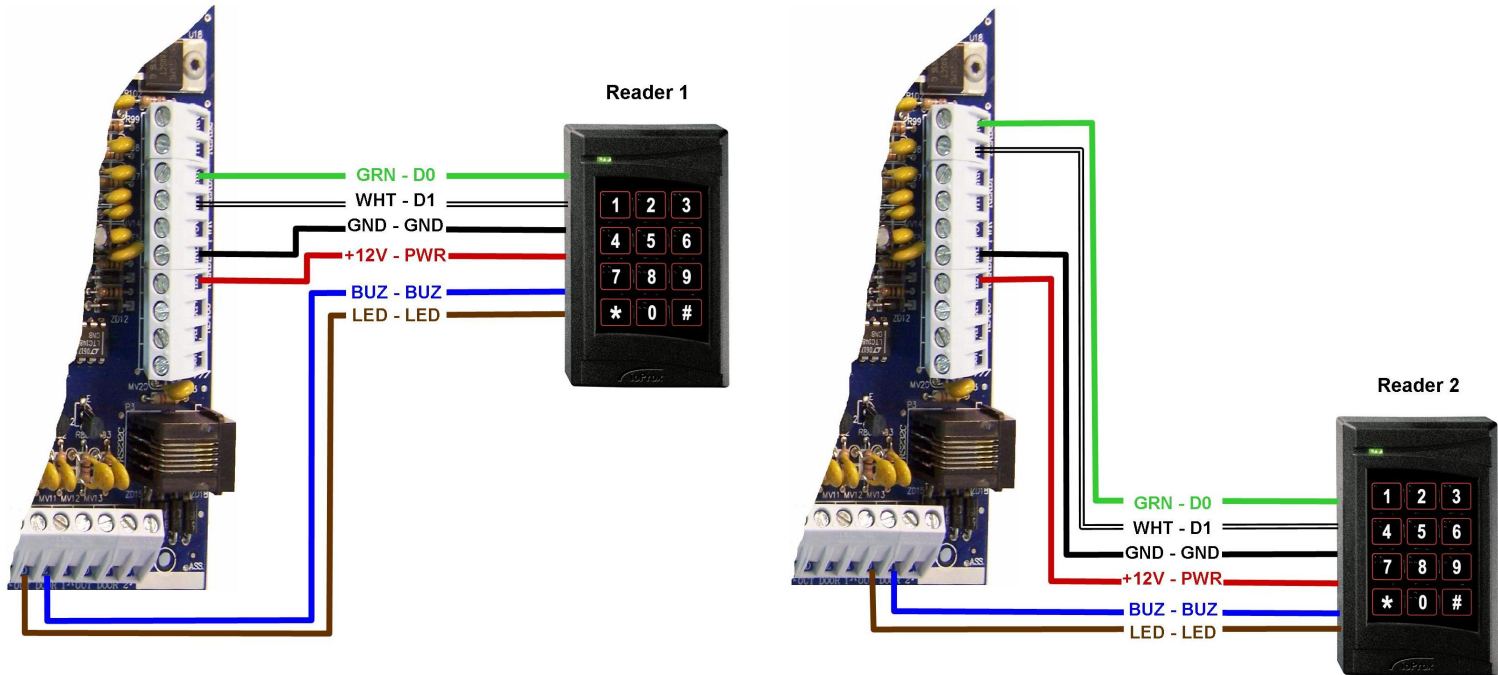
KT-300 Installation



Readers

Required Wire (ioProx reader):

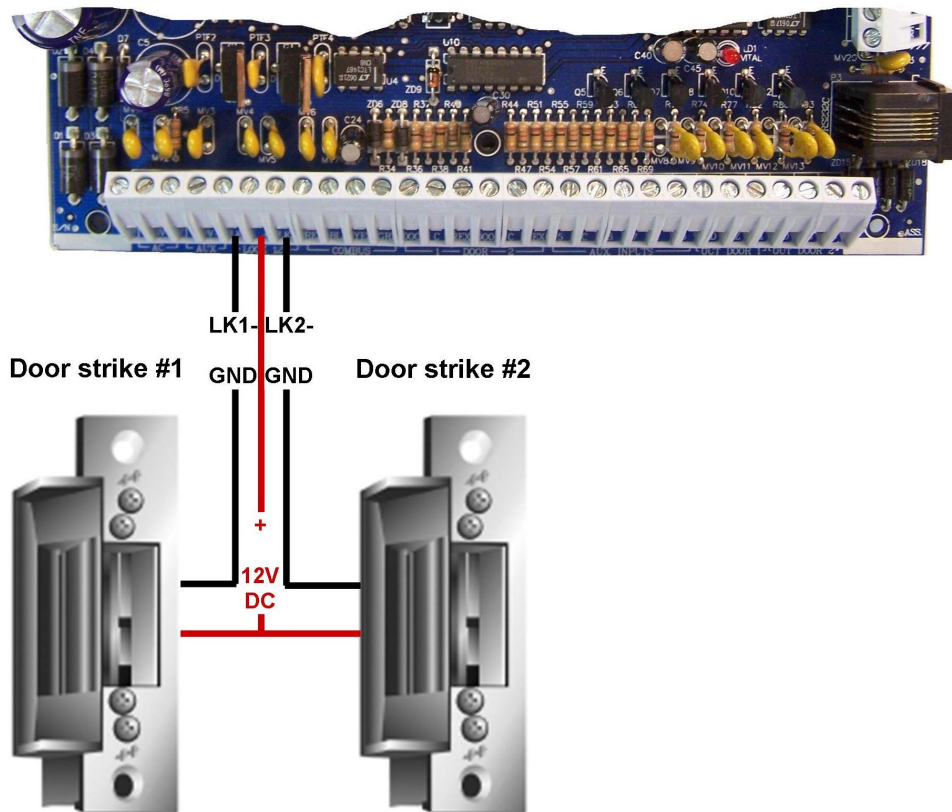
- . 3 twisted pairs, solid, #22AWG,unshielded
- . Compatible with Ethernet CAT3 and CAT5e cable
- . Up to 1000' with Belden # 8742 @ 12VDC.



Door Strikes

Required Wire:

18 AWG 2 Conductors (or bigger depending on Voltage Drop).



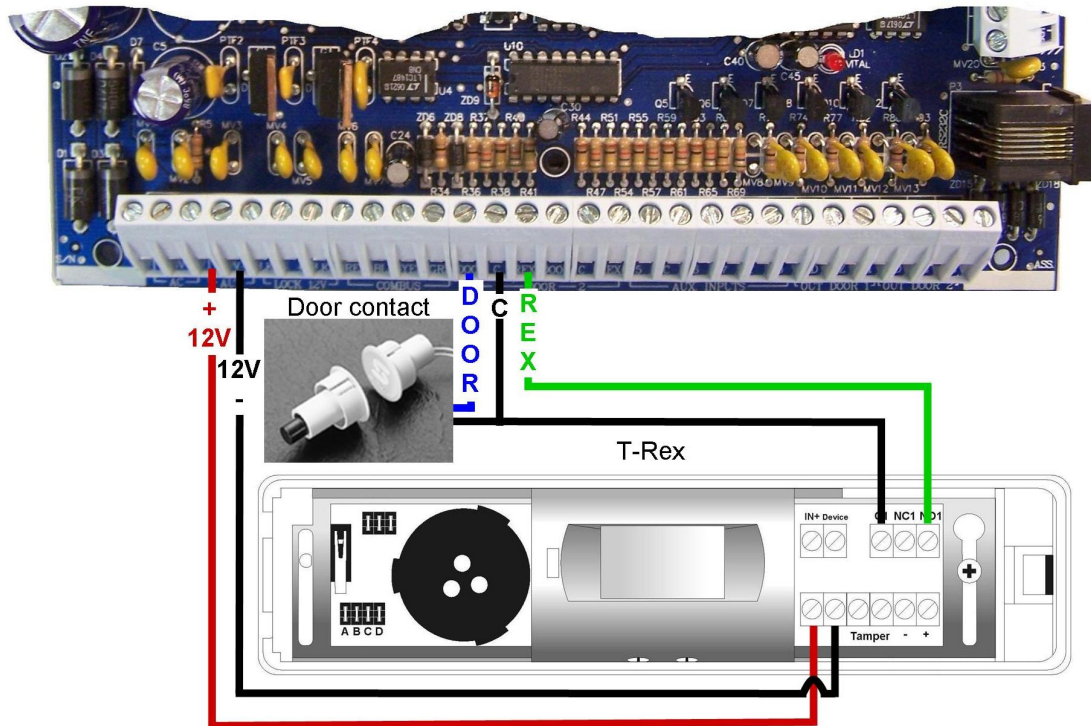
REX & Contact

Required Wire:

- . Rex : 4 conductors, solid, #22AWG.
- . Door Contact: 2 conductors, solid, #22AWG.
- . Compatible with Ethernet CAT3 and CAT5e cable
- . Up to 2000' with Belden # 9794.



Door #1

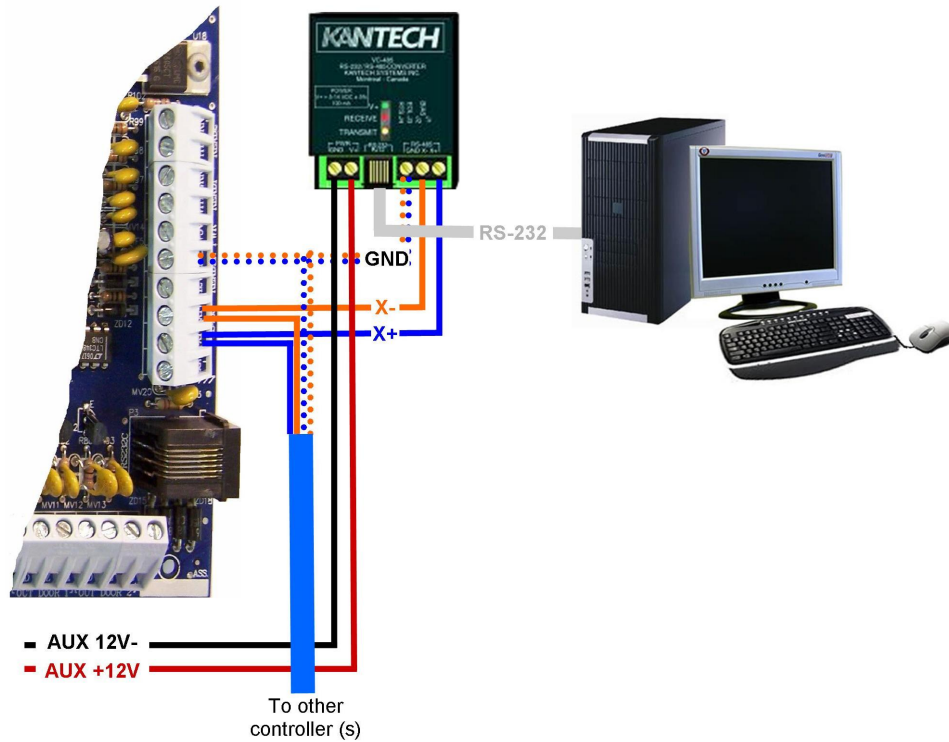


Communication Loop

Required Wire:



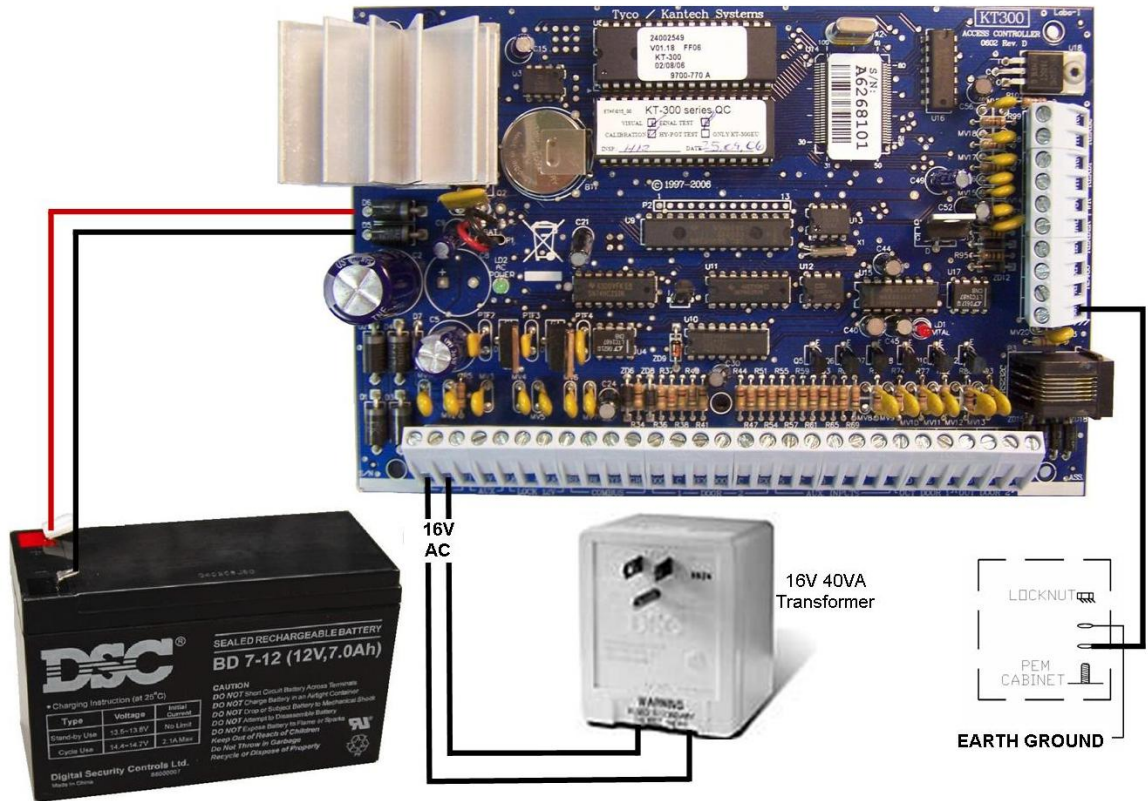
- 2 twisted pairs, #22AWG, unshielded, Ethernet CAT3
- Compatible with Ethernet CAT5e cable
- Up to 4000' with Belden #1227A1
- Up to 32 controllers in daisy chain configuration



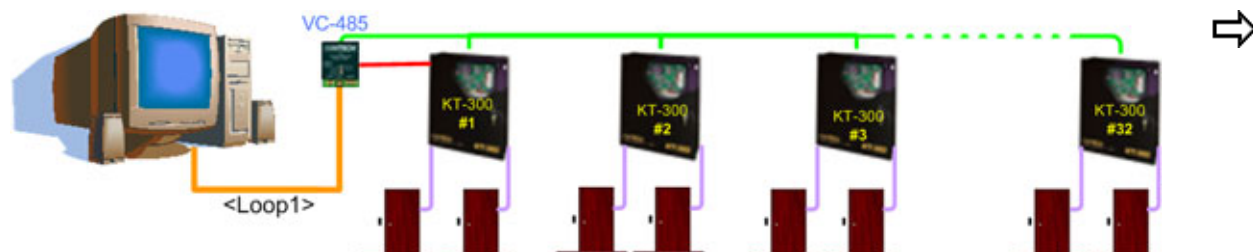
Power

Required Wire:

- 3 conductors, solid, #18AWG, unshielded (2 for transformer, 1 for GND)
- Requires a 16VAC 40VA transformer and a 12V, 7Ah battery.



Wiring



RS-232 Communication

- Connection between the computer and the VC-485.
- Max 100'.
- Use cable included with the VC-485. (10').

Power cable

- Power from a KT-300 to VC-485.
- Use 2 conductors, 22 AWG.
- Max 75'.

RS-485 Communication

- Connection between the computer and the controllers.
- Max 4000'.
- Use CAT3 cable, 22 AWG.

Door

- Reader wire: 6 conductors, twisted, 22 AWG non shielded (io-Prox) Max 1000'.
- Reader wire: 6 conductors, twisted, shielded, 22 AWG (Other readers) Max 500'.
- Door Lock: 2 conductors, 18 AWG, unshielded, Max 500'.
- Rex: 4 conductors, solid, 22 AWG, Maximum 2000'.
- Door Contact: 2 conductors, solid, 22 AWG, Max 2000'.

HARD RESET



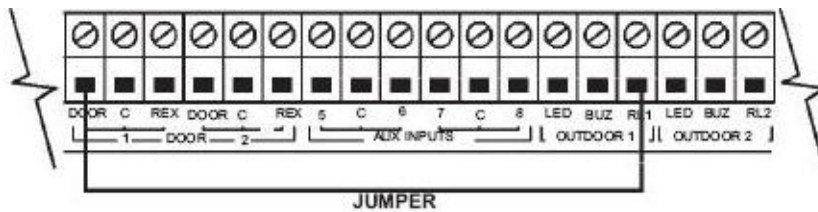
KT-300 should be Hard Reseted prior to communicate with any EntraPass software

Procedure to perform a Hard Reset:

1. Disconnect both transformer and battery.
2. Remove all connection to DOOR1 and RL1 terminals.
3. Place a jumper between the DOOR1 and RL1 terminals.
4. Apply AC power to the transformer.

The VITAL LED should flash 4 times. This means that the controller is in the Hard Reset mode.

5. Remove jumper.
6. Reconnect the battery.

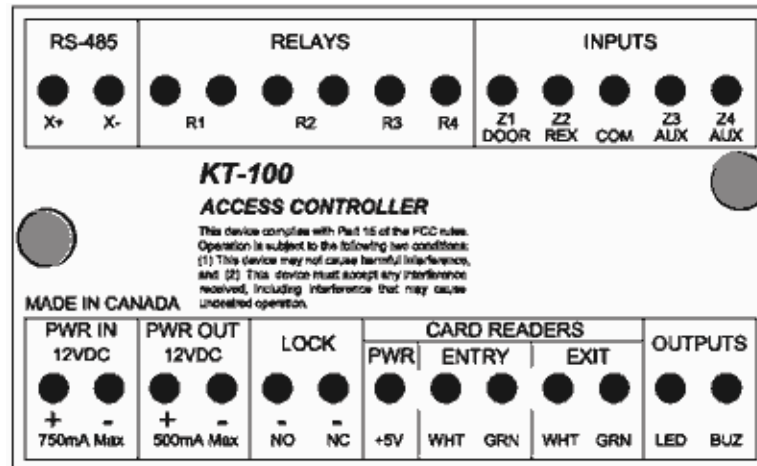




Communication status and other vital controller parameters can be obtained from VITAL LED pulsation.

VITAL LED Pulse	Status Identification
1 per second	Communication with EntraPass Global Gateway
2 per second	Communication with master controller, modem online
3 per second	Communication with EntraPass Corporate Gateway
4 per second	Hard reset to factory defaults
Continuous	Offline
0.5 second ON	Reading access card
2.5 seconds ON	Modem confirm

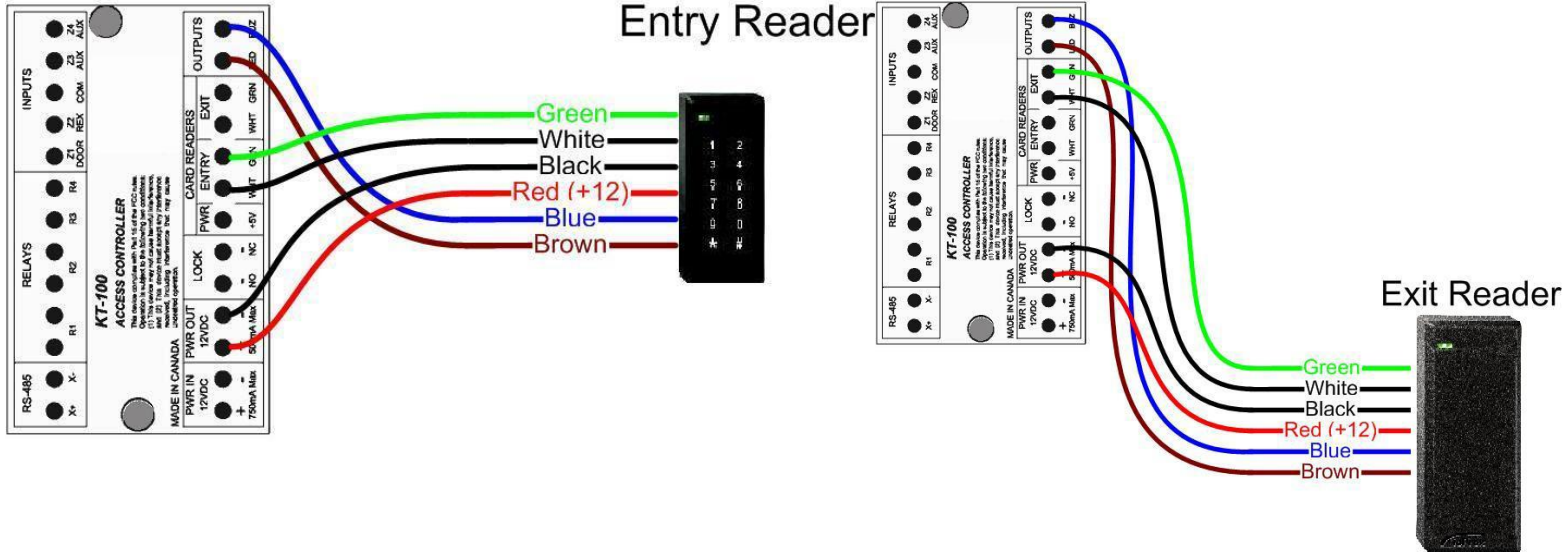
KT-100 Installation



Readers

Required Wire (ioProx reader):

- 3 twisted pairs, solid, #22AWG, unshielded
- Compatible with Ethernet CAT3 and CAT5e cable
- Up to 1000' with Belden # 8742 @ 12VDC.

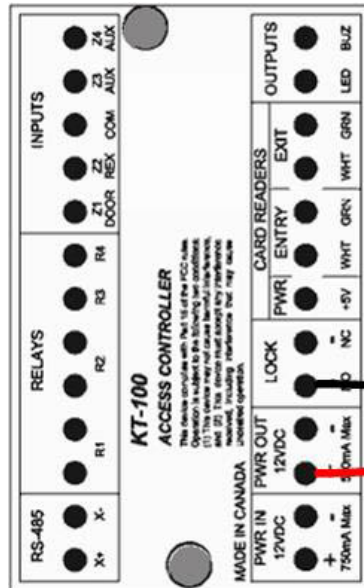


Door Strikes

Required Wire:



18 AWG 2 Conductors (or bigger depending on Voltage Drop).



Door Strike

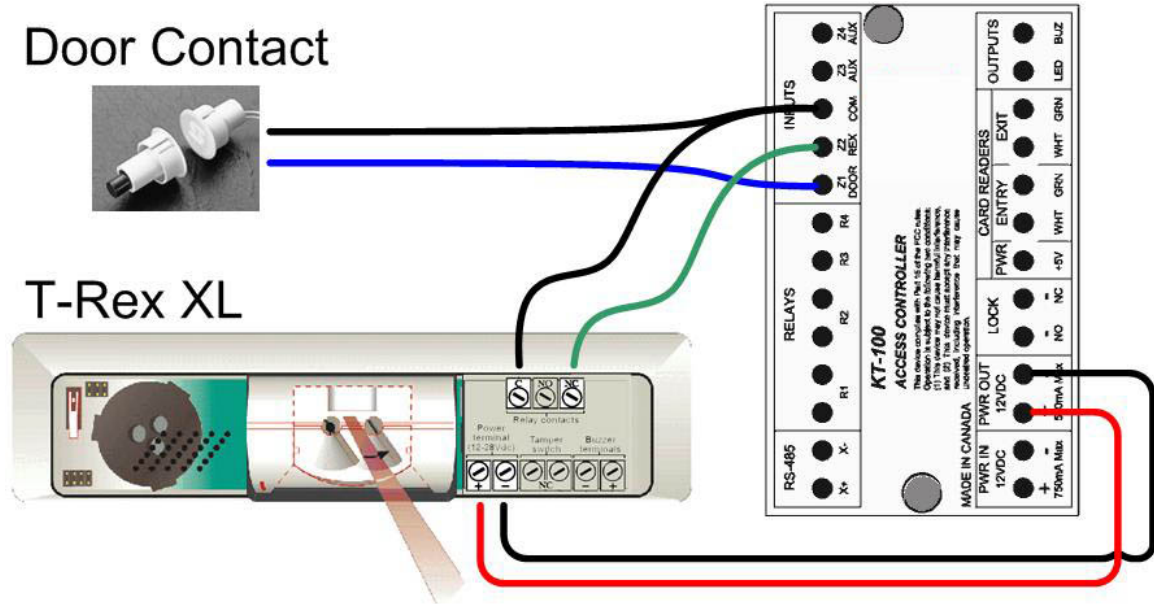


Black

Red (+12)

REX & Contact

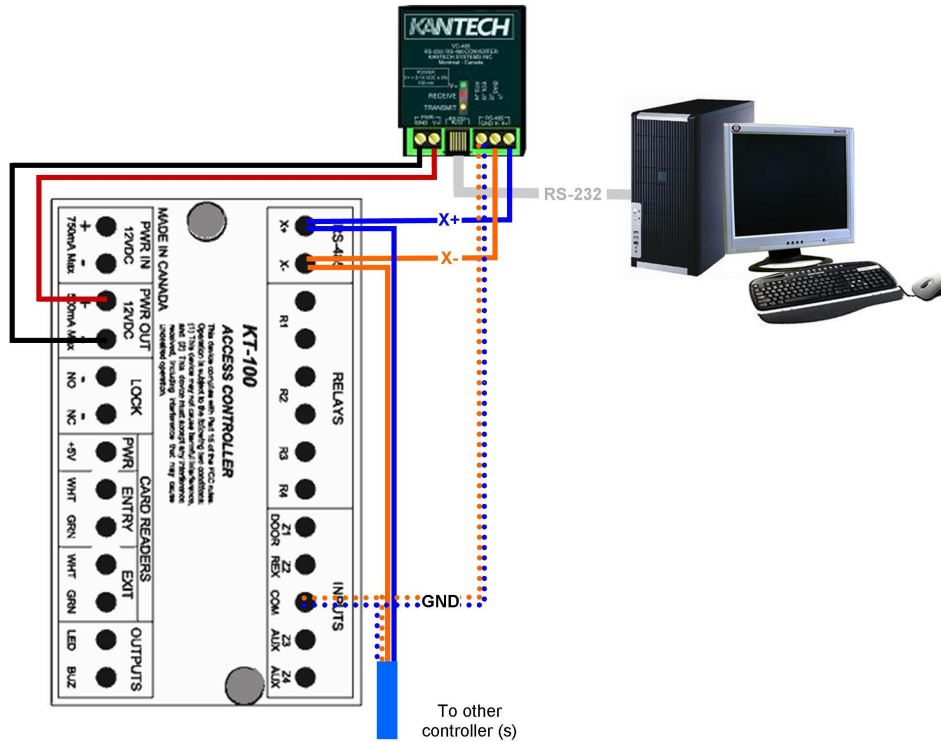
- . Rex: 4 conductors, solid, #22AWG.
- . Door Contact: 2 conductors, solid, #22AWG.
- . Compatible with Ethernet CAT3 and CAT5e cable
- . Up to 2000' with Belden # 9794.



Communication Loop

Required Wire:

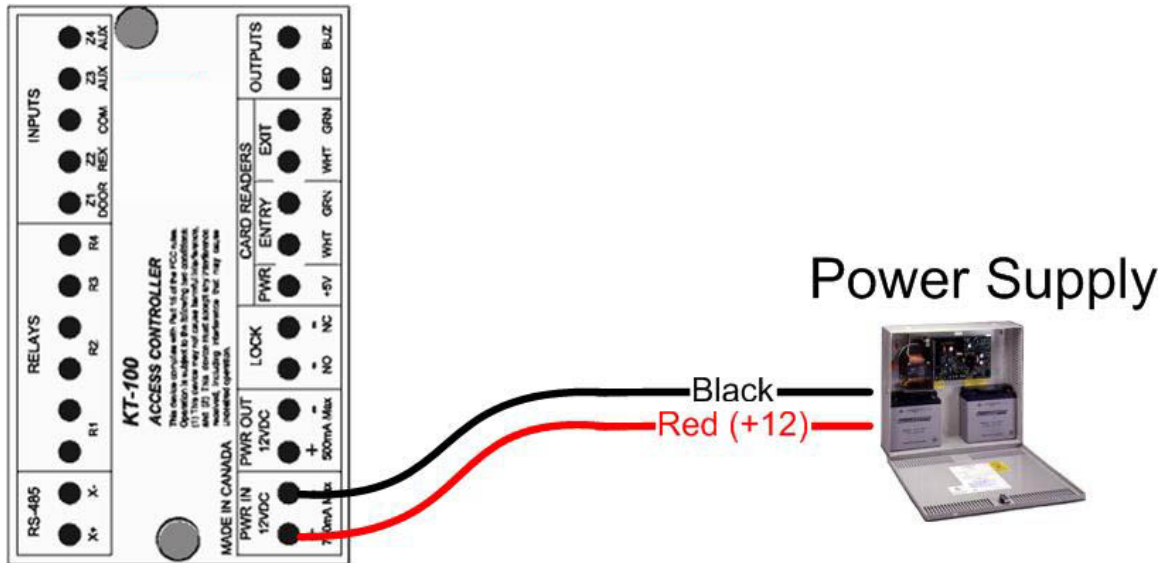
- 2 twisted pairs, #22AWG, unshielded, Ethernet CAT3
- Compatible with Ethernet CAT5e cable
- Up to 4000' with Belden #1227A1
- Up to 32 controllers in daisy chain configuration

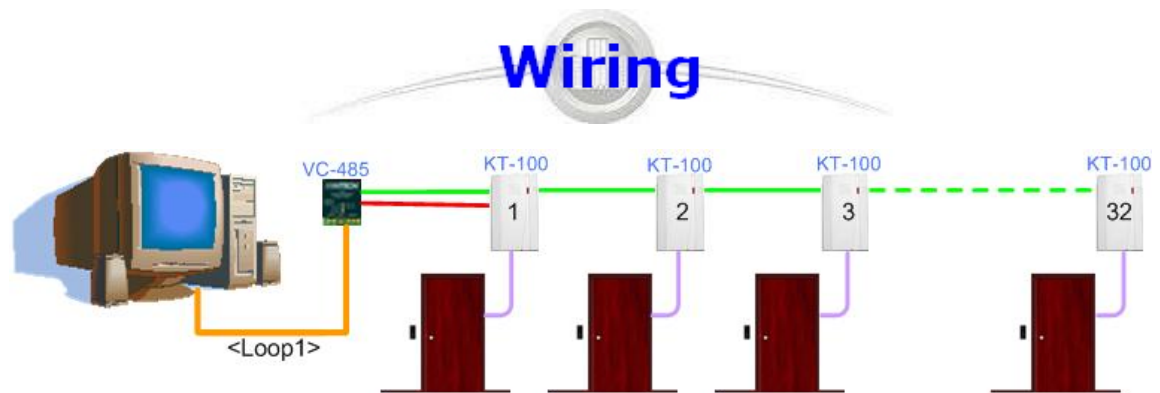


Power

Required Wire:

- 2 conductors, solid, #18AWG, unshielded
- Requires a 12Vdc 1A Power Supply.





RS-232 Communication

- Connection between the computer and the VC-485.
- Max 100'.
- Use cable included with the VC-485. (10').

Power cable

- Power from a KT-100 to VC-485.
- Use 2 conductors, 22 AWG.
- Max 75'.

RS-485 Communication

- Connection between the computer and the controllers.
- Max 4000'.
- Use CAT3 cable, 22 AWG.

Door

- Reader wire: 6 conductors, twisted, 22 AWG non shielded (ioProx) Max 1000'.
- Reader wire: 6 conductors, twisted, shielded, 22 AWG (Other readers) Max 500'.
- Door Lock: 2 conductors, 18 AWG, unshielded, Max 500'.
- Rex: 4 conductors, solid, 22 AWG, Maximum 2000'.
- Door Contact: 2 conductors, solid, 22 AWG, Max 2000'.

Controller

- Power supply to controller: 2 conductors, 18 AWG, unshielded, Max 100'.

HARD RESET



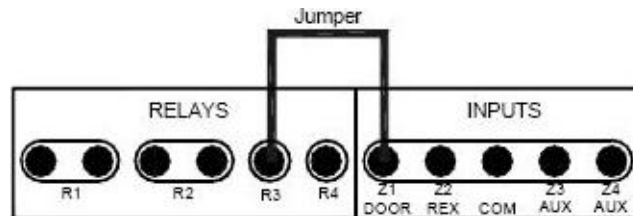
KT-100 should be Hard Reseted prior to communicate with any EntraPass software

Procedure to perform a Hard Reset:

1. Disconnect the Power Supply.
2. Remove all connections of Z1 (DOOR) and R3 terminals.
3. Place a jumper between the Z1 (DOOR) and R3 terminals.
4. Apply power to the Power Supply.

The VITAL LED should flash 4 times. This means that the controller is in the Hard Reset mode

5. Disconnect the jumper.

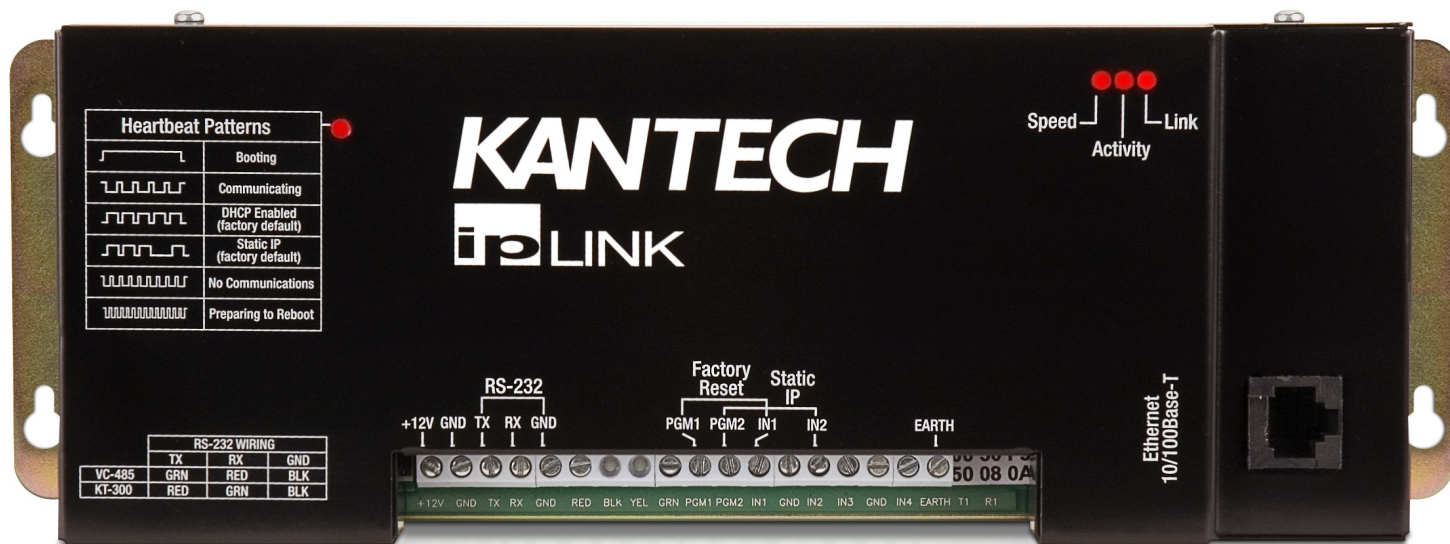




Communication status and other vital controller parameters can be obtained from VITAL LED pulsation.

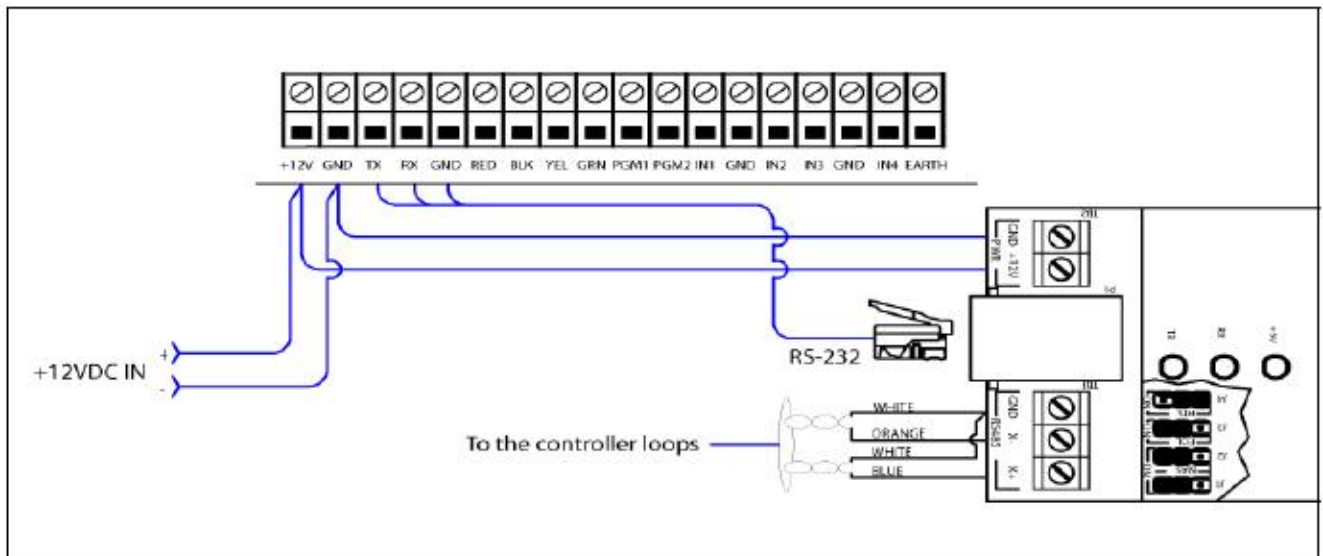
VITAL LED Pulse	Status Identification
1 per second	Communication with EntraPass Global Gateway
2 per second	Offline
3 per second	Communication with EntraPass Corporate Gateway
4 per second	Hard reset to factory defaults
0.5 second ON	Reading access card

IP Link Installation



Wiring

- Connect the Earth terminal to an Earth Ground.
- Power the unit with 12V_{DC} from the 12V AUX terminals of the KT-300.
- VC-485 can be powered from the same terminal as well.
- Connect provided RJ12 cable as follow:
 - Green <=> TX
 - Red <=> RX
 - Black <=> GND



Programming



IP Link can be defined in three different ways.

- . Directly from EntraPass (Lan)
- . With the KT-Finder (Lan/Wan)
- . With the Web configuration page (Fixed IP)

For any option, parameters entered in the EntraPass software must match parameters enter in the configuration tool.

IP Link must be in Factory Default to accept any configuration

EntraPass Programming (LAN)

Create a site like you would normally do (using the white page icon).



Select Enhanced ethernet (IP Link) for Connection type.

The screenshot shows the 'Site' configuration window in the EntraPass software. The window has a blue title bar and a toolbar with various icons. The main area is divided into several sections:

- Gateway:** A dropdown menu showing '01 - Corporate Gateway'.
- Site:** An empty text field.
- Language:** A dropdown menu showing 'English'.
- Connection type:** A dropdown menu showing 'Enhanced ethernet (IP Link)'.
- Hardware definition:** A section with a 'Number of controllers' spinner set to '1'.
- Daylight saving time options:** A section with a checked box for 'Use Windows daylight saving time setting' and a 'Time adjustment based on gateway time zone (h)' spinner set to '0.0'.
- Video view:** An empty text field with a dropdown arrow.
- Graphic:** An empty text field with a dropdown arrow.
- Communication timing:** A section with a plus icon and the text 'Communication timing:'.

At the bottom of the window, there are three buttons: 'Close', 'Cancel', and 'Help'.

EntraPass Programming (LAN)

- Enter MAC address.
- Enter unit IP information.
- Enter the EntraPass (Special or Gateway) IP or domain.
- Click Save. (EntraPass will look for the unit and it should come on-line)



The screenshot shows the 'Site' configuration window for EntraPass. The 'IP Link IP Configuration' tab is active. The 'Gateway' dropdown is set to '01 - Corporate Gateway'. The 'Site' dropdown is empty. The 'Language' is set to 'English'. The 'IP Link' field is empty. The 'MAC address' is '00-50-F9-50-08-0D'. The 'Online' checkbox is checked. The 'Obtain an IP address automatically' radio button is selected. The 'Use the following IP address' radio button is unselected. The 'IP address', 'Subnet Mask', 'Gateway (Router)', and 'DNS server address' fields are all set to '0 . 0 . 0 . 0'. The 'Port' is '18810'. The 'EntraPass Special Edition / Corporate Gateway' section shows the 'IP address' radio button unselected and the 'Domain name' radio button selected. The 'Test DNS' button is visible. The 'IP address' field is set to '0 . 0 . 0 . 0' and the 'Domain name' field is set to 'BR02WKL266'. The 'Close', 'Cancel', and 'Help' buttons are at the bottom right.

Site

Gateway: 01 - Corporate Gateway

Site:

English

IP Link:

General | IP Link IP Configuration | IP Link Automated Connection | IP Link Parameters

MAC address: 00-50-F9-50-08-0D

☒ Online

☒ Obtain an IP address automatically

☐ Use the following IP address

IP address: 0 . 0 . 0 . 0

Subnet Mask: 0 . 0 . 0 . 0

Gateway (Router): 0 . 0 . 0 . 0

DNS server address: 0 . 0 . 0 . 0

Port: 18810

EntraPass Special Edition / Corporate Gateway

☐ IP address: 0 . 0 . 0 . 0

☒ Domain name: Test DNS BR02WKL266

Close Cancel Help

KT-Finder (LAN/WAN)

KT-Finder is a stand alone application you can carry with you.



- **Launch application.** (IP Link and KT-Finder must be in the same IP range) **Select IP Link next to Device.**
- **Enter MAC Address and click Connect.**

KT-Finder (LAN/WAN)

- . Enter the EntraPass (Special or Gateway) IP or domain.
- . Enter unit IP information.
- . Click OK.
- . IP Link will try to reach the EntraPass and should come on-line.



The screenshot shows the 'KT-Finder Wizard' window with the following sections:

- IP Link**
 - Boot loader and firmware version: 1.00.01 / 1.02.07
 - MAC address: 00-50-F9-50-08-0D
- EntraPass Special - Corporate Gateway**
 - ☐ EntraPass IP address
 - ☒ Domain name: BRO2WKL266
 - Domain name resolution: [] Test DNS
- Ethernet configuration**
 - ☒ Obtain an IP address automatically
 - ☐ Use the following IP address
 - IP address: 10.38.193.21
 - Subnet Mask: 255.255.252.0
 - Gateway (Router): 10.38.195.254
 - DNS server address: 10.38.191.245
 - Port: 18810

At the bottom right are 'OK' and 'Cancel' buttons.

Web Configuration Page (Fixed IP)

When defaulted with Fix IP address, IP Link can be configured via a built in web page. ➡

- Launch web browser. (IP Link and PC must be in the same IP range)
- Enter 192.168.1.2 in the address box.
- Enter the EntraPass (Special or Gateway) IP or domain.
- Enter unit IP information.
- Click Save.
- IP Link will try to reach the EntraPass and it should come on-line.

EntraPass Special Edition / Corporate Gateway

EntraPass - IP Address	0 . 0 . 0 . 0
EntraPass - Domain name	
Domain name resolution	

Ethernet Configuration

MAC Address	00-50-f9-50-08-0d
DHCP	Enable ▾
Local IP Address	10 . 38 . 193 . 21
Subnet Mask	255 . 255 . 252 . 0
Router address	10 . 38 . 195 . 254
DNS Address	10 . 38 . 191 . 245
Port	18810

Save configuration to IP Link



Unit must be Factory Reset to be able to configure it. Once configured, the Web Page will be disable and the KT-Finder will provide a read only access.







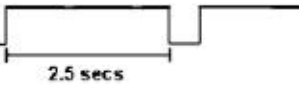
WARNING: This reset will clear all IP Link configuration including the IP address.

Factory Default (DHCP)	<ul style="list-style-type: none">• Disconnect DC power.• Connect a wire between the PGM1 and IN1• Connect power.• The Heartbeat Patterns should be steady red, then blink very quickly.• Remove jumper when it start flashing.• Remove the wire between PGM1 and IN1. <p>Heartbeat patterns should now be 1 long flash per sec.</p> <ul style="list-style-type: none">• The IP Link will now be in DHCP mode and will attempt to obtain an IP address automatically from the DHCP server.
Factory Default Static IP 192.168.1.2	<ul style="list-style-type: none">• Disconnect DC power.• Connect a wire between the PGM1 and IN1• Connect a wire between the PGM2 and IN2• Connect power.• The Heartbeat Patterns should be steady red, then blink very quickly.• Remove jumper when it start flashing. <p>Heartbeat patterns should now be 3 flashes in 3 secs and OFF for 1 sec.</p> <ul style="list-style-type: none">• The IP Link will now be at IP address 192.168.1.2.• Configure the IP Link using either the KT-Finder or the Web Configuration Page.• Save the configuration.• Remove the wire between PGM2 and IN2.

Status

Communication status and other vital parameters can be obtained from the Heartbeat LED pulsation and also the network LEDs.



Pulses	Description	Patterns
Steady ON for 15 secs	IP Link is booting.	 15 ~ 30 sec.
1 quick flash/sec.	IP Link is configured and communicating with the Gateway.	 1 sec.
1 long flash/sec.	IP Link is in Factory Default (DHCP) mode	 1 sec.
3 flashes in 3 secs and OFF for 1 sec.	IP Link is in Forced Static IP mode (192.168.1.2) and in Factory Default .	 1 sec. 1 sec.
2 quick flashes/sec.	IP Link is no longer communicating with the Gateway but is configured.	 2 pulses / sec
5 quick flashes/sec.	IP Link is preparing to reboot.	 5 pulses / sec
1 long pulse for 2.5 secs	IP Link has received a broadcast from the Gateway or the KT-Finder. After this delay, the IP Link returns to its previous heartbeat pattern. Useful to verify network communication.	 2.5 secs

Speed	remains OFF in a 10BaseT network, remains ON in a 100BaseT network.
Activity	blinks to show network activity, and steady when there is intense network activity.
Link	turns ON when the network is present, turns OFF when there is no network.