

SmartTOUCH™

MIFARE® READER & FINGERPRINT SCANNER

The versatility of Mifare®

A Mifare® card or tag is suitable for a multitude of applications. The various sectors within the chip can be used for a variety of applications such as: identification and payment functionalities, but also for the storage of biometric data. SmartTOUCH™, the combined Mifare® reader and fingerprint scanner smartly takes advantage of the versatility of the Mifare® card.

Reliable and secure

The CMOS sensor used in the SmartTOUCH™ actively transmits and receives a radio-frequency signal. The sensor determines the electromagnetic image of the subcutaneous layer (sub surface imaging). Thanks to the link to other unique finger-specific parameters (active anti spoofing) and the advanced pattern recognition, the SmartTOUCH™

Ergonomic design

Thanks to the smart design of the SmartTOUCH™ housing, the user's finger is automatically placed in the correct position. The verification algorithm caters for potential twists and shifts of the finger. The chance of an incorrect denial is therefore very slim.

Decentralised processing and verification

It was not by chance that Keyprocessor has chosen to store the fingerprint template on the Mifare® card itself. Many suppliers store the templates in a database within the fingerprint reader. In this case the amount of fingerprints is limited to the amount of memory available in the reader. In the method chosen by Keyprocessor the biometric data is kept outside a database. Thus the verification takes place in a totally independent system.

Privacy guaranteed

The privacy of the cardholders is not invaded because the fingerprint is not published publicly. Upon a valid verification only a number, which has no relation to the fingerprint, is transported to the underlying system. For this reason the Person Data Protection law is not applicable to the SmartTOUCH™ of Keyprocessor.



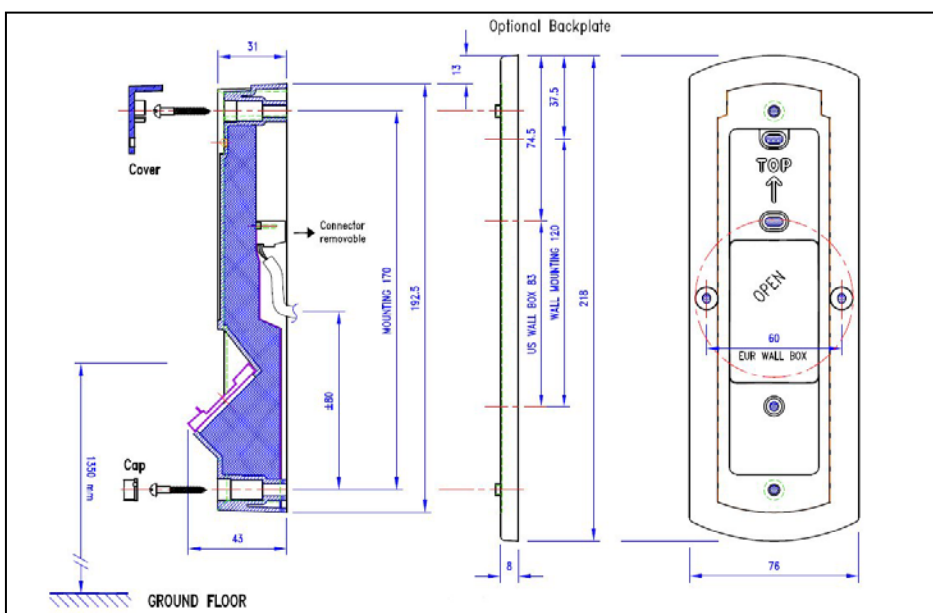
SmartTOUCH™: double security

SmartTOUCH™ does not only verify the authorisation of a Mifare® card, but it also verifies that the person who presents it is the rightful owner of the card. A scan of the fingerprint of the cardholder is stored as a template on the Mifare® card. Only when there is a perfect match between the fingerscan and the template stored on the card a go ahead is given.

offers an extremely high level of security. In contrast to frequently used optic sensors, the SmartTOUCH™ does not measure the visible fingerprint. This means that the reader is not affected by dirty fingers, small wounds or dirt on the surface itself. Another advantage is that the economic life of the CMOS sensor is much longer than that of optic sensors.

TECHNICAL SPECIFICATIONS

SmartTOUCH™	
Card reading principle	ISO/IEC 14443A-3 / Mifare®.
Fingerprint sensor	CMOS.
Frequency range	13.56 MHz.
Data transmission	106 kBaud.
Reading distance	0 - 5 cm.
Power supply	8 - 24 Volt DC.
Current	Average 2,5 Watt. Peak 5 Watt.
Size	49 x 182 x 38 mm.
Housing	Polyurethane, black.
Operating temperature	0 °C to 60 °C (32 °F to 140 °F).
Operating humidity	30 - 80% (non condensing).
Assembly	Mounting / 2 x screw from outside or inside.
LED's	Front: green, red. Side: green, orange, red (to be used when enrolling)
LED-functions	Power/access.
Cable	
Connection	Via plug connection with screw connectors.
Type	5 x 0,35 mm ² shielded.
Length	20 metres from Orbit reader interface.
Proximity transponders	
Type	ISO/IEC 14443A-3 / Mifare®.
Data transmission	Contactless.
Operating frequency	13.56 MHz.
Baudrate	106 kBaud.
Transaction time	Less than 100 ms.
Read/write distance	Up to 1,000 mm, antenna dependent.
Data integrity	Fast anticollision.
Multi-card operation	Fast anticollision.
Life cycle	100,000 writing cycles, with 10-year data retention under operating temperature conditions.
Energy	No battery, contactless energy.
Chip technology	High speed CMOS EEPROM-process, single chip, one coil.
Security mechanism	Fast anticollision protocol, individual access rights for each block, individual keys for each block, mutual authentication according to ISO/IEC DIS 9798-2, encrypted data, secure data protocol with CRC, unique serial number, transport key.
Memory	1024 x 8 bit EEPROM of which 768 byte free for use divided into 16 sectors of each 4 blocks. Sector 0 reserved for manufacturer data, serial number and MAD.



Subject to changes.

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