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Measurement & Control

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ADTS542F

Wireless ADTS500 Series Easy-to-Use Pitot Static Tester



Features

- ADTS Touch hand terminal with WiFi and Bluetooth® wireless technology (backup cable supplied)
- Accuracy suitable for RVSM validation
- Low airspeed option
- Swipe-action, touch screen user interface with colour graphics and menu
- 15-month calibration interval option
- Standard icons and layouts for routine testing
- Engine Pressure Ratio (EPR) option
- Multiple languages
- Stores customized aircraft test sequences
- High flow proportional pressure control technology
- Accessories bag supplied, ADTS Touch carry case and ADTS542F backpack options
- TERPS high accuracy pressure sensors inside
- GE ADTS global service support

Your touch, our technology



ADTS Touch

The ADTS Touch is a removable, robust wireless hand terminal that communicates to the test set via secure Bluetooth® wireless technology. This technology and the innovative design of the ADTS Touch remove the need to run cables or hoses into the cockpit.**



A rechargeable battery pack enables up to eight hours of continuous ADTS Touch wireless use. The battery can be charged by the ADTS Touch when connected to the test set, by power cable, or by an optional desk charger.

As an alternative, the ADTS Touch can be used as a conventional wired hand terminal, with or without a battery pack, by attaching a supplied cable, or as a local user interface by docking the hand terminal onto the ADTS542F.

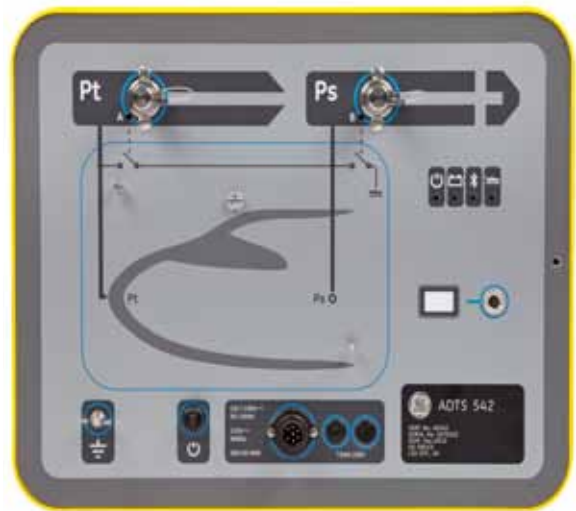
A large, easy-to-read display in pressure or aeronautical units and swipe navigation, with intuitive icons that are logical and easy to remember, allow you to quickly scroll through available tasks. The ability to set "aircraft safety limits," enable "auto leak recovery" and save/recall aircraft test sequences make the ADTS Touch an easy-to-use hand terminal. Its multi-language selection further enhances the ADTS Touch's usability.

ADTS542F

The ADTS542F, supplied with an ADTS Touch, is a small, lightweight and cost-effective portable two-channel flightline pitot static tester for "Aircraft on the Ramp" testing. The ADTS542F is also ideal for any aircraft with low pitot static demands or for light aircraft, including helicopters and propeller-driven airplanes.

To ensure an accuracy that is suitable for RVSM (reduced vertical separation minimum) validation, the new ADTS542F incorporates advanced Druck TERPS (trench etched resonant pressure sensor) technology together with innovative Druck proportional pressure control.

**Due to individual country radio licence requirements, Bluetooth® wireless technology may not be available in some countries. An up-to-date list of countries that the ADTS Touch with Bluetooth® wireless technology is licenced to be used in is available upon request from GE.



ADTS542F Standard Specifications

- ADTS542F pitot static tester
- ADTS Touch hand terminal
- AC power lead: 1.8 m (6 ft) length approximately
- ADTS Touch remote connecting cable: 5 m (16 ft) length approximately
- ADTS Touch battery pack
- ADTS Touch AC power supply unit
- Pack of Ps and Pt colour labels
- Multi-language installation manual
- Accessories bag
- Operator manual (installed in ADTS Touch)
- Calibration certificate traceable to international standards



ADTS542F and ADTS Touch Specifications

Parameter	Operating Range	Resolution	ADTS542F 12 mth Accuracy *	ADTS542F-E3 15 mth Accuracy *
Altitude	-3,000 to 55,000 ft	1 ft	+/-3 ft at sea level +/-7 ft at 29,000 ft +/-12 ft at 41,000 ft	+/-3 ft at sea level +/-7 ft at 29,000 ft +/-12 ft at 41,000 ft
Ps	91 to 1,130 mbar abs	0.01 mbar	+/- 0.10mbar abs	+/- 0.10mbar abs
Standard Airspeed (CAS)	20 to 650 knots	0.1 kt	+/-1.5 kt at 20 kts +/-0.6 kt at 50 kts	+/-1.5 kt at 20 kts +/-0.6 kt at 50 kts
Standard Airspeed Pt	91 to 1,997 mbar abs	0.01 mbar	+/- 0.13mbar abs	+/- 0.13mbar abs
Low Airspeed Option (CAS)	20 to 650 knots	0.1 kt	+/-1.2 kt at 20 kts +/-0.5 kt at 50 kts	+/-1.2 kt at 20 kts +/-0.5 kt at 50 kts
Low Airspeed Option Pt	91 to 1,997 mbar abs	0.01 mbar	+/- 0.10mbar abs	+/- 0.10mbar abs
Rate of Climb	0 to 6,000 ft/min	1 ft/min	+/- 2% Aim	+/- 2% Aim
Mach **	0 to 2.0	0.001	Better than 0.005	Better than 0.005
Engine Pressure Ratio (EPR)	0.1 to 10	0.001	Better than 0.005	Better than 0.005

* Accuracy over operating temperature includes: calibration uncertainty, non-linearity, hysteresis, repeatability, measurement stability over calibration period and control stability

** Depends on altitude at max Qc

Scaling Factors

- Altitude: ft, meters
- Airspeed: knots, km/hr, mph
- Rate of Climb: ft/min, m/min, m/s
- Others: mbar, inHg, inH2O, mmHg, kPa, hPa, psi

Rate Control/Indication

- Roc: Rate of Climb
- Rt Ps: Rate of Static
- Rt Pt: Rate of Pitot
- Rt Qc: Rate of Pt-Ps
- Rt CAS: Rate of calibrated airspeed
- Rt EPR: Rate of engine pressure ratio

Overpressure

Negligible calibration change with up to 1.25 x full scale (FS) overload applied

Calibration Stability

ADTS542F: Better than 0.05 mbar (Ps) & 0.05 mbar (Pt) over 12 months

ADTS542F-E3: Better than 0.05mbar (Ps) & 0.05mbar (Pt) over 15 months

Recalibration

Simple keypad instruction, use of primary standard pressure reference is recommended

Display

7" WVGA (800X480) TFT, LED backlit display. High contrast ratio, wide view angle, two readings-per-second update

Power Supplies

Auto-selection between:
100/120/230 Vac, 50/60 Hz, power - 200 VA;
115 Vac, 400 Hz, power - 200 VA

Power Failure Protection

System locks and a manual let-down feature provided

Self Test

Integral test routines and reporting for both electrical and pneumatic systems

Temperature Range

- Storage: -20°C to 70°C (-4°F to 158°F)
- Operating: 0°C to 50°C (32°F to 122°F)

Humidity

0 to 95% non-condensing

Environmental

Vibration, shock/drop and solar radiation to MIL-PRF-28800F Class 2

Conformity

EMC EN61326, LVD EN61010 (Electrical safety, PED, WEEE, CE marked)

Physical

- Weight 14Kg nominal (30.9 lb)
- Dimensions (including lid) H 300mm, D 320mm, W 420mm (H 11.8 in, D 12.6 in, W 16.5 in)

Pneumatic Connections

AN4 for Ps and Pt

Sealing

Weatherproof in operating mode (lid removed). Base unit IP23, ADTS Touch IP65

Pneumatic Supplies

Integral pressure and vacuum pumps capable of generating for a minimum of 1,000 running hours:

- 1,829 m/min (6,000 ft/min) into a 3L total volume (Ps 2L + Pt 1L) up to 9,144 m (30,000 ft)
- Water/moisture content vented automatically

Options and Accessories

Option - Low Airspeed

To facilitate the testing of aircraft with low air speed such as helicopters, the ADTS542 low airspeed option offers an improved QC measurement accuracy.

Option - EPR Test

Engine Pressure Ratio (EPR) test (Pt/Ps for inlet/exhaust)

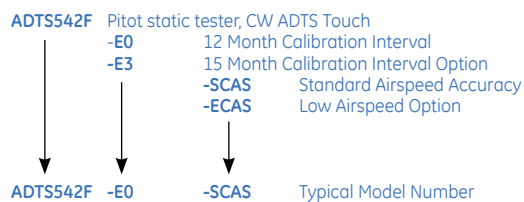
Option – ADTS542F-E3

ADTS542F with 15-month calibration interval (includes one UKAS calibration with new instrument)

Accessories

Part number	Description
AA542F-2	ADTS542F back pack
AA500F-18	ADTS542F accessories bag
AATOUCH-4	ADTS Touch carry case
AA500F-7	Additional ADTS Touch remote connecting cable – 5 m (16 ft) length approximately (can be connected to ADTS Touch connecting cable for 10 m (32 ft) total length)
AA500F-8	Additional ADTS Touch remote connecting cable – 18 m (59 ft) length approximately
AATOUCH-5	ADTS Touch battery pack AC desk charger (state mains lead requirement)
AATOUCH-1	Additional ADTS Touch battery pack
ADTSTOUCH	Additional ADTS Touch hand terminal (state mains lead requirement)
AA500F-1	Pressure connector AN3 male
AA500F-2	Pressure connector AN4 male
AA500F-3	Pressure connector AN6 male
AA500F-4	Pressure connector Staubli quickfit male
AA500F-5	Pressure connector Hanson quickfit male
AA500F-6	Manifold, one way + one way switched
AA500F-19	Red hose (please state length in metres or feet)
AA500F-20	Blue hose (please state length in metres or feet)
AA500F-21	Hose pressure connector AN3 female
AA500F-22	Hose pressure connector AN4 female
AA500F-23	Hose pressure connector AN6 female
AA500F-24	Hose pressure connector Staubli quickfit female
AA500F-25	Hose pressure connector Hanson quickfit female

Ordering Information



2. Options

EPR
Wireless Disabled

3. Mains Lead

Choose one from this list:
MAINS LEAD - UK PLUG
MAINS LEAD - JAPAN PLUG
MAINS LEAD - EU PLUG
MAINS LEAD - USA PLUG

MAINS LEAD - SOUTH AFRICA
MAINS LEAD - INDIA PLUG
MAINS LEAD - CHINA PLUG
MAINS LEAD - AUSTRALIA/NEW ZEALAND PLUG
MAINS LEAD - TAILS (No plug fitted)

4. Country of Use

Please state country of use for Bluetooth® setup.**

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5. Accessories

Please state any accessories required as separate items when placing order.

Warranty Terms

New product is supplied with an initial warranty of 18 months. For peace of mind, extend coverage on your equipment beyond the initial period up to a total four-year term.

Supporting Services

Should your equipment need calibration or maintenance, our global repair facilities are happy to serve.



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