



Installation and User Manual for uTrust TS ScramblePad SC Reader

Version 1.3

8336

Confidential

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Version	1.3
Date	24-Apr-2018
Document no	833601

Document History

Version	Date	Description of Change	Author
1.0	10-Jan-18	Initial version	Sixtus Stanly
1.1	31-Jan-18	Updated comments from UL	Sixtus Stanly
1.2	20-Mar-18	Updated the Current at 55V based on UL comments	Sixtus Stanly
1.3	24-Apr-18	Updated the UL1076 details based on UL comments	Sixtus Stanly

uTrust TS Scramblepad SC

Contents

1.0	Introduction	4
2.0	Reader	4
2.1	Functionality.....	4
2.2	Front/Top Casing with Contact Card	4
2.3	Rear view with back plate and metal bracket	5
3.0	Product details	5
4.0	Specifications	6
4.1	Rated current - PoE operating voltage range	6
5.0	Power up and Testing	6
6.0	Product Label	7
7.0	Installation	7
8.0	Certifications	9
8.1	FCC.....	9
8.2	IC	9
	UL 294 and UL 1076	9
8.3.....		9
8.3.1	Access control performance levels	9

uTrust TS Scramblepad SC

1.0 Introduction

This document details the Physical Access Control Reader **uTrust TS ScramblePad SC, Model Number: 8336**) and its user instruction and installation procedures. The 8336 reader extends the features already supported by the UL 294 certified 8330 readers, by adding an interface for accessing a Contact Smart Card. This is achieved by the addition of two add-on boards to the 8330 hardware that provides the Contact Smart card functionality. The interfaces to the control panel and all external cabling are identical to that of the 8330 readers.

2.0 Reader

2.1 Functionality

TS ScramblePad reader is a physical access control smart card reader that can read HF and LF contactless credentials, conforming to the following standards: ISO 14443 A & B, ISO15693 with a randomly displayed keypad PIN entry for additional security. The reader addition of the contact interface enables the reader to access ISO-7816 compliant contact smart cards in the ID-1 form factor. The reader can interface with an access control system equipped with a Wiegand, RS485 half-duplex or the Ethernet interface. Interface to the control unit via Ethernet is not evaluated by UL.

2.2 Front/Top Casing with Contact Card



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2.3 Rear view with back plate and metal bracket



3.0 Product details

Product Name	: uTrust TS ScramblePad SC
Model Name	: 8336
Device Type	: Physical Access control Reader (accessory equipment) that has RFID reader, 13.56MHz (HF) / 125 KHz (LF), Scramble Keypad and Contact Smart Card interface.
Type of equipment	: Suitable for Indoor use
Interface Type	: Phoenix connectors and RJ45
Voltage Rating	: 12V DC (or) PoE over RJ45 Connector
Current Rating @12V	: Max Current : 300 mA, Typ Current : 270 mA
Current rating via POE@55V	: Max Current : 73mA , Typ Current : 67mA
Communication protocol	: Wiegand; Shielded cable, Max length - 500ft ,Min AWG - 22 RS485 (2wire - Half Duplex); Shielded twisted pair; Max length 1000ft, Min AWG -24

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10BaseT ETH – Not evaluated by UL

4.0 Specifications

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

Model	Operating Voltage	Current	Operating temp	Operating humidity
8336	12 VDC	Typ: 270 mA Max: 300 mA	0 to +49C	85 +/-5 % RH
	POE @ 55VDC	Typ: 67 mA Max: 73 mA		

- Class 2 listed power supply with 12VDC to be used to power the reader
- POE sourcing equipment shall be UL Listed. Eg ALTRONIX NetWay8M
- When the readers use POE as a power source, the power input wiring from the control unit (i.e. Red and Black for 8336) shall be disconnected
- The maximum length of the Ethernet cable when using POE as the power source in UL installations is limited to 30 meters (98.5 feet)

4.1 Rated current - PoE operating voltage range

Voltage (V)	Max Current (mA)	Typ Current (mA)
44	87	73
46	84	70
48	82	68
50	78	65
52	75	64
54	73	67
56	72	60
57	70	59

The data in the table above for the current ratings at various voltages are based on lab measurements and not validated by UL

5.0 Power up and Testing

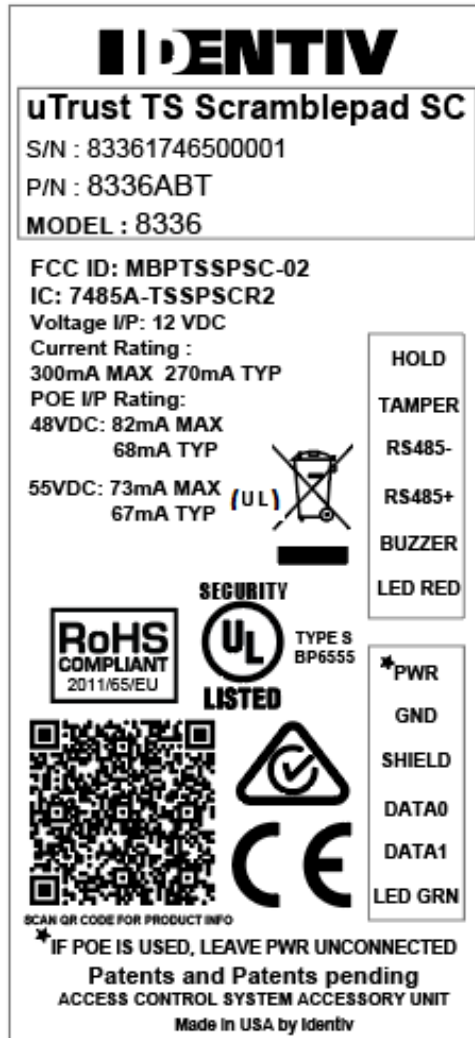
- 1 **Turn power on**
The LED blinks 3 times green with a long beep, then turns Blue
- 2 **Insert a Contact Smart Card in the Contact Slot.**
Scrambling display comes up with buzzer tone. LED glows Orange.
- 3 **Flash a Contactless card on the reader face**
The LED glows Orange and turns to blue when the card is removed.
- 4 **Press Start Key**
Scrambling display with buzzer tone & displays scrambled key
- 5 **Wiegand / RS485**
Communication to the Panel is done through Wiegand / RS485.
- 6 **RJ45 Ethernet cable**

uTrust TS Scramblepad SC

Reader can be powered from POE. Communication happens through Ethernet also, but not evaluated by UL.

This is the default reader behavior in a standalone condition.

6.0 Product Label



- SHIELD – should be connected to the cable shield.

Caution:

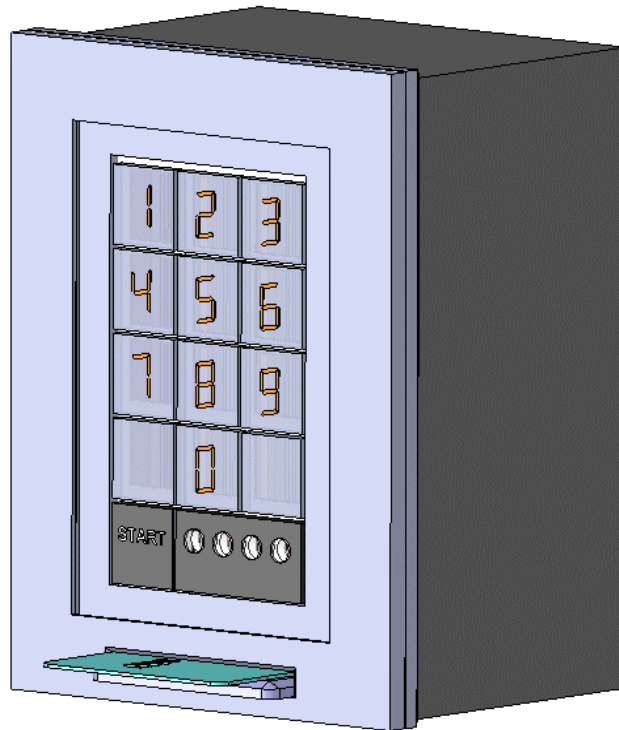
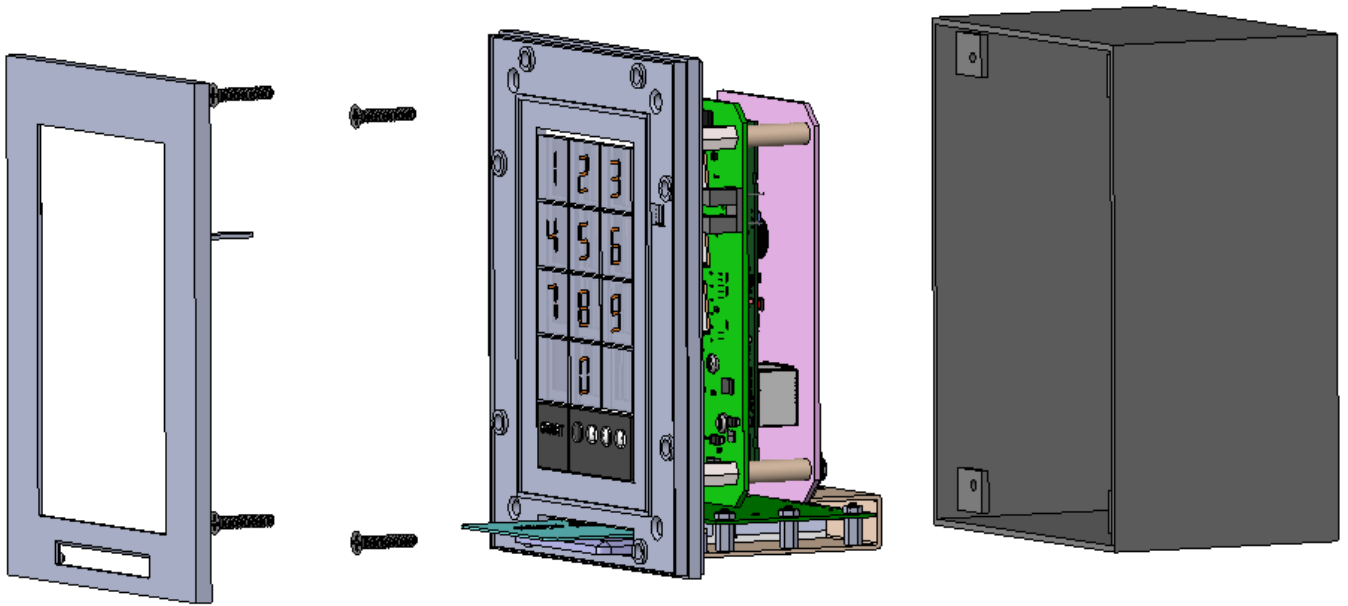
During wiring, make sure that the PWR lines does not contact any other conductors, as it might affect reader functionality / cause damage to the reader.

7.0 Installation

All cabling and wiring shall be UL Listed and/or UL Recognized.

- Install the required mounting box to the wall
- Take the cable from the rear side of the reader as per the pin outs in the label drawing
- Secure the reader unit with four screws at the corner into the mounting box
- Fix the bezel on the top of the casing

uTrust TS Scramblepad SC



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.

8.3 UL 294 and UL 1076

- Communication via Wiegand and RS485 was evaluated by UL and serves as the interfaces between the reader and panel.
- Communication via Ethernet was not evaluated by UL
- The maximum length of the Ethernet cable when using POE as the power source in UL installations is limited to 30 meters (98.5 feet).
- When the reader is powered by a supply other than Identiv Mx series controller, the power supply should be a UL 294 and 1076 listed , class 2 supply.
- For UL 1076, the reader was assessed for the acknowledgement signal annunciation while interfacing to the Listed Identiv Mx series control unit via RS-485 and Wiegand.

8.3.1 Access control performance levels

Destructive attack	: IV
Line Security	: I
Endurance	: I
Standby Power	: I