



SAIMS 02H - DATA ACQUISITION AND RECORDING SYSTEM WITH STATIC MEMORIES

SAIMS 02H is designated for the acquisition and memory recording of the main flight parameters, quick download and ground processing of these parameters, so as to permit the analysis of the aircraft evolution, in normal flights and in case of accident. It is designed to be used mainly on the IAR 330 Puma and IAR 330 Puma SOCAT helicopters of the Romanian Air Force.

MULTIPLE PURCHASE MODULES (MAM-1M / MAM-2M)

are a pair of hardware equipment intended for the acquisition of flight parameters from the helicopter on which they are mounted.

MAM-1M overall dimensions, LxWxH: max. 207x125.5x73 mm, mass: max. 1.1 Kg.

MAM-2M overall dimensions, LxWxH: max. 190x125.5x73 mm, mass: max. 1.3 Kg.

Electrical characteristics: Helicopter power supply bar P1 and P2: 24 ÷ 30 VDC / max. 50 mA

MAM-1M acquire 11 signals out of which: 3 analog AC signals frequency; 3 DC analog signals; 2 signals pressure; 3 digital signals.

MAM-2M acquire 10 signals out of which: 4 analog AC sine signals; 2 frequency AC analog signals; 1 analog DC signal; 3 digital signals.

Construction features: continuity of electrical circuits $\leq 2.5 \text{ m}\Omega$; metallization resistance $\leq 2.5 \text{ m}\Omega$; insulation resistance $\geq 50 \text{ M}\Omega$ at 50 VDC

Operational features- climatic: class B3, - 45 ° C ÷ + 70 ° C according to MIL 810F; mechanical: category 4 F, max. 2000 Hz/10 g con.

DATA AND VOICE PROTECTED RECORDER (IPDV-2)

is a hardware device designed to record flight parameters of the helicopter on which it is mounted.

Physical characteristics

Power supply from IS-2; storage capacity: min. 40 Gb; recording time: min. 20 hours ; data transfer time from last flight information, lasting 10 hours: max. 5 minutes and for maximum information, lasting 20 hours: max. 10 minutes; Data retention time in IPDV 2 unused or in case of accident min.10 years;

Operational features

Climatic: class B3, 45 ° C ÷ + 70 ° C according to MIL 810F; Mechanical: category 4 F, max. 2000 Hz / 10 g according to MIL810 F

Crash: according to TSO C124a / ED 55:

High temperature fire: 1100 ° C for 60 minutes;

Low temperature fire: 260 ° C for 10 hours;

Penetration resistance: 227 Kg, drop from 3m;

Static crash: 22.5 KN for 5 minutes;

Impact: 3400G;

Pressure: immersed in sea water equivalent to 600 m depth;

Fluid immersion: min. 48 hours in aviation fluid.

Registration integrity - rate of recording and playback errors in environmental conditions: temperature, vibration, acceleration does not exceed 1 to 10,000,000 bits per signal.

MTBF: 5000 h

DIGITAL VIBRATION TRANSLATORS (TDV-11M and TDV-22M)

are a pair of hardware-software equipment intended for the acquisition of vibrations in the area of the main rotor of the helicopter on which it is mounted.

Overall dimensions, LxWxH: max. 141 x 67 x 44 mm; Mass: max. 0.35 Kg.

Electrical characteristics: Power supply from the P1 and P2 bar helicopter: 24 ÷ 30 VDC / max. 10 mA; Inquisitive signals: vibrations on three axes / digital signals.

Construction features: continuity of electrical circuits $\leq 2.5 \text{ m}\Omega$; metallization resistance $\leq 2.5 \text{ m}\Omega$; insulation resistance $\geq 50 \text{ M}\Omega$ at 50 VDC.

Operational features – Climatic: class B3, 45 ° C ÷ + 70 ° C according to MIL 810F; mechanical: category 4 F, max. 2000 Hz / 10 g according to MIL; MTBF: 5000 hours.

SECONDARY RECORDER (IS-2) is a software hardware equipment designed to manage the functions of SAIMS 02H.

Overall dimensions: LxWxH max. 255 x 125 x 178 mm; Mass: max. 3.6 Kg.

Electrical characteristics: Power supply from the P1 and P2 helicopter bars: 24 ÷ 30 VDC / max. 750 mA; Acquired signals: 28 out of which 25 logic signals, 1 analog voice signal, 1 analog video signal; 1 digital bus 1553 B communication signal.

Operational features- climatic: class B3, 45 ° C ÷ + 70 ° C according to MIL 810F; mechanical: category 4 F, max. 2000 Hz / 10 g according to MIL; MTBF: 5000 hours.

ESPD-HM DATA PROCESSING EQUIPMENT is a ground software hardware equipment intended for flight data processing.

ESPD-HM provides: data transfer from EPD M / IP M; data management and display in the required format; database formation; programming, maintenance level calibration I; maintenance, IBIT execution on the on-board equipment at Maintenance level I.

ESPD-HM is used in: mission analysis; at maintenance level I in order to establish the technical condition of the aircraft; when analyzing the causes of accident or accident premises.

EPD-HM DATA COLLECTION EQUIPMENT is a ground hardware equipment that is intended to support the ground operation of SAIMS onboard equipment. It provides: transfer of recorded data, data management and display in the required format; cancellation of SAIMS status signals and exceeding parameter limits supervised; execution of IBIT test of Operational Level O for onboard equipment; replacing the firmware of the onboard equipment without removing them from the plane; execution of calibration.

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