



D.MARCHIORI

MPS 36 Air Data Test Set



Digital Air Data Test Set

The DMA MPS36 is a laboratory digital technology Air Data Test Set with extreme accuracy for testing aircraft pitot-static components.

The MPS36 is designed to meet and exceed manufacturers test requirements for military and commercial fixed / rotary wing aircraft, with altitude control accuracy better than ± 2 feet at sea level (or ± 0.002 inHg).

PC control in laboratory operations can be accomplished by a serial RS232 or parallel GPIB communication protocol interface. The MPS36 can be used as a replacement of earlier technology precision laboratory air data test set applications.

The MPS36 uses precision vibrating cylinder transducers with a special characterization for maximum accuracy of all altitude and airspeed parameters. Use of fast and precise flow valves, digitally commanded, allows great control stability.

The MPS36 requires low maintenance costs and extended calibration periods compared to previous equipment. Up to 40 test user programmed routines can be entered and stored in on board memory, and can be executed through a single key.

The MPS36 can be used in ATE systems: it accepts commands through RS232 or GPIB bus; simple high level words are used to input all the control parameters, thus reducing time to develop new SW programs.

FEATURES

- Accuracy ± 2 feet at sea level or ± 0.002 inHg.
- Low maintenance design eliminates high calibration and maintenance costs.
- Full featured "at-a-glance" 20x4 char. flat panel display.
- Complete Automatic Safety Protection for fail-safe operation.
- Standard IEEE-488 and RS232 interface ports for ATE/PC operations.
- Multiple pressure engineering unit capability.
- 3HE 84TE rack (19" x 15" x 5.2")
- Very high resolution (0.2 Pa for static pressure).
- Up to 40 test user programmed routines, single key executable, can be stored into inside memory

Automatic Safety Protection Features

Intrinsically safe with internal HW and SW protection. Manual vents allow to reach safely ambient conditions in case of power failure. Factory safe limits or custom programmed limits prevent UUT damage.

Display

The 20x4 characters LCD display shows all the information needed by the user through a simple, intuitive and complete visual interface. Altitude, airspeed, rates, pressures and mach no. are simultaneously displayed in logic and simple arrangements.

STANDARD SPECIFICATIONS

Parameter	Range		Resolution		Accuracy	
	Measure	Control	Meas.	Contr.	Measure	Control
Altitude(ft)	-3,000 100,000	-3,000 80,000 (100,000 2 pumps)	1	1	±2 @ SL ±4 @ 30,000 ±7 @ 50,000	±1
Static pressure inHg Pascal	0.3 to 34 1000 to 115000	0.3 to 34 1000 to 115000	0.0001 0.2	0.001 2	±0.002 inHg @ 30 ±0.001 inHg @ 3.5	
Altitude slew rate (ft/min)	0 to 60,000	0 to 60,000	25 > 1000 5 < 1000	25	25±1% of reading	same as measure
Airspeed (kt)	10 to 850	10 to 850	1 < 50 0.1 > 50	0.1	±0.5 @ 50 ±0.1 @ >500	±1
Ultra Low Speed funct.	ULS: 2 to 200		0.1 > 20		ULS:±0.001 inHg	
Mach No.	0 to 6	0 to 6	0.001	0.001	< 0.002	±0.002
Airspeed slew rate (kt/min)	0 to 900	0 to 900	10	10	10±1% of reading	±5%

Note

Accuracy compliant with FAA advisory circular 43-2B, and Reduced Vertical Separation Minimums

PHYSICAL/DIMENSIONS

Rack mount configuration: 19" x 15" x 5.2"
Weight, with case: 50 lbs.

WARRANTY AND CALIBRATION

Unit is internally self-calibrating for valve adjustment
Calibration is fully software accomplished by comparison against a primary or transfer standard instrument.
Warranty: two years
Calibration interval: one year recommended

MPS36 OPTIONS

Vacuum and pressure pumps
Encoding altimeter reading capability
Hand Held Remote Control Unit
ADTSWINL PC control software
Special low drift multi sensor technique

SOFTWARE LIBRARY

Serial Command Set
GPIB Command Set
Circa 1975 IEEE-488 Command set
Customer interface software for modular ATE applications.

Note: --- Specifications subject to change without notice ---



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