



PRODUCT

USE INSTRUCTIONS



Ordering code: FIS108

Part number: FIS M-400-072-001-07-S4

IO-Link RFID

Read/write compact processor user manual



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■ Expected use

This manual describes as decentralized input and output modules for connecting to an industrial network.

■ Installation and start-up

Precautions!

Installation and start-up may only be performed by trained personnel. A qualified individual is one who is familiar with the installation and operation of the product and has the necessary qualifications to perform such operations. Any damage caused by unauthorized operation or illegal and improper use is not covered by the manufacturer's warranty. The equipment operator is responsible for ensuring that appropriate safety and accident prevention regulations are observed.

■ Corrosion resistance

Precautions!

FNI modules generally have good chemical and oil resistance. When used in corrosive media (e.g. high concentrations of chemicals, oils, lubricants, coolants and other material media (i.e. very low water content), these media must be checked before the corresponding application material compatibility. If a module fails or is damaged due to this corrosive medium, a defect claim cannot be made.

■ Dangerous voltage

Precautions!

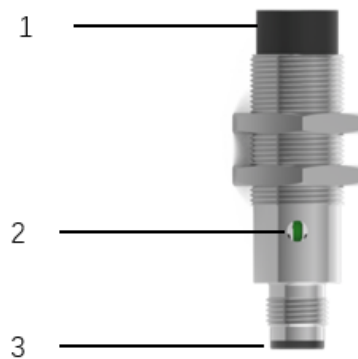
Disconnect all power before using the device!

■ General security

Debugging and inspection	Fault	Owner/operator obligations	Expected use
Before debugging, read the user manual carefully.	If the defect or equipment failure cannot be corrected, the operation of the equipment must be stopped to avoid damage that may be caused by unauthorized use.	This equipment is an EMC Class A compliant product. This device produces RF noise.	The warranty and limited liability statement provided by the manufacturer does not cover damage caused by: ·Unauthorized tampering ·Improper use operation ·The instructions provided in the user manual explain the use, installation and handling of discrepancies
This system cannot be used in an environment where the safety of personnel depends on the functionality of the equipment.	Only after the housing is fully installed can the intended use be assured.	The owner/operator must take appropriate precautions to use this equipment. This device can only use the power supply that matches this device, and can only connect cables approved for application.	

1.Component function description

1.1 Module overview



- 1 Sensor head
- 2 LED status indicators
- 3 IO-Link interface

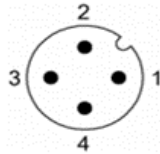
1.2 Module parameters

Shell material	Brass, nickel plated brass nut
Working frequency	HF(13.56MHz)
Supported encoding types	DIN ISO 15693
Connect	Plug, M12x1 plug, 4-pin
Interface	IO-Link1.1
Operating Voltage	18...30 V DC, LPS/Level 2 only
Ambient temperature	0...70°C
Protection level	IP67

2.Interface definition

2.1 IO-Link interface (M12 A-coded)

M12,A-coded, Male

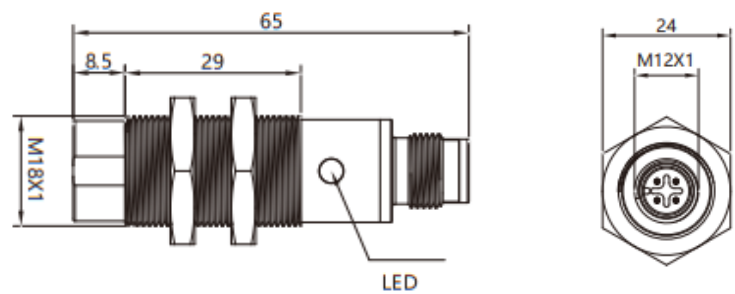


Pin	Function
1	Power controller,+24V,max2000mA
2	NC
3	GND
4	C/Q, IO-Link data transmission channel

2.2 Status LED meter

LED	Show	Comment
Idle state	The blue light is always on and IOL self-test is disabled.	The device is idle, only supplies power, and has no CQ signal.
	Long blue and short red, CQ is abnormal	
	Long green, short red, factory default	
Self-test mode	Four color changes red->green->blue->white	After the programming program is completed, power on and enter the self-test mode, and the status light changes in four colors.
Communication failure	Flashing red light	When the IOL chip, RFID chip, and EEPROM chip work abnormally
IOL communication is normal	Green light flashes	Green light flashes 4 long and 1 short quickly, continuous communication
IOL upgrade	Blue light gradient	Breathing light gradient, the faster the speed, the faster the progress (0-100)
RFID communication in progress	White light flashes/white light stays on	RFID is being read and written for delivery. The length of the white light on indirectly indicates the length of data reading and writing.
RFID communication failure	Red light flashes quickly	RFID interaction error

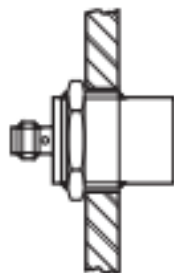
2.3 Size



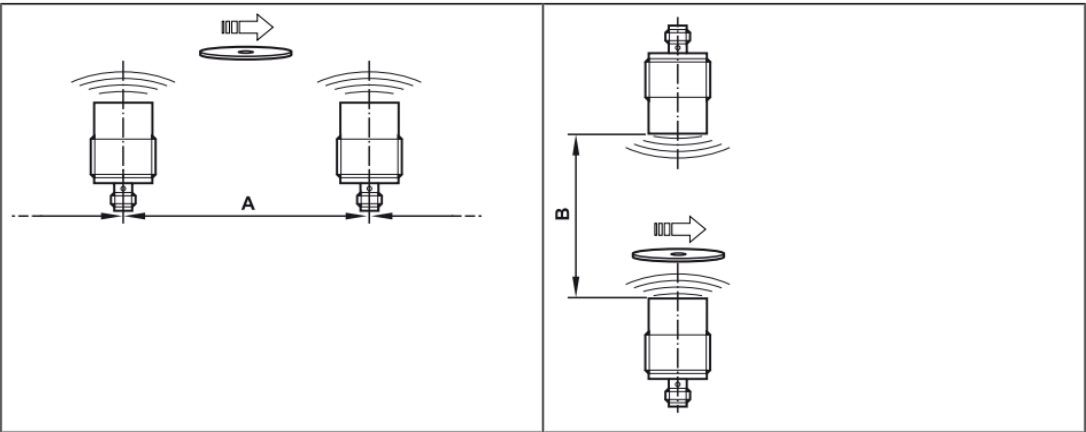
Project	Specification
Dimensions (Diameter x length)	Ø 18 x 65 mm

2.4 Installation method

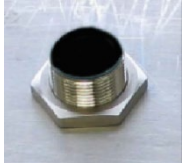
Non-flush installation using included nut fasteners.



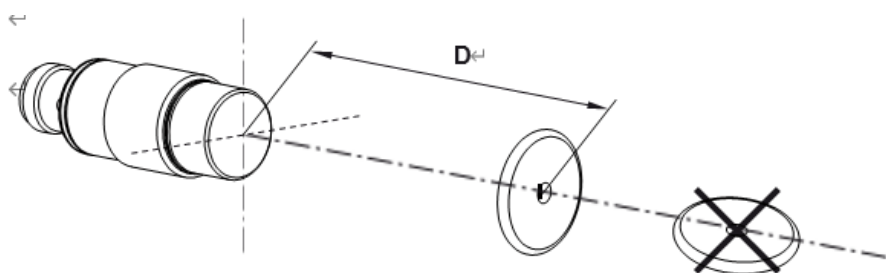
2.5 Assembly distance



Operating mode	Distance edge(A)	Distance before (B)
Read/write	≥ 90 mm	≥ 180 mm

	The reader is mounted on metal, the distance to the metal is ≥ 12 mm
	The reader is mounted in metal, enclosed within it, the distance should be ≥ 10 mm to avoid any influence on the field data.

2.6 Positioning of ID tags



Align the ID tag with the central axis of the device antenna, $D < 30$ mm.

3.IO-Link data

3.1 Communication parameters

Data transmission baud rate	COM2 (38.4kbit/s)
Minimum cycle time	4.5ms
Process data cycle time	4.5ms, consistent with minimum cycle time
Process data length	4 bytes input, 4 bytes output

3.2 service data

	SPDU		Object name	length	Scope	Default value
	Index	Subindex				
Identification data			Supplier ID	2	/	0x0454
			Device ID	3	/	0x099CE5
	0x10	0	Supplier name	16	Read only	FAS(Fujian)Co.,LTD
	0x11	0	Supplier text	19		www.fas-elec.com
Parameter data	1903	0	Automatically read start address		Read only	
	1904	0	Automatic read length			
	1905	0	LED brightness			[0, 100]Default 50%
	1907	0	Write the corresponding block content			Default 1 is enabled
	1908	0	Speed up reading big data			Default 1 is enabled
	1909	0	Speed up writing big data			Default 1 is enabled
	1910	0	LED mode			Default 0, 0 flashes 1 constant
	1911	0	Blocking function			Default 0
	1912	0	Module enables power on and off			Default 0

4.Parameter settings

4.1 Parameter

4.1.1 Data block length

The memory area of the ID tag is organized in data blocks. This parameter specifies the size of the data block. The set value must correspond to the value of the ID tag indicated in the data sheet.

The following values are allowed:

Each block is 4, 8, 16 and 32 bytes.

The data block size is only used for data processing within the device. The user can access the process data image byte by byte on the memory area of the ID tag.

4.1.2 Data order

This parameter sets the order of data in the data block marked by the ID.

Example

For ID tags with a block size of 4 bytes, the data can be arranged in the order in the table:

Data block 0				Data block 1	
Byte 3	Byte 2	Byte 1	Byte 0	Byte 3	...

Tab. 1: Order

Data block 0				Data block 1	
Byte 0	Byte 1	Byte 2	Byte 3	Byte 0	...

Tab. 2: Reverse order

4.1.3 Data retention time

Data retention time indicates the time that the data of the process data input image can be kept constant. Depending on the operating mode, this involves

- UID
- Data label presentation bit
- Data in automatic reading and automatic writing modes

In "read data" and "write data" modes, "data retention time" does not affect data transmission.

Example

When the data retention time is set to 500 ms, the UID and "Tag present" bit are transmitted via IO-Link for at least 500 ms.

This also applies if the ID tag is no longer in range of the device.

4.1.4 Automatic read/write address

"Auto read and write address" sets the starting address of the memory area accessed in "auto read" and "auto write" modes.

The address is provided in bytes.

In the "auto read" and "auto write" working modes, the device automatically reads and writes the specified amount of ID tag data.

The addressed memory area must be within the available memory area of the ID tag:

Automatically read and write addresses+

Automatically read and write data length ≤

Number of bytes available on the ID tag

The number of available bytes is shown in the ID tag's datasheet.

4.1.5 Automatic read/write data length

"Automatically read and write data length" sets the length of the memory area to be read and written.

Length is expressed in bytes. The minimum length is 1 byte and the maximum length is 29 bytes.

In the "auto read" and "auto write" working modes, the device automatically reads and writes the specified amount of ID tag data.

The addressed memory area must be within the available memory area of the ID tag:

Automatically read and write addresses+

Automatically read and write data length ≤

Number of bytes available on the ID tag

The number of available bytes is shown in the ID tag's datasheet.

4.2 Status bits

Process data entry								
Bit	7	6	5	4	3	2	1	0
Object					Deactivate antenna	Label performance	Cmd Finish	Cmd Start enabling

Process data output								
Bit	7	6	5	4	3	2	1	0
Object					Cmd Deactivate antenna			Cmd Start

Status bit	Value	Illustrate
Antenna deactivated	0	The antenna is active and the device is ready to receive
	1	Antenna failed, device not ready to accept
Label display	0	No ID tag in device range
	1	ID tag detected
Cmdend	0	The read/write operation has not started or is in progress
	1	Read or write operation terminated
Cmd start enabling	0	Unacknowledged start of read or write operation
	1	Confirmed start of read or write operation
Cmd antenna disabled	0	Activate antenna
	1	Disable antenna
Cmd start	0	Read and write operations reset flip-flop
	1	Set read and write operation trigger



The following status bits cannot be used in "Read UID" mode:

- u Cmd start
- u Cmd starts enabling
- u Cmd end

5. Operate

This device supports multiple operating modes, selected using command values in the process data output image:

operating mode	Command value	Illustrate
Read UID	0x00	Operating mode Read UID
Automatically read data	0x01	Operation mode: automatic reading of data
Automatically write data	0x02	Operation mode automatically writes data
Read data manually	0x03	Operation mode manual reading of data
Manually write output	0x04	Operation mode: manual data writing

For all operating modes, the same status bits and error values apply in the process image.

5.1 Deactivate the internal antenna

The internal antenna of this unit can be deactivated at any time. After deactivating the antenna

- The device is still accessible via IO-Link,
- The module does not generate high-frequency magnetic fields,
- The device does not recognize ID tags.

Interference between units installed next to each other is reduced by deactivating the antennas.

Deactivate the internal antenna;

u Set the "Cmd antenna deactivation" bit in the process data output.

 Query the status of the internal antenna via the "Antenna deactivated" bit in the process data input image.

5.2 Operation mode read UID

In the "Read UID" working mode, read the UID of the ID tag. The UID is then available in the process data input. If there is no ID tag within the scope of the device, the 8-byte value of the UID is "0x00".

Once the device detects the ID tag, the UID is transferred. Continue transmission within the minimum length of data retention time. If a new ID tag appears within the detection range during the data retention time, the UID of the new ID tag is transferred.

 After the device is started, the default operating mode is "Read UID".

Byte	Process data output	Process data entry
0	Command value = 0x00	Command value = 0x00
1	State	State
2	Neglect	UID 0
3	Neglect	UID 1

4	Neglect	UID 2
5	Neglect	UID 3
6	Neglect	UID 4
7	Neglect	UID 5
8	Neglect	UID 6
9	Neglect	UID 7
10	Neglect	0x00
11	Neglect	0x00
12	Neglect	0x00
13	Neglect	0x00
14	Neglect	0x00
15	Neglect	0x00
16	Neglect	0x00
17	Neglect	0x00
18	Neglect	0x00
19	Neglect	0x00
20	Neglect	0x00
21	Neglect	0x00
22	Neglect	0x00
23	Neglect	0x00
24	Neglect	0x00
25	Neglect	0x00
26	Neglect	0x00
27	Neglect	0x00
28	Neglect	0x00
29	Neglect	0x00
30	Neglect	0x00
31	Neglect	Neglect error value

5.3 Operation mode automatically reads data

In the "automatically read data" working mode, bytes 0 to 28 represent the data in the ID tag memory area. The memory area is set by "Automatic read/write address" and "Automatic read/write data length".

For memory areas with data length < 29 bytes, the remaining data in the process image is filled with the value 0x00.

Once the ID tag comes into detection range, the data in the process image is updated. The data in the process image is valid as long as the status bit "Cmd Ended" is set.

If the ID tag exceeds the detection range, the data is saved in the process image based on the data retention time. If the data retention time is exceeded and there is no ID tag within the detection range, the data will be filled with the value 0x00.

If the ID tag remains within the detection range, the data with the status bit "Cmd Start" can be read. If the read is unsuccessful, an error value will be displayed in the process image.



The smaller the "Auto Read/Write Length" setting is, the less time it takes to read. This means that the ID tag can stay within the detection range for a shorter time.

Byte	Process data output	Process data entry
------	---------------------	--------------------

0	Command value = 0x01	Command value = 0x01
1	State	State
2	Neglect	Data 0
3	Neglect	Data 1
4	Neglect	Data 2
5	Neglect	Data 3
6	Neglect	Data 4
7	Neglect	Data 5
8	Neglect	Data 6
9	Neglect	Data 7
10	Neglect	Data 8
11	Neglect	Data 9
12	Neglect	Data 10
13	Neglect	Data 11
14	Neglect	Data 12
15	Neglect	Data 13
16	Neglect	Data 14
17	Neglect	Data 15
18	Neglect	Data 16
19	Neglect	Data 17
20	Neglect	Data 18
21	Neglect	Data 19
22	Neglect	Data 20
23	Neglect	Data 21
24	Neglect	Data 22
25	Neglect	Data 23
26	Neglect	Data 24
27	Neglect	Data 25
28	Neglect	Data 26
29	Neglect	Data 27
30	Neglect	Data 28
31	Neglect	Error value

5.4 Operation mode automatically writes data

In the "Automatic write data" operating mode, the data to be written is defined by the process data output image. Set the parameters to "Automatic read/write address" and "Automatic read/write data length".

Once the ID tag enters the detection range, the data is written to the ID tag along with the address and length. A maximum of 29 bytes (bytes 0 to 28) are defined in the process data output image. For memory areas with data length < 29 bytes, the remaining data will be ignored and no ID tag will be written.

If the write is successful, the written data is copied into the process data input image and the status bit "Cmd End" is set. If the ID tag exceeds the detection range, the data is saved in the process image based on the data retention time.

If the data retention time is exceeded and there is no ID tag within the detection range, the data will be filled with the value 0x0

If the ID tag is always within the detection range, data can be written with the "Cmd Start" status bit. If the write fails, an error value will be displayed in the process image.



The smaller the "Automatic read/write data length" is set, the shorter the time required for writing. This means that the ID tag can stay within the detection range for a shorter time.

Byte	Process data output	Process data entry
0	Command value = 0x02	Command value = 0x02
1	State	State
2	Data 0	Data 0
3	Data 1	Data 1
4	Data 2	Data 2
5	Data 3	Data 3
6	Data 4	Data 4
7	Data 5	Data 5
8	Data 6	Data 6
9	Data 7	Data 7
10	Data 8	Data 8
11	Data 9	Data 9
12	Data 10	Data 10
13	Data 11	Data 11
14	Data 12	Data 12
15	Data 13	Data 13
16	Data 14	Data 14
17	Data 15	Data 15
18	Data 16	Data 16
19	Data 17	Data 17
20	Data 18	Data 18
21	Data 19	Data 19
22	Data 20	Data 20
23	Data 21	Data 21
24	Data 22	Data 22
25	Data 23	Data 23
26	Data 24	Data 24
27	Data 25	Data 25
28	Data 26	Data 26
29	Data 27	Data 27
30	Data 28	Data 28
31	Neglect	Error value

5.5 Manual data reading in operating mode

In the "read data" working mode, a read operation can read data larger than 29 bytes. Data is transferred from the device to the controller in turn.

Transfer data from device to controller

u Use this control to set the following values in the process data output: command value "0x03", address (16 bits) and data length (16 bits).

u Using the control, start the read operation with the status bit "Cmd start".

w The device acknowledges the start of the read operation by setting the status bit "Cmd Start Confirm" in the process data input.

- w The device transmits the data in the process data input (data 0 ~ 27) and increments the block counter by 1 as soon as the first data of the ID tag is available. When the value exceeds "255", the blocking counter is reset to "0".
- u Using the control, acknowledge receipt of data by incrementing the block counter in the process data output by "1".
- u Repeat the last two steps until all data has been transferred.
- w The device sets the status bit of the last transmission to "Cmd End" and the read operation ends.



If the read is unsuccessful, the device will set the error value and status bit "Cmd Ended" in the process image.
Data transfer interrupted.

5.5.1 The instance successfully reads data

This example shows that the data is read successfully.

Byte	Process data output	Process data entry
0	Command value = 0x03	Command value = 0x03
1	State	State
2	Neglect	Data 0
3	Neglect	Data 1
4	Address (high byte)	Data 2
5	Address (low byte)	Data 3
6	Length (high byte)	Data 4
7	Length (low byte)	Data 5
8	Neglect	Data 6
9	Neglect	Data 7
10	Neglect	Data 8
11	Neglect	Data 9
12	Neglect	Data 10
13	Neglect	Data 11
14	Neglect	Data 12
15	Neglect	Data 13
16	Neglect	Data 14
17	Neglect	Data 15
18	Neglect	Data 16
19	Neglect	Data 17
20	Neglect	Data 18
21	Neglect	Data 19
22	Neglect	Data 20
23	Neglect	Data 21
24	Neglect	Data 22
25	Neglect	Data 23
26	Neglect	Data 24
27	Neglect	Data 25
28	Neglect	Data 26
29	Neglect	Data 27
30	Block counter	Block counter
31	Neglect	Error value

	Instruction value	Address	length	Data 0 — 27	Block counter	Status bit "Cmd start"
Default command	0x00	0x0000	0x0000	0x00	0x00	0
Controller setting command (read 35 bytes from address 0x12)	0x03	0x0012	0x0023	0x00	0x00	1
Device enable command	0x03	0x0012	0x0023	0x00	0x00	1
The first byte of device setup data	0x03	0x0012	0x0023	0x00	0x00	1
The controller acknowledges receipt of data	0x03	0x0012	0x0023	0x00	0x01	1
The device sets more data and terminates the read	0x03	0x0012	0x0023	0x00	0x01	1
The controller acknowledges receipt of data	0x03	0x0012	0x0023	0x00	0x02	1
Controller withdraw command value	0x00	0x0000	0x0000	0x00	0x00	0
The device executes preset commands	0x00	0x0000	0x0000	0x00	0x00	0

Tab. 3: Process data output

	Instruction value	Data 0 — 27	Block counter	Mistake value	status bit "Cmd Finish"	Status bit "Cmd start"
Default command	0x00	UID	0x00	0x00	0	0
Controller setting command (read 35 bytes from address 0x12)	0x03	UID	0x00	0x00	0	0
Device enable command	0x03	0x00	0x00	0x00	0	1
The first byte of device setup data	0x03	Data	0x01	0x00	0	1
The controller acknowledges receipt of data	0x03	Data	0x01	0x00	0	1
The device sets more data and terminates the read	0x03	Data	0x02	0x00	1	1
The controller acknowledges receipt of data	0x03	Data	0x02	0x00	1	1
The controller acknowledges receipt of data	0x03	Data	0x02	0x00	1	1
The device executes preset commands	0x00	UID	0x00	0x00	0	0

Tab. 4: Process data entry

5.5.2 The instance failed to read data successfully

This example shows that data reading was unsuccessful.

	Instruction value	Address	length	Data 0 — 27	Block counter	status bit "Cmd start"
Default command	0x00	0x0000	0x0000	0x00	0x00	0
Controller setting command (read 35 bytes from address 0x12)	0x03	0x0012	0x0023	0x00	0x00	1
Device enable command	0x03	0x0012	0x0023	0x00	0x00	1
The first byte of device setup data	0x03	0x0012	0x0023	0x00	0x00	1
The device sets more data and terminates the read	0x03	0x0012	0x0023	0x00	0x01	1
Device setting error value	0x03	0x0012	0x0023	0x00	0x01	1
No ID tag	0x00	0x0000	0x0000	0x00	0x00	0
Controller withdraw command value	0x00	0x0000	0x0000	0x00	0x00	0

Tab. 5: Process data output

	Instruction value	Data 0 — 27	Block counter	Mistake value	status bit "Cmd Finish"	Status bit "Cmd start"
Default command	0x00	UID	0x00	0x00	0	0
Controller setting command (read 35 bytes from address 0x12)	0x03	UID	0x00	0x00	0	0
Device enable command	0x03	0x00	0x00	0x00	0	1
The first byte of device setup data	0x03	Data	0x00	0x00	0	1
The device sets more data and terminates the read	0x03	Data	0x01	0x00	0	1
Device setting error value	0x03	Data	0x01	0x11	1	1
No ID tag	0x03	0x00	0x01	0x11	1	1
Controller withdraw command value	0x00	UID	0x00	0x00	0	0

Tab. 6: Process data entry

5.6 Operation mode writing data

In the "write data" working mode, the number of bytes that can be written in one write operation is greater than 29 bytes. Data is transferred sequentially from the controller to the device.

Transfer data from controller to device:

u Use this control to set the following values in the process data output:

command value "0x04", address (16 bits) and data length (16 bits).

u Using the control, start the write operation with the status bit "Cmd Start".

w The device acknowledges the start of the write operation by setting the status bit "Cmd Start Confirm" in the process data input.

u Using the control, populate the process data output (data 0 to 27) with data and increment the block counter by "1". When the value exceeds "255", the blocking counter is reset to "0".

w The device acknowledges receipt of data by incrementing the block counter in the process data output by "1".

u Repeat the last two steps until all data has been transferred.

w The device sets the status bit to "Cmd Ended" for the last transmission to the ID tag. The write operation is terminated.



If the write fails, the device will set the error value and status bit "Cmd End" in the process image. Data transfer interrupted.

Byte	Process data output when starting a write operation	Process data output during data transfer	Process data entry
0	Command value=0x04	Command value=0x04	Command value=0x04
1	State	State	State
2	Neglect	Data 0	0x00
3	Neglect	Data 1	0x00
4	Address (high byte)	Data 2	0x00
5	Address (low byte)	Data 3	0x00
6	Length (high byte)	Data 4	0x00
7	Length (low byte)	Data 5	0x00
8	Neglect	Data 6	0x00
9	Neglect	Data 7	0x00
10	Neglect	Data 8	0x00
11	Neglect	Data 9	0x00
12	Neglect	Data 10	0x00
13	Neglect	Data 11	0x00
14	Neglect	Data 12	0x00
15	Neglect	Data 13	0x00
16	Neglect	Data 14	0x00
17	Neglect	Data 15	0x00
18	Neglect	Data 16	0x00
19	Neglect	Data 17	0x00
20	Neglect	Data 18	0x00
21	Neglect	Data 19	0x00

22	Neglect	Data 20	0x00
23	Neglect	Data 21	0x00
24	Neglect	Data 22	0x00
25	Neglect	Data 23	0x00
26	Neglect	Data 24	0x00
27	Neglect	Data 25	0x00
28	Neglect	Data 26	0x00
29	Neglect	Data 27	0x00
30	0x00	Block counter	Block counter
31	Neglect	Neglect	Error value

5.6.1 Instance data written successfully

This instance writes data successfully

	Instruction value	Address	length	Data 0 — 27	Block counter	Status bit "Cmd start"
Default command	0x00	0x0000	0x0000	0x00	0x00	0
Controller setting command (write 40 bytes from address 0x10)	0x04	0x0010	0x0028	0x00	0x00	1
Device enable command	0x04	0x0010	0x0028	0x00	0x00	1
The first byte of device setup data	0x04	Data for ID tag			0x01	1
Device confirmation data	0x04	Data for ID tag			0x01	1
Controller transmits more data	0x04	Data for ID tag			0x02	1
The device acknowledges the data and terminates the write	0x04	Data for ID tag			0x02	1
Controller withdraw command value	0x00	0x0000	0x0000	0x00	0x00	0
The device executes preset instructions	0x00	0x0000	0x0000	0x00	0x00	0

Tab. 7: Process data output

	Instruction value	Data 0 — 27	Block counter	Mistake value	Status bit "Cmd Finish"	Status bit "Cmd start"
Default command	0x00	UID	0x00	0x00	0	0
Controller setting command (write 40 bytes from address 0x10)	0x04	UID	0x00	0x00	0	0

Device enable command	0x04	0x00	0x00	0x00	0	1
The first byte of device setup data	0x04	0x00	0x00	0x00	0	1
Device confirmation data	0x04	0x00	0x01	0x00	0	1
Controller transmits more data	0x04	0x00	0x01	0x00	0	1
The device acknowledges the data and terminates the write	0x04	0x00	0x02	0x00	1	1
Controller withdraw command value	0x04	0x00	0x02	0x00	1	1
The device executes preset instructions	0x00	UID	0x00	0x00	0	0

Tab. 8: Process data entry

5.6.2 Instance data writing failed

In this instance, the data was not successfully written

	Instruction value	Address	length	Data 0 — 27	Block counter	Status bit "Cmd start"
Default command	0x00	0x0000	0x0000	0x00	0x00	0
Controller setting command (write 40 bytes from address 0x10)	0x04	0x0010	0x0028	0x00	0x00	1
Device enable command	0x04	0x0010	0x0028	0x00	0x00	1
The first byte of device setup data	0x04	Data			0x01	1
Device confirmation data	0x04	Data			0x01	1
Controller transmits more data	0x04	Data			0x02	1
Device settings wrong value (ID tag not available)	0x04	Data			0x02	1

Controller withdraw command value	0x00	0x0000	0x0000	0x00	0x00	0
The device executes preset instructions	0x00	0x0000	0x0000	0x00	0x00	0

Tab. 9: Process data output

	Instruction value	Data 0 — 27	Block counter	Mistake value	Status bit "Cmd Finish"	Status bit "Cmd start"
Default command	0x00	UID	0x00	0x00	0	0
Controller setting command (write 40 bytes from address 0x10)	0x04	UID	0x00	0x00	0	0
Device enable command	0x04	0x00	0x00	0x00	0	1
The first byte of device setup data	0x04	0x00	0x00	0x00	0	1
Device confirmation data	0x04	0x00	0x01	0x00	0	1
Controller transmits more data	0x04	0x00	0x01	0x00	0	1
The device acknowledges the data and terminates the write	0x04	0x00	0x01	0x11	1	1
Controller withdraw command value	0x04	0x00	0x01	0x11	1	1
The device executes preset instructions	0x00	UID	0x00	0x00	0	0

Tab. 10: Process data entry

5.7 Wrong values in process data entry

Value	Name	Illustrate
0x00	RFID_NOERROR	No errors, read and write operations were successful.
0x01	RFID_UNKNOWN_COMMAND	The command value is unknown.
0x11	COMMAND_NO_RESPONSE	• ID tag unresponsive; • ID tag is out of range; • The ID tag does not support the operation or the parameters are incorrect (for example: the data block is too large).
0x12	COMMAND_RX_ERROR	An error occurred while receiving ID tag data.
0x21	TAG_COMMAND_NOT_SPECIFIED	ID tags do not support this command.
0x22	TAG_COMMAND_SYNTAX	Wrong command parameters.
0x23	TAG_OPTION_NOT_SUPPORTED	ID tags do not support command options.
0x2F	TAG_OTHER	Other errors occurred during execution of the ID tag command.
0x30	TAG_BLOCK_NOT_USABLE	The data block of the ID tag cannot be used (for example, the data block does not exist).
0x31	TAG_BLOCK_ALREADY_BLOCKED	The data block is locked.
0x32	TAG_BLOCK_NOT_UPDATEABLE	The data block is locked and cannot be overwritten.
0x33	TAG_BLOCK_WRITE_VERIFY	The data block was not written correctly (such as a defective memory area).
0x34	TAG_BLOCK_LOCK_VERIFY	The data block cannot be locked (eg the memory area is defective).

6.Appendix

6.1 Ordering information

Product ordering code	Ordering code
FIS M-406-082-401-07-S4	FIS106

■ High Quality Product / Sincere Service



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