



Transition Series

Multi-technology Access Readers



Description

GE Transition™ Series multi-technology card readers feature simultaneous compatibility with multi-vendor 125kHz Proximity, Mifare (ISO 14443A), and Vicinity (ISO 15693) credential technologies—all in one reader. With this remarkable technology combination, security administrators can now deploy the Transition readers into new or existing facilities.

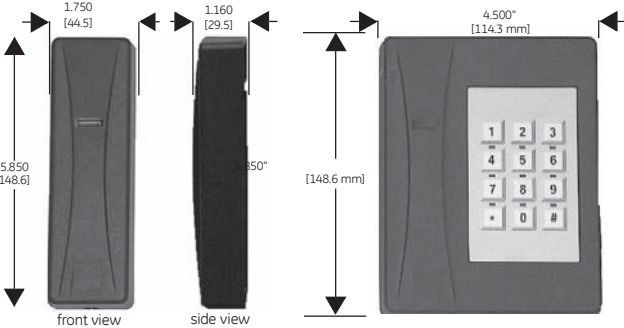
Figure 1. Multi-technology Readers



Mounting the reader

1. Find a suitable mounting position on the door frame or wall.
2. Drill two vertical mounting holes from 3.25” (82.6 cm) to 4.891” (124.6 cm) apart on the mounting surface of the door frame or wall. Models 520/525 require a second pair of vertical mounting holes, horizontally spaced 2.75” (70 cm) from the first pair.

Figure 2. Dimensions



3. Drill one 0.625” (15.87 mm) diameter hole in wall for the pigtail wire connection.
4. Follow the Cable Connection Chart to connect the reader to the field panel and external door equipment.
5. Mount the base plate to the wall using the supplied screws.
6. Install the top cover to the reader base. The base plate and top cover guides should be aligned, so the connectors seat correctly.

Figure 3. Aligning base plate and top cover



7. Verify the connection is secure and install the security screw on the bottom of the reader.

Connecting the cable

1. The readers are supplied with a 12-conductor cable pigtail with drain wire. Connect the pigtail to the host panel. Use the Cable Connection Chart (below) to correctly match the color of each wire.

Color	Signal
Black	Ground
Blue	Hold
Brown	Red LED Control
Gray	Door DI
Green	Data 0
Orange	Green LED Control
Pink	REX DI
Purple	Reserved
Red	6 to 16 VDC
Tan	Tamper Output
White	Data 1
Yellow	Beeper Control

2. Use a DC Power source between 6-16 VDC.
3. Verify the reader is properly grounded by attaching the ground wire to an earth ground connection at the power supply or field panel end of the cable. Connect reader’s drain wire to the cable shield. Do not connect shield wires at the field panel.

Testing the reader

1. Power up the reader. Verify the power-on self test LED/ beep sequence:
 - green LED flashes; two short beeps
 - yellow LED flashes; three short beeps
 - red LED flashes.
 - yellow LED flashes.
2. Verify the yellow LED is on continously indicating the reader is ready.
3. Present a badge that has been properly enrolled in the system. Verify the yellow LED flashes and a short beep is heard.

Removing the cover

- 1. Remove the security screw.
- 2. Insert screwdriver tip in guide between the cover and base plate.
- 3. Carefully pry loose to remove the cover.

Figure 4. Removing the Cover



Keypad configuration card

- 1. Place the reader in tamper mode by briefly removing and replacing the reader’s cover while the power is on. The reader stays in tamper mode for 60 seconds (minimum) after power is applied or the cover is replaced.
- 2. Present the keypad configuration card within one minute. The LED turns green and a short triple-beep indicates the reader is ready to configure.
- 3. Enter the keypad entry within five seconds. Use the chart below to identify the correct keypad entry.

Mode/Keypad entry		Setting	GE	non GE
1	* followed by 0 (Factory default setting.)	8 bits per key, no buffering.	✓	✓
2	* followed by 1	6 bits per key, no buffering.		✓
3	# followed by 3 keys (0 to 9 only)	26-bits output custom configuration. (Contact GE Sales Engineering for assistance.)		✓
4	1 followed by 1 key (0 to 9 only)	4 bits per key, no parity, up to 9 keys buffered.		✓
5	1 followed by *	4 bits per key, no parity, up to 10 keys buffered.		✓
6	1 followed by #	4 bits per key, no parity, up to 11 keys buffered.		✓

For non-GE keypad configurations, contact GE Sales Engineering for assistance.

Specifications

Colors	Black, Charcoal, Gray
Power supply	Linear DC recommended
Voltage range	6 - 16 VDC
Temperature range	-31 F to 149 F -25 C to 65 C
Cable distance to panel	200 ft. max (22 gauge) 300 ft. max. (20 gauge) 500 ft. max. (18 gauge)
Read Range (Distances may vary depending on environment.)	Proximity Perfect cards are not supported by the Transition Series reader. Model T-500SW: - GE Proximity: up to 3.5" (8.89 cm) - HID Proximity: up to 3.5" (8.89 cm) - Mifare: up to 1" (2.54 cm) Ultralight cards not supported - Vicinity: up to 3.5" (8.89 cm) Model T-520SW and T-525SW: - GE Proximity: up to 5" (15.24 cm) - HID Proximity: up to 5" (15.24 cm) - Mifare: up to 1" (2.54 cm) Ultralight cards not supported - Vicinity: up to 5" (12.7 cm)
Wiegand output	Proximity 4002 (40-bit) Mifare 5502 (55-bit) Vicinity 5502 (55-bit)
Tamper output	Open Collector
Regulatory approvals and standards	UL 294, CE, and FCC (part 15)
ISO Standards	Mifare ISO 14443A Vicinity ISO 15693

The voltage specification for this reader is 6-16 VDC, although 12 VDC or greater is recommended for better performance and cable run distances.

The recommended cable gauge is 18-gauge to 22-gauge. Check with the cable supplier to determine the best choice for the application and installation distance.

FCC compliance

The FCC requires the following statement: This reader uses radio frequency energy and has been tested, and complies with the limits of FCC testing. Changes, modification, or disregard of proper installation and instructions not expressly approved by GE Security, and is strictly prohibited by the FCC and could void the user’s authority to operate the equipment.

Ordering information

Product	Description
T-500W (Gray) *	Mullion mount; Wiegand output
T-520W (Gray) *	1-Gang US mount; Wiegand output
T-525W (Gray) *	1-Gang US mount; Keypad; Wiegand output
T-500W (Charcoal) *	Mullion mount; Wiegand output
T-520W (Charcoal) *	1-Gang US mount; Wiegand output
T-525W (Charcoal) *	1-Gang US mount; Keypad; Wiegand output
T-500W (Black) *	Mullion mount; Wiegand output
T-520W (Black) *	1-Gang US mount; Wiegand output
T-525W (Black) *	1-Gang US mount; Keypad; Wiegand output
* 385001001	Installation wrench (Required)