

GE
Oil & Gas

ADTS542F

Wireless ADTS500 Series
Easy-to-Use Pitot Static Tester



Features

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

*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.



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 or 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.



For the more demanding wireless application, such as a large aircraft outside of a hanger (nothing for the wireless signal to bounce off), the ADTS Touch-ER offers a solution. The ADTS Touch-ER extends the wireless range, by the use of a fixed external antenna, or by using the supplied window attach antenna.

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.



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: 5m (16ft) 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 | 92 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 | 92 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 | 92 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) and 0.05 mbar (Pt) over 12 months
- ADTS542F-E3: Better than 0.05mbar (Ps) and 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, 200 VA power
- 115 Vac, 400 Hz, 200 VA power

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

- ADTS542F Base Weight: 14 kg (30.9 lb)
- Base Unit Dimensions (H x W x D): 300 x 320 x 420 mm (11.8 x 12.6 x 16.5 in.) [Note: Dimensions include lid.]
- Hand Terminal Weight: 1.1 kg (2.4 lb), Battery Weight: 0.4 kg (0.9 lb)
- Hand Terminal Dimensions (H x D x W): 153 x 58 x 223 mm (6.0 x 2.3 x 8.8 in.)

Pneumatic Connections

AN6 for Ps, AN4 for 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 (2L Ps + 1L Pt) up to 9,144 m (30,000 ft)
- Water/moisture content vented automatically

ADTS542F Options and Accessories

Options

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 - ADTS Touch-ER

ADTS Touch with external antenna for greater Bluetooth® range

Option - ADTS542F-E3

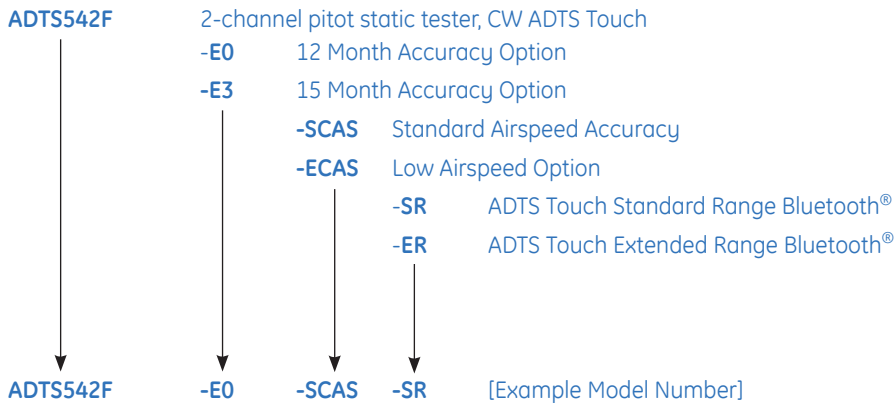
ADTS542F with 15-month accuracy (includes one UKAS calibration with new instrument)

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-1 | Additional ADTS Touch battery pack |
| AATOUCH-5 | ADTS Touch battery pack AC desk top charger (state mains lead requirement, US, UK or EU) |
| ADTSTOUCH | Additional ADTS Touch hand terminal (state mains lead requirement) |
| ADTSTOUCH-ER | ADTS Touch with external antenna for greater Bluetooth range® (state mains lead requirement) |
| AA500F-1 | Pressure connector AN3 male |
| AA500F-2 | Pressure connector AN4 male |
| AA500F-3 | Pressure connector AN6 male |
| AA500F-4 | 2 X Staubli quickfit female pressure connector kit (2 X G 1/8th plus 1 X red dot Staubli plus 1 X black dot Staubli) |
| AA500F-5 | Pressure connector AN4 to Hansen quickfit male |
| AA500F-6 | Manifold, one way + one way switched |
| AA500F-9 | Pressure connector AN6 to Hansen quickfit male (does not include AN6 connector, part number AA500F-3 is also required) |
| AA500F-10 | Bulkhead service kit for 1 connector |
| AA500F-19 | Red hose (please state length in meters or feet) |
| AA500F-20 | Blue hose (please state length in meters or feet) |
| AA500F-17 | Black hose (please state length in meters 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 | 2 X Staubli quickfit male hose pressure connector kit (1 X red dot Staubli plus 1 X black dot Staubli) |
| AA500F-25 | Hose pressure connector AN4 Hansen quickfit female |
| AA500F-27 | Hose pressure connector AN6 Hansen quickfit female |
| AA500F-41 | 10 m (33 ft) length approximately mains lead – UK plug |
| AA500F-42 | 10 m (33 ft) length approximately mains lead – Japan plug |
| AA500F-43 | 10 m (33 ft) length approximately mains lead – Europe plug |
| AA500F-44 | 10 m (33 ft) length approximately mains lead – USA plug |
| AA500F-45 | 10 m (33 ft) length approximately mains lead – India plug |
| AA500F-46 | 10 m (33 ft) length approximately mains lead – China plug |
| AA500F-47 | 10 m (33 ft) length approximately mains lead – Australia/New Zealand plug |
| AA500F-48 | 10 m (33 ft) length approximately mains lead – South Africa plug |

ADTS542F Ordering Information

1. Model Number Configuration



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

4. Country of Use

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

***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.*

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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