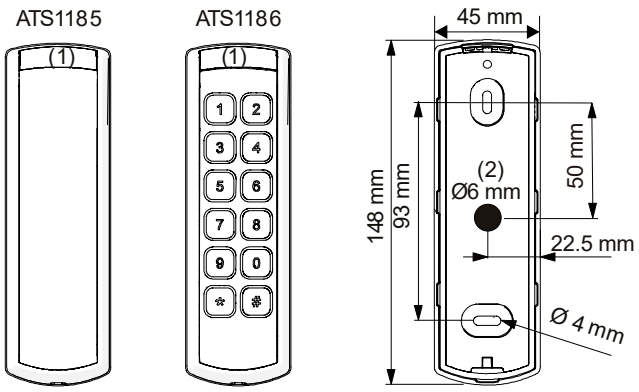
ATS1185 and ATS1186 Mifare Bus Readers Installation Sheet



Description

ATS1185 and ATS1186 are Mifare card readers. These readers offer mobile credentialing (BLE) by default thru Aritech ID app (IOS or Android). They are designed, for example, to mount on metal, dry- or brick wall, or any other location.

ATS1185 and ATS1186 can be also mounted on metal, window or door frames and are suitable for any location that requires a small reader.

ATS1186 is equipped with a keypad for card+PIN applications.

The reader connects directly to the control panel data bus. The reader includes an input for a request to exit button and an open collector output to control a door relay.

The reader address is set using the ATS1482 programming card.

The reader is waterproof. It matches by default to the electric wall sockets.

Figure

(1) LED (2) Cable

Mounting

The reader can be mounted on any flat surface by two pan head screws, 3.0 to 3.5 mm diameter, located under the cover. A slightly reduced range will be experienced when mounted on metal surfaces.

It is not recommended to use countersunk screws.
If readers are placed closer than 10 cm from each other or if the reader is installed on metal, the reading distance can be shorter.

Do not install close to sources of powerful electromagnetic disturbance.

Do not cut the cable shorter than 10 cm.

RAS addressing

The address of the reader for bus operations is set to the default address RAS 16. You can change it using the ATS1482 configuration card.

Note: It is possible to change the reader address with configuration card only when the reader is not polled.

Reader programming

When using the reader with a control panel, use the control panel programming menus. See the appropriate control panel manual for details on reader programming.

The following options are available:

- Tamper Option: Enable/disable (default enabled).
- RTE (egress): Enable/disable the request to exit and open collector (default disabled).
- Backlight Option: Permanent/Access only (default Access only).
- Buzzer Option: enable/disable reader buzzer (default enabled).

Next to that, the following options are available:

- Select Secure (default) or unsecure operation. By default, the reader reads only configured ATS145x cards. In the unsecure mode it reads Mifare UID cards, like ACT407E.
- Card Bit Limit (unsecure mode only): The maximum length of the secure card number in bits (the allowed range is 26 to 56 bits, default is 48). **Note:** This is a global setting for all readers.
- Security specific details to read custom secure cards: secure card encryption keys, application ID and file number.

Reader wiring

Table 1: Reader wiring

Red	+12V	Positive 10 to 30 VDC supply, 80 mA
Black	0 Volts	DC supply ground
White+Yellow	D+	RS-485 Data +
Yellow+Brown	D−	RS-485 Data −
White+Green	RTE	Request to exit button
Brown+Green	OC	Open Collector output used to control a door relay

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Bare wire	Shield	Safety shield

Spare wires are not used.

Use WCAT52 cable to extend the standard shielded cable for the bus and power wires. Make sure the shield is properly connected.

Cable length depends on the bus configuration.

Reader LEDs

Table 2: Reader LEDs

LED pos.	Colour	Description
Left	Green	System disarmed
	Red	System armed
	Green / red flashing	Valid card presented
	Green flashing	Door open time
Middle	Orange	System ready / Alert
Right	Red flashing	Alarm

Specifications

Number of card combinations	42x108 — 4-byte UID 72x1015 — 7-byte UID Depending on used card number range for secure applications (>42x108)
Supply voltage	10 to 30 VDC
Supported card types	Secure mode: ATS145x series, Mifare Desfire EV1, EV2 and EV3 Unsecure mode: ACT4xxE, Mifare Classic UID, Mifare Desfire EV1 UID, Mifare Plus UID, Mifare UltraLight UID
Connectivity	Everon and ATSx500A data bus
Cable	LIYY 3 m
Normal operating current	50 mA at 13.8 VDC
Maximum operating current	120 mA at 13.8 VDC
Open collector output (OUT terminal)	14 VDC max. at 50 mA max.
LED	Tri-color
Wireless operating frequency	13.553 to 13.567 MHz (Mifare) 2.4 GHz (BLE)
Maximum power output	42 dBµA/m at 10 m
Field strength	According to EN 300 330
Material of design housing	Plastic
BLE specifications	
Bluetooth transmission power	Adjustable −18 to +3 dBm
Android requirements	
Operating system version	Android 10 or higher
Bluetooth	BLE 4.1 or higher
NFC	By Android 5.0 or higher
iOS requirements	
Operating system	iOS 12.2 or higher
Bluetooth	4.1 or higher
NFC	Not supported
Color	Black
Pry-off tamper	Optical sensor
Dimensions of housing (H x W x D)	148 x 45 x 26 mm
Operating temperature	−30 to +55°C
Storage temperature	−30 to +55°C
Relative humidity	<95%, noncondensing
IP rating	IP67
IK Rating	IK09

Regulatory information

Manufacturer	KGS Fire & Security B.V. Kelvinstraat 7, 6003 DH Weert, Netherlands
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