FROG ENGINEERING

Intelligent Cabinet Lock

Product Catalog

“Locks became intelligent”

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FE-NBL Intelligent Cabinet Lock Series

FE-NBL-2100-J5A intelligent access control cabinet lock is the newest patented product of our company, based on the normal cabinet lock, reading card cabinet lock to develop this intelligent cabinet lock. It integrates the card reader, access controller with the cabinet lock, make it all in one, easy to install and test, it also has the special security specification of the proximity card technology and RS485 network communicating to make the In & Out control management system. it has network security and monitor function, usually used in the IDC cabinet, NONE People on duty integration base station, database room etc. area that required monitoring function. It uses electronic intelligent to control, proximity smart card to open lock, with multi functions, safety and reliable. The special function is: easy to install, easy to update, having keys and manual to open is available, Grade III lighting protection, SMT technologies etc

Performance Parameter

Size：L170mm×W42mm×H60mm±5%;
Net weight: 0.90Kg±5%;
Color: black;
Working voltage: 12VDC
Input voltage range:10.8VDC—13.2VDC;
Working current: less than 150mA in static, electronic control open lock less than500mA
Minimum current: 1000mA／12VDC when input;
Work status：normal standby not bright lights, press the right key blue light flash once, unlocking bright long 3 second, press the wrong key or alarm the red light flashing;
Hole size：W31mm±0.5, H:160mm±0.5;

Performance Parameter

Swiping card distance: 10-30mm
Working time: more than 350 thousand times;
Communicate interface: RS485, 9600bit/s(default);
Lock open method: electric control(remote command , legal card read card , linkage input) to open and manual to open, power on to open lock, power off to be locked;
Reading card method: read ID card serial number methods
Support card type: support any EM cards (advice to use the keyfob);
RF working frequency: 125KHZ±5% ;

Performance Characteristic

- Access control authorized: max512pcs ID card;
- Software authorized: using software to authorize (advice to use software to do the authorization);
- Events Records: max 1120pcs (extended is available), if more than 1120pcs records the newest record will replace the oldest record;
- RS485 network in real time monitor, door status, handle status, real time clock function;
- One way photoelectric isolated input as the external door sensor;
- Internal installed EM card reader and access controller;
- Can connect network remote monitor, and also can work offline;
- Emergency key open lock function(use computer keylock core which the mutual opening rate is extremely low to ensure safty).

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FE-NBL Series Finger Vein Reader

FE-NBL-200H series finger vein reader is one of our latest developed biometric reader, this product adopts high speed 32bit processor and uses advanced high speed arithmetic; realized finger vein's high speed identity and management. It has strong anti-interference function, also has function of anti-prevent, anti-demolition and high security. It also has touchable keypad, support different card read, like ID/IC/CPU card, it can realize the function of ID identity+ authority confirmation; it supports standard wiegand 26 output, also support RS485/TCP communication; the network updated program is provided, it is high compatible and easy operation. It is widely used in financial bank, government, jail, army police, high-end property, education institution such high security places etc...

Performance Characteristic

- 3.5" TFF color display, arc touchable keypad, man-machine interaction design, shows real-time working status
- Adopt Hitachi advanced finger vein arithmetic, living recognition, accuracy and high speed.
- Working mode can be set up by software, in and out mark is available, remotely download is provided.
- Built-in ID/IC card reading, support wiegand 24/44 output under the condition of corresponding finger vein
- Support multi mode of recognition, finger vein, user ID or password, card-reading or their free combination modes.
- Function of anti-force alarm, when users input anti-force finger vein, the alarm will be sent out through wiegand 28/29
- Finger vein output: finger vein ID output supports BCD code or 16 HEX
- Finger vein register: register by software, finger vein character value is 536bytes.
- Finger vein enroll: by RS485/TCP, use the software to enroll the finger vein,6000pcs users max.

Performance Parameter

Finger vein capacity: 6000pcs
Register user: 2000-6000 users
Certificated time: 1-2s
FRR: 0.1%
FAR: 0.001%
3.5" TFT color LCD display
Communication: TCP/IP 100 ethernet interface, one channel RS485, capacitive touch keypad.
Support ID,IC or CPU card.
Voice prompt output
One channel wiegand output(support 26/28/44)
Support single door access controller function
Multi working mode: card swipe for finger vein working, card swipe+ finger vein, ID+ finger vein, card swipe + finger vein + password etc..

Performance Parameter

Size:L290MM*M110MM*H100MM
Net weight: 690g ±5%
Module length:536 bytes
Certificated time:1-2s
FRR: 0.01%
FAR: 0.001%
Scan way: the transmission optical way
Authentication Method: 1:1, 1:12000, the authentication level has 3 grades.
Authentication Method: 1:1, 1:N
Register time: not over 2s.

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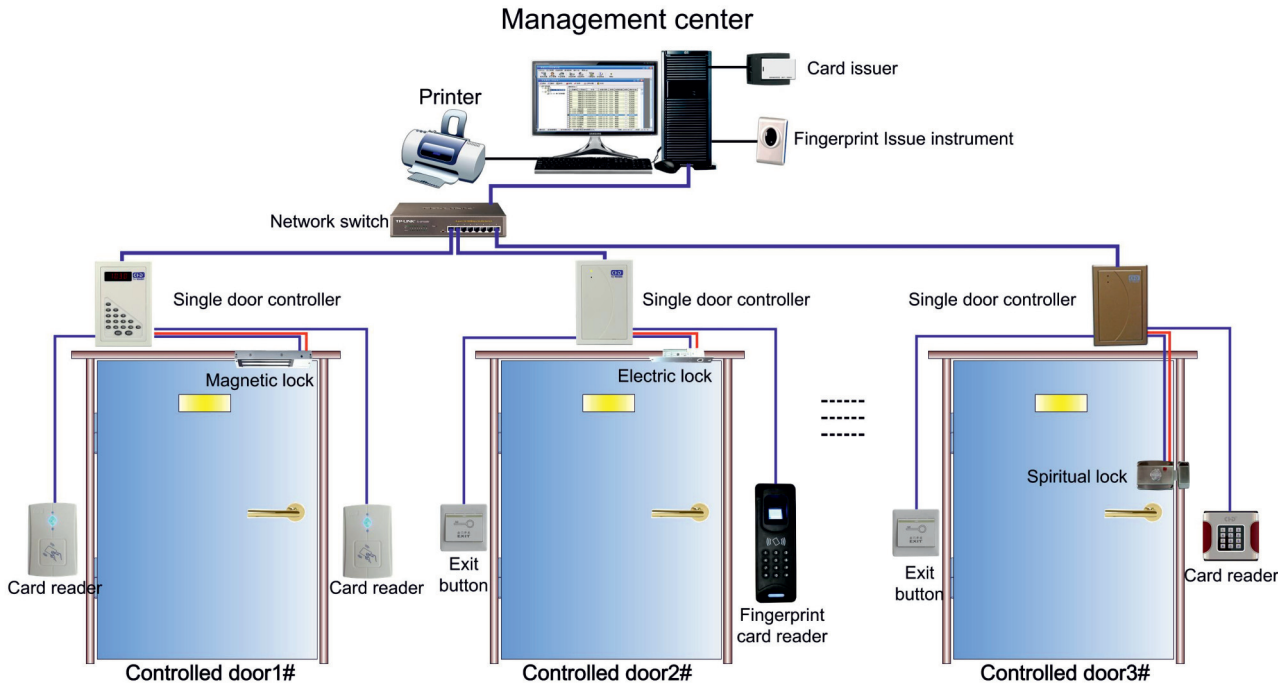
Single Door Access Control System

Single door controller configuration principle:
In principle, one door install one controller, one electric lock, one power, one entry card reader and one exit button.
If the customer require entry and exit both need read card verification, then one door need install two card readers, without exit button.
Some special occasions, such as company gate, use left and right sides two doors, just each door install one unit electric lock, the two locks parallel to one controller using. Exit position and the reception both need to install a exit button, then the door need to configure two buttons, the same door 's exit button can be used in multiple parallel.



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FE-NBL-802A/B/M
FE-NBL-802A-E/B-E/M-E
Economical Access Controller

Size: L150mm×W100mm×H28mm
Power: DC12V,Consumption≤1W
The upper limit of user registration: 1700
Support multi-mode of door-open: card reading, remote control, exit button;
Support TCP/IP network or RS485/RS422;
Environment monitoring record: door switch, and infrared, etc
Support different electromagnetic locks: magnetic lock, electric bolt, pulse lock, etc
Detailed record: the upper limit for newest record is 6144 (the number can be expanded to above 20,000) Connectable to Wiegand sensors, with Anti-jamming protection for b oth input and output
Oiled treatment of the surface: mold-proof and anti-dampness;
Working temperature: -10℃-55℃; working humidity: <98%
Without keyboard setting function or LED display

FE-NBL-802AT/BT/MT
FE-NBL-802AT-E/BT-E/MT-E
Economical Access Controller

Size：L150mm×W100mm×H28mm
Power：DC12V，Consumption≤1W
The upper limit of user registration: 455;
Support multi-mode of door-open: card reading, remote control, exit button;
Support TCP/IP network, standard 100MB Ethernet or RS485;
Environment monitoring record: door switch, and infrared, etc
Support different electromagnetic locks: magnetic lock, electric bolt, pulse lock, etc
Detailed record: the upper limit for newest record is 2368 (the number can be expanded to above 20,000) Connectable to Wiegand sensors, with Anti-jam ming protection for both input and output
Oiled treatment of the surface: mold-proof and anti-dampness;
Working temperature: -10℃-55℃; working humidity: <98%
Without keyboard setting function or LED display

FE-NBL-802D1CP-E Bank
Access controller

Dimension: 150MM (L) × 100MM (W) × 28MM (H) ±5%;
Voltage: DC10V~DC18V; much better DC12V; Working Current: ≤200mA (not include the electric lock);
Working environment: temperature: -10℃~+50℃, Humidity: ≤90% non-condensing;
Storage environment: temperature: -40℃~+70℃, Humidity: ≤95% non-condensing;
Communicate method: RS422, RS485, TCP/IP 10M optional;
Communicate speed rate: 1200~115200bps;
User capacity: 8100;
History records: 32,000 records;
Communicate distance: RS422, RS485 ≤ 1200m; TCP/IP no limited .

FE-NBL-805AE/BE/ME
FE-NBL-805AE-E/BE-E/ME-E
Standard Access Controller

Size：L150mm×W100mm×H28mm
Power：DC12V
The upper limit of user registration: 455;
Support multi-mode of door-open: card reading, remote control, exit button;
Support TCP/IP network, standard 10MB Ethernet;
Environment monitoring record: door switch, and infrared, etc
Support different electromagnetic locks: magnetic lock, electric bolt, pulse lock, etc
Detailed record: the upper limit for newest record is 6144 (the number can be expanded to above 20,000)Connectable to Wiegand sensors, with Anti-jamming protection for both input and output
Oiled treatment of the surface: mold-proof and anti-dampness;
Working temperature: -10℃-55℃; working humidity: <98%
Without keyboard setting function or LED display

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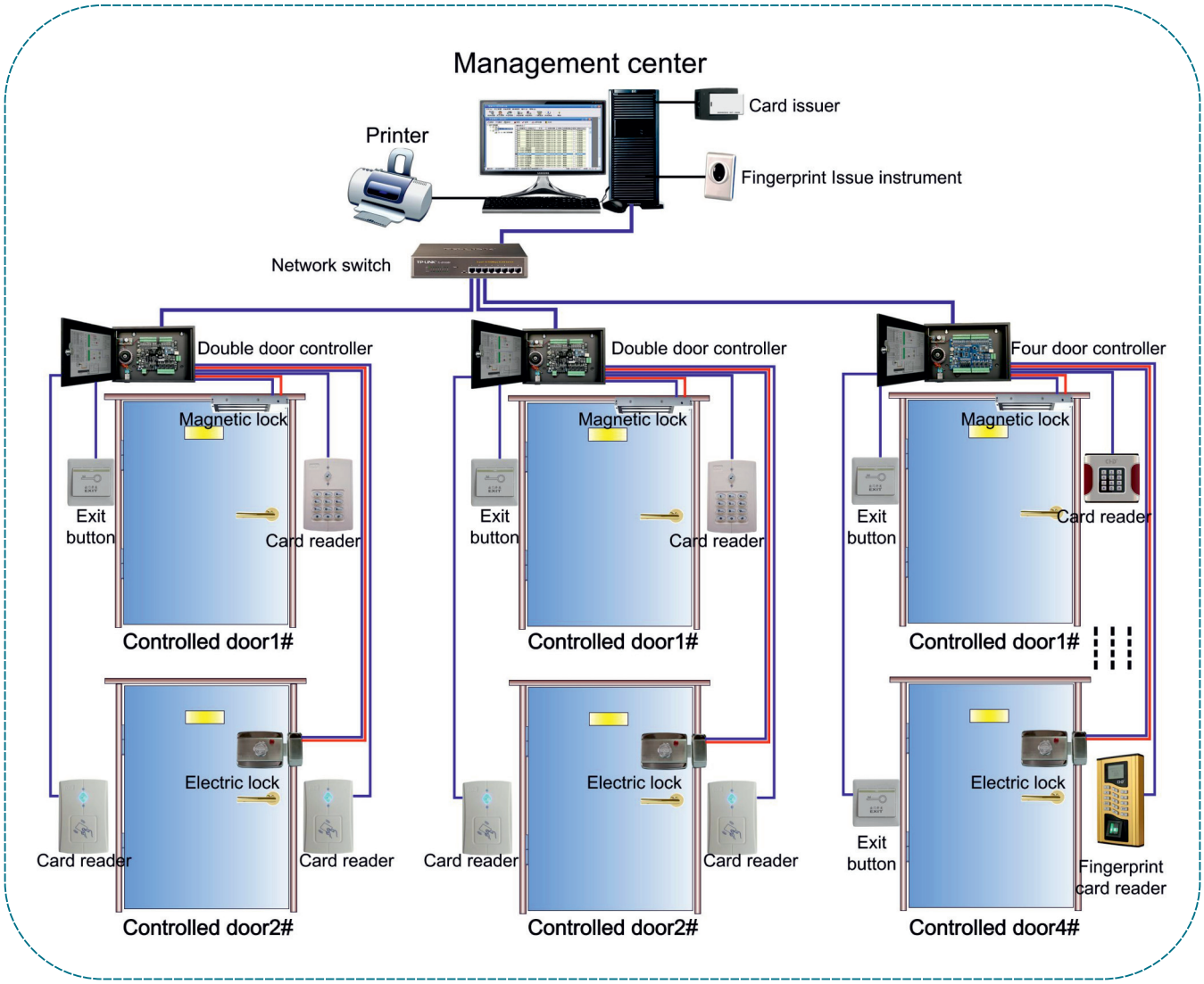
Multi-door Access Control System

Configuration principle: according nearby multi-doors need install access control system, can use multi-door controller(door to multi-door controller distance better keep within 20 m);

One controller control multi doors, in principle multi doors configure one controller, each door install one electric control lock, one power supply, one entry card reader and one exit button;

If the customer required the entry and exit both need read card verification, then one door install two card readers, no need exit button; Some special occasions, each door can add more one unit electric control lock and multi exit buttons ;



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FE-NBL-806D2/CAN-NBL-806D2-E
Double door access controller

- Size: L375mm x W240mm x H51mm
- Suitable for two door access control system
- Support 8,000 users cards and 30,000 entry records even offline
- Can be connected 4 outside standard Wiegand reader.
- Communication Interface: RS485; Standard TCP/IP network, 100M Ethernet
- Communication Rate: 1,200~115,200BPS
- Standby interface: Standard RS232, RS485, RS422 output, also with SMS interface.
- Support add and dele card user by local button (can be hid when regular working)
- Working temperature：-10℃-55℃; working humidity：98%; oiled treatment of the surface e nsures mold-proof and anti-dampness
- With iron box packing, easy for installation.

FE-NBL-806D4/CAN-NBL-806D4-E
Four door access controller

- Size：L440mm×W310mm×H50mm
- Suitable for multi-door access control system
- With iron box packing, easy for installation.
- Power：DC12V, consumption≤1W
- Power supply：220V 50HZ alternating current
- Can be connected 4 outside standard Wiegand card reader.
- Can control four separate doors.
- Can save 32,000 users cards and 32768 entry records even offline.
- Communication Interface: TCP/IP, 100M Ethernet,RS485,RS422
- Communication Rate: 1,200~115,200BPS.
- Standby Interface: Standard RS232, RS485, RS422. Also with SMS interface.
- Working temperature：-10℃-55℃; working humidity：98%; oiled treatment of the surface ensures mold-proof and anti-dampness

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FE-NBL-806D4M3
Network four door two-way controller

- Size: L375mm x W240mm x H51mm
- Power：DC12V, consumption≤1W
- Support 100000 users cards and 100000 entry records even offline
- Working temperature：-10℃-55℃; working humidity：90%;
- Oiled treatment of the surface ensures mold-proof and anti-dampness
- Communication distance: RS485≤1200M; RS422≤1200M,Standard TCP/IP network unlimited.
- Real-time deviation: less than 30seconds per month
- Noise immunity: ±2KV;power and all input/output interface
- ESD immunity: ±6KVContact discharge;±8KVair discharge, all technolog ical parts and interface.
- EFT Immunity: ±2KV, 5KHZ, power and all input/output interface.

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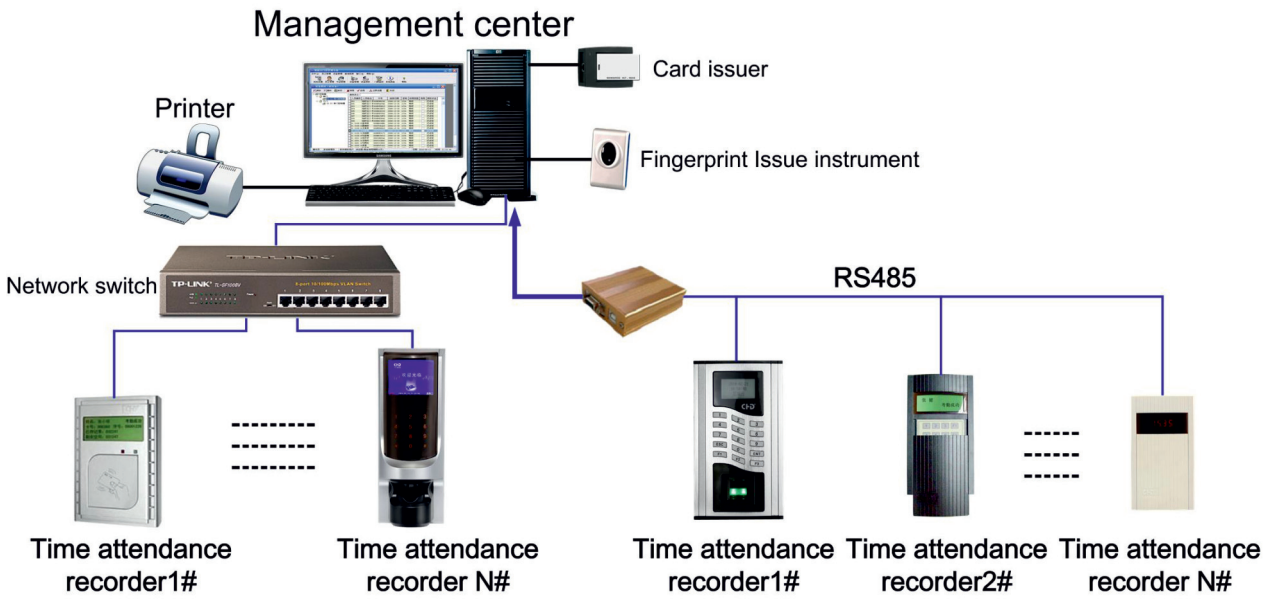
Time Attendance System

Configuration principle: staff entry and exit history record is the basis of time attendance, eliminate human factors adverse effect, full attendance report is the best information for calculating staff's salaries. General time attendance system adopt the all-in-one machine mode, that General attendance system adopt the integrated machine mode, In principle, one time attendance system equipped with one integrated time attendance recorder and one control power;



Advantage

- Read card speed very fast, one minute finish 100 times movement of attendance;
- Flexible and detailed basic classes information ,can completely meet the needs of different customers;
- Scheduling rule can allow maximum set 100 days for a cycle;
- Unique 48 hours coordinates, easily solved the problem of across a day read card etc.

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Mainly used in high-grade intelligence community, banks, intelligent buildings, prisons, government buildings, offices, schools, enterprises, military telecommunications management, wilderness unattended base stations, and assisted with Wiegand interface controller card reading equipment, equipment compact in appearance, and multiple appearance optional, easy installation and wiring, and stable

The FE-NBL card reader series is our company independent development production of high performance non-contact type induction reading device, products has keyboard, without keyboard, waterproof. Can read ID card, and IC card, and CPU card. Circuit board fully adopt SMT SMT process, improve product rolled yield and reliability, power supply and wiegand interface reference IEC6100-4-5 surge test standard design, adopted multi-stage lightning protection circuit, improve the lightning protection level of the product, with wide power supply design, input DC7V ~ DC24V can be stable work, strive to provide new and old customers with high standards of the smart card reader.

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FE-NBL-601F/FE-NBL-601FM
Cassette type card reader

Size：90mm（L）×90mm（W）×33mm（H）；
Weight：200g；
Many colors are optional such as white
Power：DC9-12V; standby, 30～50mA; card reading，55mA;
With multi-protection of self-restoration fuse, semi-conductor thunder-proof and TVS;
Working frequency：125kHz;
Support various kinds of EM sensor cards or Mifare cards(e.g. thick cards, thin cards, etc)；
Effective distance：100～150mm（depending on card quality）；
Output interface: standard Wiegand and OC output;
Transmission distance：less than 200m;
Working environment：-20℃ to 55℃; Relative humidity: 5% to 95%;
With colorful light indicating working state, accompanied with beep: standby, green light; card reading, red light with beep;

FE-NBL-603R
Long distance card reader

Size: L105mm X W62mm X H13mm
Color: black, iron grey and white
Power supply: DC9V to 12V
Working frequency: 2.4GHz (support CAN-NBL- long distance card)
Effective distance: 3~15m (depending on environment)
Transmission distance: less than 200m (Wiegand output)
Working environment: -20℃ to 55℃; Relative humidity 5% to 95%
Communication output: standard Wiegand interface (RS232 optional)
Newly high technology design, steady performance, mainly use for access control system.

FE-NBL-602JK-CPU Metal
keyboard card reader

Size: L120mm x W76 mm x H27mm±2mm
Working Voltage: DC10-18V, Consumption≤1W
Support card type:MIFARE1 card, CPU card
Interface type: standard Wiegand interface
Working environment: temperature 0-50℃/ 20-90%RH
Environment requirement: no dust, causticity gas, flammability gas, oil fog, vapor, drip, salt etc.
Anti-explosion, waterproof design, metal case, can be applied to the area which has high level security requirements

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FE-NBL-603B/FE-NBL-603 BM/
FE-NBL-603BM-U
Desktop card issuer

Size: L110mm X W81mm X H25mm
Net weight: 150g; Color: black
Working frequency: 13.56MHz (support Mifare card)
Effective distance: 40~150mm (depending on card quality)
Power supply: get power from USB port direct
Communication interface: standard USB interface;
State Display: with blue light in normal status, once reading card, there has red light and a beep with
standard USB driver to make sure can use for Windows98/2000/xp vista operation system
Easy installation, connect to USB interface and set up the USB driver can reading card.
With SDK support, suitable for USB Mifare card issuer and desk USB Mifare card reader application.

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FE-NBL biometric recognition machine series is the access control recognition equipment which our company specially developed and promoted for stick requirement and high security access control sites. Currently, products include fingerprint recognition, face recognition, biometrical Arithmetic, smart card management etc... we provide customers with reasonable solutions, build for our customer a high security ,intelligent, informative, personal, convenie nt and inter-acting working and life environment.

Size: L290mm X M110mm X H100MM
Net weight: 690g ±5%
Module length: 536 bytes
Certificated time: 1-2s
FRR: 0.01%
Scan way: the transmission optical way
Authentication Method: 1:1, 1:12000, the authentication level has 3 grades.
Authentication Method: 1:1, 1:N
Register time: not over 2s.

FE-NBL-200H fingerprint Identifier

Size:L153mm X W87mm X H21.5mm
FRR: less than 0.02%, FAR: less than 0.0003%
Fingerprint number:1500pcs, records:4000pcs
Communication way: RS485, used for fingerprint register
Wiegand kinds: 26/28/44 for optional
Main function: 1. Anti-force, 2. tamper alarm, 3. Open door by fingerprint or fingerprint +password
Working temperature:-10℃-55℃, working humidity:40%-90% RH; working method: offline or online.
Working power supply:DC10-18V(suggest 12V), power comsumption less than 10W

FE-NBL-200/CAN-NBL-200A2/CAN-NBL-200A ID
FE-NBL-200AIC Fingerprint Reader

Size:L155mm X W52mm X H39mm
Card supporting: ID or IC card
RF working frequency: ID card,125KHZ; IC card.13.56MHz
Inductive distance: 50-100mm(no any similar signal interference at the same place)
FRR: less than 0.02%, FAR: less than 0.0003%
Resolution ratio:508 dpi; fingerprint comparison time: less than 3s
Fingerprint number: 1024pcs
Working power supply:DC10-18V(suggest 12V), power comsumption less than 10W

FE-NBL-200GIDK/FE-NBL-200GICK
Fingerprint Reader

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FE-NBL-200Z Fingerprint Reader

Size:L290mm X W110mm X H100mm
Net weight: 0.69kg ± 5%, mould length is 536 bytes
Rated working voltage: 10.8V DC -13.2V DC
Input voltage range:10.8V DC- 13.2V DC
Working currency: less than 300mA
Min power supply currency: 1A/12V DC input
Working environment: -10 to +55℃, 20%-90%(non condensing and ice)
Storage environment: -20 to +70℃, 5%-90%(non condensing and ice)
Communication way: RS485 used for setting up time, reading or downloading fingerprint information

FE-NBL-200U Fingerprint Issuer

Size:L156mm X W53mm X H38mm ± 5%
Net weight:0.2kg ± 5%
Color: black
Communication way: USB connection, serial port, used for setting up, reading or downloading the fingerprint information
Working voltage: electrostatic standby voltage not over than 200mA, dynamic fingerprint working voltage not over than 250mA
Image distortion rate: not over than 2%
The sensitivity level: FRR: not over than 0.1%, FAR: less than 0.001%
Rated working voltage: 5V DC, USB power supply
Input voltage range:4.5V DC-5.5V DC
Min power supply curre ncy: 500Ma/12V DC input
Pixel: 640X480

FE-NBL-518AV
Fac e Recognition Device

Size: 180mm x138mm x92mm
Recognition methord: face; staff number + face; card + face (configure card reader), only read card
Camera: special dual camera , maximum user capacity:500
Recognition speed:⩽1s Recognition rate:⩾99%
Error recognition rate:⩽0.1%
Angle range: level:±20°, Vertical: ±20°
Suit height :145-195CM Recognition distance:30-80CM
Built-in card reader :Optional (ID/IC)
Working environment: suit light:0-20000LUX
Working temperature: 0 ~45 ,humidity:20%~80%
Install methord: wall hanging

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FE-NBL-2100-J5A/J5R/J5L Integrated Access Control Cabi net Lock

Size:L170 X W42 X H600(mm) ± 5%
Net weight:0.9kg ± 5%
Rated working voltage:12V DC
Input voltage range:10.8V DC-13.2V DC
Working currency: static standby less than 150mA, dynamic card swiping less than 500mA
Min power supply:1000mA/ 12V DC input
Card support: different kinds of EM card, key fobs card is more better.
RF working frequency: 125KHz ± 5%
Card swiping distance: 10-30mm
Working status: normal standby, no light, blue light on when legally open door, red light on when illegally swipe card or open door

FE-NBL-2100-J5K Access Control Electronic Cipher Cabinet Lock

Size:L170 X W42 X H600(mm) ± 5%
Net weight:0.9kg ± 5%
Rated working voltage:12V DC
Input voltage range: 10.8V DC-13.2V DC
Min power supply:1000mA/ 12V DC input
Working status: normal standby, no light, blue light on when legally open door, red light on when illegally swipe card or open door

FE-NBL-485NET Network Converter

TCP/IP converter
RS485 to TCP/IP
Super lightning protection function

FE-NBL-2100 Integrated Access Control Lock

The working voltage range is from DC12V to DC24V, max-working current is 60mA;
Integrate with access controller and EM or Mifare card reader, so no need to connect with access control system;
Support network and also standalone work, and support remote controller and ID/IC card to open doors;
With RS422 communication output and wiegand 26bit interface for online work;
256 users can be registered and 512 records can be kept. (capacity of user and record is expandable)

FE-NBL-2200 Integrated Access Control Lock

The working voltage range is from DC12V to DC24V, max-working current is 60mA;
Itself is a door access controller and EM or Mifare 1 card reader, so no need to connect with access control system;
Support network and also standalone work, and support remote controller and ID/IC card to open doors;
256 users can be registered and 2,528 records can be kept (capacity of user and record is expandable);
With RS422 communication output and wiegand 26bit interface for online work.

FE-NBL-602LC Electronic Motor Lock

- The voltage range of opening lock is wide (from DC9V to 16V);
- With EM or Mifare 1 card reader inside.
- With wiegand 26bit interface;
- Easy installation but not easy to open by force, applicable in big iron door such as guard-against-theft door;
- Support many modes of opening doors such as by remote controller, by reading ID/IC card or by key;
- 100% through the high-temperature aging treatment

FE-NBL-8212AK/FE-NBL-8212MK Intelligent Electronic Lock

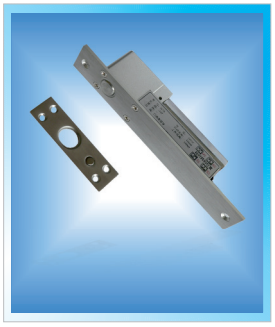
- Standard DC12V--18V power supply, and maximal working current is 300mA;
- With wiegand 26bit interface; With voice and light indicating work state;
- Once wrongly locked or wrongly unlocked, it will auto unlock or lock in 410 seconds;
- Connected with door access controller so that remote controller can control it to open or close door;
- With EM or Mifare 1 card reader inside, so support remote controller and ID/IC card to open doors.

FE-NBL-CM280H1 Single Door Magnetic Lock

- Size: 250L x 42W x 25H (mm);
- Holding force: 280kg (600Lbs);
- Net weight: 2kg; Voltage: 12/24VDC+10%;
- Current draw: 480mA by 12VDC; 240mA by 24VDC;
- Operating temp: -10～+55℃(14-131F), humidity 0-90%RH
- High strength material, anodized aluminum housing
- Applicable: wooden door, glass door, metal door and fire-proof door.
- Feature: fail safe.

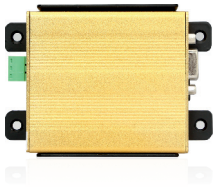
FE-NBL-CM280H2 Double Door Magnetic Lock

- Size: 500L x 47W x 27H (mm);
- Holding force: 280kgx2 (600Lbsx2);
- Net weight: 4kg; Voltage: 12/24VDC+10%;
- Current draw: 300mA by 12VDC; 500mA by 24VDC;
- Operating temp: 10～+55℃(14-131F), humidity: 0-90%RH
- High strength material, anodized aluminum housing
- Applicable: wooden door, glass door, metal door and fire-proof door.
- Feature: fail safe



FE-NBL-CE200 Electric Bolt Lock

- Size: 500L x 47W x 27H (mm);
- Holding force: 280kgx2 (600Lbsx2);
- Net weight: 4kg; Voltage: 12/24VDC+10%;
- Current draw: 300mA by 12VDC; 500mA by 24VDC;
- Operating temp: 10～+55℃(14-131F), humidity: 0-90%RH
- High strength material, anodized aluminum housing
- Applicable: wooden door, glass door, metal door and fire-proof door.
- Feature: fail safe



FE-NBL-485HVD RS485/RS422 to RS232
FE-NBL-485TW RS485/RS422 to Wiegand

Lightning protection type RS232/RS485 converter
Use USB stealing electricity design
With the latest semiconductor lightning protection tube,high performance TVS double protection

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FE-NBL-SC02 Long Range Card

Size: L86mmxW33mmxH5.2mm
Power supply: standard CR2032/3V button battery.
Working environment: -10℃ - +50℃
Relative humidity: 5%-95%
Read Distance:3~10m (depends on the working environment)
Button sensing design, power save during non-working hours.
With external IC or ID card, convenient even the battery is dead
Must be consistent with the use of FE-NBL-603R

FE-NBL-SC04 Long Range Card

Size: L109mmxW62.5mmxH9mm
Large capacity lithium battery, standard USB output, with own On/Off power switch
Working environment: -10℃ - +50℃
Relative humidity: 5%-95%
Read Distance:3~10m (depends on the working environment), Sensing distance adjustable by dialing.
Users can not set sensing distance, only confirm it before burning program during factory setting
With external IC or ID card, convenient even the battery is dead
Must be consistent with the use of FE-NBL-603R

Key fob

Key fob

RFID card