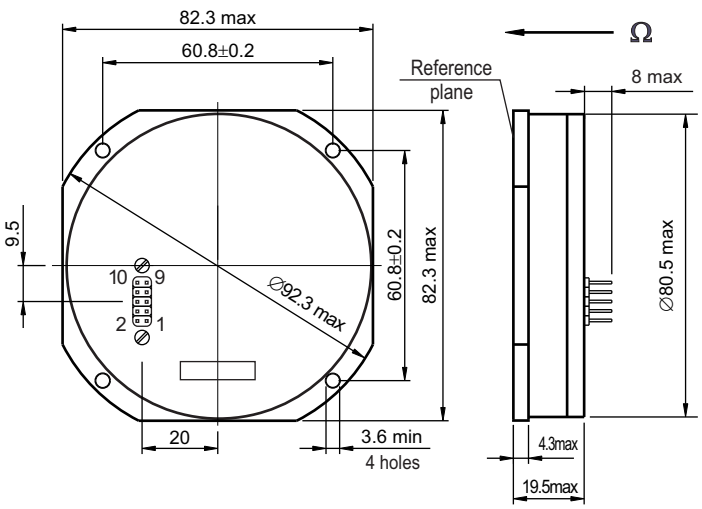
OUTLINE DRAWING



MAIN PARAMETERS (typical values)

♦ Rate range	150 deg/s
Scale Factor (SF)	9 mV/deg/s
Angle random walk	0.015 deg /√h
Bias stability, RMS	3 deg / h
SF stability, RMS	0.1 %
Readiness time	1 s

ENVIRONMENT

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

RELIABILITY

MTBF	90000 hours (20°C, predicted)
♦♦ Lifetime (predicted)	15 years

♦ Precision class - ④
♦♦ Estimated for low humidity

DESCRIPTION OF OUTPUT CONNECTOR **PLD-10**

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

DIGITAL OUTPUT

1. Asynchronous RS232 port, 8 bit data, 1 stop bit, no parity control.

2. Transmission rate (default) - 115 kBod (repetition rate ~ 1.2 kHz).
   Option: - 38 kBod (repetition rate ~ 0.3 kHz).

3. Sensor output voltage = 2.5 RATE / 2^{23} V, RATE is a binary complementary 24-bit word (see Table 1).

4. 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).

RECOMMENDATIONS AND PRECAUTIONS

1. Do not deform housing
2. Fragile components inside - no shocks, no drop
3. Treat as electrostatic sensitive unit
4. Is designed to be mounted inside water protected equipment
5. Increased humidity shortens essentially lifetime
6. Mounting surface must be grounded
7. Power must be off during connecting
8. Soldering to contacts - by low-temperature solder

PHYSICAL PARAMETERS

1. Ω - sensing axis, 90°± 0.5° to the reference plane
2. Dissipation - 1 W
3. Weight - 110 gram (150 gram max)
4. Volume - 0.1 litre
5. Housing material - aluminum alloy
6. Housing protection - powder coating
7. Tolerances per ISO 2768-m
8. Ingress protection class - IP67

Table 1. Digital data format and data block content

SOD (1 byte)	Start of Data DD hex
Data Block (5 bytes)	1st byte RATE lowest byte (L) 2nd byte RATE highest byte (H) 3rd byte RATE middle byte (M) 4th byte COUNTER status 5th 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