



# Product Manual and Specification for uTrust TS ScrambleFactor Reader SF.3

**Confidential**

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## Document History

Version	Date	Description of Change	Author
1.0	11-Jan-2024	Initial version for FCC/CE	Sixtus Stanly
1.1	09-Apr-2024	Updates based on HCT feedback	Sixtus Stanly

# uTrust TS ScrambleFactor Reader

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## 1.0 Introduction

This document details the Physical Access Control Reader **uTrust TS ScrambleFactor SF.3** and its basic user instruction and installation procedures. SF.3 is a multi-factor authentication reader which supports RFID, Contact Smart card, Biometrics, and an LCD display which has a touch keypad for PIN entry. This reader is used to grant/ deny access to the users to secured premises.

### 1.1 Functionality

SF.3 has the following interfaces.

#### User Interfaces

- HF (13.56Mhz), Type A, Type B, VICC cards.
- LF (125KHz) – FSK, ASK, PSK
- Contact Smart card - ISO 7816 ID-1 formfactor cards
- Fingerprint - Optical FP sensor module.
- TFT LCD with Capacitive Touch – The LCD can activate a Keypad for PIN entry.
- Buzzer
- Red/ Green LED

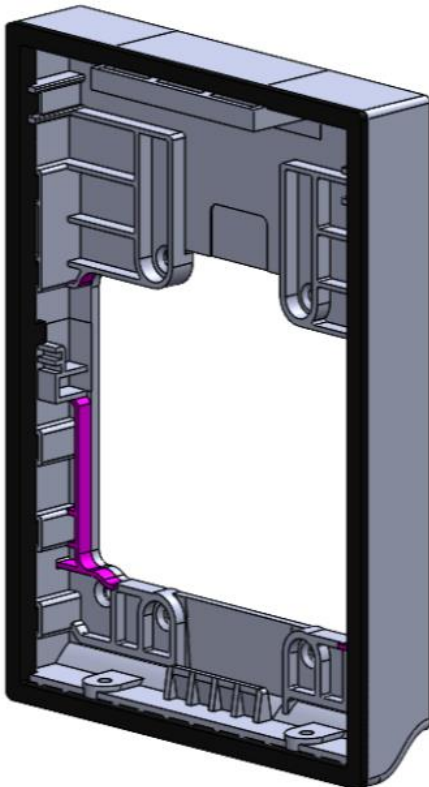
#### Panel Interfaces

- Power : 12V DC
- RS485- Half Duplex for OSDP communication
- Wiegand – Low speed panel communication interface

### 1.2 Mechanical Details

The device has 2 main parts,

- A polycarbonate **2 Gang adaptor** plate that can be secured to a wall, double gang boxes, and other Identiv mounting boxes. The 2 Gang adaptor has an integrated Fascia seal/gasket on it.

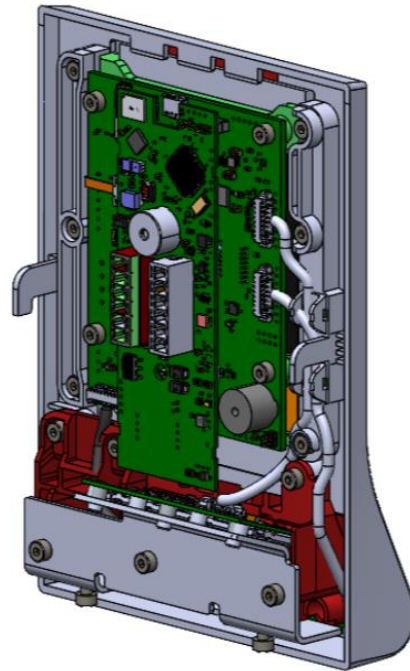


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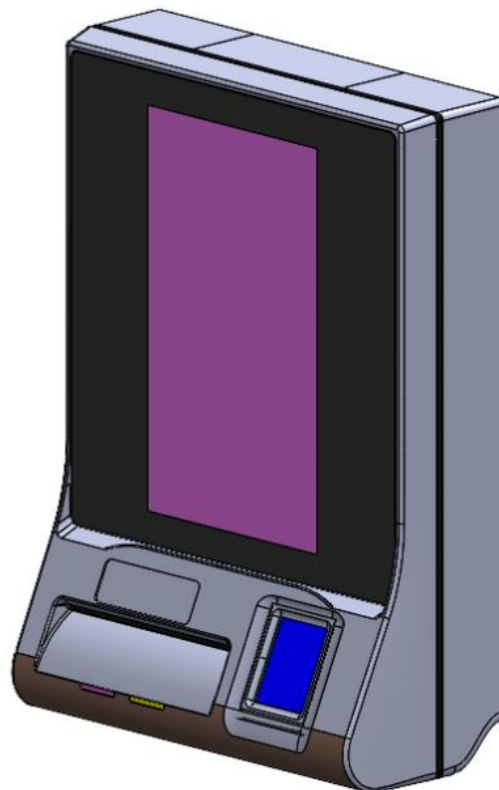
- A polycarbonate **fascia** with all the electronic subassemblies integrated which is mounted on the adaptor plate.



Fascia Front view



Fascia Rear view



Fascia and 2 Gang Adaptor integrated when mounted on wall.

## uTrust TS ScrambleFactor Reader

### 2.0 Product details

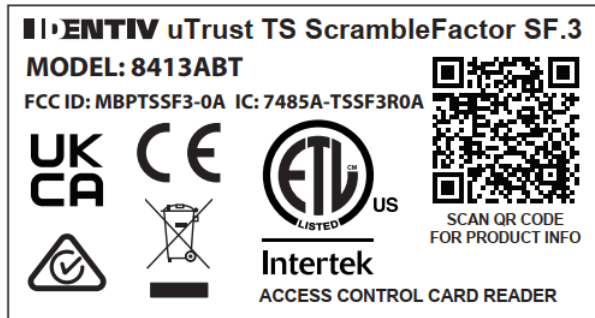
Product Name	: uTrust TS ScrambleFactor Reader SF.3
Model Name	: 8413ABT
Device Type	: Physical Access control Reader (accessory equipment) that has RFID reader, 13.56MHz (HF) / 125 KHz (LF) – Intentional Radiator LCD Display with Capacitive touch, Fingerprint interface Contact Smart Card interface.
Type of equipment	: Suitable for Indoor use.
Panel Interfaces	: Phoenix connectors for OSDP, Wiegand and Power.
Voltage Rating	: 12V DC; Class 2 listed power supply with 12VDC to be used to power the reader.
Current Rating @12V DC	: Max Current : 320 mA max, Average Current : 260 mA
Operating Temperature	: 0 to 49 Deg C
Humidity	: 5 to 95% relative humidity (non-condensing)
Communication interfaces	: Wiegand; Shielded cable, Max length - 500ft , AWG - 18 RS485 (2wire - Half Duplex); Shielded twisted pair; Max length 500ft
Installation type	: Wall Mounted
Dimensions	: 156 X 113 X 49 mm
Weight	: 420 g
Highest internal clock frequency	: 400MHz
Mode of operation	: Functional mode with all interfaces active.

### 3.0 Specifications

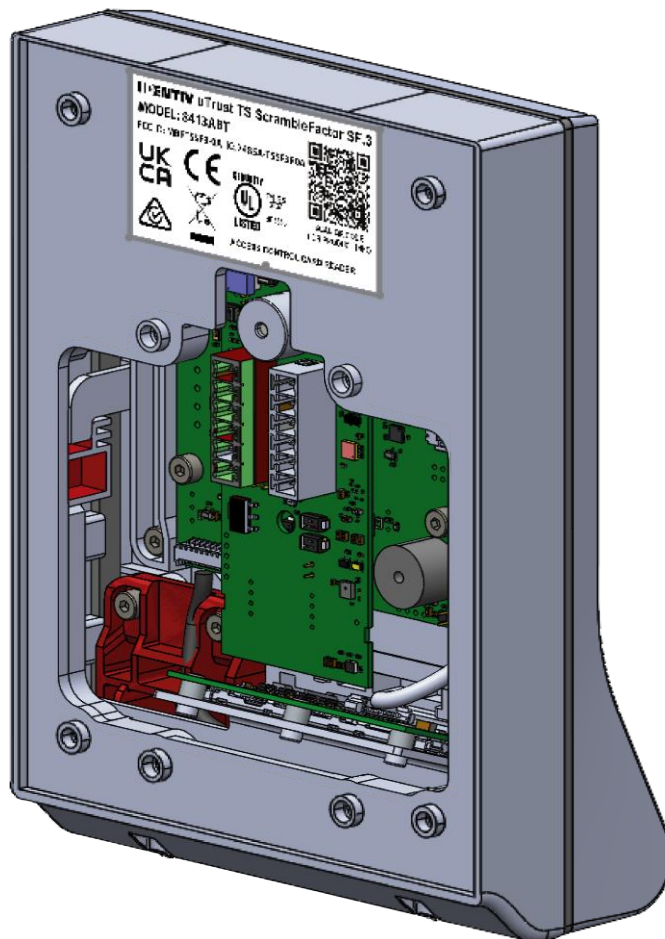
Model	Operating Voltage	Current	Operating temp	Operating humidity
8413ABT	12 VDC	Av – 260mA Pk- 320mA	0 to +49 deg C	5 to 95% RH

## 4.0 Product label and location

### 4.1 Certification label

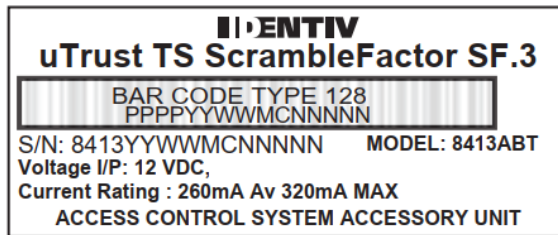


Label location

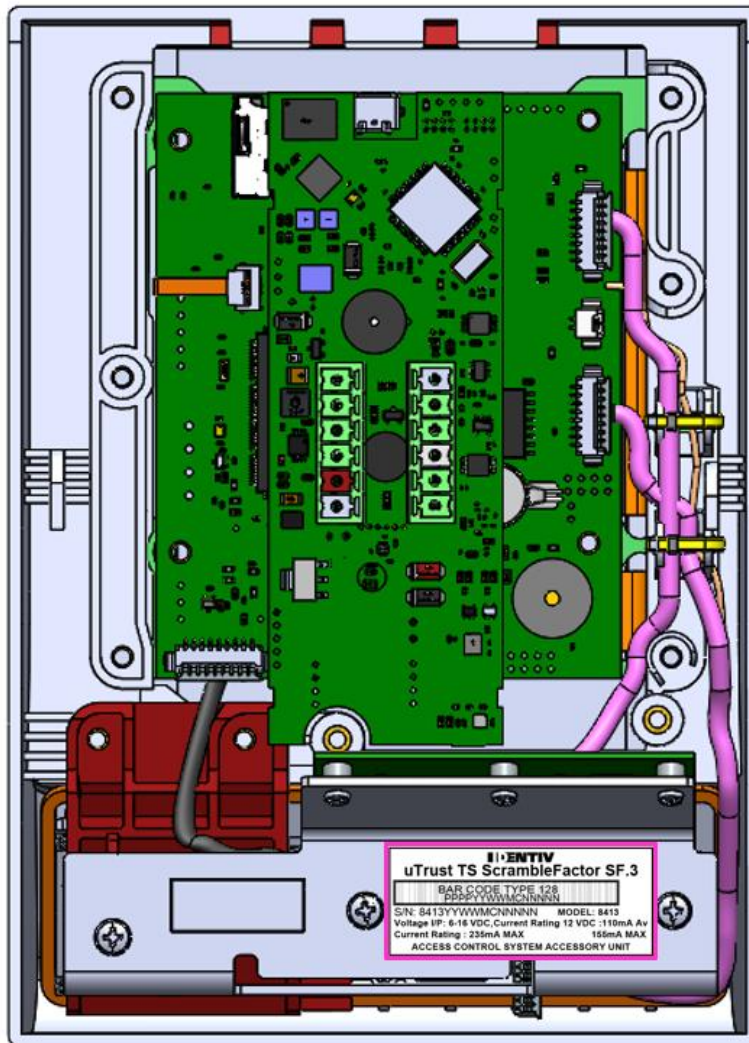


## uTrust TS ScrambleFactor Reader

### 4.2 Product label



### Label location





## **5.0 Product Certification ID's**

FCC ID – **MBPTSSF3-0A**

IC ID - **7485A-TSSF3R0A**

## **6.0 Installation details**

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction.

### **6.1 Parts List**

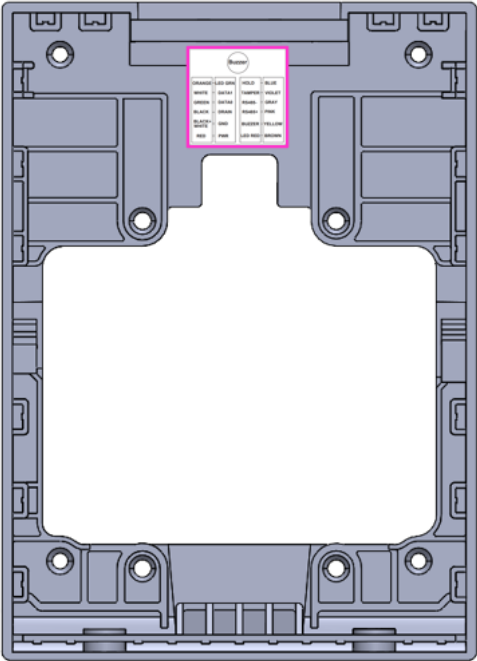
- Fascia Bezel with electronics -1 No
- 2 Gang adaptor plate – 1 No
- Screws (6-32 X 3/4 SS Black) - 4 No's – 2 gang adaptor to mounting box or US 2 gang box.
- 6 pin phoenix plug– 2 Nos
- Ferrite Core 246 OHM Hinged (P No: 74271131 ) - 1 No
- Screws (Phillips PAN HEADx2 M3 , L8 ) – 2 Nos – 2 Gang adaptor to Fascia.
- Nylon anchor plug -4 Nos -Installing mounting box to wall, optional.
- Screws (A #6-18X1.5" SS) - 4Nos – Back Plate mounting screws for Wall, Optional.

### **6.2 Recommended Infrastructure**

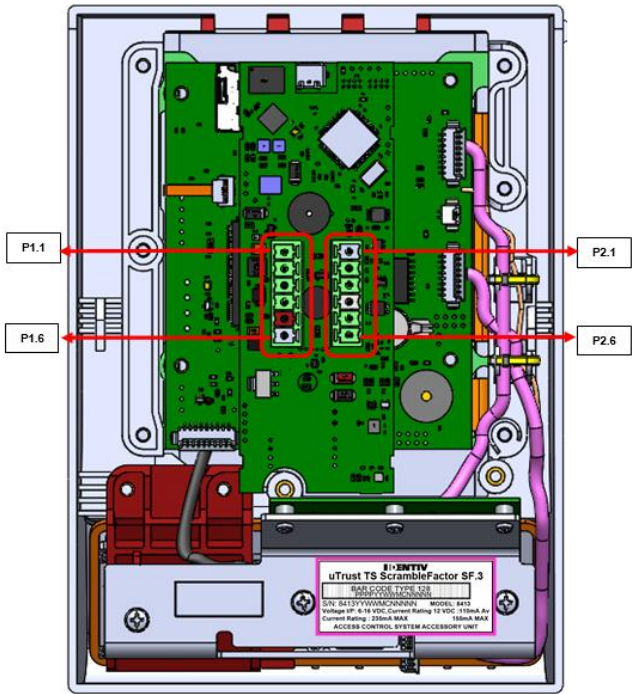
- All cabling and wiring shall be UL Listed and/or UL Recognized
- Cable Wiegand - 18AWG Shielded cable or better.
- Cable RS485 - 24AWG STP or better  
Cabling shall comply with UL2556 VW-1 for IEC62368 complaint installations.
- Power Supply - Class 2 Linear DC PSU - 12 V, 1A min.  
(for uL compliant installations)  
ES1 / PS2 Linear DC PSU - 12 V, 1A min.  
(for IEC 62368 compliant installations)

# uTrust TS ScrambleFactor Reader

## 6.3 Connection details



Buzzer			
ORANGE	LED GRN	HOLD	BLUE
WHITE	DATA1	TAMPER	VIOLET
GREEN	DATA0	RS485-	GRAY
BLACK	DRAIN	RS485+	PINK
BLACK+WHITE	GND	BUZZER	YELLOW
RED	PWR	LED RED	BROWN



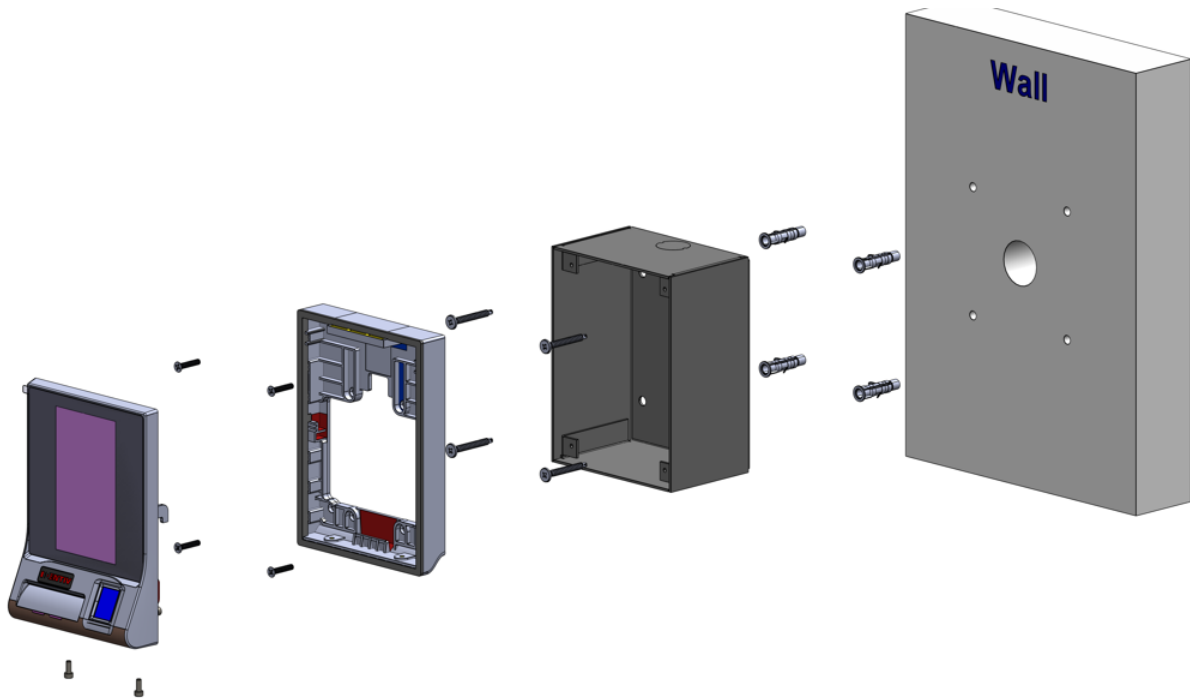
Pin Number	Pin Function	Wire Color
P1.1	LED Green	Orange
P1.2	Wiegand Data 1	White
P1.3	Wiegand Data 0	Green
P1.4	Shield Ground/ Drain	Black
P1.5	Ground	Black & White
P1.6	+ 12 VDC (nominal)	Red
P2.1	Hold	Blue
P2.2	Tamper Output	Violet
P2.3	RS485 -	Grey
P2.4	RS485 +	Pink
P2.5	Buzzer	Yellow
P2.6	LED Red	Brown

- Shield Ground/ Drain – Black wire should be connected to the cable shield.

### Caution:

During Wiring make sure that the +VDC lines do not touch any other cables, as it might affect reader functionality/ cause damage to the reader.

### 6.4 Mounting the Reader



- Make the required holes on the wall corresponding to the mounting box screw positions.
- Insert the nylon screw plugs into the wall. Needed only if the mounting box is to be installed on the wall.
- Pull the cables from the wall through the mounting box and install the mounting box.
- The reader is to be mounted at a height less than 2 meters from the floor for MS1 compliance as per IEC 62368-1
- Strip off the overall jacket and shield of the Wiegand / OSDP cable approx 6 inches.
- Wind the conductors of the cable two turns in the ferrite core. Clamp the ferrite core on the wires close to the connectors by pressing the ferrite core. ( P No : .
- Secure the 2 gang adaptor plate onto the mounting box with the 6-32 X 3/4 STAINLESS Screws X 4
- Hook the fascia sub assembly onto the 2 gang adaptor plate. Ensure the two parts are properly assembled.
- Secure the fascia and the 2 gang adaptor plate with the PAN HEAD X2 M3 L8 (Qty-2) screws.

## 7.0 Power up and Testing

- Turn power on**  
Buzzer sounds one short Beep and then a long beep.  
The LCD turns ON and home screen is displayed.
- Present a card**  
Contactless card – The LCD screen updates to show card screen.  
Contact card – The LCD screen updates to insert contact card.
- FP access**  
Use ENROL on the home screen to enroll a finger to the reader.  
Use VERIFY to get access grant/ denied for a finger.

## 8.0 Certifications

### 8.1 FCC

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Information to user

Changes or modifications not expressly approved by **Identiv** could void the user's authority to operate the equipment.

### 8.2 IC

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie 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"

### 8.3 CE

**Identiv** hereby declares that the uTrust TS ScrambleFactor SF.3 reader Model 8314ABT is in compliance with the essential requirements and other relevant provisions of CE directive