



**User Manual for  
uTrust TS KEYPAD  
Physical Access Control Readers**

**Version 1.7**

**8230**

**Confidential**

<b>Author</b>	Sixtus Stanly
<b>Version</b>	1.7
<b>Date</b>	24-Apr-2018
<b>Document no</b>	823005

## Document History

<b>Version</b>	<b>Date</b>	<b>Description of Change</b>	<b>Author</b>
1.0	08-May-15	Initial version	Suresh Kumar T
1.1	09-Oct-15	Wiegand section, Outdoor, temperature profile modified.	Suresh Kumar T
1.2	26-Oct-15	Document updated after inputs from UL	Sudhan Immanuel G
1.3	30-Oct-15	Current ratings for different voltages and wiring configuration for power updated	Sudhan Immanuel G
1.4	18-Nov-15	Document updated to restrict Ethernet POE cable lengths	Sudhan Immanuel G
1.5	19-Nov-15	Document updated after review comments from UL	Sudhan Immanuel G
1.6	14-Dec-2015	PoE current rating updated	Sudhan Immanuel G
1.7	24-Apr-18	Updated the UL1076 details based on UL comments	Sixtus Stanly

# uTrust TS KEYPAD User Manual

## Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
<b>2.0</b>	<b>Reader .....</b>	<b>4</b>
2.1	Functionality.....	4
2.2	Front/Top Casing.....	4
2.3	Back View/plate .....	5
<b>3.0</b>	<b>Product details .....</b>	<b>6</b>
<b>4.0</b>	<b>Specifications .....</b>	<b>6</b>
4.1	Rated current at different operating voltages .....	6
<b>5.0</b>	<b>Label .....</b>	<b>7</b>
<b>6.0</b>	<b>Installation details .....</b>	<b>7</b>
6.1	Parts List.....	8
6.2	Recommended Infrastructure .....	8
6.3	Connector Information .....	8
6.3.1	Pinout diagram .....	8
6.4	Mounting the Reader .....	9
6.4.1	Location of mounting holes on wall .....	9
6.4.2	Reader Installation Steps .....	10
<b>7.0</b>	<b>Power up and Testing .....</b>	<b>12</b>
<b>8.0</b>	<b>Certifications .....</b>	<b>13</b>
8.1	FCC.....	13
8.2	IC .....	13
8.3	UL 294 and UL 1076.....	13
8.3.1	UL 294 access control performance levels .....	13

# uTrust TS KEYPAD User Manual

## 1.0 Introduction

This document details the Physical Access Control Reader **uTrust TS KEYPAD** and its basic user instruction and installation procedures.

## 2.0 Reader

### 2.1 Functionality

TS KEYPAD 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 keypad PIN entry for additional security. The reader can interface with an access control system equipped with a Wiegand or RS485 serial interface. It can also be interfaced with a Host Server / Control Panel that supports Ethernet interface. User interfaces include RGB LED's and Buzzer.

### 2.2 Front/Top Casing



# uTrust TS KEYPAD User Manual

## 2.3 Back View/plate



Standard version



Connectivity version

Back plate

# uTrust TS KEYPAD User Manual

## 3.0 Product details

Model Name	: uTrust TS keypad
Device Type	: RFID reader, 13.56MHz (HF) / 125 KHz (LF), keypad Physical Access control Reader (accessory equipment)
Type of equipment	: Potted Reader, Suitable for Indoor use
Interface Type	: Phoenix connectors and RJ45
Voltage Rating	: 6-16V DC (or) 48V DC on RJ45 Connector
Current Rating @12V	: Peak Current – 255 mA, Average Current 180 mA
Communication protocol	: Wiegand, RS485 (2wire - Half Duplex), 10BaseT ETH

## 4.0 Specifications

Model	Operating Voltage	Current	Operating temp	Operating humidity
8230 uTrust TS KEYPAD	6-16 VDC	Av -180 mA @12V Pk -255 mA @12V  Refer Section 4.1 for detailed ratings at various voltages	0 to +49C	85 +/-5 % RH
	POE @ 48VDC*	80 mA Max.		

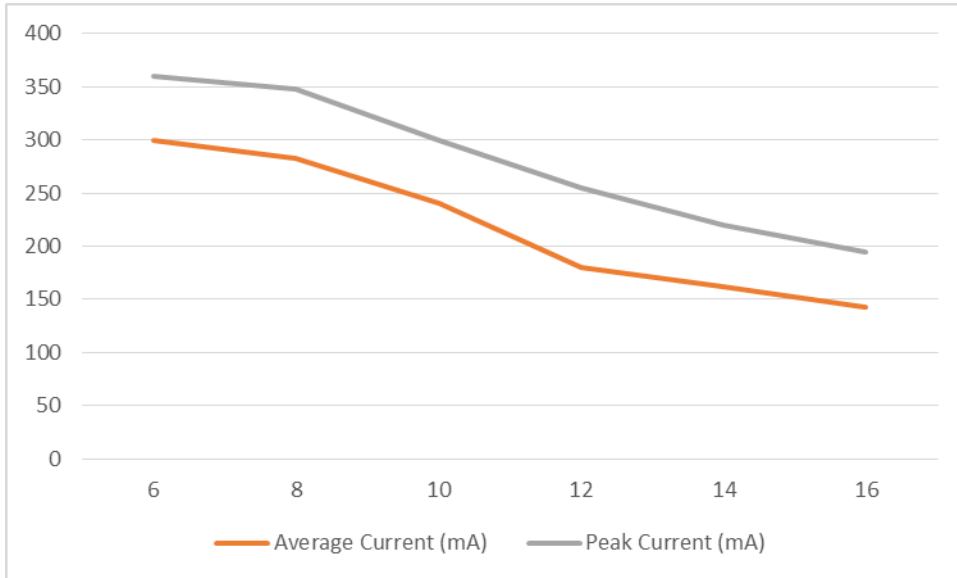
\* POE sourcing equipment shall be UL 294 or UL 294B Listed with Class 2 output

- When the readers use POE as a power source, the power input wiring from the control unit (i.e. Red and Black for 8230) 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)
- There shall be no connections made to the RS-485 interface ( RS485+ and RS485-) for UL installations

### 4.1 Rated current at different operating voltages

Voltage (V)	Average Current (mA)	Peak Current (mA)
6	300	360
8	283	348
10	241	300
12	180	255
14	162	220
16	142	195

# uTrust TS KEYPAD User Manual



## 5.0 Label

**IDENTIV** uTrust TS Network Keypad Reader

BAR CODE TYPE 128  
PPPPYYWWMNNNNN

S/N: 8230YYWWMNNNNN P/N: 8230

**MODEL: 8230**  
FCC ID: MBPISKP-02  
IC: 7485A-TSKPR2

Voltage I/P: 6 to 16 VDC  
Current Rating @12V:  
180mA Av  
255mA Pk

**ACCESS CONTROL SYSTEM  
ACCESSORY UNIT**

RoHS COMPLIANT  
2011/65/EU

CE

★ IF POE IS USED, LEAVE  
PWR UNCONNECTED

ORANGE	LED GRN
WHITE	DATA1
GREEN	DATA0
BLACK	DRAIN
BLACK+ WHITE	GND
RED	PWR

SCAN QR CODE  
FOR PRODUCT INFO

Patents and Patents pending  
Made in XXXXXXXXXX  
by Identiv

HOLD	BLUE
TAMPER	VIOLET
RS485-	GRAY
RS485+	PINK
BUZZER	YELLOW
LED RED	BROWN

### Caution:

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

## 6.0 Installation details

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

# uTrust TS KEYPAD User Manual

## 6.1 Parts List

- TS Keypad reader -1
- Screws (A #6-18X1.5" SS) - 4Nos – Back Plate mounting screws for Wall
- Snake Eye Screw (SMF #6-32X5/16" SS) – 1 No- Top casing mounting security screw
- Screws (SMF #6-32x3/8" SS) - 3 No's - 1 casing to back plate mounting screw and 2 Junction Box mounting screws
- Nylon anchor plug -4 Nos
- 6 pin phoenix plug (Phoenix connector version only) – 2 Nos
- Back Plate

## 6.2 Recommended Infrastructure

- All cabling and wiring shall be UL Listed and/or UL Recognized
- There shall be no connections made to the RS-485 interface (RS485+ and RS485-) for UL installations
- Cable Wiegand - 22AWG Shielded cable. (Cable P No : ALPHA WIRE, P/N 1299/10C)
- Cable RS485 - RS485 for 1000m\*\* (4000ft) 24AWG STP
- Cable RJ45 - Cat5e / Cat6
- Class 2 Linear DC PS - 6-16 V, 1A min.

\*\* Tested in lab conditions up to 115Kbaud

## 6.3 Connector Information

### 6.3.1 Pinout diagram





# uTrust TS KEYPAD User Manual

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 color should be connected to the cable shield.**

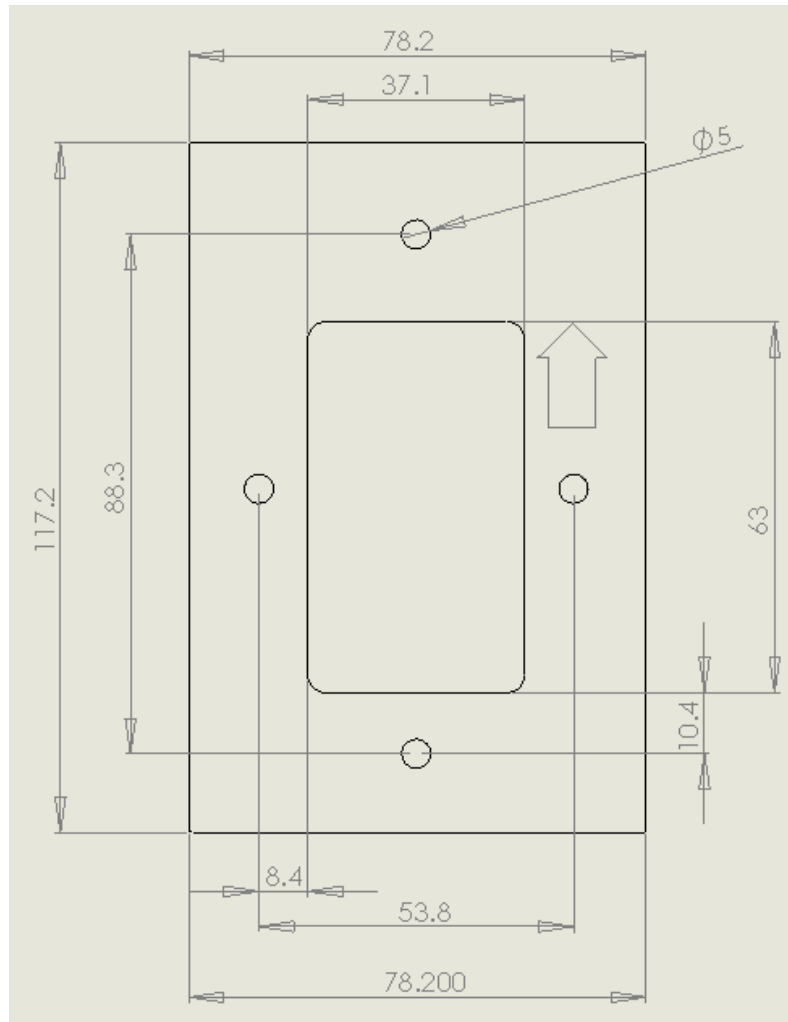
### **Caution:**

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

## **6.4 Mounting the Reader**

### **6.4.1 Location of mounting holes on wall**

## uTrust TS KEYPAD User Manual

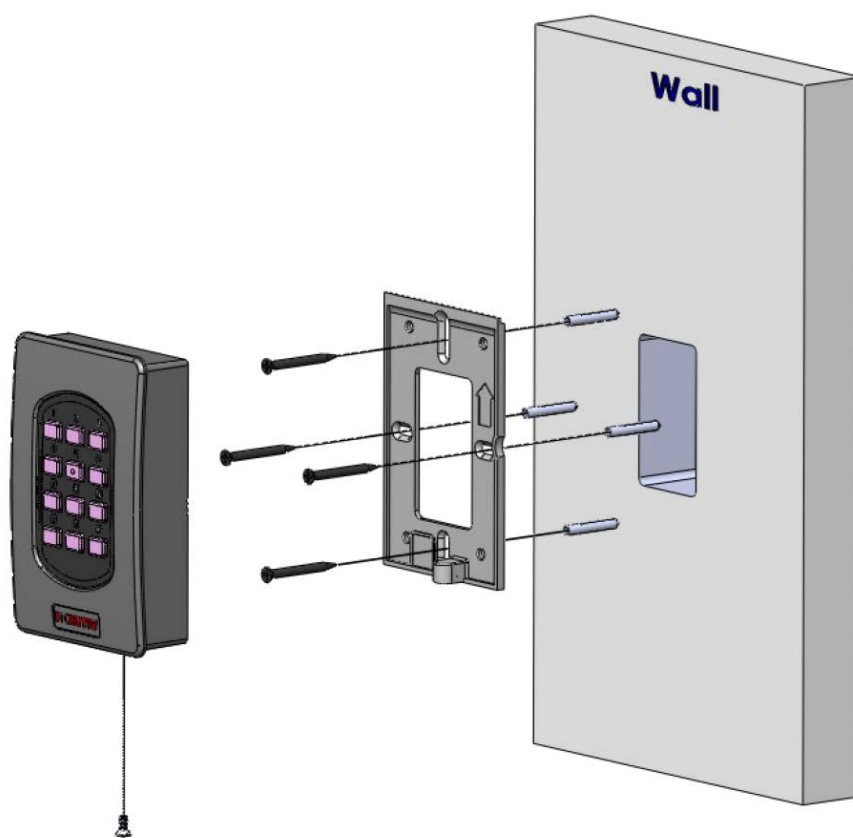


**Phoenix connector Reader – 4 Holes and 1 Slot**

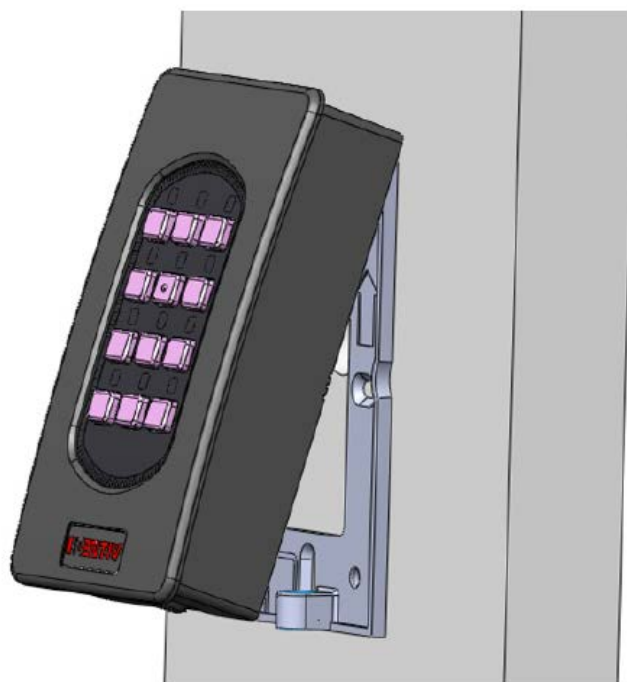
### 6.4.2 Reader Installation Steps

- a. Make holes on the wall as per the image above.
- b. Insert the nylon screw plugs into the wall.
- c. Connect the wires as per the Table 2 or Table 3.
- d. TouchSecure® reader with Bottom Casing is to be now secured onto the wall using the Screws (A #6-18X1.5" SS)
- e. The top casing can be inserted onto the bottom casing
- f. Secure the Top and bottom casing by the Snake Eye Screw (SMF #6-32X5/16" SS)

# uTrust TS KEYPAD User Manual



Install Reader to Backplate



# uTrust TS KEYPAD User Manual

## 7.0 Power up and Testing

- 1 **Turn power on**  
The LED blinks 3 times green with a long beep, then turns red
- 2 **Present a card**  
The LED blinks green, and a short Beep is emitted
- 3 **Press Key**  
Buzzer tone & backlight LED blinks

This is the default reader behavior.



Turn power on.



Test with card.

# uTrust TS KEYPAD User Manual

## 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 was evaluated by UL and serves as the interface between the reader and panel
- Communication via RS485 or OSDP is not permitted
- 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 acknowledgment signal annunciation while interfacing to the Listed Identiv Mx series control unit via Wiegand only.

#### 8.3.1 UL 294 access control performance levels

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