RION TECH

PATENT NO.: ZL 201830752896.8

V1.2

MEMS DIGITAL ACCELEROMETER

AKS392

Technical Manual

PRODUCTION EXECUTION STANDARD REFERENCE

○ Quality management system certification: GB/T19001-2016 idt ISO19001:2015 standard (Certificate No.: 128101)

○ Quality management system certification: IATF16949: 2016 (Certificate No.: T178487)

○ GJB9001C-2017 Standard Weaponry Quality Management System Certification (Registration number: 02622J31799R0M)

○ Intellectual property management system certification: GB/T29490-2013 standard (Certificate No.: 41922IP00281-06R0M)

○ High-tech Enterprise (Certificate No.: GR201844204379)

○ ShenZhen Professional Dedicated Unique Innovative Enterprice(No.: SZ20210879)

○ China National Intellectual Property Appearance Patent (Patent No.: ZL 201830752896.8)

○ Revision time:2023-2-8

Note: Product functions, parameters, appearance, etc. will be adjusted as the technology upgrades. Please contact our pre-sales business to confirm when purchasing.

▶ INTRODUCTION

AKS392 triaxial accelerometer is a product independently developed and produced by Rion Technology, which is specially used in the building monitoring industry. In order to improve the resolution of the product, the product uses a smaller range, which can more accurately reflect the subtle changes of the product. Digital interface output is adopted, RS232/485/TTL is optional, different address codes can be set, and multiple sensors are connected in series for a long distance, which is convenient for multi-point measurement and data analysis. The internal FFT processing can directly output the vibration frequency, speed and amplitude of the object, which is convenient for users to analyze the data. The AKS392 is a monocrystalline silicon capacitive sensor consisting of a micromachined silicon chip, a low-power ASIC for signal conditioning, a microprocessor for storing compensation values, and a temperature sensor. This product has low power consumption, solid structure and stable output after calibration. The new electronic configuration provides solid state power for reset, providing protection against over-powering. The long-term stability and deviation of the scale factor are typically less than 0.1% over the full scale range. This series of products have the characteristics of solid structure, low power consumption and excellent deviation stability, which ensures stable output reliability.

▶ MAIN FEATURE

★ Three axes (X, Y, Z)
★ Output signal: RS232; RS485; TTL
★ Power supply voltage: 9~36V
★ Size: L34.3×W34.3×H38.5mm
★ Working temperature: -40°C ~ +85°C
★ Storage temperature: -40°C ~ +85°C
★ Excellent deviation stability, good environmental performance (shock, vibration and temperature)

▶ APPLICATION

★ Medical equipment
★ Bridge
★ Automobile
★ Road roller
★ Crash records, fatigue monitoring and prediction
★ Wind power generation
★ Large machinery, engines
★ Low-frequency vibration and automatic monitoring
★ Traffic system monitoring, roadbed analysis and high-speed railway fault detection

▶ SPECIFICATIONS

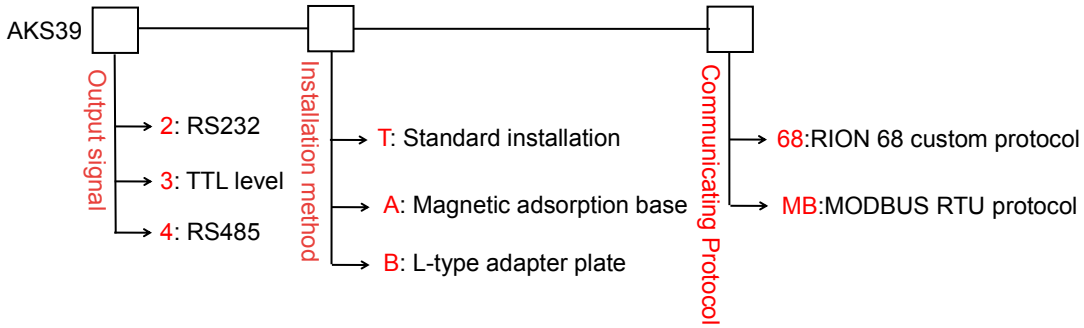
AKS392	PARAMETERS	UNIT
Range	±2	g
Bias calibration	<1	mg
Measure axis	X,Y,Z	axis
Power on/off repeatability	<2	mg(max)
Bias temperature coefficient	0.15	%/℃(typical)
Resolution/threshold (@ 1Hz)	< 1	mg(max)
Non-linearity	<0.5	% FS(max)
Bandwidth (3DB)	80	Hz
Cross axis sensitivity	1	%
Transverse vibration sensitivity ratio	1	%
Density of noise	21	μg/√Hz
Resonance frequency	2.4	kHz
Output rate	5Hz、10Hz、25Hz、50Hz、100Hz、200Hz、500Hz、1000Hz	
Output Interface	RS232/RS485/TTL	
Protocol	RION 68 protocol and MODBUS RTU protocol	
Input（VDD_VSS）	9~36 VDC	
Operating current consumption	<60mA @ 12 VDC	
Connector	Industry standard M12 connector	
Weight	Product net weight: 82g, Magnetic base: 48g, L-shaped adapter plate 20g	
Size	Product size: 34.3*34.3*38.5mm Magnetic adsorption base size: 34.23*34.23*6mm L-shaped adapter plate size: 36*44*15mm	

▶ VIBRATION PARAMETER INDEX

The product's vibration frequency, speed, and displacement are derived from data analysis, where frequency is the main frequency of the current object vibration frequency, speed is the maximum vibration speed, and displacement is the maximum amplitude value of the object vibration. Because of the irregularity of the object vibration, the data is only used reference.

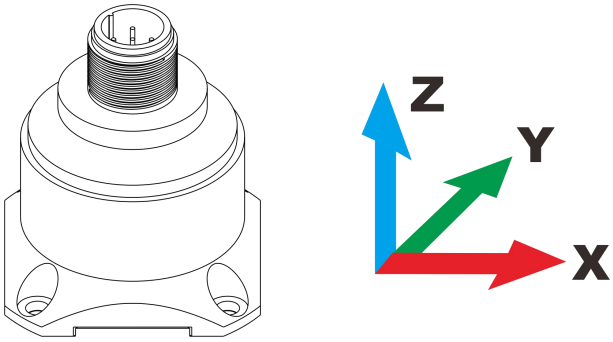
INDEX	VALUE	UNIT
Acceleration	2,4,8,10,20,40	g
Speed	Vibration speed	m/s
Amplitude	Vibration amplitude value	m
Frequency	0~80	Hz
Frequency resolution	0.2	Hz

▶ ORDER INSTRUCTION

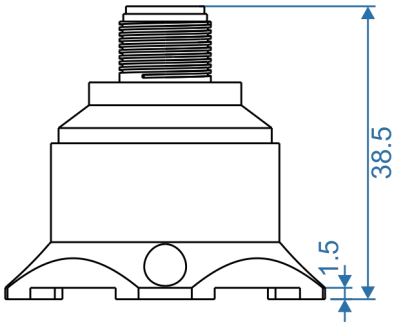


E.g: AKS392-T-68: RS232 output / standard installation / RION 68 protocol.

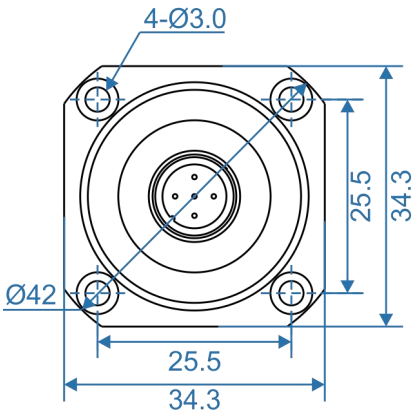
▶ MEASURE DIRECTION

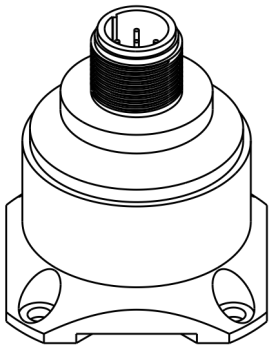


▶ SIZE

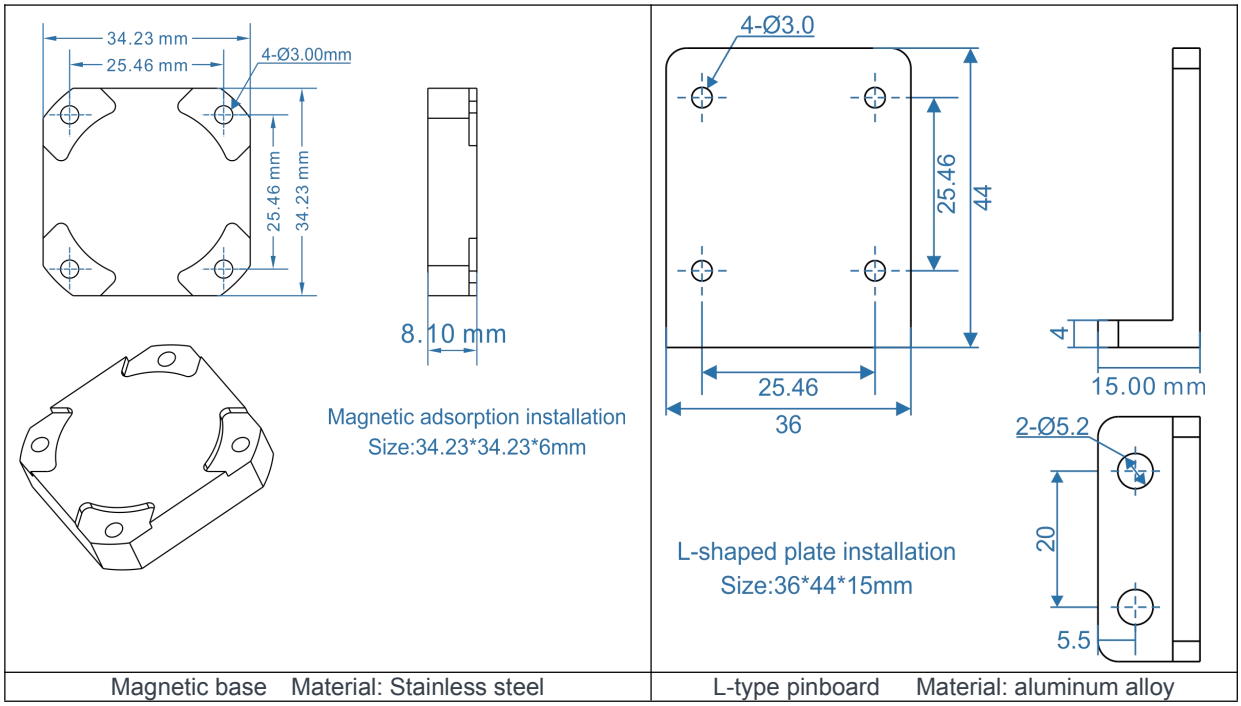


Standard positioning installation
Size:34.3*34.3*38.5mm





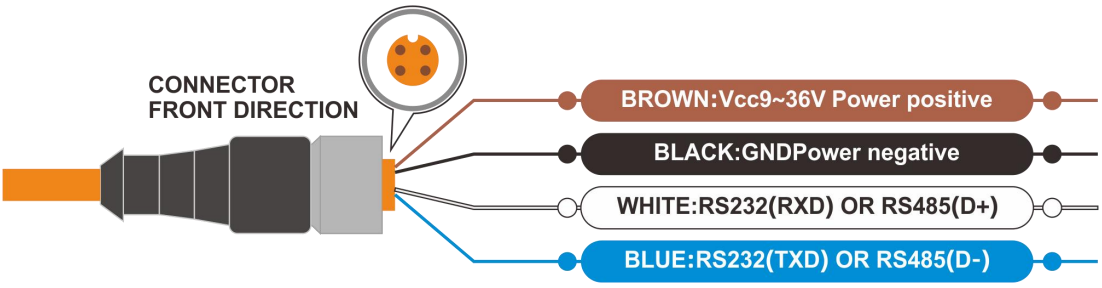
▶ MOUNTING ACCESSORIES SIZE



Magnetic base Material: Stainless steel	L-type pinboard Material: aluminum alloy

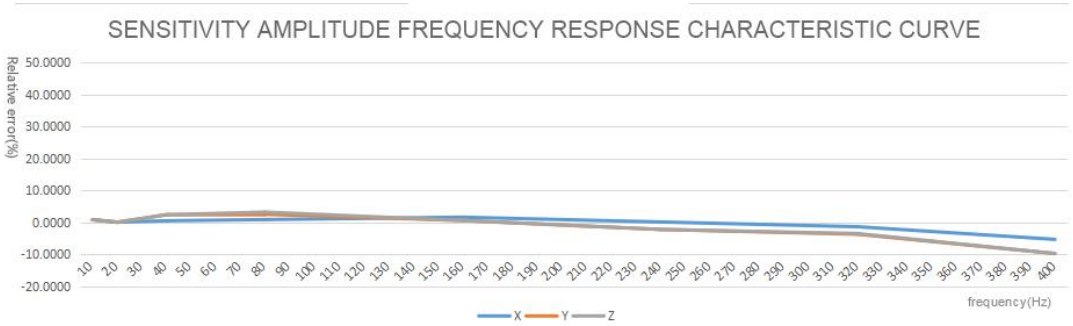
▶ CONNECTION

THREAD COLOR FUNCTION	BLACK	WHITE	BLUE	BROWN
	GND	RS232(RXD)/ RS485(D+)	RS232(TXD)/ RS485(D-)	Vcc 9 ~ 36V



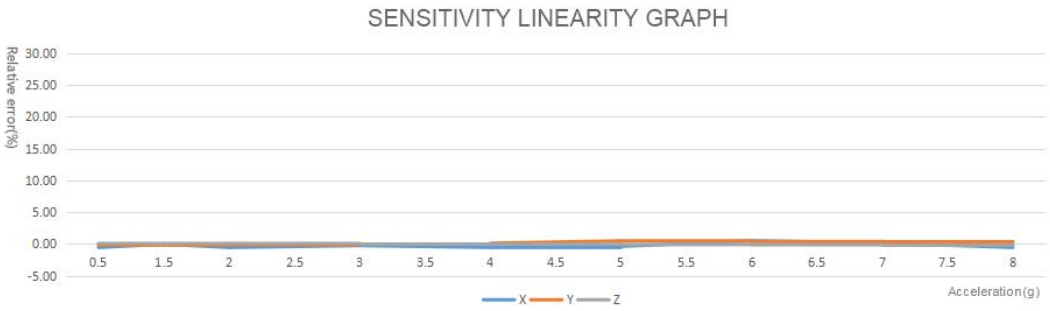
▶ SENSITIVITY AMPLITUDE-FREQUENCY RESPONSE CHARACTERISTIC CURVE

(reference conditions: f=20.000Hz , a=2.000G)



Reference diagram of measuring range ±8G

▶ SENSITIVITY LINEARITY GRAPH



▶ COMMUNICATION PROTOCOL

The product includes 68 protocol and MODBUS RTU two protocols. The default configuration parameters of the protocol are as follows:

PROTOCOL	RION 68 PROTOCOL	MODBUS-RTU
Address code	0	1
Broadcast address	255	0
Serial port baud rate	9600	9600
Parity bit	No parity	Even parity
Serial port start bit	1 bit	1 bit
Serial port data length	8 bits	8 bits
Serial port stop bit	1 bit	1 bit
Output mode	Question and answer	Question and answer
Data Format	Data format	Data format
Data check method	Checksum	CRC16

RION 68 protocol and MODBUS protocol mutual switching method:

Open the serial port debugging assistant, select the baud rate 115200, no parity, stop bit 1, the connection port number, make the host computer send hexadecimal 0xAA regularly for every 10ms. Power on the product and reply "RION" or "MRTU" to indicate that the change to the corresponding protocol is successful. After the switch is successful, the parameters are all the above default parameters.

▶ AUTOMATICALLY OUTPUT DATA

This output is related to the automatic output mode command. When the corresponding BIT bit is set, it will be output. The lower the BIT, the higher the data content. That is, all content output is sorted from left to right as: acceleration|frequency|speed|amplitude|temperature. for example:
68 protocol: the automatic output item is 1011H, then the automatic output data is: acceleration|frequency|amplitude;
Modbus protocol: the automatic output item is 9001H, then the automatic output data is: acceleration|amplitude|temperature.

BIT0	BIT1	BIT2	BIT3
Accelerometer	-	-	Temperature
BIT4	BIT5	BIT6	BIT7
frequency	-	-	-
BIT8	BIT9	BIT10	BIT11
Speed	-	-	-
BIT12	BIT13	BIT14	BIT15
Amplitude	-	-	Temperature

The following table describes the relationship between output rate, data content and baud rate, please calculate and set reasonably according to the parameters.

Fre (HZ)	0	5	10	25	50	100	200	500	1000	300	400
Remark	Auto output is valid						Auto output is invalid, only the acceleration data is output, high baud 115200/230400 is recommended to use				

▶ RION 68 COMMUNICATION PROTOCOL (DEFAULT PROTOCOL)

Note: Please read the following items carefully before use:

1) All setting operations will not be saved after power off, and the setting of the command issued will be effective immediately. If it needs to be saved, a save command needs to be issued. The operation is: send the setting command -> return successfully, the setting takes effect -> send the save command -> return successfully, the setting is saved.

2) Please note that the auto output rate of the product is affected by the data length and baud rate, please calculate and set a reasonable baud rate by yourself.

3) The 68 protocol specifies the broadcast address----255. The sensor can also accept the content of the broadcast address, but will never reply. Therefore, the broadcast address 255 can be used for the following purposes, for reference only.

1. Set the addresses of all the acceleration sensors of this model mounted on the bus to a certain address.
2. Set all the acceleration sensors of this model mounted on the bus to relative/absolute zero point.
3. Test the sensor of this type on the entire bus, that is, the host sends a 0 address to the bus to inquire about the acceleration command, and the communication indicator can flash, that is, the communication is normal.

4) Flashes once every 1 second when normal communication.

1.DATA FRAME FORMAT: (8 bits date , 1 bit stop , No check , Default baud rate 9600)

Identifier (1byte)	Date Length (1byte)	Address code (1byte)	Command word(1byte)	Date domain	Check sum (1byte)
0x68					

Default communication parameters: address 0, baud rate 9600, 1 start bit, 8 data, no parity, 1 stop bit;

Effective setting address: 0~254;
Identifier: fixed as 0x68;
Data length: the length from data length to checksum (including checksum);
Data field: according to the different content and length of the command word changes accordingly;
Checksum: The sum of data length, address code, command word and data field, regardless of carry, that is, Sum&0xFF.

2.command word analysis

Command	Meaning/Example	Description
0X01	**Read X axis acceleration command.** E.g.: ***68 04 00 01 05***	Data field (0byte) No data field command
0X02	**Read Y axis acceleration command.** E.g.: ***68 04 00 02 06***	Data field (0byte) No data field command
0X03	**Read Z axis acceleration command.** E.g.: ***68 04 00 03 07***	Data field (0byte) No data field command
0X04	**Read all 3 axes acceleration command.** E.g.: ***68 04 00 04 08***	Data field (0byte) No data field command
0X94	Sensor reply E.g.: **68 10 00 94 FF FF D1 24 FF FF FF B2 00 0F 56 62 0D**	Data domain (12 byte) Four bytes per axis, big endian mode, data as a 32-bit signed integer, acceleration as the data value multiplied by 0. 000001. Other axis data are parsed in the same way. **FFFFD124** The three green bytes are the X-axis acceleration of the product, and the resolution is -0. 011996g; **FFFFFFB2** The three green bytes are the acceleration of the Y axis of the product, which is analyzed as -0. 000078g; **000F5662** The three green bytes are the acceleration of the Z axis of the product, and the resolution is 1. 005154g; **1B** Checksum, the hexadecimal sum of all data, excluding the prefix 68.
0X15	**Read 3 axes vibration frequency data** E.g.: ***68 04 00 15 19***	Data field (0byte) No data field command
0X95	**Sensor reply reply** E.g.: **68 10 00 95 00 01 00 00 00 02 A8**	Data field (9 byte) Each axis occupies 2 bytes in big-endian mode, the data is a 16-bit signed integer, and the acceleration is the data value multiplied by 0.1. Other axis data are parsed in the same way.
0X16	**Reading three-axis vibration speed data** E.g.: **68 04 00 16 1A**	Data field (0 byte) No data domain command
0X96	Sensor reply reply E.g.: **68 10 00 96 FF FF D1 24 FF FF FF B2 00 0F 56 62 0F**	Data domain (12 byte) Parsing is the same as 0X14 instruction
0X17	**Reading three-axis vibration amplitude data** E.g.:**68 04 00 17 1B**	Data domain (12 byte) No data domain command
0X97	Sensor reply reply E.g.: **68 10 00 97 FF FF D1 24 FF FF FF B2 00 0F 56 62 10**	Data field (9 byte) Parsing is the same as 0X14 instruction
0X18	**Read acceleration, vibration frequency, vibration velocity, vibration amplitude, temperature data** E.g.: **68 04 00 18 1C**	Data field (0 byte) No data domain command
0X98	Sensor reply reply E.g.: **68 30 00 98 FF FF D4 30 FF FF FF D2 00 0F 6C DF 0E 2B 00 02 00 02 00 02 00 6C A4 E6 00 46 23 7A 00 75 F4 26 00 46 D3 31 00 2D B9 27 00 4C E4 D4 F5**	Data field (39 byte) **Blue** refers to the acceleration data of X, Y and Z in turn, in G; **Orange** is the speed data of X, Y and Z in turn, in m/s; **Red** is the amplitude data of X, Y and Z in turn, in m; The analysis of these three data is consistent with the acceleration analysis method. **Purple** is temperature data, unit ℃, coefficient 0.01;

		Green is the frequency data of X, Y and Z in the unit of Hz The analysis of these two data is consistent with the frequency analysis method.
0X0B	**Set communication rate** E.g.: ***68 05 00 0B 03 13***	Data field(1byte) Baud rate: Default value: 9600 00 means 2400 01 means 4800 02 means 9600 03 means 19200 04 means 38400 05 means 115200 06 means 230400
0X8B	Sensor reply command E.g.: ***68 05 00 8B 00 90***	Data field(1byte) The number in the data field indicates the result of the sensor response: 00 Success FF Failure
0X1A	**Set automatic output data item** E.g.:**68 06 00 1A 11 19 4A**	Data field (2byte) Output item: default value: 1119H
0X9A	**The sensor answers the reply command** E.g.: **68 05 00 9a 00 9F**	Data field (1byte) The number in the data field indicates the result of the sensor respond 00 Success FF Fail
0X1A	**Read automatic output data item** E.g.: **68 04 00 1A 1E**	Data field (0 byte) No data domain command
0X9A	**The sensor answers the reply command** E.g.: **68 06 00 9 A 91 11 CA**	Data field (2byte) Data field value: 1119H
0X0C	**Setting the Sensor Output Mode** **Q & a mode:** The sensor responds to the relative data only after the host computer sends the read acceleration command. **Automatic output mode:** automatic output after the sensor is powered on, and the output rate depends on the set value. For high frequency output, set the baud rate to 115200. E.g.: **68 05 00 0C 00 11**	Data field (1byte) The factory default value is: 00 00 question and answer mode 01 5Hz Auto Output Mode 02 10Hz automatic output mode 03 25Hz Auto Output Mode 04 50Hz Auto Output Mode 05 100Hz Auto Output Mode 06 200Hz Auto Output Mode 07 500Hz automatic output mode (115200 and 230400 are adopted for baud rate) 08 1000Hz Auto Output Mode (230400 for Baud Rate) 09 300Hz Auto Output Mode 10 400Hz Auto Output Mode
0X8C	The sensor answers the reply command E.g.: **68 05 00 8C 00 91**	Data field (1byte) The number in the data field indicates the result of the sensor respond 00 Success FF Failure
0X0F	**Set Module Address Command** The default address of the sensor is 00, 1. If multiple sensors are connected to a set of buses at the same time, such as RS485, each sensor needs to be set to a different address to control and respond to acceleration separately. 2. If the new address is successfully changed, the address code in all subsequent command and response packets must be changed to the new address code after the change, and the sensor will not respond to the command. E.g.: ***68 05 00 0F 01 15*** Set the address to 01. E.g.: ***68 05 FF 0F 00 13*** Reset the address to 00 with the general addr	Data field (1byte) XX module address, from 00 to EF; Note: All products have a common address: FF
0X8F	The sensor answers the reply command E.g.: 68 05 00 8F 00 94	Data field (1byte) The number in the data field indicates the result of the sensor respond 00 Success FF Failure
0X53	Set the save command 68 04 00 53 57	

0XD3	Set Save Command Reply 68 05 00 D3 00 57	Data Field (0 BYTE) The number in the data field indicates the result of the sensor respond 00 Success FF Failure
0X1F	Read version software number instruction 68 04 00 1F 03	
	Read software version reply 68 14 00 9F 41 4B 47 33 39 32 54 5F 56 32 31 30 37 30 38 41 A0	Data field (BYTE) The number in the data field indicates the result of the sensor respond AKS392T_V210708A

▶ MODBUS PROTOCOL

MODBUS uses RTU mode, 'big-Endian' represents addresses and data items, adopts CRC16 check data, standard error code. Support 0x03 to read holding registers and 0x06 to write single registers.

Note: please read the following items carefully before use:

1) Because the MODBUS protocol stipulates that the time between two data frames should be at least 3.5 bytes (for example, at a baud rate of 9600, the time is 3.5×(1/9600)×11=0.004s). But in order to leave enough margin, this sensor increases the time to 10ms, so please leave at least 10ms time interval between each data frame. Please note that the automatic output of the product does not consider the T3.5 time.

The host sends a command-10ms idle-the slave responds to the command-10ms idle-the host sends a command...

2) The MODBUS protocol stipulates the relevant content of the broadcast address ---- 0. This sensor can also accept the content of the broadcast address, but it will not reply. So broadcast address 0 can be used for the following purposes, for reference only.

1. Set the addresses of all accelerometers of this model mounted on the bus to a certain address.
2. Set all the accelerometers of this model mounted on the bus to relative/absolute zero.
3. Test the sensor of this model on the entire bus, that is, the host sends a 0 address query acceleration command to the bus, and the communication indicator can flash if the communication is normal.

3) In order to improve the reliability of the system, setting the address command and setting the baud rate, these two commands must be sent twice in a row to be effective. "Send twice in a row" means that the two transmissions are successful (the slave responds every time), and the two questions and answers must be consecutive before and after. The setting process is as follows:

Send the setting address command-Waiting for the successful setting command sent by the slave-(No other commands can appear) Send the setting address command again-Waiting for the successful setting command sent by the slave-Successful modification

4) After power on, the command can only be set once, if you need to set again, you need to power on again.

5) When communicating normally, it flashes once per second.

1.Data frame format:

Default communication parameters: address 1, baud rate 9600, 1 start bit, 8 data, even parity, 1 stop bit;

Effective setting address: 1~247;

CRC check: The range is the check of all bytes before the CRC field, using 16-bit CRC check.

2.Data types:

Type	Description
short	Signed 16-bit shaping
ushort	Unsigned 16-bit shaping
int	Signed 32-bit shaping
uint	Unsigned 32-bit shaping
R	Read only

3. Register address table:

Register address	Data content	Data type	Accuracy	Unit
40001	Automatically output data items	ushort (W/R)	-	-
40002	Reserved	short (R)	-	-
40003	X acceleration	int (R)	0.000001	g
40005	Y acceleration	int (R)	0. 000001	g
40007	Z acceleration	int (R)	0. 000001	g
40009	Temperature	short (R)	0.01	℃
40010	X vibration frequency	short (R)	0. 1	hz
40011	Y vibration frequency	short (R)	0. 1	hz
40012	Z vibration frequency	short (R)	0. 1	hz
40013	X vibration speed	uint (R)	0. 000001	m/s
40015	Y vibration speed	uint (R)	0. 000001	m/s
40017	Z vibration speed	uint (R)	0. 000001	m/s
40019	X vibration amplitude	uint (R)	0. 000001	m
40021	Y vibration amplitude	uint (R)	0. 000001	m
40023	Z vibration amplitude	uint (R)	0. 000001	m

Data analysis method: data value = register data * coefficient.

4.Example：Read X axis data, Modbus function code 03H

Host query command		Slave response		
Sensor address	01H	Sensor address	01H	
Function code	03H	Function code	03H	
Register address	00H	Data length	0CH	
	02H	Data word 1-4 bytes	00H	X acceleration
Register length	00H		00H	
	06H		00H	
CRC	6408H		24H	
		Data word 5-8 bytes	FFH	Y vibration speed
			FFH	
			FFH	
			F0H	
		Data word 9-12 bytes	00H	Z vibration speed
			00H	
			03H	
			E8H	
		CRC_L	2CH	
		CRC_H	DEH	

Take the above data frame as an example: the conversion process of acceleration is as follows:

1) Get the current data, X-axis acceleration is 00000002H, Y-axis acceleration is FFFFFFFD H, Z-axis acceleration is 000003E8H. Then convert the above data to decimal.

2) Multiply by the accuracy to get the data X-axis acceleration is 2*0.001=0.002g, Y-axis acceleration is -15*0.001=-0.015g, Z-axis acceleration is 1000*0.001=1g.

5.Set Sensor address:

Set sensor address code command		Slave response	
Sensor address	01H	Sensor address	01H
Function code	06H	Function code	06H
Address	00H	Register address	00H
	11H		11H
Sensor new address	00H	Sensor new address	00H
	04H		04H
CRC	D80C	CRC	D80C

Commands must be sent twice consecutively to be effective.

Example of setting sensor address command								
Host send		01H	06H	00H	11H	00H	04H	D8H	0CH
Slave response								
01H	06H	00H	11H	00H	04H	D8H	0CH	

Note: 0011H is the register address, which controls the sensor address. In the above example, the address of the sensor has been changed to 0004H, and the last two bytes are the CRC checksum.

6.Set the baud rate of the sensor: (The factory default is 9600bps)

Set sensor baud rate command		Slave response	
Sensor address	01H	Sensor address	01H
Function code	06H	Function code	06H
Address	00H	Register address	00H
	12H		12H
Sensor baud rate	00H	Sensor baud rate	00H
	XX		XX
CRC	CRC LH	CRC	CRC LH

XX : A0H:4800 A1H:9600 A2H:19200 A3H:38400 A4H:115200 A4H:230400

Example of sensor baud rate setting:								
Host send	01H	06H	00H	12H	00H	A2H	A8H	76H
Slave response								
01H	06H	00H	12 H	00 H	A2H	A8H	76H	

Note: 0012H is the register address, which controls the baud rate of the sensor. In the above example, the baud rate of the sensor is set to 19200, and the last two bytes are the CRC checksum.

7.Set the parity bit of the sensor serial port: (factory default is even parity)

Set parity bit command		Slave response	
Sensor address	01H	Sensor address	01H
Function code	06H	Function code	06H
Register address	00H	Register address	00H
	09H		09H
Sensor change parity bit	00H	Sensor change parity bit	00H
	01H		01H
CRC	9808	CRC	9808

Application example of setting parity bit command:								
Host send	01 H	06 H	00 H	09 H	00 H	01H	98H	08H
Slave response								
01 H	06 H	00 H	09 H	00 H	01H	98 H	08H	

The above example is to set the byte format to: a start bit + 8 data bits no parity + 1 stop bit

Valid after re-powering on. The factory default is one start bit + 8 data bits even parity + 1 stop bit

Note: 0009 is the register address, this register controls the character format of sensor communication.

0000H: a start bit + 8 data bits even parity + 1 stop bit

0001H: A start bit + 8 data bits without parity + 1 stop bit

8．Set sensor output mode: (factory default 0HZ)

Set sensor output mode command:		Slave response:	
Sensor address	01H	Sensor address	01H
function code	06H	function code	06H
address	00H	register address	00H
	13H		13H
The output rate of the sensor	00H	The output rate of the sensor	00H
	XX		XX
CRC	CRC LH	CRC	CRC LH

The following table shows the valid values of data field XX ：

frequency (HZ)	0	5	10	25	50	100	200	500	1000	300	400
XX	00H	01H	02H	03H	04H	05H	06H	07H	08H	09H	0AH

Application example of set Set sensor output mode command:								
Host send	01H	06H	00H	13H	00H	A2H	A8H	76H
Slave response								
01H	06H	00H	13H	00H	02H	A8H	76H	

Note: 0013H is the register address, this register controls the sensor output mode. In the above example, the output rate of the sensor is set to 10HZ, the last two bytes are the CRC checksum, and the automatic output is three-axis acceleration data.

9.Set the automatic output data item of the sensor::

Set the sensor automatic output data item command：		Slave response：	
Sensor address	01H	Sensor address	01H
Function Code	06H	Function Code	06H
Address	00H	Register Address	00H
	00H		00H
Automatic output of the sensor	11H	Automatic output of the sensor	11H
	19H		19H
CRC	CRC LH	CRC	CRC LH

Commands must be sent twice consecutively to be effective.

Application example of Set the sensor automatic output data item command：							
Host send	01H	06H	00H	00H	11H	19H	44H	50H
Slave response								
01H	06H	00H	00H	11H	19H	44H	50H	

Note: 0000H is the register address, which controls the automatic output data item of the sensor. In the above example, set the output of the sensor to 1119H, and the last two bytes are the CRC checksum.

9.Read sensor automatic output data item:

Read sensor automatic output data item command：		Slave response：	
Sensor address	01H	Sensor address	01H
Function Code	03H	Function Code	03H
Register address	00H	length	02H
	00H	Register data	11H
Register length	00H		19H
	01H		
CRC	CRC LH	CRC	CRC LH

Commands must be sent twice consecutively to be effective.

Application Example of Read sensor automatic output data item Command：								
Host send	01H	03H	00H	00H	00H	01H	84H	0AH
Slave response								
01H	03H	02H	11H	19H	75H	DE		

Note: 0000H is the register address, which controls the automatic output data item of the sensor. In the above example, the output of the read sensor is 1119H, and the last two bytes are the CRC checksum.

RION TECH

Add : Block 1 & Block 6, COFCO(FUAN)

Robotics Industrial Park , Da Yang Road No. 90,

Fuyong Distict, Shenzhen City, China

Tel : (86) 755-29657137 (86) 755-29761269

Fax : (86) 755-29123494

E-mail : sales@rion-tech.net

Web : www.rionsystem.com