

KMY3501A Encryption Metal Keypad



Physical Features

1. Keypad made of high quality stainless steel
2. Customizable layout, dimension and installation design
3. Dustproof, waterproof, shake-proof, pickproof, drill-proof, bombproof
4. Braille key design for visually handicapped people
5. Latest professional security processing chip
6. Optional USB and RS232 connection
7. Ports for optional eight external function keys, beeper and guide light
8. Two types of power supply ports
9. Tamper protection box
10. Secure and reliable protection against power cu

Supported Algorithms

1. DES user data ECB/CBC encryption/decryption
2. 3DES user data ECB/CBC encryption/decryption
3. DES MAC calculation
4. 3DES MAC calculation
5. DES PIN encryption
6. 3DES PIN encryption
7. Multiple PIN Block formats: ANSI, ISO0, ISO1, ECI2, ISO3, IBM3624, DIEBOLD, DIEBOLDCO

Tamper Detection and Protection

The tamper detection leads to the following protection responses:

1. Erasure of master keys which are used to decrypt the encrypted working keys
2. Erasure of working keys which are used to encrypt the user data or PIN
3. Erasure of the user data in the memory
4. Erasure of the program in the memory
5. Resetting the device to an unusable stat

Alarm Conditions

1. Temperature beyond the range
2. Low battery
3. Tamper detection

Reliability and Performance Data

1. Key lifetime > 200,000 cycles per key
2. Force on keys: 3-5 N
3. Key range: 0.45mm
4. Wide voltage input: 7V DC-60V DC
5. In running state, 12 V +/- 20% is needed; the electrical current is up to 100 mA and the actual power consumption is below 1.5W.
6. Running lifetime > 10 years; Battery lifetime > 10 years (without external power supply)
7. Calculation time on 256 bytes by 3DES MAC calculation < 500 milliseconds

Supporting Software

- A full function, easy-to-use Windows NT/2000/XP compliant device driver
- Standard XFS 2.0 and XFS 3.0 Service Providers, fully integrated with exiting multi-vendor XFS platforms in the marketplace, such as Kalignite (KAL), Aprta (NCR), Protopas (Wincor) and Agilis (Diebold) etc
- 3DES IP65 NEMA 4X Encrypted;
- Self-destruction when dissembling is detected;
- Dustproof, water proof, vandalism resistance,
- shake-proof, pickproof;
- Interface:RS232, PS/2;
- Supply Voltage: +5V DC +/-5%;
- Lettering: Sunk laser legends & characters in high quality ink;
- Switch life: more than 2 million of operations;
- Actuator/keys materials: 316#(RoHS) stainless steel;
- Customizable keys;
- Cert:Pass the certification of , China Central Bank card testing center; CE, RoHS, FCC
- ANSI 9.8 PINBLOCK:
- ANSI, IBM3624, ISO0, ISO1, ISO2, ISO3, DIEBOLD, DIEBOLDCO
- IP Protection Class IEC/DIN/EN/ 60529:IP65
- IK Protection Class DIN EN 50102:IK07
- Faceplate dimensions:100X91.5 mm;
- GW:0.75KG

Keypad Features

1. Keypad containing 16 keys with etched and colored graphics
2. Horizontal grind on the keypad surface
3. Letters and digits filled with black paint
4. Colored graphics on the function keys
5. Easy to use for visually handicapped users
 1. The keys **X**, **O** and **|** are designed with embossing (optional)
 2. The number key **5** is designed with an embossing dot
 3. The graphics are etched and filled with black paint for all letters and digits
 4. The function keys may have colored bars, filled with pain

Connections

1. RS232 port: complying with the RJ45 of EIA-RS232-D standard. The baud rate can be configured up to 57600 baud. The baud rate is automatically adapted.
2. USB port: type B
3. Power supply: supporting two types of connections
4. External expanding port (optional): for eight external function keys
5. Special signal output port: for external LED guide light and beeper. A 12V DC beeper and two 5V DC LED (red and green) can be supported

To meet the security requirements and protect the sensitive information, some special security detection and protection mechanisms are designed

Logical Security Features

1. PIN encryption in a secure module
2. Multi-layer, flexible encryption key management
3. Multiple independent detection mechanisms for ensuring the PIN security

Environment Requirements

1. Only the front panels shall be exposed to outdoor climate. The panels are dustproof, waterproof, shake-proof, pickproof, drill-proof and bombproof.
2. Operating temperature range: -25°C - 45°C
3. Storage temperature range: -25°C - 65°C
4. Maximum humidity in operating environment: 80%
5. For security reasons, the user PIN is deleted when the environment temperature is beyond the storage temperature range. The target level for this function is set to -30°C

Dimensions:

| Model | Specification | Faceplate (W×H) |
|----------|-----------------------------|-----------------|
| KMY3501A | PSAM+dual channel(Optional) | 100×91.5mm |
| KMY3501B | PSAM+dual channel(Optional) | 87.5×91.5mm |
| KMY3501C | PSAM+dual channel(Optional) | 150×74mm |

KMY3503A Encryption Metal Keypad



Physical Features

1. Keypad made of high quality stainless steel
2. Customizable layout, dimension and installation design
3. Dustproof, waterproof, shake-proof, pickproof, drill-proof, bombproof
4. Braille key design for visually handicapped people
5. Latest professional security processing chip
6. Optional USB and RS232 connection
7. Ports for optional eight external function keys, beeper and guide light
8. Two types of power supply ports
9. Tamper protection box
10. Secure and reliable protection against power cut

Logical Features

1. Standard firmware that supports common encryption/decryption algorithms
2. Customizable firmware design for specific application requirement
3. Full function and easy-to-use driver Application Programming Interfaces (API)
4. Secure, complete and flexible encryption key management architecture and technology
5. Support of multiple PIN block formats
6. Secure PIN processing
7. Unlimited length of data for user data encryption/decryption and MAC calculation

Supported Algorithms

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5. DES PIN encryption
6. 3DES PIN encryption
7. Multiple PIN Block formats: ANSI, ISO0, ISO1, ECI2, ISO3, IBM3624, DIEBOLD, DIEBOLDCO

Physical Security Features

1. Automatic detection of disassembling the keypad
2. Automatic detection of disassembling the encrypting module
3. Automatic detection of drilling on the PCB board and encrypting module
4. Automatic detection of low battery warning
5. Automatic detection of high and low temperature

Tamper Detection and Protection

The tamper detection leads to the following protection responses:

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2. Erasure of working keys which are used to encrypt the user data or PIN
3. Erasure of the user data in the memory
4. Erasure of the program in the memory
5. Resetting the device to an unusable state

Reliability and Performance Data

1. Key lifetime > 2,000,000 cycles per key
2. Force on keys: 3-5 N
3. Key range: 0.45mm
4. Wide voltage input: 5V DC +/- 20%
5. In running state, 5 V +/- 20% is needed; the electrical current is up to 100 mA and the actual power consumption is below 1.5W.
6. Running lifetime > 5 years; Battery lifetime > 5 years (without external power supply)
7. Calculation time on 256 bytes by 3DES MAC calculation < 500 milliseconds

Dimensions

Faceplate: (W×H) : 160×102mm

3DES IP65 NEMA 4X ATM Metal Keypad;

Self-destruction when dissembling is detected;

Dustproof, water proof, vandalism resistance, shake-proof, pickproof;

Interface:RS232, PS/2;

Supply Voltage: +5V DC +/-5%;

Lettering: Sunk laser legends & characters in high quality ink;

Switch life: more than 2 million of operations;

Actuator/keys materials: 316#(RoHS) stainless steel;

Customizable keys;

Cert:Pass the certification of

China Central Bank card testing center;

CE, RoHS, FCC

ANSI 9.8 PINBLOCK:

ANSI, IBM3624, ISO0, ISO1, ISO2, ISO3, DIEBOLD, DIEBOLDCO;

IP Protection Class IEC/DIN/EN/ 60529:IP65

IK Protection Class DIN EN 50102:IK07

Faceplate dimensions:160X102.5 mm;

GW:1.35KG

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3. Storage temperature range: -25°C - 65°C
4. Maximum humidity in operating environment: 80%
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KMY3505A Encryption Metal Keypad



KEY Features:

System requirement: WIN98, WIN2000, WIN XP
Comply with ISO/IEC9995, GB/T14081 standards
High quality stainless panel
Dustproof, waterproof, shake-proof, pickproof,
drill-proof, bombproof
CE, FCC, RoHS and 3C certificated

Applications:

Self-service terminal, internet kiosk, industrial control,
medical device

Environment adaptability:

Protection level:IP65(static)/IP54(dynamic)
Operation temperature: -25°C~+45°C RH:30~90%
Storage temperature: -35°C~+55°C RH:20~95%
Air pressure:60~106Kpa

Mechanism characteristics:

Key lifespan>2,000,000.00
Activate force: 65g
Key press force: 3~5N
Key travel: 0.45mm
Power handling: less than 1 Watt (dynamic), less than
200m Watt (static)

Dimensions:

Faceplate, W×H 196×100mm
Non-encryption keypad with Trackball;
Trackball Diameter:38mm;
Dustproof, water proof, vandalism resistance,
shake-proof, pickproof;
Interface:RS232, PS/2;
Supply Voltage: +5V DC +/-5%;
Lettering: Sunk laser legends & characters in high
quality ink
Switch life: more than 2 million of operations;
Actuator/keys materials: 316#(RoHS) stainless steel;
Customizable keys;
Cert:Pass the certification of China Central Bank card
testing center; CE, RoHS, FCC;
IP Protection Class IEC/DIN/EN/ 60529:IP65
IK Protection Class DIN EN 50102:IK07
Faceplate dimensions:196X110 mm;
GW:1.55KG;

Interface:

PS/2 or USB port
2 function keys
Diameter of metal ball:38 mm