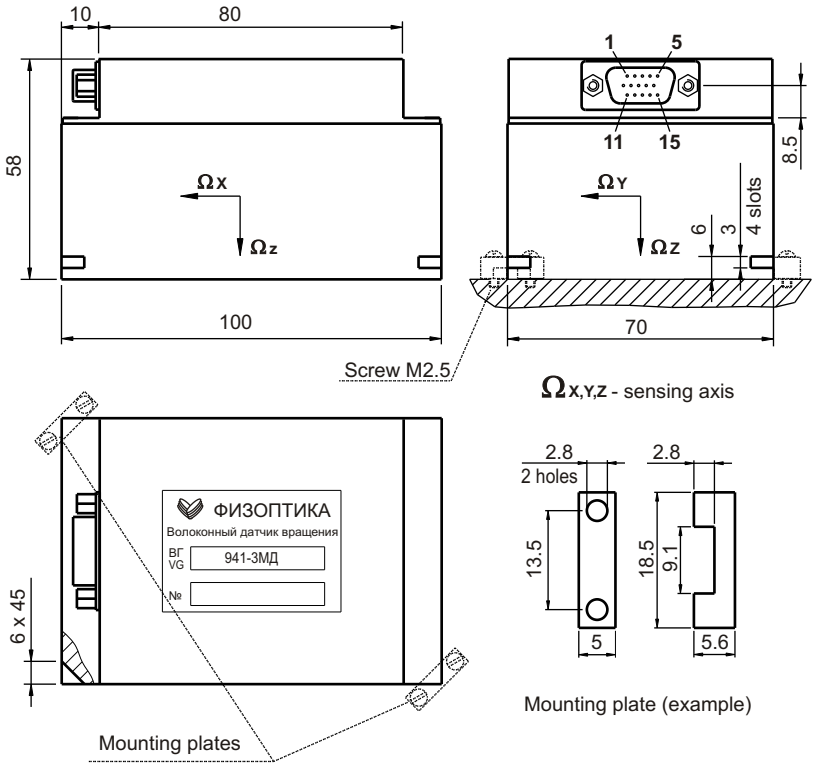
Output connector DHS-15M

Contact	Name	Description
3	+ 5 V	Power input +5V ± 0.25V, 900 mA max
4	GND	Power return line, ground, electrically connected to the sensor's cover
11	RS232 TXD	Digital output RS232
12	D_GND	Digital ground, connected to "GND"



OUTLINE / INSTALLATION DRAWING

1. $\Omega_{X,Y,Z}$ - sensing axes, 90°± 1.5 °
2. Dissipation - 4.5 W
3. Weight - 550 gram (approx.)
4. Volume - 0.4 litre
5. Housing material - aluminum alloy
6. Tolerances - H12; h12, T12

DIGITAL OUTPUT

Asynchronous RS232 port, 8 bit data, 1 stop bit, no parity control.
Transmission rate - 115 kBod (repetition rate ~ 0.6 kHz).
Sensor output voltage = 2.5 RATE / 2^{23} V,
RATE is a binary complementary 24-bit word (see Table 1).

Additional data (Xdata) - temperature (output of AD TMP36), supply voltage. These data (16 bits each) are transmitted in series of 32 sendings according to the status of COUNTER (see Table 2).

MAIN PARAMETERS

Input range	± 500 deg/s (± 15%)
Scale Factor (SF)	3.7 mV/deg/s (± 15%)
Noise (PSD)	0.01 mV/√Hz
Bias variation (steady state)	0.015 mV (RMS)
SF variation (steady state)	0.05 % (RMS)
SF change (over temp. range)	- 0.05 % / °C
Readiness time	1 s (after power on)

ENVIRONMENT

Temperature operating		-30°C ... +70°C
	non-operating	-55°C... +85°C
Vibration	non-operating	2 g (RMS), 20Hz... 500Hz
Shocks	non-operating	40 g, 1 ms

Table 1. Digital data format and data block content

SOD (1 byte)	DD hex (start of Data)
Data Block (12 bytes)	**00 hex** **RATELX lowest byte (L)** **RATEMX middle byte (M)** **RATEHX highest byte (H)** **RATELY lowest byte (L)** **RATEMY middle byte (M)** **RATEHY highest byte (H)** **RATELZ lowest byte (L)** **RATEMZ middle byte (M)** **RATEHZ highest byte (H)** **COUNTER status** **Xdata**
LCC (2 bytes)	**2 bytes of sum of Data Block**
Total - 15 bytes	

Table 2. X data content

Counter	Byte	Xdata
00	H	Temperature (C)
01	L	HL 250 / 2^{15} - 50
02	H	Supply voltage (V)
03	L	HL 2.5 / 2^{15} / K
04 - 1F		Reserved
K = 0.25 (+/- 10%, non-calibrated)		

MOUNTING AND CONNECTING

1. Do not deform housing and output connector
2. Fragile components inside - no shocks, no drop
3. Treat as electrostatic sensitive unit
4. Mounting surface must be grounded
5. Power must be off during connecting
6. After installation calibrate bias and scale factor