



MPS35C

Air Data Test Set



PRECISION, 3 CHANNEL DIGITAL AIR DATA TEST SET

MPS35C is a digital technology portable Air Data Test Set incorporating many standard features normally found on more expensive air data test sets. It is built rugged and rainproof for demanding commercial and military flight line use.

The MPS35C is easy and fast to use by both experts and first time users. Testing and troubleshooting with the MPS35C can be performed via an intuitively arranged color-coded keypad using the large (4x20) front panel character LCD backlit display or a multifunction hand controller.

All air data functions are simultaneously displayed; constant screen or menu changes are not required. Readings of both commanded and measured test values are displayed.

Two vibrating element absolute transducers and one differential transducer for AOA, all with pressure and temperature characterisation, assure high accuracy at all pressures, without warm-up time.

Three pressures are controllable separately and independently: static; pitot and angle of attack pressure, to test the aircraft equipped with Smart Pitot Probes. The angle of attack pressure can either be displayed in pressure units or directly in degrees of AOA, with 0.0001 inHg or 0.1 deg. resolution.

4+4 (or 2+2+4 when in AOA mode) multiple line switching allows fast and safe isolation in the case of leaking channels.

FEATURES

- Accuracy ± 3 feet at sea level, exceeds RVSM calibration requirements.
- Compact and self contained. The test set is housed in a single 77 lb. case.
- Three pressures controllable separately and independently: static, pitot and AOA.
- Easy to read LCD backlit display and waterproof keypad controls.
- Lightweight remote hand held control or PDA wireless Bluetooth (as option).
- Removable Compact Flash Memory Card to store and manage test results and to update internal software.
- Low power consumption.
- Low maintenance design; industry exclusive 5000 hour pump guarantee.
- Internal rechargeable battery
- **Multiple line switching: 4+4 static and pitot lines or 2+2+4 static, AOA and pitot lines**

The MPS35C is a rugged and low maintenance design. Internal pumps run only on demand, extending pump life. Calibration, performed by software, is fast and simple since no mechanical adjustments are required. Calibration factors are password protected.

Low power absorption grants low temperature and high endurance: typical 90 VA are absorbed from a.c. line (including power supply efficiency). The MPS35C is equipped with internal rechargeable battery which assure four hours of full operation.

The MPS35C uses precision vibrating cylinder pressure sensors for maximum accuracy to exceed RVSM calibration requirements.

MULTIPLE CIRCUIT ISOLATION

The MPS35C is configured to control up to 8 isolated lines, 2 for static, 2 for AOA, 4 for pitot, controlled from the remote hand controller. When AOA is not used the MPS35C can control the switching of 4 static lines + 4 pitot lines in any combination.

SAFETY

The MPS35C is designed for maximum safety during testing. Key DMA design features protect the test set and instruments under test. A pressure condition of P_s greater than P_t is prevented in both manual and automatic operation. With loss of power the test circuit is safely isolated and can be manually vented preventing instrument and test set damage. Factory or user programmed safe limits, with password protection, prevent damage of UUT.



STANDARD SPECIFICATIONS

Operating temperature range: from -5°C to +50°C

Control capability on all load volumes (cu. in.): Static: 0 to 125, Pitot: 0 to 80 cubic inches.

Parameter	Range		Resolution		Accuracy	
	Measure	Control	Measure	Control	Measure	Control
Altitude (ft)	from -3,000 to +80,000	from -3,000 to +60,000	1	1	±3 @ SL ±5 @ 30,000 ±20 @ 60,000	±2
Altitude slew rate (ft/min)	N 0 to 6,000 HR 0 to 30,000	0 to 6,000 0 to 30,000	25 > 1,000 5 < 1,000	25	25±1% of reading	same as measure
Airspeed (kts)	C: 10 to 850	C: 10 to 850	1 < 50 0.1 > 50	0.1	±0.5 @ 50 ±0.1 @ >500	±1
Ultra Low Speed funct.	ULS: 5 to 200		ULS:0.1 > 20		ULS: ±0.001 inHg	
Angle of Attack pressure (inHg)	-2.5 to 2.5	-2.5 to +2.5	0.001	same	±0.003	same
Mach No.	0 to 4	0 to 4	0.001	0.001	< 0.002	±0.002
Airspeed slew rate (kt/min)	0 to 700	0 to 700	10	10	10±1% of reading	±5%

N: normal HR: high rate

STANDARD TEST FUNCTIONS:

- pressure/vacuum generation
- automatic leak check
- controlled venting to ambient
- altitude/airspeed input
- static/dynamic/total pressure input
- altitude/airspeed rates input
- pressure/angle of attack input
- Mach Number input
- EPR generation
- TAS / IAS toggle
- Offset correction
- 30 test user programmed profiles
- ultra low speed (5 to 200 kts) function

DISPLAY AND KEYPAD

Integral display and keypad in splash and shock protected front panel. LCD with backlighting displays all test parameters.

CALIBRATION

One year interval, performed using software.

PHYSICAL SPECIFICATIONS

Weight: 77 lbs. (35 kg.)

Dimensions: L 24.8" x W 19.7" x H 11.6"

HAND HELD REMOTE CONTROL UNIT



ENVIRONMENTAL

Waterproof and shockproof
CE compliant.

POWER SUPPLY

Universal - all world and aircraft ac power.
4 hours operation internal rechargeable battery

WARRANTY

Unit 24 months
Pumps 5000 hours

OPTIONS

A. 28 V d.c. Power supply: (18 to 30 V d.c.)

B. ARINC429 interface

C. IEEE488 GPIB control (RS232 standard)

D. PDA for wireless remote control

F. ADWIN PC Control software

G. Hand held remote control unit: 4 x 20 characters backlit LCD with 60 ft extension cable

H. Altimeter Encoder: Displays encoder data

- **Custom Pitot/Static connections** available

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



DMA-Aero

11 Old Sugar Hollow Road

Danbury, CT 06812

Tel: 203 790-8371

Fax: 203 743-2051

E-mail: sales@dma-aero.com

www.dma-aero.com

Representative