ImproX MDTA

Product Specification Catalogue

The ImproX (MDTA) Multi-discipline Time Attendance Terminal is designed for a wide variety of uses: Interfacing with the IXP220 or IXP400 Controller via the RS485 Terminal Bus connection. Or alternatively interface using high-speed RS485 communications making use of an ImproX iTHT Module attached via an IXP220 Controller, iTT or iTRT Terminal.

The ImproX MDTA Terminals applications include:

- Time and attendance.
- Access control (IXP400i only).
- OEM custom requirements.

New technology allows the ImproX MDTA to read both 125 kHz and 13.56 MHz frequency Tags. These Terminals therefore fit seamlessly into new or existing applications allowing you to upgrade Tag technology without replacing existing Tags.

You can use the ImproX MDTA in both indoor and outdoor (dry) environments. The ImproX MDTA offers a 12-button Keypad allowing PIN-code entry, and a 4-level, single tone Buzzer. You can control the functions of the Buzzer to suit the needs of your application.

Key Features

- CSN read capability from various Tag types: Omega Tags, Impro Trinary Tags (1074 and 2074), Philips HITAG™ 1, Philips HITAG™ 2, HID Tags (H10301, H10302 and H10304), ISO 15693-2 iClass Tags, ISO 18092 FeliCa Tags and ISO 14443A MIFARE® Tags.

CAUTION: **The ImproX MDTA Terminal does not support the use of HID 1346 Proxkey II Tags.**

NOTE: *HID, FeliCa and MIFARE® are registered trademarks of HID Global Corporation (an ASSA ABLOY Group Brand), The Sony Corporation and Koninklijke Phillips Electronics N.V. respectively.*

- A 240 x 320 Pixel, 65 K Colour, Thin Film Transistor Liquid Crystal Display (TFT-LCD).
- A 12-button Keypad.
- A single-tone, 4-level volume (including off) adjustable Buzzer.
- Operation from power inputs in the range 8 V to 14 V DC.
- A Software utility to upgrade Firmware while installed on-site, without removal of the Terminal and with zero downtime.
- At this stage, when connecting the ImproX MDTA via RS485 there's NO Full-offline Validation. Full-offline Validation is, however, available when the MDTA connects via an ImproX (iTHT) Intelligent High-speed Module.

Reading Range (Tag)

Tag Type	Typical Range (Minimum) (mm)	Typical Range (Minimum) (in)
Slim Tags	25 - 50	1 - 2
Omega Tags	25 - 50	1 - 2
Impro Trinary Tags	25 - 50	1 - 2
Philips HITAG™ 1	25 - 50	1 - 2
Philips HITAG™ 2	25 - 50	1 - 2
HID 125 kHz Tags	25 - 50	1 - 2
HID iCLASS Tags	25 - 50	1 - 2
FeliCa Credit Card Tags	25 - 50	1 - 2
MIFARE® Credit Card Tags	25 - 50	1 - 2

NOTE: Mounting the Terminal on a metallic surface will reduce the Tag Read/Write range slightly.

Physical Specifications

Length	:	97 mm (3.8 in).
Width	:	145 mm (5.7 in).
Height	:	39 mm (1.5 in).
Approximate Weight	:	199 g (7 oz).
Cabinet Material	:	ABS Plastic.
Colour	:	Black.

Environmental Specifications

Operating Temperature	:	-25°C to +60°C (-13°F to +140°F).
Storage Temperature	:	-40°C to +80°C (-40°F to +176°F).
Humidity Range	:	0 to 95% relative humidity at +40°C (+104°F) non-condensing.
Approvals		
CE Approval	:	EN 301 489-1 and EN 301 489-3.
FCC Approval	:	Pending.
Dust & Splash Resistance	:	The Terminal is designed to work in an indoor (dry) environment, similar to IP54. The Terminal is, therefore, sealed against water.
Drop Endurance	:	2 m (6.56 ft) drop (in packaging).

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ACCESS CONTROL

Electrical Specifications

Power

Input Voltage	:	8 V DC to 14 V DC.	
Power Requirements		Current (mA)	Power (W)
Input Voltage 12 V DC	:	110	1.32
Permissible Input Supply Ripple Voltage (Max)	:	1 V_{PP} at 50 Hz.	
Power Input Protection	:	Reverse polarity, over-voltage and over-current protection.	

Terminal Bus

Electrical Interface	:	RS485, ASCII with 16-bit CRC checking.
Baud Rates	:	9 600, 19 200, 38 400, 57 600 and 115 200 selectable via the communications protocol.
Data Format	:	8 data bits, no parity, 1 stop bit.
Communications Protocol	:	ImproX Secure Communications Protocol.

Frequency

Passive Frequency	:	125 kHz and 13.56 MHz.

Processor

Type	:	ARM7 TDMI.
Flash ROM	:	256 K.

Other

Anti-tamper Switch	:	An optical anti-tamper inside the housing indicates an alarm if the Front Cover assembly is removed from the Backing Plate.

Factory Defaults

Baud Rate	:	Factory-set to 38 400.
Buzzer Volume	:	Level 3 (maximum).

User Interfaces

Display

Type	:	Thin Film Transistor Liquid Crystal Display (TFT-LCD).
Resolution	:	240 x 320 Pixels.
Colour	:	65 K Colour Screen.
Back-lighting	:	Permanently on.

Buzzer

Volume	:	Software adjustable in four discrete steps (including off).
Tone	:	Single tone.

Keypad

Buttons	:	12 Buttons, used for entering Reason Codes.
Reason Code Range	:	00-99.

Related Information

For extra information relating to this product refer to the:

- Hardware Installation Manual (XTA307-0-0-GB-XX).

Ordering Information

Order the ImproX (MDTA) Multi-discipline Time Attendance Terminal using the following Part Number:

- XTA921-5-0-GB-XX: ImproX (MDTA) Multi-discipline Time Attendance Keypad Terminal.

Warranty Details

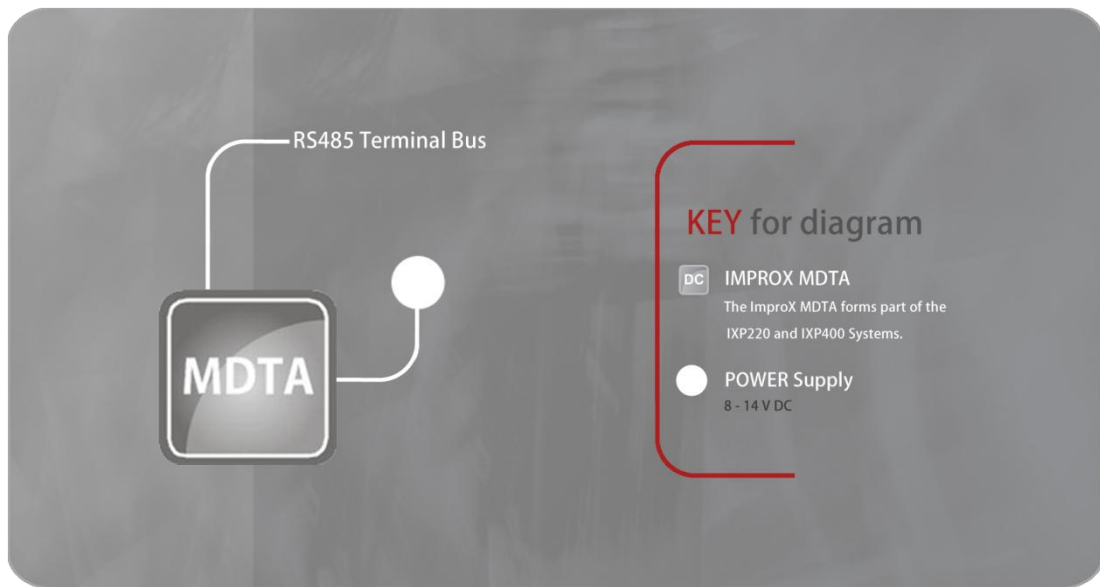This product conforms to our Warranty details on **www.impro.net**.

Figure 1: ImproX MDTA Overview

This Product Specification Catalogue applies to the ImproX (MDTA) Multi-discipline Time Attendance Terminal, XTA921-5-0-GB-03.			
(The last two digits of the Impro stock code point to the issue status of the document or product).			
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