



OUTLINE DRAWING

DIGITAL OUTPUT

Asynchronous RS232 port, 8 bit data, 1 stop bit, no parity control.
Transmission rate (default) - 38 kBod (repetition rate ~ 0.3 kHz).
Instantaneous bandwidth 100 Hz

Sensor output voltage = $2.5 \text{ RATE} / 2^{23} \text{ V}$,

RATE is a binary complementary 24-bit word (see Table 1).

Additional data (Xdata) - temperature (taken from AD TMP36 sensor), supply voltage, consumption current.

These data (16 bits each) are transmitted in series of 16 sendings according to the status of COUNTER (see Table 2).

Table 1. Digital data format and data block content

SOD (1 byte)	Start of Data DD hex	
Data Block (5 bytes)	1 st byte	RATE lowest byte (L)
	2 nd byte	RATE highest byte (H)
	3 rd byte	RATE middle byte (M)
	4 th byte	COUNTER status
	5 th byte	some of Xdata
LCC (2 bytes)	Lower 2 bytes of sum of Data Block	
Total - 8 bytes		

Table 2. X data content

Counter	Byte	Xdata
00	H	Temperature (C)
01	L	$HL250 / 2^{15} - 50$
02	H	Supply voltage (V)
03	L	$HL2.5 / 2^{15} / 0.25$
04	H	Consumption current (A)
05	L	$HL2.5 / 2^{15} / 10$
06...0F		Reserved

- Ω - sensing axis, 90° ± 0.5° to the reference plane
- Dissipation - 1.5 W
- Weight - 80 gram (100 gram max)
- Volume - 0.1 litre
- Housing material - plastic
- Tolerances - ± 0.5 IT14

MAIN PARAMETERS

◆ Rate range	160 deg/s
◆ Scale Factor (SF)	10 mV/deg/s
◆ Frequency range	0...0.1 kHz
◆ Angle random walk	0.03 deg / h
◆ Bias stability	10 deg / h (RMS)
◆ SF variation (steady state)	0.1 % (RMS)
◆ Readiness time	1 s

ENVIRONMENT

Temperature operating	-30°C ... +70°C
Temperature endurance	-55°C... +85°C
Vibration (operating)	2 g (RMS), 20Hz... 500Hz
Vibration (endurance)	6 g (RMS), 20Hz... 2000Hz
Shocks (endurance)	90 g, 1 ms
Acceleration (operating)	5 g
Acceleration (endurance)	20 g, 5 s

RELIABILITY

MTBF	20000 hours (20°C, predicted)
Lifetime (predicted)	15 years

- ◆ Rate range (measurement) - grade 4.0 (linearity error - 4%)
- ◆ Rate range (indication) - 200 deg/s (min) (linearity error - 15%)

Output connector PLD-10

Contact	Name	Description
1	+ 5 V	Power input +5V ± 0.25V, 300mA max, ripple 10mV max within 0-1MHz
2 - 5	—	Reserved
6, 8	GND	Power return line, ground
7	KEY	Shortened pin
9	RS232 TXD	Digital output RS232
10	D_GND	Digital ground, connected to "GND"

MOUNTING AND CONNECTING

- Do not deform housing and output pins
- Fragile components inside - no shocks, no drop
- Treat as electrostatic sensitive unit
- Power must be off during connecting
- Soldering to contacts by low-temperature solder