ASSA ABLOY

WT1 Wiegand Test Unit : Wiring and Use Instructions

FOR INSTALLATION ASSISTANCE, CALL 1-800-810-WIRE

CONTENTS

- WT1, plastic, 6.25" x 3.5" x 2.375"
- AC / DC power adapter
- ElectroLynx cable
- Wiring harness

As part of their promise to provide innovative, fast and effective, and higher security solutions to their customers, ASSA ABLOY Group companies offer ElectroLynx, a universal quick-connect system that simplifies the electrification of the door opening. ElectroLynx™ is a trademark of ASSA ABLOY, Inc.

TEST BOX PRODUCT DESCRIPTION

Designed for compatibility with ASSA ABLOY products and other Wiegand output devices, the ASSA ABLOY WT1, or Wiegand Test Unit, is a user-friendly tool that demonstrates products features and capabilities.

The WT1 also provides field troubleshooting by verifying proper wiring, card reader data integrity, lock functionality including lock/unlock, door position status, and request-to-exit (REX) status.

The WT1 connects directly to Wiegand output for testing. Connect your product's interface board (if required) to translate to Wiegand, then connect the WT1 to the interface board. If your product does not need an interface board to provide Wiegand output, you may connect it directly to the WT1.

To connect the WT1 to the product, use the enclosed ElectroLynx cable; if an interface board is required, connect the WT1 to the interface board using the enclosed wiring harness.
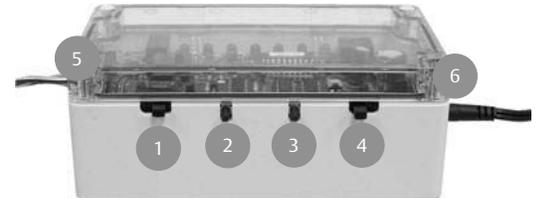
❶ *Fail Safe /Fail Secure Selector*
❷ *Open Override*
❸ *Learn Button*
❹ *12VDC / 24VDC Selector*
❺ *To Power Adapter*
❻ *To Lock*
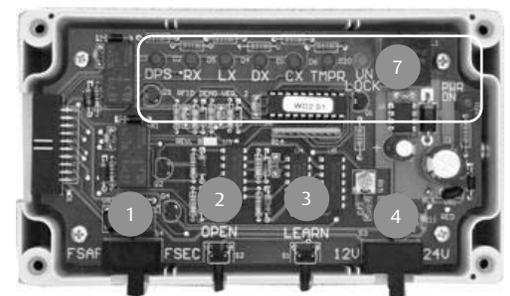
Adapter

End View

VISUAL MONITORING INDICATORS

❼ LEDs refer to the following product features:

DPS	Door position switch
RX	Request to exit
LX	Latch bolt monitoring
DX	Dead bolt monitoring
CX	Cylinder monitoring (not currently in use)
TMPR	Tamper
PWR ON	Indicates unit powered

IMPORTANT

1. Disconnect unit to be tested from access control system before servicing.

2. Installer must be a trained, experienced service person.

3. Wiring must comply with applicable local electrical codes, ordinances and regulations.

4. Unit is grounded to Common (-) for Electrostatic Discharge (ESD) protection. Use appropriate ESD practices when handling the circuit board, (i.e. standard grounding precautions). Common (-) must be grounded to earth (EG) at the power supply.

5. Ensure that no wires are pinched or damaged during installation.

INSTALLATION INSTRUCTIONS

Install equipment on door according to manufacturer's instructions. Please refer these websites for installation instructions at:

- ASSA ABLOY: *www.intelligentopenings.com*
- HES: *www.hesinnovations.com*
- Securitron: *www.securitron.com*

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CONNECT THE WT1

To connect the WT1, determine whether your lock provides a direct Wiegand output, or if it requires an interface panel to convert to Wiegand.

If your lock is direct-connect, follow the diagram under the ElectroLynx Wiegand Wiring Diagram. If your lock requires an interface panel, follow the diagram under Wiring Diagram for Interface Board to WT1.

ELECTROLYNX WIEGAND WIRING DIAGRAM

Use the provided ElectroLynx cable when the product has direct Wiegand output.

Lock	ElectroLynx Cable	Hinge with ElectroLynx Cable	Pin Connections to WT1

1 (Black) READER NEG
2 (Red) READER POS
3 (White) DATA 1
4 (Green) DATA 0
5 (Orange) RX (NO/NC)
6 (Blue) RX (COM)
7 (Brown) Not Used
8 (Yellow) LED
9 (Violet) LOCK NEG
10 (Gray) LOCK POS
11 (Pink) DPS NC
12 (Tan) DPS (COM)
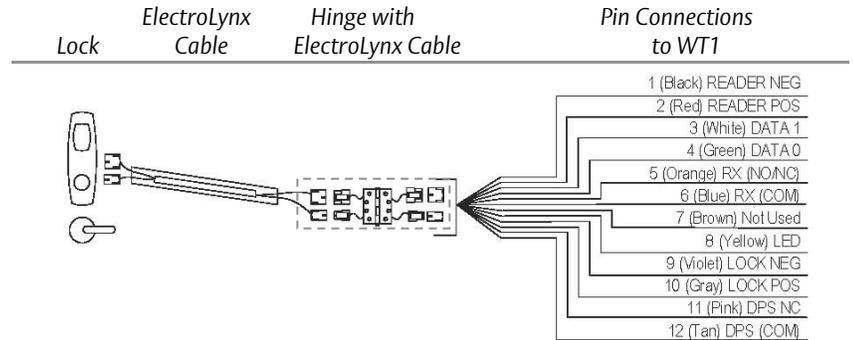
Lock to WT1 Connections

Notes

The System is designed to be installation friendly with ElectroLynx quick connectors.
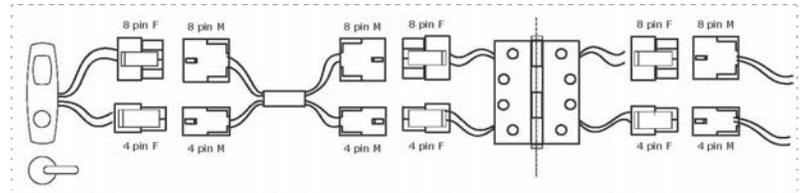
Hinge With ElectroLynx Cable Detail

Important

ElectroLynx connectors plug and lock together in only one way, as shown. Do NOT force connectors together.
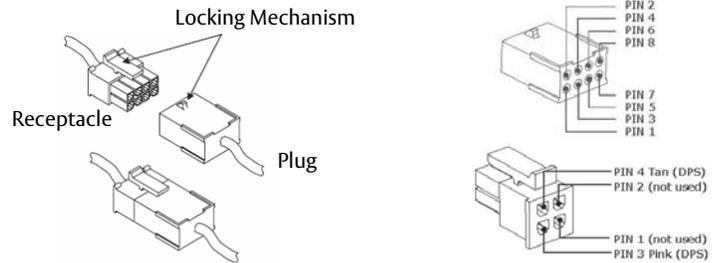
Reference ElectroLynx Catalog A7738.

Locking Mechanism

Receptacle

Plug

PIN 2
PIN 4
PIN 6
PIN 8

PIN 7
PIN 5
PIN 3
PIN 1

PIN 4 Tan (DPS)
PIN 2 (not used)

PIN 1 (not used)
PIN 3 Pink (DPS)

Power Input

AC 100 – 240V 800mA 50Hz/60Hz

Power Output

The WT1 is capable of supplying a total of 900 MA output to the unit under test. The 900 MA is the total output for both reader interface and the lock.

PIN ASSIGNMENT TABLE FOR WIRE HARNESS

The following chart shows the wiring assignments for the wire harness included with the WT1. This harness is only used when the lock's output must first go through an interface board to translate to Wiegand.

See the connection diagram on the following page for how to wire the interface board to the WT1.

PIN #	DESCRIPTION	WIRE COLOR	WIRE CABLE	ELYNX CABLE	MISCELLANEOUS COMMENTS
1	Reader Power -	Black	Controller TS1	8 PIN -1	Ground
2	Reader Power +	Red	Not Used	8 PIN -2	+12 VDC always
3	Wiegand Data 1	White	Controller TS4	8 PIN -3	+5 goes to ground for data 1 bit
4	Wiegand Data 0	Green	Controller TS4	8 PIN -4	+5 goes to ground for data 0 bit
5	REX Switch NC/NO (Keeper Switch on Strike)	Orange	Controller TS4	8 PIN -5	LED on when REX used or when Keeper closed
6	REX Switch COM (Keeper Switch on Strike)	Blue	Controller TS4	8 PIN -6	LED on when REX used or when Keeper closed
7	Beeper Control - Cylinder Switch	Brown	Not Used	Not Used	
8	LED Control	Yellow	Not Used	8 PIN -8	+5 goes to ground to turn LED Green
9	Lock Power	Violet	Not Used	4 PIN -1	Ground
10	Lock Relay Out	Grey	Not Used	4 PIN -2	Lock Power+
11	DPS Switch NC/NO	Pink	Controller TS4	4 PIN -3	LED on when switch closed
12	DPS Switch COM	Tan	Controller TS4	4 PIN -4	LED on when switch closed
13	Beeper Control	Brown	Controller TS4	Not Used	+5 to turn Beeper on
14	LED Control	Yellow	Controller TS4	Not Used	+5 to turn LED Green
15	Dead Bolt Switch NC/NO	White/Orange	AUX Board TS1 AUX-2	Not Used	LED on when secure (Dead Bolt extended)
16	Latch Bolt Switch NC/NO	White/Red	AUX Board TS1 AUX-1	Not Used	LED on when secure (Latch Bolt extended)
17	Cylinder Switch NC/NO - Spare	White/Black	Not Used	Not Used	LED on when Key in use (future)
18	Tamper Relay NC/NO	White/Blue	Controller TS1	Not Used	LED on when Tamper true
19	Lock Power + / Controller Power	Red	Controller TS1	See Table 1	v.N1 controller can be 12 or 24 (switch selected)
20	Lock Relay IN	Violet	See Table 1	See Table 1	Use for Fail Secure Lock

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WIRING DIAGRAM FOR INTERFACE BOARD TO WT1

The following wiring diagram shows how to connect the WT1 wiring harness:

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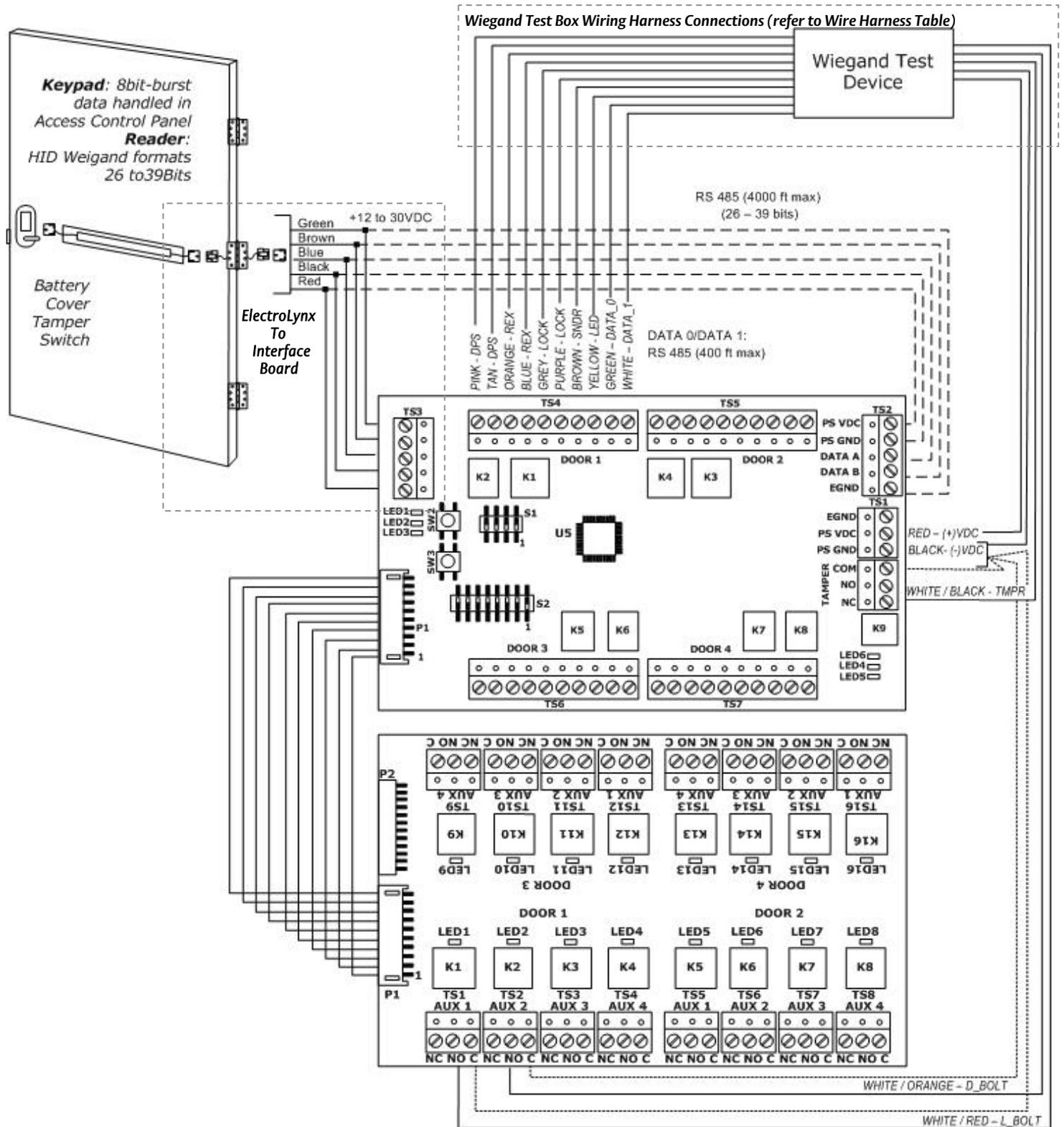
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OPERATING INSTRUCTIONS FOR ALL CARDS

NOTES: Failure to connect the WT1 to the lock before applying power result in false reads.

The WT1 is capable of remembering up to the last 20 programmed, or learned, cards. To clear all cards from memory, hold down the learn button while applying power.

The door device green LED flashes.

To initialize the test box for all cards:

1. Connect all wires to the WT1 first.
2. Select Fail Safe or Fail Secure according to sample.
3. Select the appropriate solenoid lock voltage (12 or 24 VDC).
4. Apply power to the WT1.
5. Once the door device completes its visual and audio signaling, it will unlock when ANY Wiegand card is presented.

OPERATING INSTRUCTIONS FOR LIMITED NUMBER OF CARDS

NOTES: Failure to connect the WT1 to the lock before applying power result in false reads.

The WT1 is capable of remembering up to the last 20 programmed, or learned, cards. To clear all cards from memory, hold down the learn button while applying power.

The door device green LED flashes.

To initialize the test box for a limited number of specific cards:

1. Connect all wires to the WT1 first.
2. Select Fail Safe or Fail Secure according to sample.
3. Select the appropriate solenoid lock voltage (12 or 24 VDC).
4. Apply power to the WT1.
5. Present a card to the lock.
6. That card is recognized and added to the list of cards that will unlock the lock. Other cards will not work until each is presented while holding down the learn button.

NOTES

- Once a single card/cards are recognized, the door device will no longer operate by the presentation of any random card until it is been reset.
- To reset the device, cycle the power while holding the learn button until it flashes three times. Any card will then activate the lock.

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