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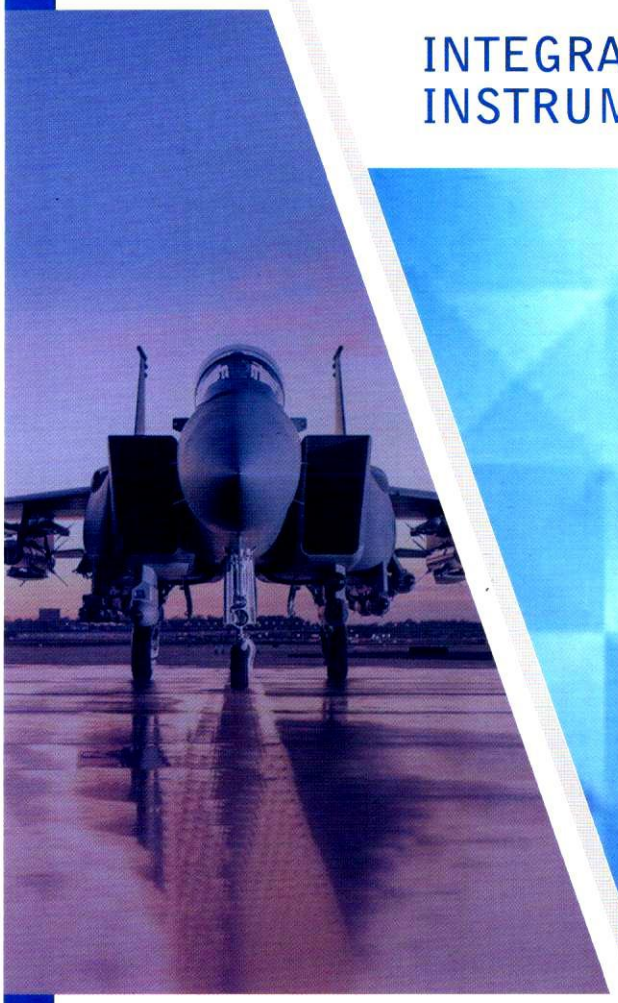
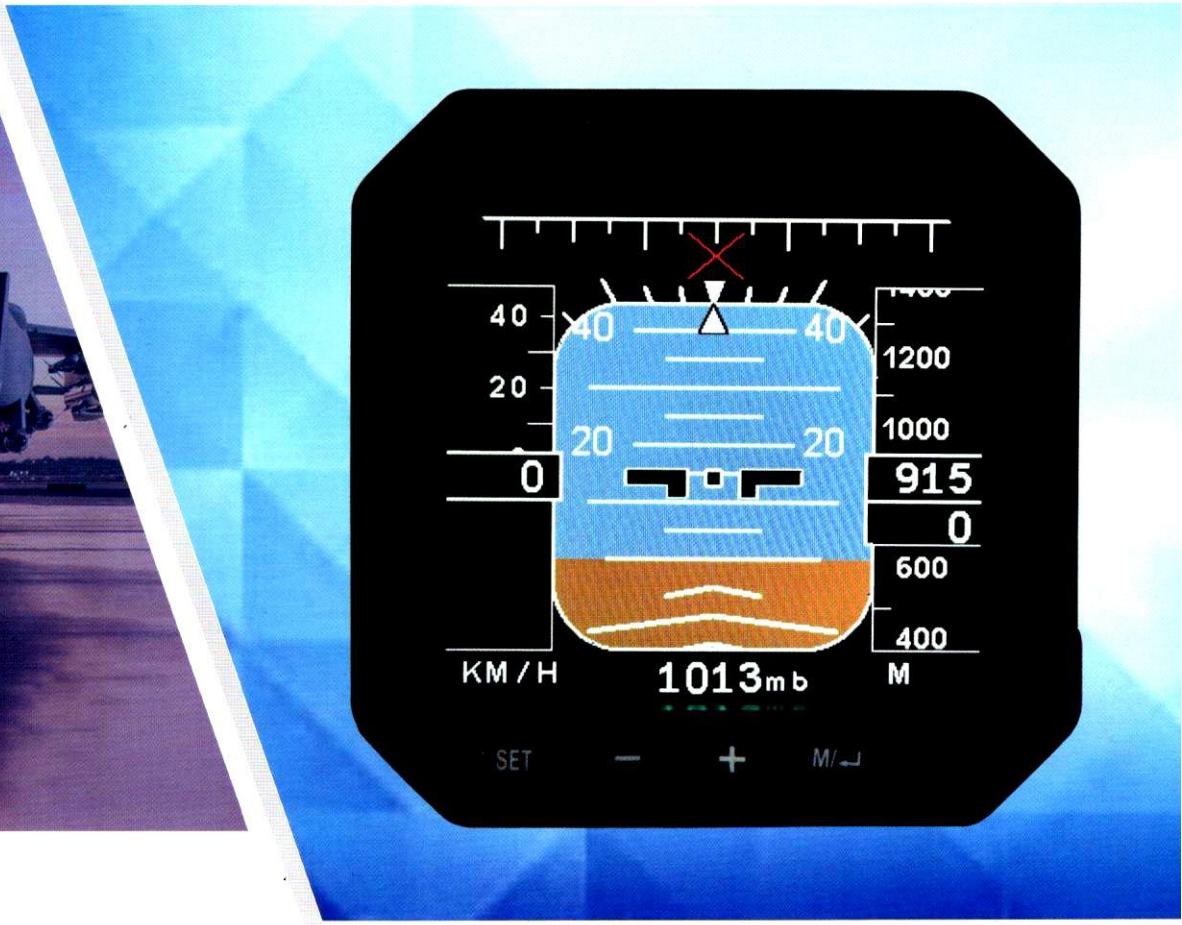
Innovative Labs

INTEGRATED STANDBY INSTRUMENT SYSTEM





Integrated Standby Instrument System (ISIS) is included in cockpits to serve as backup in case of failures in an all glass cockpit instrument system, and thus is designed to operate as reliably and independently as possible from the aircraft's main instrument system, with embedded sensors. ISIS is a rugged AMLCD based display unit housed in a 3ATI case, mounted in front of the pilot on the main instruments panel of the Helicopter/ Aircraft cockpit. The unit has built-in MEMS and pressure sensors to compute and display Attitude, Altitude and Airspeed in a Graphical format to the pilot.

SCOPE OF SUPPLY:

- Bright, Full Colour, Sunlight readable AMLCD
- Static Source Error Correction and Baro-Corrected Altitude Display.
- More reliable than traditional Standby systems
- Built-In Test page
- Baro Set Function
- Heading
- Vertical Speed
- Requires no active cooling
- Compatible with standard 3ATI instrument, Pneumatic Connections and Panel Cut-outs.
- ARINC 429 and RS232 Interface
- Automatic Fast Align on Power up
- Automatic Brightness control

POWER INPUT VOLTAGE:

- Nominal input 28VDC compliant with MIL-STD-704

POWER CONSUMPTION:

- 22.4W at 28VDC room temperature
- 42 W at 28 VDC with both Backlight heater and AMLCD heater 'ON' at – 40oC

OPERATING TEMPERATURE RANGE

- -40°C to +71°C

EXTERNAL CONNECTIVITY

- Unit Connector: D38999/20WE35PN

MECHANICAL FINISH

- Material: Aircraft grade Aluminum alloy 6061 T6.
- All internal surfaces of the part are subjected to ALCHROME
- Treatment as per MIL 5541E.
- External Surface is Black Matte Anodized

INTEGRATED STANDBY INSTRUMENT SYSTEM

DRIVE ELECTRONICS:

- Based on an high performance 32 bit Power PC processor.
- Software is tested and certified as per DO-178B level B

ORDERING INFORMATION:

- DSS09-01-ISIS WITH ARINC 429
- DSS09-01-ISIS WITH 1553B

SPECIFICATIONS	
Weight	1.7 Kg
Dimension	3" x 3" x 9.4" (3ATI)
Useable Screen area	2.4" x 2.4"
Display Luminance	200 Foot Lamberts
Sensors	3 Axis MEMS Rate gyros 3 Axis MEMS Accelerometer Absolute Air Pressure sensor Differential Air Pressure sensor
External Interfaces	Pneumatic Connection for Pitot and StaticARINC 429 RS232 3 Discrete Inputs for defining the mode of Operation and MKS/FPS system units.
X Rate Y Rate Z Rate	+/- 300°/Sec +/- 300°/Sec +/- 300°/Sec
X –g Y –g Z –g	+/- 5g +/- 5g +/- 5g
Air Data Accuracy	As per TSO standard
Attitude accuracy	+/- 2° Static +/- 4° Dynamic
Bezel Keys	Display Brightness control Menu Page Selection Baro-Set Function Initiated Self Test Fast align Function

DESIGNED AS PER	
MIL-STD-461/462	EMI/EMC tests requirements
MIL-STD-704D	Power Supply requirements
MIL-STD-810F	Environmental conditions & test procedures
RTCA-DO-178B	Software considerations in airborne systems
MIL-C-14806A	Anti-reflective Coating
MIL-C-26482	Electrical Connector
MIL-C-38999	Electrical Connector
FED-STD-595	Case Finish (Color)
MIL-A-8625F, Type III, C/2	Case Finish (Process)
TSO C2d	Airspeed Instruments
TSO C8d	Vertical Velocity Instruments (Rate-of-Climb)
TSO C4c	Bank& pitch Instruments
TSO C10b	Altimeters, Pressure actuated, Sensitive type
TSO C113	Air Borne Multipurpose Electronic Display
TSO C153	Integrated Modular Avionics Hardware Elements
ARINC 429	Mark 33 Digital Information Transfer System
ARINC 408	Air Transport Indicator Case & Mounting

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