CISA

Wave Mode
Contactless lock for hotels and other communities

Ingersoll Rand
Security Technologies

Ingersoll Rand's Security Technologies Sector is a leading global provider of products and services that make environments safe, secure and productive. The sector's market-leading products include electronic and biometric access-control systems; time-and-attendance and personnel scheduling systems; mechanical locks; portable security; door closers, exit devices, architectural hardware, and steel doors and frames; and other technologies and services for global security markets.

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CISA SpA
Via Oberdan, 42
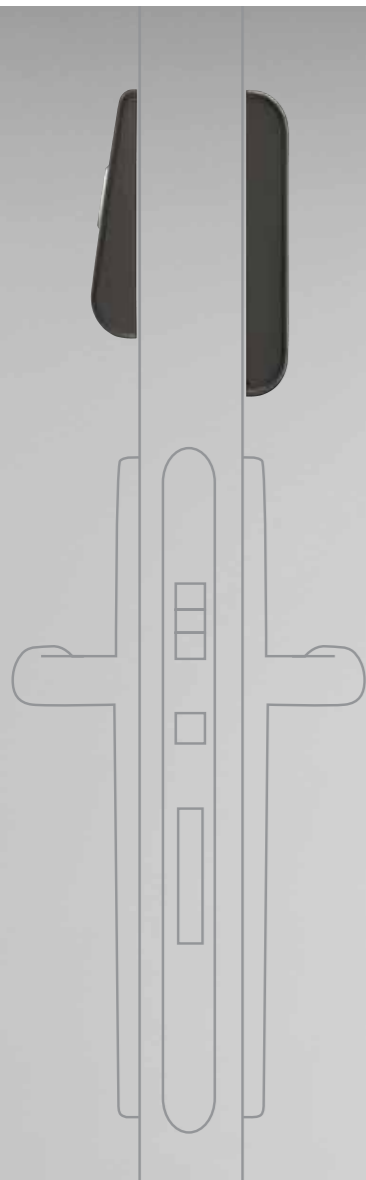48018 Faenza (RA) Italy
Tel. +39 0546 677111
Fax +39 0546 677150
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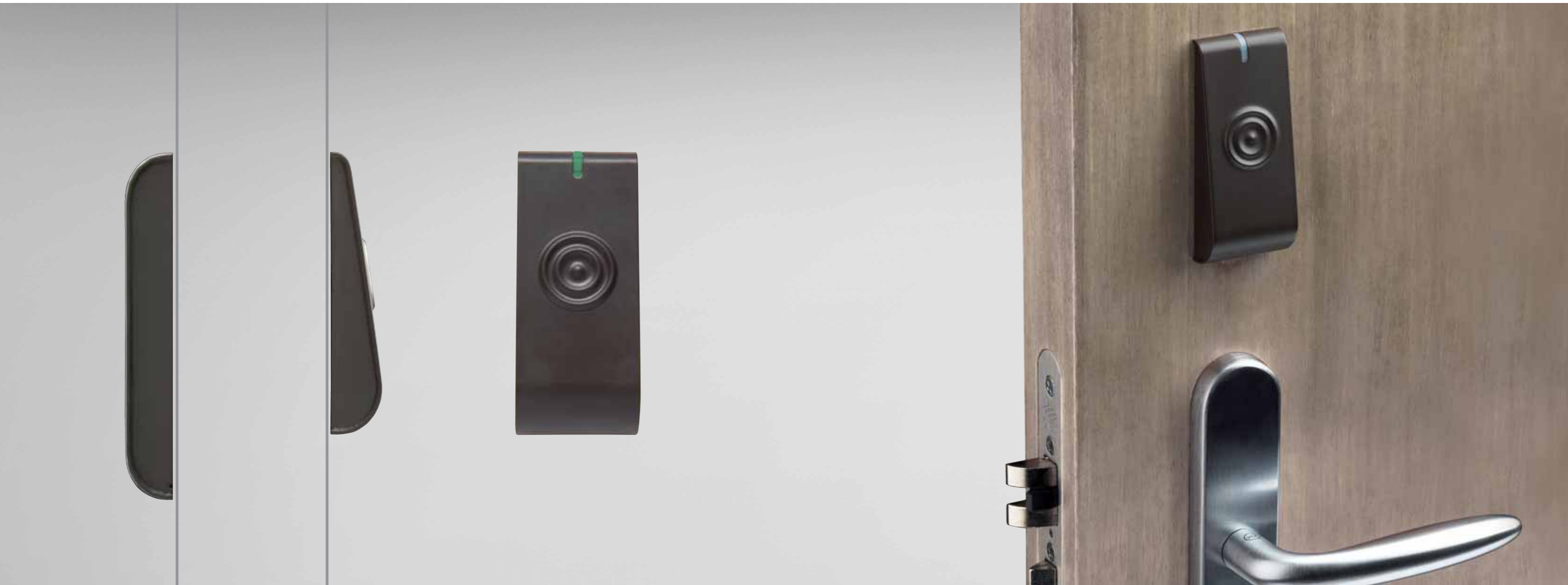**Ingersoll Rand**
Security Technologies

Wave Mode

Wave Mode is our new contactless lock for hotels and other communities, combining the most advanced security performances with maximum attention to design. Thanks to its reduced dimensions and its compatibility with different types of handles, Wave Mode suits to the exclusive style of any environment. Wave Mode has different modular elements and product configurations to best suit the different needs of customers with regards to mechanical performances and handle models. The contactless technology is simple and easy to use for all users. Enter the world of Wave Mode!

Technology blended design

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Wave Mode blends into any decor and respects the exclusive style of design both inside and outside the rooms. Electronic module is compatible with several types of handles.

Intelligent technology

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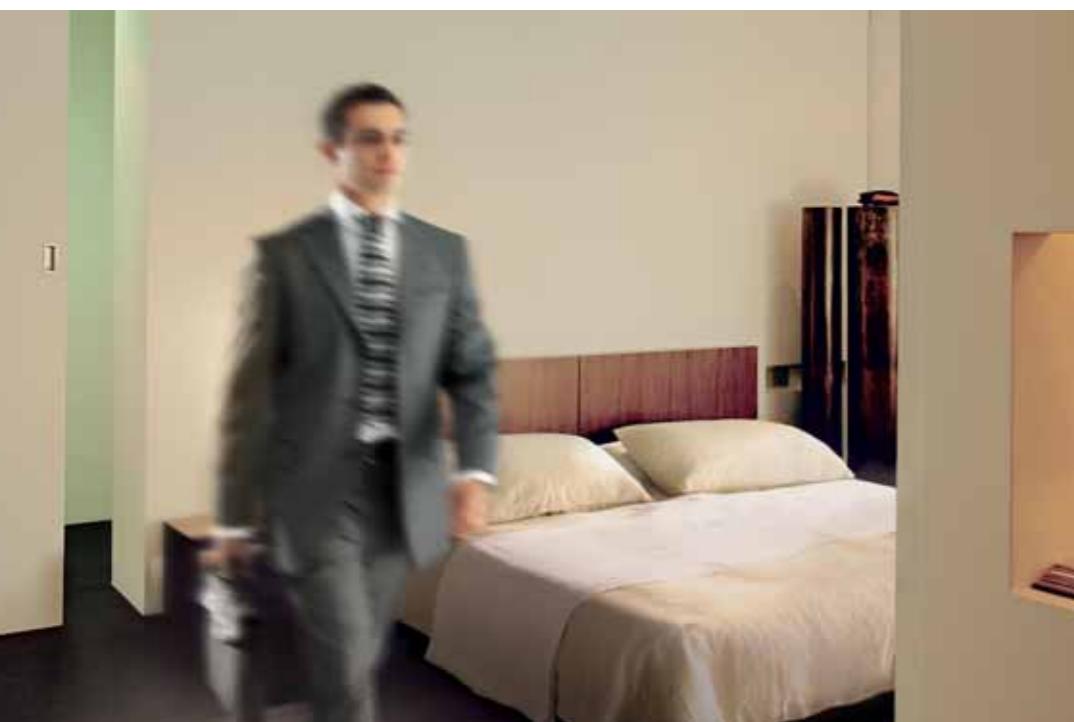Wave Mode only recognizes and validates the original card, which cannot be cloned.

Suitable for use externally due to high wear and all weather resistance.

Technology for everyone

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Contactless technology is simple and easy to use.

Active do not disturb: The Wave Mode reader indicates whether guests are in their rooms or not. It replaces inconvenient "do not disturb" cards or expensive cabling for specific indicators and enhances the hotel staff productivity. The hotel staff can find out at a glance if the room is empty or not without having to knock or open the door.

No clone. Wave Security Card is the first contactless card, which cannot be cloned and allows to prevent burglaries or frauds. Wave Mode is equipped with a 3DES cryptosystem and can validate cards, avoiding any possible attempt of making illegal cloned copies.

Reduced maintenance costs: "Contactless" means no contact between wave readers and cards. This means that both readers and cards are extremely durable to wear resistance, compared with contact technology systems (magnetic or smart).

High resistance to weather conditions*: The wave reader is also available in a special version, to protect against water, sand, salt and dust. This version is particularly suitable for external applications (resorts). IP55 protection level.

Integration in hotel automation systems: Wave Mode can be integrated in the hotel automation system through the contactless security card. It is therefore possible to benefit from the advantages of the thermotechnical controlling system, without the security and door control limits of an electric striker.

Vandalgard TM: Wave Mode allows the handle to be in neutral position. Compared with other fixed handles systems, Wave Mode reduces the handles being damaged by acts of vandalism or by any other forcing action resulting by an improper use of the handle.

Benefits to the hotels guests

User friendly: The contactless technology allows to open the door simply by bringing the card close to the wave reader. Finally, cards do not have to be inserted or wiped anymore!

Active do not disturb: An easier way for the hotel guests to indicate whether they are in their rooms or not. Wave Mode is equipped with an illuminated push-button that allows the hotel guest to select and unselect the "do not disturb" message, without opening the door or using an inconvenient "do not disturb" card.

(*) For more information, see the technical features.

Benefits to hotels and resorts

Zero-impact design: The electronic unit suits the exclusive style of any environment. Thanks to the reduced dimensions of its components, Wave Mode can be installed in any hotel and resort without compromising its design, neither inside nor outside the rooms.

Free choice: The Wave Mode electronic unit is compatible with several types of handles. Thanks to its modularity, Wave Mode offer hoteliers a choice of different product configurations to best suit their customer needs with regards to locks and emergency mechanical override.

Benefit to other communities (universities, offices, hospitals, etc.)

Zero-impact design. The electronic unit suits the exclusive style of any environment. Thanks to the reduced dimensions of its components, Wave Mode can be installed in any hotel and resort without compromising its design, neither inside nor outside the rooms.

Free choice. The Wave Mode electronic unit is compatible with several types of handles. Thanks to its modularity, Wave Mode offer hoteliers a choice of different product configurations to best suit their customer needs with regards to locks and emergency mechanical override.

No clone. Wave Security Card is the first contactless card, which cannot be cloned and allows to prevent burglaries or frauds. Wave Mode is equipped with a 3DES cryptosystem and can validate cards, avoiding any possible attempt of making illegal cloned copies.

Interoperability: the multistandard Wave Mode reader is compatible with all ISO technology standards (ISO 14443A-B, ISO 15693, MIFARE CLASSIC, NFC) for using contactless cards supplied by third parties.

Network on card: the advantages of an on-line system at a fraction of the cost. Access rights are memorized on the security card and not on the on-line access network, avoiding expensive masonry work and cabling.

Validator: the on-line readers located in strategic points allow to remotely modify the access rights, enabling to cancel, reprogram and revalidate the credentials.

Smart Software: software package to manage the system, in particular the flexible key-plan, card programming, audit-trail reading and analysis, printing of all data, back-up , etc. Windows 95, 98, NT, XP and Vista compatible. Modifications of user access rights are directly sent to validators, which update the card when validated.

History "on card": the last user events are recorded on the card so it is possible to trace the activity of each user by simply reading his card.

Reduced maintenance costs: "Contactless" means no contact between wave readers and cards. This means that both readers and cards are extremely durable to wear resistance, compared with contact technology systems (magnetic or smart).

High resistance to weather conditions*. The wave reader is also available in a special version, to protect against water, sand, salt and dust. This version is particularly suitable for external applications (resorts). IP55 protection level.

Vandalgard TM. Wave Mode allows the handle to be in neutral position. Compared with other fixed handles systems, Wave Mode reduces the handles being damaged by acts of vandalism or by any other forcing action resulting by an improper use of the handle.

Audit-trail+: the dead-bolt status detector, allows the audit-trial to record the exit as well. It is now possible to trace who left the room and when, for maximum monitoring of staff and users. (Upon request and only in combination with automatic dead-bolt).

Benefits to the users

User friendly. The contactless technology allows to open the door simply by bringing the card close to the wave reader. Finally, cards do not have to be inserted or wiped anymore!

One card, many applications: it is possible to use only one card for several functions (e-pos, transport, cantine, etc.).

(*) For more information, see the technical features.

Modular Elements

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Wave Mode
A solution for every need.

Wave Mode is composed of different modular elements, which can be chosen depending on the needs of the hotel/resort. Therefore, it is possible to order only some elements and integrate them with components supplied by third parties. If you find a handle that suits your hotel design better - no problem! You can order only the other components (electronic unit, lock and emergency mechanical override).

CISA provides two types of configurations (SUITE and JUNIOR) with different mortice locks, handles and emergency mechanical override.

Electronic unit, A0W01 series

It is the main part of the Wave Mode and is composed of a contactless reader, an internal compartment for batteries with a "do not disturb" selection push-button, an electronic card and an actuator (lockbox). The actuator provides an innovative solution to reduce energy consumption and enhance reliability (European Patents no. 04023760.4 and no. 04023759.6).

The electronic card and the actuator have very limited overall dimensions and can be applied to several types of handles. It is also available in a special version to protect against water, sand, salt and dust (item no. A0W01.20.0). IP55 protection level.

		SUITE	JUNIOR
Electronic unit	Standard.	●	●
	IP55 protection level.	R	R
Antipanic mortise lock	Latch and antitheft device only. 5A755/6 series.		●
	Automatic deadbolt with emergency mechanical override detector (audit trail). 5A502/3 - 5A512/3 series.	●	
	Automatic deadbolt with emergency mechanical override and deadbolt status detector (audit trail +) 5A504/5 - 5A514/5 series	R	
	Fire rating kit REI 30 - EN1634. 06436 series	R	R
Handle	Aluminium. 30301/30311 series		●
	Brass. 30300 series.	●	
Emergency mechanical override	None.		●
	C2000 conventional key cylinder.		R
	3-times recodable AP3 patented reversible key cylinder.	●	
Contactless security card	Plastic card. Long life. A0C09 series.	●	R
	Cardboard card. A0C10 series.	R	●

Antipanic mortice lock

The antipanic mortise lock is the closing element controlled by the electronic unit. Compared with other systems provided with electric strikers, it assures the hotel guests greater security, protection and flexibility. EN 179 certified locks.
Two versions are available, assuring different performances.

5A755/6 series, for Junior configuration.
Equipped with only one latch and an anti-theft device.

5A502/3 - 5A512/3 series, for Suite configuration.
The automatic deadbolt (patented system,

no. EP 1 030 955) assures maximum security and flexibility.
It is equipped with a detector which stores in the audit trail the use of the mechanical override.
It is also available with a deadbolt status detector (thrown or not), which stores the information in the audit trail of the electronic unit (Audit trail +), 5A504/5 - 5A514/5 series.

Fire rating kit, 06436 series.
for REI 30-EN1634 doors, available upon request.

for Suite   for Junior

Handles

Different handles (with plate) are available in different materials and finishes.

for Suite   for Junior

30300 series handle for Suite configuration.   30301/30311 series aluminium handle for Junior configuration.

Ferrite (00)   Silver (A3)   Gold (A6)

Polished brass (00)   Polished chrome (A2)   Anthracite (A9)   Silver (A3)

Satin brass (A1)   Satin chrome (A8)   Gold (A6)

Modular Elements

Contactless Security Card

A contactless uncloneable card, provided with a free memory area to be used to support applications supplied by third parties (hotel automation, POS, etc.)
A card customizing service for promotion proposals is also available.

Two versions are available:

Plastic card – A0C09 series
It assures long lasting performances.

for Suite

Cardboard card – A0C10 series

for Junior

Emergency mechanical override

An emergency non-invasive door opening system assuring maximum protection for the hotel guests and limited damages to doors or locks.

Two versions are available:

AP3 Cylinder.
A patented reversible key cylinder (PCT/E99/07611). It can be coded 3 times. A 1,2,3 system with a set of 3 registered pass keys.
Security Card: an authorised keys duplication service that can be offered only by Cisa or a Cisa Solution Partner.

This service provides 3 identical keys, which can operate all cylinders within the system. EN 1303-2005 certification.

C2000 Cylinder.
A conventional key cylinder.
This service provides 3 identical keys, which can operate all cylinders within the system.

3

2

1

Other components

Wave Mode Mobile
Encoding system

Autonomous network.
A multi-check-in stations facility without any dedicated PC, operating together with the PMS even when the PMS is not active. The system architecture, based on a shared database, has the ability to manage up to 200 devices in the same network, thanks to Wavemobile and access control units in mixed configuration. Possibility of connecting into an existing ethernet network.

PMS interface.
An easy way to interface to the most common PMS without having to use extra devices or a dedicated PC. It is possible to operate simultaneously from both the PMS and from the encoding system.

Virus free.
Wavemobile is autonomous, no PC is required therefore Virus Free. The system allows check-in operations even when it is interfaced to the PMS and the PMS is not active.

Fast check-in.
A user interface is specially designed for receptionists, enabling them to issue guest cards in a few seconds even when not interfaced to the PMS.

Smart Software.
It is compatible with Smart Software, a very useful software package allowing to search, read or analyse the audit trail and to print or make a back-up of the entire database in Windows XP, Vista environment (upon request).

Access control

This system has been created to control the access to restricted or public areas (garage, parking, fitness centre, conference hall, etc.) protected by electrical devices.

User friendly. The contactless technology and the well visible LED assure it is easy and simple to use.

High resistance. The wave reader protects against water, sand, salt and dust. IP55 protection level.

Simple and safe installation method. Compatible with box n. 503.

Configurable. It can be configured both off-line and on-line. In the latter, the hotel guest's card will be invalidated after the check-out.

Wave Mode Energy Saver

A simple and economical solution to reduce energy consumption. The Wave Mode energy saver is a card operated switch helping to prevent and thwart any attempt to use cards incorrectly.

Only a Contactless Security Card can activate the Wave Mode energy saver.
A basic version, without any card control device, it is also available.

Technical features

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Electronic unit, A0W01 series

A 13.56 MHz contactless reader unit, with an ISO 14443 B certification. Provided with an auto-on system.
Reading distance (cm): 2 max.
Status LED: authorized, non authorized, active do not disturb. Batteries compartment unit and "do not disturb" push-button. Power supply: 3 alkaline batteries AALR6 1,5 V (supplied).
*A0W01.30 series available with integrated multistandard reader.

Battery life:

≥ 20.000 cycles (approx. 2 years).
≥ 30.000 cycles (approx. 3 years), without

"active do not disturb".
Audit trail: the last 500 events (emergency mechanical override included in SUITE configuration).
Up to 60 auto-programmable timetables and choice among 3 possible status: normal, always ON (open), access denied (guest and/or staff).
Operating temperature: 0° - 70°.
The A0W01.20.0 series protected version (IP55) is also available.

Compatible with handles:

- having the overall dimensions indicated in the picture below;
- having holes for M4 and M5 screws;
- having an 8 mm follower;

- having plate springs or not;
- having a cylinder hole (if an emergency mechanical override is provided).

B≥20 mm:

(B = distance between the axis of the lock and the external side of the door).
If 14<B<20 mm, order lock box spacer 1A000240 series for wider plates or see below.
If B<20 mm, order spacer series 1A000243
If A-B<22 mm, order spacer series 1A000241
(A = door thickness).
For metal doors, order spacer series 1A000242.

Fire rating kit, 06436 series

Ceramic cardboard kit to be used with mortice locks on REI 30 - EN1634 doors.
Backsets (E): 60, 70, 80, 90 mm.
Supplied with intumescenttape for the lock reader.

AP3 cylinder

12 pins key bitting system.
BKP – Bumping-resistant.
Brass body.
Nickel silver alloy key.
Pins and drivers in hardened steel.
EN1303-2005 certification.
Key Related Security: grade 6
Attack Resistance: grade 2
Durability: grade 6 (100.000 cycles).

C2000 cylinder

5 pins key bitting system.
Brass body, key, pins and drivers. Compliance with EN 1303-2005.
Key Related Security: grade 4
Attack Resistance: grade 0
Durability: grade 6 (100.000 cycles).

Different lengths available (L), see AP3 and C2000 catalogues.

Antipanic mortice lock automatic deadbolt, 5A502/3-5A512/3 series, for SUITE configuration EN 179 certified locks.

Nickel-plated brass, reversible, antifriction, 17 mm latch.
Piston thrown deadbolt.
Automatic deadbolt with door closing recognition device (patent no. EP 1 030 955).
16 mm long (5A502/3 series).
25 mm available upon request (5A512/3 series).

Prearrangement for emergency mechanical override.
Detector of opening operations carried out wi th an emergency mechanical override.
Follower: 8 mm.
Distance: 85 mm.
Backsets (E): 60, 70, 80, 90 mm.
Protected satin brass faceplate (fin. 00).
Satin stainless steel available upon request (fin. 20)
Fire rating: 3 hours (stainless steel version).

Striker available upon request.

Antipanic mortice lock automatic deadbolt and audit trail + version, 5A504/5 - 5A514/5 series, for SUITE configuration

EN 179 certified locks.
Technical features as for 5A502/3-5A512/3 series and deadbolt status detector (thrown or not) for the lock status recognition and

the opening operations stored in the Wave Mode audit trail.
16 mm deadbolt (5A502/5 series).
25 mm deadbolt available upon request (5A512/5 series).

Antipanic mortice lock, 5A755/6 series, for JUNIOR configuration

EN 179 certified locks.
Nickel-plated brass, reversible, antifriction, 17 mm latch.
Antitheft device.
Prearrangement for emergency mechanical override.
Follower: 8 mm.
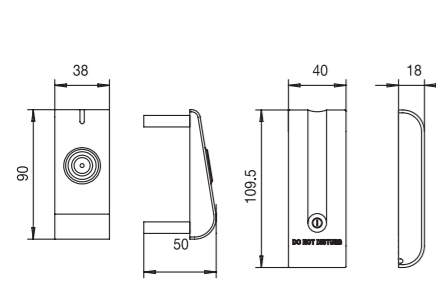Distance: 85 mm.
Backsets (E): 60, 70, 80, 90 mm.

Satin nickel-plated steel faceplate (fin. 12). Protected satin brass-plated steel available upon request (fin. 38)
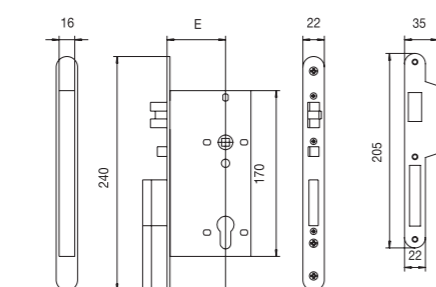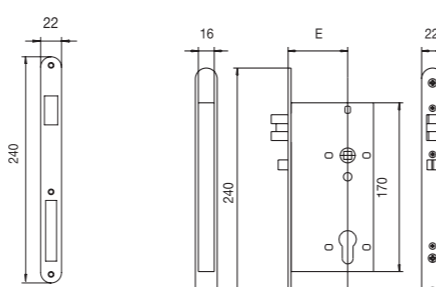Striker available upon request:
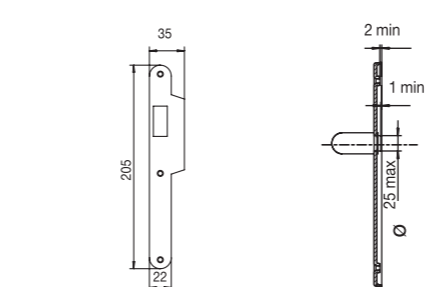- 06158.15.0 series (with tongue)
- 06243.15.0 series (without tongue)

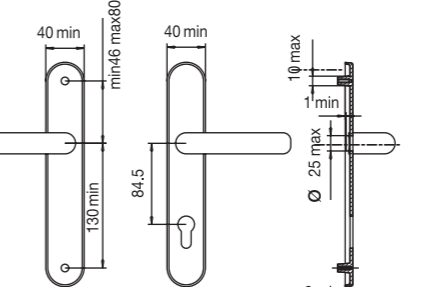

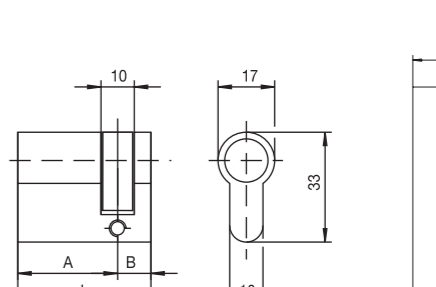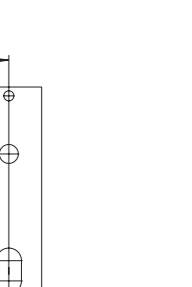Electronic Unit   Lock series 5A502, 5A512   Striker   Lock series 5A75   Striker   Handles   Cylinder   Kit Fire

Dimensions in mm

Technical features

CISA

Brass handle, 30300 series
Pair of handles for entrance doors.
Cylinder hole on external side.
8 mm follower.
EN 179 certified handle.

Aluminium handle, 30311 series
Pair of handles for entrance doors.
8 mm follower.
EN 179 certified handle.

Aluminium handle, 30301 series
Pair of handles for entrance doors.
Cylinder hole on external side.
8 mm follower.
EN 179 certified handle.

Followers set, A0A0A series
Set composed of a split follower and several fixing screws for the electronic unit, the handle and the lockbox.

Wave Mode Mobile
2 Mb version, A0138 series.
Up to 1500 rooms and/or controlled access areas.
Login and events audit trail: 10.500.
Operators: 350 (card + password).
Active cards audit trail: 12.000.
8 Mb version (PLUS), series A0139.
Up tp 5.000 rooms and/or controlled access areas.
Login and events audit-trail: 16.350.
Operators: 930 (card+password).
Active cards audit-trail: 16.350
Integrated writer/reader ISO 14443 B cards*
Main power supply: 220 Vac 50 Hz (110

Vac 60 Hz available upon request).
Alternate power supply: 4 alkaline batteries AALR6 1,5 V (supplied).
Backlit display: 6 lines x 16 columns.
Operating temperature: 0° - 70°.
*A0138.10/A0139:10 series available with integrated multistandard reader.

Autonomous network
ETHERNET
Cable type: ethernet CAT 5 or greater.
RS485.
Maximum distance (Km): 10.
Cable type: telephone, TR/R ATOX – FLAM (CEI 46.5).
2p (Twisted) + G not shielded.

Contactless Security Card, A0C09 series, for SUITE configuration
13,56 MHz contactless card,
ISO 14443 B certification.
Material: PVC.
Dimensions: ISO 7810 standard.
Front: graphics in 4 colours.
Reverse: space available for the hotel to personalise the card.

Contactless Security Card, A0C10 series, for JUNIOR configuration
13,56 MHz contactless card,
ISO 14443 B certification.
Material: cardboard.
Dimensions: ISO 7810 standard.
Front: graphics in 2 colours.
Reverse: space available for the hotel to personalise the card.

WAVE MODE ENERGY SAVER
Power supply: 24 Vac 50Hz.
Max output voltage: 24 Vac.
Outside power: 75 VA at start, 15 VA continuous.
Activated cards: contactless security card.
Operating temperature: 0° - 70°.

Access Control - Wave Mode Reader
13,56 MHz contactless reader, ISO 14443 B* .
Provided with auto-on system.
Position and status LED.
Reading distance (cm): 2 max.
* Version A0805.21.0 available with integrated multistandard reader.

Access Control - Control Unit
Ethernet version, series 0A821
Cable type: ethernet CAT 5 or greater.
Version RS485, series A0820.
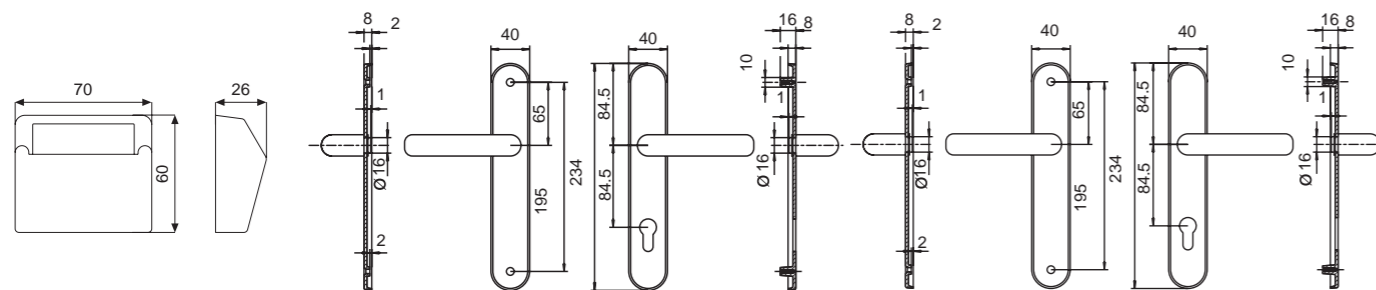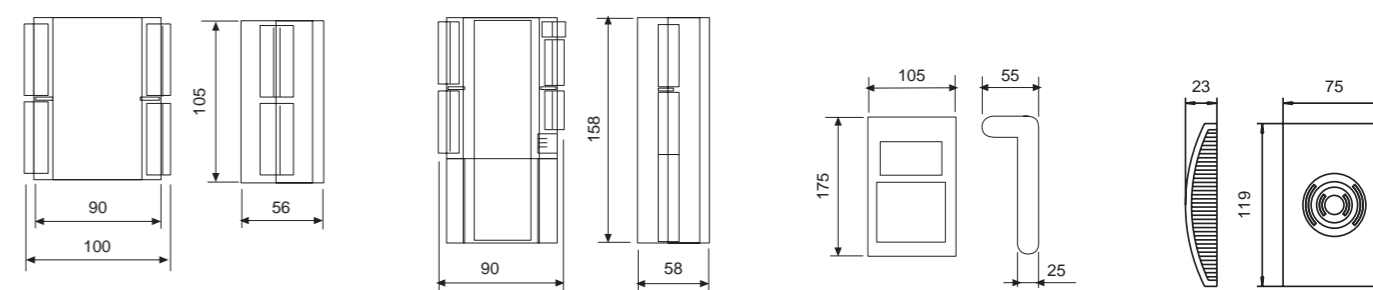Maximum distance (Km): 10.
Cable type: telephone, TR/R ATOX-FLAM

(CEI 46,5).
2p (twisted)+G, not shielded.
Power supply: 7-30 Vdc, 8-21 Vac*
Transformer 220V-12Vac (supplied).
Mounted on DIN RAIL EN50022.
Integrated relay: NO (230 Vac 5A).
Programmable access time relay: from 0.01 sec to 10 min.
Audit-trail (off-line) 30.000 events.
Black list: 1.000 cancelled cards (off-line).
Up to 60 auto-programmable timetables and choice among 3 possible status: normal, always ON (open), access denied (guest and/or staff).
Distance from reader (m): 20 max.

Readers per control unit: 2 max.
Operating temperature: 0° - 70°.
*Configuration with rechargeble internal battery pack 10x1,2V Ni-Mh 1500 mAh (20 h durability) (upon request).

Access Control - Multi I/O, A0806000
Relay activator: 12 relay, 24 V, 1A (relay configuration NO, NC configured through jumper).
Led signal on each activated relay.
Possibility of connecting up to 4 multi I/O (max 48 relays)
Powered by access control unit.

Energy Saver | Handles | Access control: Multi I/O | Access control: Control unit | Wave Mode Mobile | Access control: Reader

Dimensions in mm