2-axis Inclinometer PEI-Z260-AL-xxx-1

low cost, small size and light weight

two-axis +/-60°

Serial Bus interfaces: RS232, RS485,TTL

Zero setting

Waterproof and Dustproof

Shock resistant 10'000g

Inclination side indication "+" or "-"

Frequency response adjustment.

Electrical Specification

Parameter	Value	Unit	Remark
Measuring Range	±60	degree	
Resolution	0.1	degree	
Repeatability	0.3	degree	@25℃
Accuracy（±45°）	<0.5	degree	RMS @25℃
Output Frequency[1)]	14	Hz	programmable
Operating Voltage[2)]	9 .. 12	V（dc）	± 5%
Operating Current	＜ 40	mA	

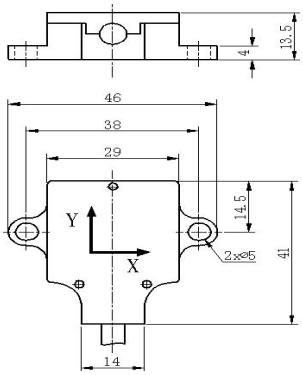
Note 1: Output frequency can be adjusted by "FILT**" command, default is 14Hz (about 1 Hz error)

Note 2: supply voltage: 5V standard, optional 7-15V.

Environmental Specification

Parameter	Value	Unit	Remark
IP Grade	IP68 / IP65		
Operating Temp.	－40～＋85	℃	
Zero Temp. Drift	0.03	degree/℃	-40～＋85℃
Size	46*41*13	mm	
Weight	115	g	

Mechanical Dimensions & Connection

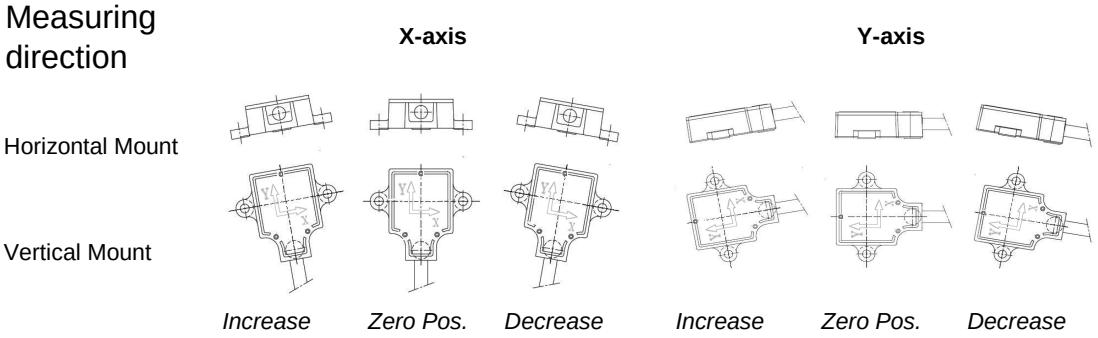


Wire color	**RS485**	**RS232**	**TTL**
Blue	485B	RX	RX
Green / Yellow	485A	TX	TX
Red	VCC	VCC	VCC
Black	GND	GND	GND

Order informations

RS485 Interface:	PEI-Z260-AL-485-2
RS232 Interface	PEI-Z260-AL-232-2
TTL Interface (ASCII)	PEI-Z260-AL-TTL-2
IP68 option:	PEI-Z260-AL-xxx-1-WP

Measuring direction



Note: Incorrect installation respective to sensor plane & axis will result in large angle errors.

User Instructions

ASCII Format

One set of data has 16bytes.
Byte1：X
Byte2：＋/-
Byte3：X-axis tens digit of angle value
Byte4：X-axis units digit of angle value
Byte5：point“.”
Byte6：one digit after the decimal point of X-axis angle value.
Byte7：20
Byte8：20
Byte9：Y
Byte10：＋/-
Byte11：Y-axis tens digit of angle value
Byte12：Y-axis units digit of angle
Byte13：point “.”
Byte14：one digit after the decimal point of Y-axis angle value.
Byte15：0d
Byte16：0a

Format ：

ITEAM	SIGNED	DATA	STOP
X/Y	+/-	**.*	Enter/New line

For example：
If current x-axis angle value is +23.6 degrees and Y-axis is -0.1 degrees, it will display following:
X＋23.6
Y－01.0

Note ：88.8 is displayed in case of overrange
Single byte transmission format: 1 start bit, 8 data bits, 1 stop bit.

Hex Format

bit15：1：X-axis 0：Y-axis
bit14：1：negative 0：positive
bit13－bit0：angle value×10
Eg. the current angle of X-axis is +23.6degrees: 0x80EC
0x 8000 ＋（23.6×10=0236, its hex format is 0x00EC)
In hex a set of data consists of 5bytes, in which two bytes for X-axis, two bytes for Y-axis and OA for marks byte.

Serial communication command

Command sort	Command word	function	Response symbol	remark
Operating state	$	Perform"stop sending, receiving command"		Stop sending and collecting data, waiting for receiving command.
	@P	Output angle value		Angle output mode, default state after power on is absolute angle output.
Operating parameter	FILT**	Set output frequency	setfilt**	output frequency setting; available values for “**” :“01, 03, 05, 07, 10, 14, ” For example：FILT05 = 5Hz output.
	&Z	Set zero	set zero	Setting current position as relative zero degree. Output values will be relative to this zero point. Will be resetted after power on.
	&R	Perform conversion of relative and absolute angle.	R	Relative and absolute angle output. Outputs “R” after the command is accepted, will be resetted after power on.
display format	*AS	Perform ASCII communication	ascii	ASCII communication, default display format.
	*HE	Perform Hex communication	hex	Will be resetted after Power on
Output mode	*n（lower case）	Perform continuous output mode		Default mode is Continuous output. A change of the output mode will be stored in the EEPROM.
	*P（capitalization）	perform single step output mode		
	@??	perform data group for single step output mode	set??	Set data sets of single output, “??” values range from 01 to 99; default is 01.
Baud rate	*4800B	Baud rate 4800	baud4800	Default Baudrate is 9600. Changing the Baudrate in continuous mode will take effect immediately, and changing it in single step mode needs a power-on to take effect.

The software version will be sent out first After power-on

Continuous output is the default output mode

Please distinguish upper/lower case when entering command word.

Specifications are subject to change without notice

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