ImproX DBv

Product Specification Catalogue

The ImproX (DBv) Vertical Mount Drop Box is a Tag reading Terminal designed to interface with the IXP120, IXP220 and ImproNet Access Control Systems, as well as OEM applications, using the RS485 Bus Connection.

The Drop Box is available in 125 kHz and 13.56 MHz frequency options. The 125 kHz ImproX DBv supports the ImproX Antenna Reader range while the 13.56 MHz ImproX DBv supports the ImproX Multi-mode Remote range.

The ImproX DBv provides access control to one door in Full Anti-passback (APB) by using an ImproX Antenna or Multi-Mode Reader (connected to “Reader 2”) as the incoming Reader, and the Drop Box as the outgoing Reader. Alternatively, again on a single door and making use of “Reader 2”, use the Antenna or Multi-Mode Reader as the outgoing Reader for permanent Tagholders and the Drop Box as the outgoing Reader for visitor Tagholders.

The ImproX DBv is available in a 3CR12 Steel cabinet or unhoused to best suit the needs of your application.

Key Features

General Hardware

- An excellent user interface consisting of 9 LED “Diagnostic Indicators.”
- Accepts Tags with or without the slot and clip.
- An external RS485 Terminal Communications Bus Interface.
- A Software utility to upgrade Firmware while installed on-site, without removal of the Drop Box.
- Four Digital Inputs (including 2 Door Open Sensors (DOS) and 2 Request to Exit (RTE)). These Digital Inputs let you interface with a variety of devices such as reed switches, push-buttons and alarm panels.

ImproX (DBv)

Vertical Mount Drop Box

XDB902-1-0-GB-XX XDB903-1-0-GB-XX XDB904-4-0-GB-XX
XDB905-4-0-GB-XX

General Hardware (Continued)

- End-of-Line Sensing Anti-tamper Protection.
- Allows Relaxed or Full Anti-passback access.
- Two independent single-pole, double-throw (SPDT) Relay Outputs. “Relay 1” is pre-wired for use by the ImproX DBv, “Relay 2” lets you interface to door strikes, magnetic locks and other third-party devices (for example alarm panels or lighting).

XDB902 and XDB903

- Reads selected HID 125 kHz Tags.

NOTE: HID is a registered trademark of HID Global Corporation (an ASSA ABLOY Group Brand).

- Read/Write capability using the following Impro Tags: Slim Tags and Omega Tags, WriTag 128 and WriTag 2048.
- Connection to ONE Antenna Reader, to “Reader 2”, per ImproX DBv.
- The XDB903 is supplied housed in a white powder coated 3CR12 steel Cabinet.
- Operates from a 12 V DC power input.
- CE Approved.

XDB904 and XDB905

- Reads FeliCa Tags.
- Reads MIFARE® Tags.
- Connection to ONE Multi-mode Remote, to “Reader 2”, per ImproX DBv.
- The XDB905 is supplied housed in a white powder coated 3CR12 steel Cabinet.
- Operates from a 12 V DC power input.

Physical Specifications

XDB902 and XDB904

Length	:	13 cm (5 in).
Width	:	20 cm (8 in).
Height	:	25 cm (10 in).
Approximate Weight	:	1.5 kg (3 lb).
Throat Assembly	:	Stainless Steel and vacuum formed ABS Plastic.
Front Mouth Plate	:	Stainless Steel.

XDB903 and XDB905

Length	:	28 cm (11 in).
Width	:	23 cm (9 in).
Height	:	111 cm (44 in).
Approximate Weight	:	25 kg (55 lb).
Throat Assembly	:	Stainless Steel and vacuum formed ABS Plastic.
Cabinet	:	3CR12 Steel.
Colour	:	White.

impro technologies® ACCESS CONTROL

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

XDB902 and XDB903

CE Approval	:	EN 301 489-1 and EN 301 489-3.
FCC Approval	:	Pending.

XDB904 and XDB905

CE Approval	:	Pending.
FCC Approval	:	Pending.

Dust & Splash Resistance XDB902 and XDB904	:	Mounted in a suitably rated, user supplied cabinet; the Drop Box is designed to work in an indoor or outdoor environment similar to IP54.
Dust & Splash Resistance XDB903 and XDB905		The Drop Box is designed to work in an indoor or outdoor environment similar to IP66.
Drop Endurance	:	2 m (7 ft) drop (in packaging).

Electrical Specifications

Power

Input Voltage	:	12 V DC, polarity sensitive.	
Power Requirements XDB902 and XDB903		Current (mA)	Power (W)
Input Voltage 12 V DC Solenoid OFF	:	45	0.54
Input Voltage 12 V DC Solenoid ON	:	800	9.6
Power Requirements XDB904 and XDB905			
Input Voltage 12 V DC Solenoid OFF	:	80	0.96
Input Voltage 12 V DC Solenoid ON	:	950	11.4

The following specifications are common to all models of the ImproX DBv:

Permissible Input Supply Ripple Voltage (Max)	:	1 V_{PP} at 50 Hz.
Power Input Protection	:	Reverse polarity, over-voltage and over-current protection are provided on the Drop Box.

Solenoid

Input Voltage	:	12 V DC.
Type	:	Push, pull action.

Terminal Bus

Electrical Interface	:	RS485, ASCII with 16-bit CRC checking.
Baud Rate	:	1 200, 2 400, 4 800, 9 600, 19 200, 28 800, 38 400 (default), 57 600 and 76 800 selectable via the Communications Protocol.
Data Format	:	8 data bits, no parity, 1 stop bit.
Communications Protocol	:	ImproX Secure Communications Protocol.
Unit Status	:	Slave.

Digital Inputs

Input Type	:	4 x Dry-contact inputs.
Detection Resistance Range	:	< 5 kOhm.
Protection Range	:	+ 50 V to – 50 V continuous, + 80 V to – 80 V surge.

Relays

Relay Output	:	2 independent single-pole, double-throw (SPDT) Relays each with NO, COM and NC contacts.
Relay 1 Allocation	:	Factory configured to drive the Solenoid when a Tag is inserted and read inside the Drop Box.
Relay 2 Allocation	:	User configured to control hardware at the exit point (typically a boom, vehicle gate or turnstile).
Contact Ratings XDB902 and XDB903	:	3 A at 24 V DC or 125 V AC. 1.5 A at 220 V AC.
Contact Ratings XDB904 and XDB905	:	10 A at 28 V DC, 5 A at 220 V AC, 12 A at 120 V AC.

Memory

Type	:	16-bit CPU operating at 16 MHz.
RAM	:	2 K Byte.
Flash ROM	:	64 K Byte.

Factory Defaults

Baud Rate	:	Factory-set to 38 400.
Mode	:	Receive (Slave Mode).
Buzzer Volume	:	Level 3 (maximum).
Beep Codes		
Fails Power-on Self-test	:	Continuous beep for 2 seconds
Passes Power-on Self-test	:	Two short beeps of 200 ms duration, separated by a 200 ms inter-beep pause.

User Interfaces

Drop Box

Status Indicator

Power On	:	Continuous Red.
Upgrade Mode	:	Flashing Red (Steady).
RS485 Communications Failure	:	Flashing Red (Intermittent).

Diagnostic Indicators

Relay 2	:	Continuous Red on activation of the Relay.
Relay 1	:	Continuous Red on activation of the Relay.
Reader 2, Inp 2 (RTE)	:	Continuous Green on detected contact closure.
Reader 2, Inp 1 (DOS)	:	Continuous Green on detected contact closure.
Reader 1, Inp 2 (RTE)	:	Continuous Green on detected contact closure.
Reader 1, Inp 1 (DOS)	:	Continuous Green on detected contact closure.
RS485 RX	:	Flashing Green as per incoming data.
RS485 TX	:	Flashing Red as per outgoing data.

Related Information

For extra information relating to this product refer to the:

- ImproX DBv Hardware Installation Manual (XDB300-0-0-GB-XX).

Ordering Information

Order the ImproX DBv using the following Part Numbers:

- XDB902-1-0-GB-XX: ImproX (DBv) 125 kHz Vertical Mount Drop Box.
- XDB903-1-0-GB-XX: ImproX (DBv) 125 kHz Vertical Mount Drop Box with Card Capture Unit.
- XDB904-4-0-GB-XX: ImproX (DBv) 13.56 MHz Vertical Mount Drop Box.
- XDB905-4-0-GB-XX: ImproX (DBv) 13.56 MHz Vertical Mount Drop Box with Card Capture Unit.

Warranty Details

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

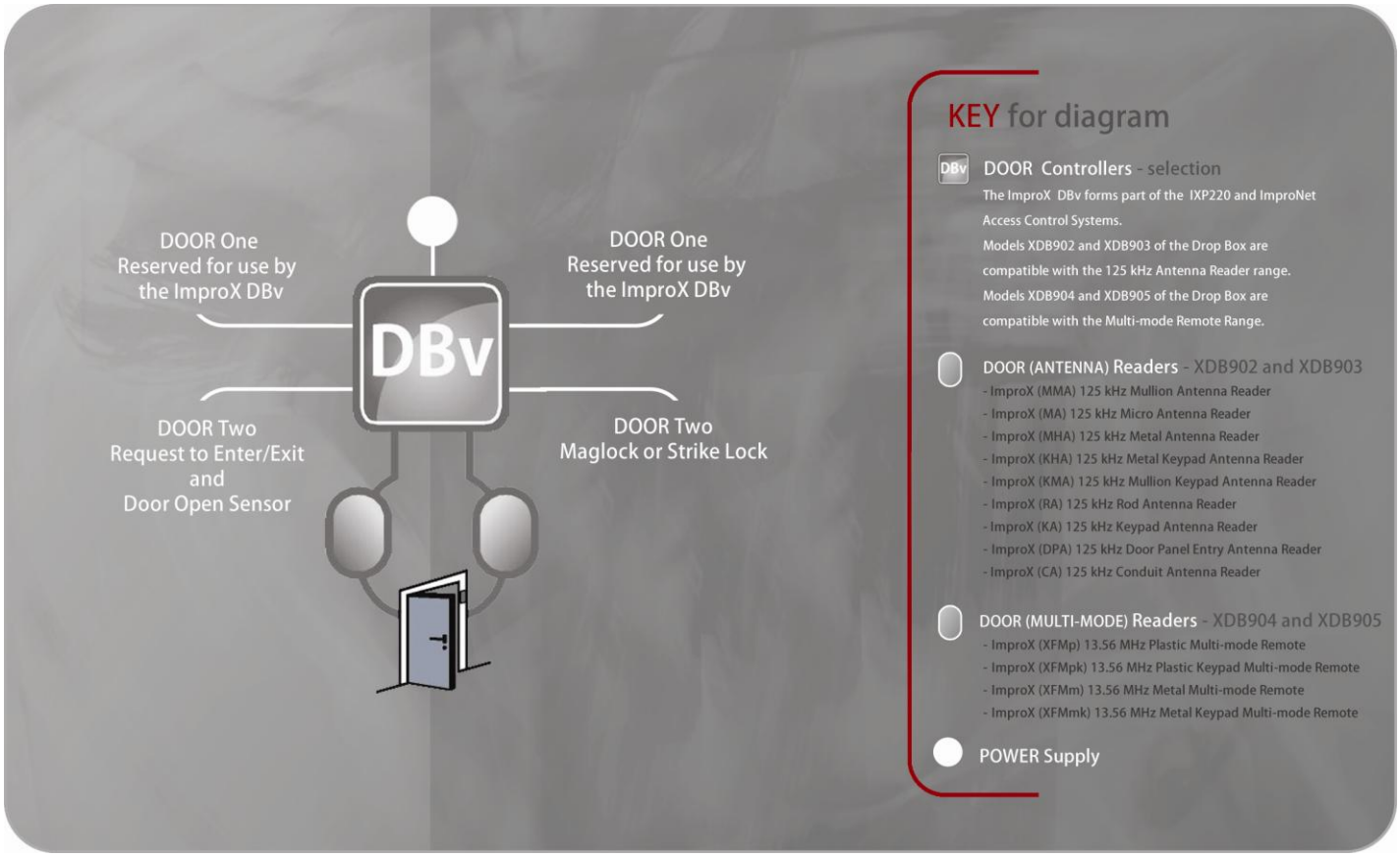

Figure 1: ImproX DBv Overview