Delivering test and measurement advantages for HVAC/R professionals worldwide

Test the tpi advantage

LOWEST ANNUAL SERVICING COSTS

£77.95 exc. VAT

Includes scheduled O_2 & CO sensor changes and return carriage (applies to ALL TPI FGAs supplied after 03/10/2011)

ANALYSER KITS

STARTING FROM £329.95

Excluding VAT

tpi 716

Flue gas

19.07.2013   13:37

Natural gas

CO	0	ppm
CO2(c)	0.1	%
Ratio	----	
Effi(n)	----	%
O2	20.7	%
XAir	----	%
Prsu	0.007	mbar
Pump	1199	cc/min

Print   Stop   Hold

Flue Gas Analyser

HVAC/R Instrument Catalogue

TPI Europe V20.pw01.15

tpieurope.com
+44 (0) 1293 530196

- In-House industry & legislative driven innovative design

- 100+ products covering a vast array of applications internationally

- UK based life-long service & back-up support

- Robust & reliable products

- Minimum 3 year warranty

- Excellent customer & distributor support

- Suppliers to large Blue Chip companies such as British Gas & Snap On Tools

Contents

TPI 716 Flue Gas Combustion Analyser Kit
c/w USB Cable & Software

£479.⁹⁵ — rendered as: £479.⁹⁵ exc. VAT

£479.95 exc. VAT

● **Combustion Efficiency Analyser:**
  Measure O_2, CO, and flue temperature.
  Calculate efficiency, excess air, CO_2 &
  (CO/CO_2) Ratio.

● **CO Analyser:**
  Measure carbon monoxide in ambient air.

● **Differential Manometer:**
  +/- 150 mBar (0.01 mBar resolution)
  Great for Tightness/Let By or Burner Pressure Testing

● **Differential Thermometer:**
  Dual input K-Type thermocouple thermometer
  measures differential temperatures
  Ideal for Measuring & Recording Flow & Return Temperatures

6 Year Warranty

Large easy to read 4 or 8 line graphical display
  No need to scroll through endless screens to see the readings you require

30 Sec Countdown only when Combustion Readings need to be taken
  Save time by taking quick pressure or temperature readings

Enhanced Let-By & Tightness Test
  Timed start, stop & differential pressure readings can be stored easily

Menu Driven User Interface
  Easily navigate to your favourite features

CO Build-Up Test
  Quickly prove or disprove the presence of CO with the added advantage of having these readings automatically stored to memory

Ability to view Pressure Readings at the same time as Combustion Readings
  See the effect on combustion readings, in real time, whilst adjusting the gas pressure intake

Large capacity pump with visible flow rate on screen
  Constant visual monitoring of internal pump to avoid unnecessary & costly repair downtime
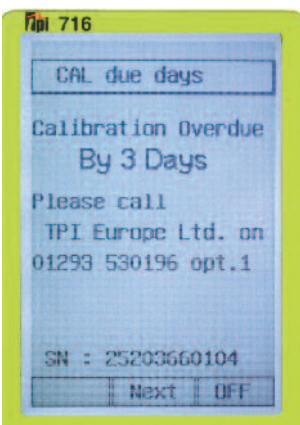
10,000 ppm CO Sensor
  Avoid unnecessary & costly repair downtime due to saturated sensors when unexpectedly exposed to higher than usual levels of CO gases

Security locked User Changeable Company Header Details for IR Print Outs
  Give a professional look to your Print-Outs when leaving them attached to Forms or Invoices.

Data Hold, Storing & Logging
  Retrieve & Print Held, Stored or Logged Data at your convenience.

Know exactly when your 716 is due back for annual service with the internally stored calibration dates and receive daily reminders, from 25 days out, along with service contact details so you can remain on the right side of the law!!

Kit options available

Kit 1 add a TPI A740 IR Printer

£579.95 exc. VAT

Kit 2 add a Printer & 2 x CK21M Pipe Clamps

£599.95 exc. VAT

Kit 3 add an IR Printer, 2 x Pipe Clamps & CPA1 Probe Kit

£649.95 exc. VAT

Kit 4 add an IR Printer, 2 x Pipe Clamps & Plug In Gas Sniffer
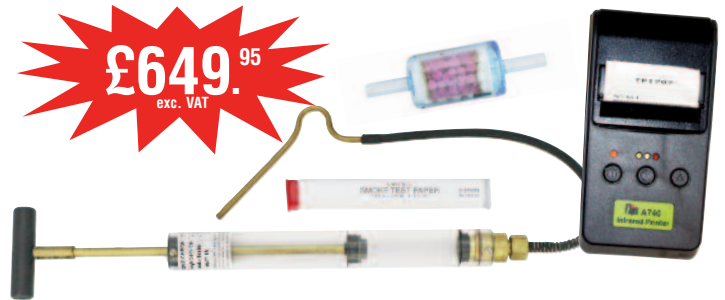
£649.95 exc. VAT

Kit 5 add an IR Printer, 2 x Temp. Pipe Clamps, CPA1 Probe Kit & Plug In Gas Sniffer

£699.95 exc. VAT

Kit 1 OIL add an IR Printer, Smoke Pump & Oil Filter

£649.95 exc. VAT

Upgrade Options - NOW or LATER

NO Sensor for NO & Calculated NOx Readings

Don't get stuck and find yourself having to pay out for an expensive brand new combustion flue gas analyser just because your business needs change and move in a more Commercial/Industrial direction. Future proof your investment!!!

£250.00 exc. VAT

High CO Sensor for CO Readings in % - up to 10%

The TPI 716 can be upgraded to include HIGH CO readings should you find the need to move into more Commercial/Industrial applications or to perform investigation work on faulty appliances. Future proof your investment!!!

£100.00 exc. VAT

Bluetooth® for Wireless communication with PC, Laptop or Smartphone

£75.00 exc. VAT

Plug-In Combustible Gas Sniffer

£50.00 exc. VAT

TPI 717R Flue Gas Analyser Kit

ALL the same Great Features,
Ease of Use & LOW cost servicing

as the **TPI 709R** PLUS

£399.**95**
exc. VAT

6 Year Warranty

- Timed Let/By & Tightness Test

- Timed CO Build-Up Room Test

- Integrated Magnet

- Calibration Due Countdown on switch on

- Serial Number on Print-Outs

- Next Calibration Due Date on Print-Outs

Kit options available

Kit 1 add a TPI A740 IR Printer

£499.**95**
exc. VAT

Kit 2 add a Printer & 2 x CK21M Pipe Clamps

£519.**95**
exc. VAT

Kit 3 add an IR Printer, 2 x Pipe Clamps & CPA1 Probe Kit

£569.**95**
exc. VAT

Kit 4 add an IR Printer, 2 x Pipe Clamps & TPI 719 Gas Sniffer

£569.**95**
exc. VAT

Kit 5 add an IR Printer, 2 x Temp. Pipe Clamps, CPA1 Probe Kit & TPI 719 Gas Sniffer

£619.**95**
exc. VAT

Kit 1 OIL add an IR Printer, Smoke Pump & Oil Filter

£569.**95**
exc. VAT

TPI 709R Flue Gas Analyser Kit

£329.**95**
exc. VAT

- Combustion Efficiency Analyser:
  Measure O_2, CO, and flue temperature.
  Calculate efficiency, excess air, CO_2
  & (CO/CO_2) Ratio.
- CO Analyser:
  Measure carbon monoxide in
  ambient air.
- Differential Manometer:
  +/- 150 mBar
  (0.01 mBar resolution)
  **Great for Tightness/Let By or
  Burner Pressure Testing**
- Differential Thermometer:
  Dual input K-Type
  thermocouple thermometer
  measures differential
  temperatures
  **Ideal for Measuring & Recording
  Flow & Return Temperatures**

6 Year Warranty

Kit options available

Kit 1 add a TPI A740 IR Printer

£429.**95**
exc. VAT

Kit 2 add a Printer & 2 x CK21M Pipe Clamps

£449.**95**
exc. VAT

Kit 3 add an IR Printer, 2 x Pipe
Clamps & CPA1 Probe Kit

£499.**95**
exc. VAT

Kit 4 add an IR Printer, 2 x Pipe Clamps &
TPI 719 Gas Sniffer

£499.**95**
exc. VAT

Kit 5 add an IR Printer, 2 x Temp. Pipe Clamps,
CPA1 Probe Kit & TPI 719 Gas Sniffer

£549.**95**
exc. VAT

Kit 1 OIL add an IR Printer, Smoke Pump & Oil Filter

£499.**95**
exc. VAT

Compare with the rest & **Save** with the **BEST**

Save £££'s   Across the **"WHOLE"** TPI Analyser Range[1]

Lowest Annual Servicing Costs

Includes:
Service/Calibration
Scheduled O2 & CO
Sensor Changes
& Return Carriage

Year 1	£77.95 exc. VAT
Year 2	£77.95 exc. VAT
Year 3	£77.95 exc. VAT
Year 4	£77.95 exc. VAT
Year 5	£77.95 exc. VAT

Fixed Costs, No Estimates, Quicker **3 Day** Turnaround[2]

1   Applies to FGAs fitted with Standard O2 & CO Sensors & originally supplied after 03/10/2011. 716 FGAs fitted with additional sensors will incur additional annual charges. Please call TPI on 01293 530196 for further details, terms and conditions.

2   3 working days turnaround **from** assessment of received FGA complete with pre-paid/cleared funds or purchase order, **to** day of shipment from TPI going back to customer/distributor. Please call TPI on 01293 530196 for further details, terms and conditions.

<u>NOT</u> just for GAS
Multi Fuels as standard

- Natural Gas
- LPG
- Light Oil
- Heavy Oil
- Bituminous Coal
- Anthracite Coal
- Coke
- Butane
- Wood (inc. Pellet)
- Bagasse

TIME & MONEY Saving Features

- Remote diagnostic software & technical helpline to reduce potential unnecessary returns between services.
- In-line pump protection filter, fitted as standard, blocking any dust/dirt ingress when sampling probe isn't attached.
- Rugged & Robust with protective boot, as standard, & drop tested from 3 metres.

A796 External Filtration System **supplied as Standard** across all TPI Flue Gas Analyser Kits to

protect the unit from both particulates & water/condensate ingress reducing unnecessary downtime and unexpected, potentially expensive, bills outside of warranty & servicing schedule.

Large visible water/condensation collection area

Large particulate filter to capture dust/dirt

Unique membrane filter to eliminate water/condensate ingress

NOW used by **British Gas** across their ENTIRE fleet of analysers

Feature	709R	717R	716	Benefit
10,000 ppm CO Sensor	✔	✔	✔	**Longer Life & Quicker Recovery Times after Combustion Tests**
Long Life O_2 Sensor	✔	✔	✔	**Longer Life & Reduced Servicing Costs**
NO & Calculated NOx	–	–	O	Additional Environmental Readings for Commercial Properties
Calculated CO_2 Readings	✔	✔	✔	Calculation carried out by analyser for ease of checking and making adjustments
Calculated Ratio Readings	✔	✔	✔	Calculation carried out by analyser for ease of checking and making adjustments
Calculated Efficiency Readings	✔	✔	✔	Calculation carried out by analyser for ease of checking and making adjustments
Differential Temperature	✔	✔	✔	No need to carry a separate Digital Thermometer
Differential Manometer	✔	✔	✔	No need to carry a separate Digital Manometer
Temperature Sampling Probe	✔	✔	✔	View temperature in flue & is necessary to calculate Efficiency Readings
In-Line Water Trap Bowl Filter	✔	✔	✔	**Prevent additional servicing costs due to damaged sensors caused by water ingress**
In-Line Mini Pump Protection Filter	✔	✔	✔	**Prevent additional servicing costs due to blocked pump caused by dust/dirt ingress**
Protective Rubber Boot	✔	✔	✔	Extra protection from accidental damage
Re-Chargeable NiMH Battery	✔	✔	✔	Save on costly replacement of batteries
Soft Carry Case	✔	✔	✔	Keeps your equipment & accessories together & secure in one handy place
Diagnostic Software	✔	✔	✔	**Save time & money by preventing the need to return the analyser for unnecessary repairs**
Readings Output to (Optional) IR Printer	✔	✔	✔	Keep permanent print-outs of recorded readings for your records & the customers
6 Year Warranty*	✔	✔	✔	**Complete peace of mind over the life of the analyser**
Combustible Gas Leak Detector			O	No need to carry a separate Combustible Gas Leak Detector
Option of Company Details on Header of IR Print-Outs			✔	**Customised Print-Outs giving a professional image & improved security against theft**
CO Build Up Test Software		✔	✔	Save time by having the analyser record the CO Build Up levels in a Room
Tightness Test Software		✔	✔	Save time by having the analyser record the Start & Stop Pressure Readings. *Enhanced Record Facility on 716
Data Logging Facility			✔	Save time by having the analyser record the Combustion Activity over a Set Period
Data Transfer c/w Software to PC/Laptop/PDA by USB			✔	Electronically Store ALL your Saved Readings for easy access in the future to aid with Invoicing & Reporting etc....
Data Transfer to PC/Laptop/PDA by Bluetooth			O	Wirelessly store ALL your Saved Readings for easy access in the future to aid with Invoicing & Reporting etc....
Graphical 4 or 8 Line Display			✔	**User switchable to display the best resolution for the readings you require on a more frequent basis**
Menu Driven User Interface			✔	Easily & Quickly navigate to your favourite features
Calibration Due Countdown		✔	✔	Always be aware of when your FGA requires annual calibration
Quick Start Menu			✔	**No need to wait for 30 second purge to perform some tests**

A740 IR Printer

£114.95 exc. VAT

Works with the 709R, 712 & 716

- Battery operated
- Self test facility
- Adjustable contrast
- Manual paper feed
- Maximum transmitting distance 16"(45cm)
- Compatible with most other combustion analysers

OPTIONAL ACCESSORY
- **A746** Replacement printer paper (10 rolls)

A773 Oil Filter

£9.95 exc. VAT

Use the A773 in addition to the Water Trap & Pump Protection Filters to stop potentially harmful residues from affecting the performance of the CO sensor and the internal pump within your Flue Gas Analyser when used on solid fuels.

CK21M Temperature Pipe Clamp (Pair)

Use the temperature pipe clamp to take hands free temperature readings on pipework to assist with Flow & Return adjustments

£27.95 exc. VAT

A788 Smoke Pump

Use the A788 Smoke Pump to check the Flue against the Smoke Test Scale Papers to establish the scale of cleaning before Flue Gas Analysis is carried out etc....

£69.95 exc. VAT

A125 Magnetic Hanging Boot Hook

Use the magnetic hanging boot hook to fit with the protective rubber boot for hands-free use

£8.95 exc. VAT

CPK3 CPA1 Probe Set (BS7967:2005)

£74.95 exc. VAT

Designed to be used on a range of open flue, room sealed and flueless appliances. Use this kit to sample combustion products from cookers, grills & flueless appliances as described in BS7967:2005

Analyser FAQs

Can I use my analyser on Oil Fired Appliances: Yes. Please ensure that the analyser is set to the correct fuel and that the additional oil filter (A773) is fitted. It is also recommended to use a smoke pump before performing any analyser test.

Can I use my analyser to perform Tightness Tests: Yes. All TPI Flue Gas Analyser models have pressure which will allow all types of pressure testing to be performed, in addition the 716 & 717R models have in-built software which makes Tightness Testing even easier to perform.

Can I read Flow & Return Temperatures with a TPI Analyser: Yes. All TPI Flue Gas Analyser models have Differential Temperature (Dual Inputs) which enables 2 temperatures to be taken at the same time and the difference calculated and displayed.

Service, Calibration & Repairs carried out within our UK facility by knowledgeable, competent and fully trained engineers. With a quick turnaround and the facility to either return your TPI instrument direct or through a merchant..........the flexibility is yours!!!! Call our Technical Helpline on **01293 530196** for further details.

Analyser Usage Tech Tips

Tech Tip: Please attach the sample line (A770) once the analyser has completed its initial Purge Period of 30 seconds. This method will avoid any residue of gases still in the sample line being drawn into the instrument, therefore, avoiding any initial error messages immediately after switch on.

Tech Tip: Please ensure that the mini in-line pump protection filter (A763) remains on the instrument at all times and that **ALL** filters (including the ball filter in the in-line pump protection filter - Unique to the TPI Analyser Family) are Clean & Dry and that the sampling line is free from obstruction. Keeping the filters clean and dry will avoid slow and/or incorrect readings.

Tech Tip: Keep the analyser fully charged where possible by giving it a complete overnight charge, especially from new. However, the instrument can be used from the mains with the charger (A766) supplied as standard with all models.

Tech Tip: Use the analyser as a CO warning tool by turning it on outside in clean air (again without the sampling line attached) and monitoring the CO readings on the screen as you enter the property. Any CO present will display on the screen thus alerting you towards any potential danger.

Tech Tip: Unique to the TPI Analyser Family is the Technical Helpline (01293 530196) where any questions or queries can be answered by our fully trained competent staff and the majority of error messages can be cleared over the phone thus saving you time and money.

A763 Mini pump protection filter
£4.95 exc. VAT

GK11M K-type thermocouple
£4.95 exc. VAT

A746 Replacement Paper Rolls (Pack of 10) for A740 IR Printer
£9.95 exc. VAT

A768 Soft Carrying Case
£14.95 exc. VAT

A770 Flue Probe
£69.95 exc. VAT

A796 Water Trap Bowl Filter Complete
£19.95 exc. VAT

A796-D Replacement Water Membrane Filter
£4.95 exc. VAT

A796-F Replacement Particle Filter for A796 - 32mm High (pack of 10)
£14.95 exc. VAT

770 Carbon Monoxide Ambient Air Monitor

- **0 to 999 ppm** in 1 ppm increments
- Quick and simple operation
- Large, easy-to-read LCD
- Visual & Audible (user settable) alarm
- Backlight for working in badly lit areas
- Designed to meet the requirements of BS 7967 parts 1-3
- Displays MAXIMUM CO & time elapsed (hours & minutes) since power on
- Use to safeguard the engineer where there is suspicion of fumes leaking from an appliance or, in response to a fixed CO alarm going off.

£129.95 exc. VAT

775 Combo Ambient CO Monitor & Combustible Gas Leak Sniffer

- Combination instrument avoids the need to carry 2 instruments
- **CO: 0 to 2,000 ppm**
- Same great features as TPI 770
- **Gas: 50 ppm Sensitivity** to Methane
- Use the combustible gas leak sensor & adjustable tic rate, for pinpointing gas leaks, if necessary, after performing a Tightness Test
- Trace for gas leaks where pipework is enclosed or not visible
- Quick and simple operation
- Large, easy-to-read LCD
- Visual & Audible (user settable) alarm
- Backlight for working in badly lit areas

£199.95 exc. VAT

719 Combustible Gas Leak Sniffer

- **30 ppm Sensitivity** to Methane
- Detect combustible gases including natural gas methane, propane (LPG), gasoline, diesel, kerosene, etc....
- Adjustable tic rate, for pinpointing gas leaks, if necessary, after performing a Tightness Test
- Trace for gas leaks where pipework is enclosed or not visible
- 16" gooseneck for hard to reach areas
- Quick and simple operation
- Optional earphone attachment
- Visual & Audible (user settable) alarm

£69.95 exc. VAT

725a Pocket Gas Sniffer

- **40 ppm Sensitivity** to Methane
- Detect gases including natural gas, methane, propane (LPG), gasoline, diesel, kerosene, etc....
- 4 Visual & Audible Alarm Levels

£34.95 exc. VAT

725L Pocket Gas Sniffer c/w Flexi-neck

- **40 ppm Sensitivity** to Methane
- 185mm Flexible Neck
- Detect all combustible gases
- Zero background levels to pin-point leaks

£39.95 exc. VAT

720b Combustible Gas Leak Sniffer

- **10 ppm Sensitivity** to Methane
- Detect combustible gases including natural gas methane, propane (LPG), gasoline, diesel, kerosene, etc....
- Adjustable tic rate, for pinpointing gas leaks, if necessary, after performing a Tightness Test
- Trace for gas leaks where pipework is enclosed or not visible
- 16" gooseneck for hard to reach areas
- Quick and simple operation
- Optional earphone attachment
- Visual & Audible (user settable) alarm

£99.95 exc. VAT

721 Combustible Gas Leak Detector with ppm and % LEL Display

- **10 ppm Sensitivity** to Methane
- Detect combustible gases including natural gas methane, propane (LPG), gasoline, diesel, kerosene, etc....
- Switch between **ppm** or **% LEL** to better determine the level of gas present
- 2 Line Backlit Display with Bargraph for easy viewing
- Adjustable tic rate, for pinpointing gas leaks
- Trace for gas leaks where pipework is enclosed or not visible
- 16" gooseneck for hard to reach areas
- Optional earphone attachment
- Visual & Audible (user settable) alarm

£129.95 exc. VAT

1008a Direct Reading CO2 IAQ Monitor c/w Ambient Temperature

£399.95 exc. VAT

- Measure Ambient CO2 levels in work & office spaces
- Conforms to BS 8494 for measuring Ambient CO2 levels in commercial kitchens & public buildings
- Confirm CO2 levels and monitor ambient air temperatures simultaneously
- 2 line display to view both CO2 and temperature simultaneously
- Backlit LCD for dimly lit areas
- Log up to 50 readings in intervals of between 1 & 60 minutes
- Print readings direct to optional A740 IR Printer
- Download logged readings to a PC or laptop via USB connector for data analysis
- Record & Display the Min/Max & Average readings

Ranges

CO2: 0 to 5,000 ppm

Temp: -20 to 60 °C

1010a Direct Reading CO & CO2 IAQ Monitor c/w Temp. & Humidity

£499.95 exc. VAT

All the great features of the 1008a **PLUS:-**

- Measure Ambient CO & CO2 levels in work & office spaces simultaneously to avoid having to carry 2 separate instruments
- Displays 4 readings on Large Easy to Read Backlit LCD Screen
- Scroll between Relative Humidity, Dew Point & Wet Bulb Readings
- Log up to 1,000 readings in intervals of between 1 & 60 minutes

Ranges

CO2:	0 to 5,000 ppm
CO:	0 to 500 ppm
Temp:	-20 to 60 °C
Humidity:	5 to 95%
Dew Point:	-44 to 57 °C
Wet Bulb:	-16 to 57 °C

556 Digital Vane Air Velocity Flow Meter

£139.95 exc. VAT

- Measure Air Velocity, Air Flow & Temperature
- 2 line display shows air flow and temperature readings simultaneously
- Data record displays minimum, maximum & average readings
- Data Log up to 1,000 readings in 1 to 999 second intervals
- Send real time or logged data to a PC via optional (A500) interface cable
- Five units of Velocity: **m/s, km/hr, mile/hr, knots & ft/min**
- Velocity Range: **0.4 to 30 m/s**
- Two units of Air Flow: **cfm & cmm**
- Air Flow Range: **0 to 9999 cfm**
- Temperature Range: **-20 to 80 °C**
- Data Hold & Auto Power OFF after 10 minutes

575 Combination Vane & Hotwire Air Velocity Flow Meter

£189.95 exc. VAT

All the great features of the 556 **PLUS:-**

- Measure **Low Flow** applications with the additional **HOTWIRE** probe
- Hotwire Velocity Range: **0.2 to 20 m/s**
- Ideal for Air Duct Analysis, Fume Hoods, Flue Registers & Exhaust Grills

608 Single Input Digital Manometer

Designed to perform tightness, standing & burner pressure tests

£64.95 exc. VAT

- Ideal for performing tightness tests
- Temperature compensated to ensure repeatable measurements
- ± 150 mBar, with 0.01 resolution. Over-pressure protected up to 300 mBar
- Wall hook and magnets for no-hands use
- Four units of measure (in H_2O, mbar, KPa, PSI)
- Replace messy "U-Tube" manometers

Specifications

Measurement Range: ± 150 mBar
Display: 4 Digit LCD with backlight
Input Type: Single (1/4" Barbed)
Resolution (max): 0.01 mBar
Accuracy: +/-1% of full scale
Functions: One Touch Zero, Backlight, Selectable units of measure
Units of Measure: 4 Units (inH2O, mBar, KPa, PSI)
Battery Type: 9V alkaline
Battery Life: 200 hours (Typical)
Auto Power Off: 40 minutes

719608 Tightness Test Kit

£129.95 exc. VAT

TWO great products combined in an **A901** protective carry-case with the **608** manometer designed to perform the Tightness Test and the **719** Combustible Detector, ideal for pinpointing any leaks, if necessary

621 Dual Input Differential Digital Manometer
c/w Protective Rubber Boot & Tilt Stand Case

Applications

- Adjusting appliance regulators
- Tightness, Standing & Burner Pressure Testing
- Setting delivery pressures
- Leakage "shut-in" tests
- Regulator adjustments for pressure and lock-up tests
- Test pressure switch operation on a 2-stage gas appliance in both positive and negative pressures

£109.95 exc. VAT

Specifications

Measurement Range: ± 300 mBar
Resolution (max): 0.01 mBar
Display: 5 Digit LCD with backlight
Accuracy: +/-0.2% of full scale
Input Type: Dual Differential (1/4" Barbed)
Functions: One Touch Zero, Back-light, Unit Selection, Smoothing, Auto power Off
Units of Measure: 7 Units (mbar, kPa, PSI, mmHg, inHg, mmH2O, inH2O)
Battery Type: 9V alkaline
Battery Life: 80 hours (Typical)
Auto Power Off: 40 minutes

635: 5 PSI
645: 30 PSI

£159.95 exc. VAT

- Rugged Extruded Aluminum Housing
- Measure positive, negative and differential pressure.
- Push button zero for altitude correction.
- Seven selectable units of measure to choose from: mmHg, inHg, kPa, mBar, PSI, inH_2O, and mmH_2O.
- Trim or Smooth functions help stabilize readings by giving average.
- Easy-to-read LCD.
- Backlight with auto shut off after 10 seconds.
- Auto power off after 30 minutes (except REC mode) saves battery life.
- Record function stores maximum and minimum readings.
- Data hold to freeze reading on LCD.
- 645 supplied with NPT fitting for high pressure.

665 Dual Input 100 PSI Digital Manometer c/w Data Logging

- 1/4" NPT fittings for high pressure
- Data logging: Record up to 16 sets of readings, each with time stamp
- PC Communication: Display saved readings with optional (**A665**) software & docking station
- Supplied in protective boot (**A614**) c/w magnets for hands free use.
- Print test results directly using the optional IR Printer (**A740**)
- Display: 5 digit, Dual Line with Backlight
- Auto Power Off after 20 minutes (can/will be disabled for data logging applications)
- Range: ± 100 PSI (7 Bar), with 0.01 (0.001 Bar) resolution
- Accuracy: 0.2% of Full Scale
- Seven units of measure (inH2O, Bar, KPa, PSI, mmHg, mmH2O, inHg)

£169.95 exc. VAT

*Use the 665L for non-corrosive water/liquid applications.

343 Dual Input Differential Digital Thermometer

£49.95 exc. VAT

- Supplied with Protective Tilt Boot Stand
- Protective Carry Pouch c/w Belt Loop supplied as standard
- Auto Field Calibrate in less than 10 seconds in ice water to achieve +/- 1°C system (tester & probe) accuracy within 0°C to 50°C temperature range
- Min/Max Record Function
- Displays T1/T2/differential - Scroll through to see all 3 readings inc. calculated differential
- Data Hold for areas where it is hard to read the display
- User Selectable °C/F
- Can measure from -50 to 1,350°C depending upon the probe used
- Use with ANY "K" type thermocouple probe fitted with a sub-mini connector (examples overleaf)

343/Kit 1 Flow & Return Digital Thermometer Kit

This kit come complete with all the great features of the 343

PLUS:-

2 x **CK21M** Temperature Pipe Clamps - Ideal for performing **FLOW & RETURN** measurements

2 x **GK11M** Air Temperature Probes - Check air temperatures in rooms, inlets & vents etc.....

1 x **A901** Soft Carry Case - Perfect for keeping your kit in one place, neat and tidy.

£84.95 exc. VAT

Kitted together to perform FLOW & RETURN tests

TPI 343 Kit 3 Legionnaires Temperature Kit

£99.95 exc. VAT

- 1 x **343** Dual Input Differential Thermometer
  - ~ Toggle between T1, T2 & Diff. Temperatures
  - ~ - 50 to 1,350 °C Temperature Range
  - ~ 0. 1 or 1 °C Auto Resolution
  - ~ Auto Field Calibrate in less than 10 secs
  - ~ Data Hold & Min/Max Features
- 1 x **FK11M** Immersion Probe
  - ~ Use to check water temperatures
- 1 x **CK11M** Surface Probe
  - ~ Use to check tank surface temperatures
- 2 x **GK11M** Air (Beaded) Probes
  - ~ Check ambient room or vent measurements
- 1 x **A901** Soft Carry Case
  - ~ Perfect for keeping your kit in one place, neat & tidy

What is Legionnaires' Disease?

Legionnaires' Disease is a potentially fatal form of pneumonia which can affect anybody, but which principally affects those who are susceptible because of age, illness, immunosuppression, smoking etc.

It is caused by the bacterium Legionella pneumophila and related bacteria that can be found naturally in environmental water sources such as rivers, lakes and reservoirs, usually in low numbers. As they are commonly found in environmental sources they may also be found in purpose built water systems such as cooling towers, evaporative condensers and whirlpool spas.

For further information check out the HSE link below:- http://www.hse.gov.uk/legionnaires/whatis.htm

tpi

Stem Probes

CK11M	FK11M	GK14M	CK16M	FK14M	GK17M
4" Stem Surface Probe	4" Stem Immersion Probe	4" Stem Air Probe	8" Stem Surface Probe	8" Stem Immersion Probe	8" Stem Air Probe
£24.95 exc. VAT	£19.95 exc. VAT	£19.95 exc. VAT	£29.95 exc. VAT	£19.95 exc. VAT	£19.95 exc. VAT
Ideal for measuring radiators, flooring or any flat surfaces etc......	Ideal for measuring running water, standing water etc......	Ideal for measuring office/room spaces, inlets & vents etc......	Ideal for measuring radiators, flooring or any flat surfaces etc......	Ideal for measuring running water, standing water etc......	Ideal for measuring office/room spaces, inlets & vents etc......

368 Close Range Infra Red Non-Contact Thermometer

£16.95 exc. VAT

tpi 368 — 74.3°F — ON/SET — MODE

- Close Focus Non-Contact Thermometer
- IR Temperature Range: -22 to 120°C
- Continuously scan surface temperatures in real time
- Fits easily into your pocket
- Min/Max Record Function

381a Infra Red Contact & Non-Contact Thermometer

Plug in any "K" type probe with sub-mini connector

£49.95 exc. VAT

- Ideal for under-floor heating
- Check for cold spots on radiators
- Read temperatures in Hard to Reach Areas
- User selectable between °C and °F
- IR Temperature Range: -20 to 300 °C (-4 to 572 °F)
- Contact Temp Range: -100 to 1200 °C (-148 to 2192 °F)
- Automatically holds last reading
- 8 : 1 Distance to Spot Ratio

383a Infra Red Contact & Non-Contact Thermometer

Plug in any "K" type probe with sub-mini connector

£59.95 exc. VAT

- Same great features of the 381a

WITH A WIDER IR TEMPERATURE RANGE

- IR Temperature Range: -35 to 537 °C (-31 to 999 °F)
- Contact Temp Range: -100 to 1200 °C (-148 to 2192 °F)

384a Infra Red Contact & Non-Contact Thermometer

Plug in any "K" type probe with sub-mini connector

£69.95 exc. VAT

- Same great features of the 383a

WITH AN EVEN **HIGHER** IR TEMPERATURE RANGE

- IR Temperature Range: -20 to 1000 °C (-4 to 1832 °F)
- Contact Temp Range: -100 to 1200 °C (-148 to 2192 °F)

Pocket Digital Thermometers

Model: 306C
Penetration Tip comes with A306
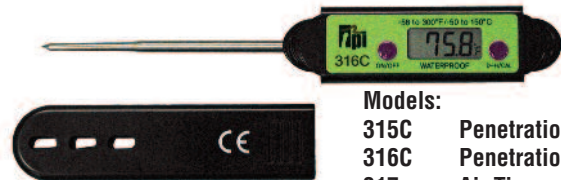
£8.95 exc. VAT

A306
Protective rubber boot for the 306C.

£10.95 exc. VAT

Model: 310C
Penetration Tip

All "C" version digital thermometers can be auto field calibrated in 0° C ice water to ± 1° C

Model: 312C Penetration-Tip

£11.95 exc. VAT

316C WATERPROOF — 75.8

£13.45 exc. VAT

Models:
315C	Penetration Tip
316C	Penetration Tip (No Magnets)
317	Air Tip
318	Chisel-Tip
319	Contact-Tip

Probe Tips

	Penetration	Chisel	Contact	Air
	Use for immersion and air; however air response time will be slower than if using an actual air probe.	Need chisel tip for surface temperatures. Penetration and/or air tips will not give an accurate surface reading.	Measures three times faster than chisel tip.	Use to sample air temperatures 3 times faster than using a contact or penetration tip. Measure ambient air temperatures in vents, ducts or in office & boiler spaces.

275 AC/DC True RMS Digital Clamp-On Tester inc. Temperature with Slim Jaw and Body

£99.⁹⁵ **exc. VAT**

Features:

- Measure up to **400 Amps AC and DC**

  <u>Ideal for testing current supplied from Solar PV Panels before and after the invertor.</u>

And More…

- Auto & Manual Ranging
- Low Battery Indicator
- Over Range Indication ("OL")
- NCV function detects down to 24V for thermostats
- Hi Voltage Indicator (>30V AC/DC)
- Auto Off after 30 minutes
- Separate Battery/Fuse Compartment
- Low Ohm Range (110V)
- Amps AC Resolution: 0.01A
- VDC/VAC Resolution: 0.01mV
- Measure up to 400 amps AC/DC
- Temperature measurement with 0.1° resolution

Applications:

- Measure flame safety control current
- Test run and start capacitors and motors
- Measure motor run current and capture peak motor start up amperage
- Measure heat anticipator current
- Determine thermocouple voltage
- Test line and control voltages
- Measure heating element resistance
- Measure air temperature in ducts
- Test for the presence of voltage in circuits without contacting the circuit
- Measure temperature differential using relative mode

270 Digital Clamp-On Tester inc. Temperature with Slim Jaw and Body for Tight & Narrow Spaces

£89.⁹⁵ **exc. VAT**

Features:

- Measure motor in-rush current and run current
- Measure temperature differential with relative mode
- Frequency, Min/Max/Record, Data Hold, and Peak Hold
- Up to 40,000 Microfarads to test run and start capacitors
- 4,000 count display with 41 segment analog bargraph

And More…

- Auto & Manual Ranging
- Low Battery Indicator
- Over Range Indication ("OL")
- NCV function detects down to 24V for thermostats
- Hi Voltage Indicator (>30V AC/DC)
- Auto Off after 30 minutes
- Separate Battery/Fuse Compartment
- Low Ohm Range (400V)
- Amps AC Resolution: 0.01A
- VDC/VAC Resolution: 0.1mV
- DCµA measurement (0.01µA resolution)
- Temperature measurement with 0.1° resolution

Applications:

- Measure flame safety control current
- Test run and start capacitors and motors
- Measure motor run current and capture peak motor start up amperage
- Measure heat anticipator current
- Determine thermocouple voltage
- Test line and control voltages
- Measure heating element resistance
- Measure air temperature in ducts
- Test for the presence of voltage in circuits without contacting the circuit
- Measure temperature differential using relative mode

265 Digital Clamp-On Tester with Frequency and Capacitance

£49.⁹⁵ **exc. VAT**

Features

- Slim jaw and body design for use in crowded electrical panels
- 4,000 count display
- Capacitance range up to 4,000 microfarads to test run and start capacitors
- 0.1 DC millivolt resolution to accurately measure thermocouples and use optional adapters
- 0.01 AC Amp resolution to measure heat anticipator current
- Frequency measurement capability
- AC/DC volts up to 600V and AC Amps up to 400A
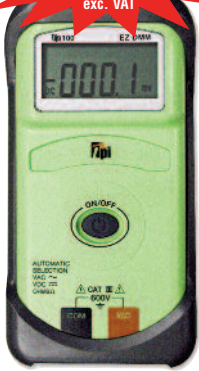- Diode, resistance, and audible continuity ranges

And More…

- Auto / manual ranging
- Data hold
- Auto power off
- CAT III 600V rated

Applications:

- Test start and run capacitors
- Measure motor run current
- Measure heat anticipator current
- Determine thermocouple voltage
- Test line and control voltages
- Measure heating element resistance
- Measure and adjust variable frequency drives

100 Palmsize One Button Operation

£34.95 exc. VAT

- Automatically switches between AC & DC Volts & OHMS (Resistance/Continuity)
- Single Button Operation - **JUST TURN IT ON & OFF**
- Check AC Power, DC Volts on PCBs, Fuses or Continuity **WITHOUT turning the dial !!!**
- Measure 0 - 600 Volts AC & DC
- Measure up to 40 Meg Ohms
- Three Year Limited Warranty

120 Palmsize c/w Continuity Buzzer

£19.95 exc. VAT

- Measure 0 - 600 Volts AC & DC
- Measure 0 - 2,000 Ohms
- Audible Continuity Buzzer
- Data Hold
- Protective Rubber Boot Tilt Stand
- Three Year Limited Warranty

122 Palmsize c/w Millivolts Feature

£29.95 exc. VAT

- Measure 0 - 600 Volts AC & DC
- Measure 0 - 2,000 Ohms
- mV range to take plug-in adaptors
- Audible Continuity Buzzer
- Data Hold
- Protective Rubber Boot Tilt Stand
- Three Year Limited Warranty

126 Palmsize c/w 400mA Feature

£39.95 exc. VAT

- Auto-Ranging
- Measure 0 - 750 Volts AC at 1mV
- Measure 0 - 1,000 Volts DC
- Measure 0 - 40 Meg Ohms
- Measure 0 - 400 mAmps AC/DC
- mV range to take plug-in adaptors
- Diode Test
- Audible Continuity Buzzer
- Data Hold & Min/Max Record
- Three Year Limited Warranty

133 Full Size c/w 10 Amps Feature

£39.95 exc. VAT

- Measure 0 - 7500 Volts AC at 1mV
- Measure 0 - 1,000 Volts DC
- Measure 0 - 20 Meg Ohms
- Measure 0 - 10 Amps AC/DC
- mV range to take plug-in adaptors
- Diode Test
- Audible Continuity Buzzer
- Data Hold
- Three Year Limited Warranty

153 Full Size Auto Ranging

£55.95 exc. VAT

- Auto-Ranging
- Measure 0 - 750 Volts AC at 1mV
- Measure 0 - 1,000 Volts DC
- Measure 0 - 40 Meg Ohms
- Measure 0 - 10 Amps AC/DC
- mV range to take plug-in adaptors
- Diode Test
- Audible Continuity Buzzer
- Data Hold & Min/Max Record
- Three Year Limited Warranty

183a True RMS c/w Triple Display

£99.95 exc. VAT

- Auto-Ranging
- Measure AC/DC Volts
- Measure 0 - 40 Meg Ohms
- Measure 0 - 10 Amps AC/DC
- Frequency (Hz) & Capacitance
- Duty Cycle & Low Pass Filter
- Audible Continuity Buzzer
- Temperature & Diode Test
- Data Hold, Min/Max Record
- Separate Fuse & Battery Comp.
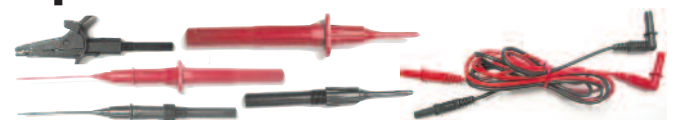- IR serial PC interface

50 AC Volt Alert Voltage Detector

£14.45 exc. VAT

- Audible & Visual Alarm
- 50 - 1,000 Volts
- Lifetime Warranty

Replacement Test Leads & Kits

A wide range of replacement test leads & kits are available for a large number of applications. Please enquire with your local distributor, visit www.tpieurope.com or call 01293 530196 for further details.

Kit 1

£169.⁹⁵ exc. VAT

Kit 2

£159.⁹⁵ exc. VAT

Kit 3

£259.⁹⁵ exc. VAT

Kit 4

£359.⁹⁵ exc. VAT

TPI 510 - Irradiance Solar Meter (Kits 1, 2, 3 & 4): Measuring solar radiation, the TPI meter displays results in either W/m2 or BTU to determine the optimal angle of inclination for siting of solar panels to achieve maximum efficiency

TPI 275 - AC/DC Clamp Meter c/w Temperature (Kits 1, 3 & 4): Measure up to 400 Amps AC/DC & 600 Volts AC/DC to determine the output from the PV panels

TPI 520 - MC4 Crimping Tool (Kits 2, 3 & 4): Used to ensure correct fitting of both male and female MC4 connectors
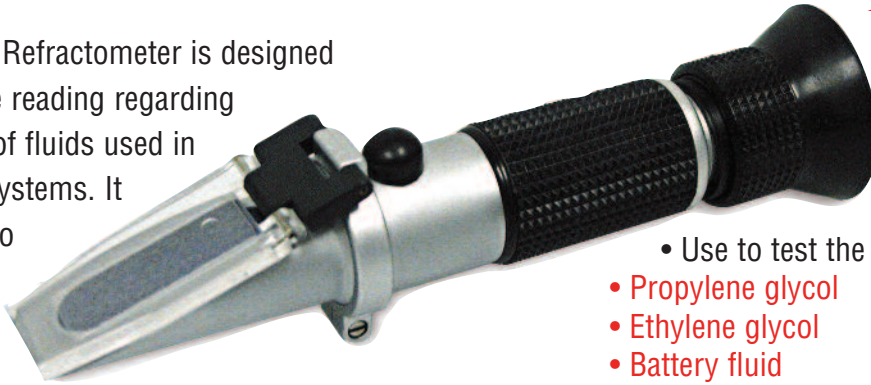commonly found in Solar systems

TPI 383a - Infra Red Thermometer (Kit 4): Ideal for regular temperature monitoring of solar panels, cells and arrays in a solar installation

TPI 523 - Digital Protractor (Kit 4): Used to set the angle of inclination when installing Solar PV panels

A768 - Protective Carry Bag c/w Shoulder Strap (Kits 1, 2, 3 & 4): Plenty of room with adjustable compartments to keep **ALL** your kit safe. Use the supplied shoulder strap to aid when climbing up heights.

395 Handheld Refractometer

£49.95 exc. VAT

The 395 Handheld Refractometer is designed to give an accurate reading regarding the freezing point of fluids used in hydronic heating systems. It is quick and easy to use. Place a drop of fluid on the prism, close the plastic lid, and look through the eye piece. Where the blue and white colors meet indicates the freezing point of the coolants or the state of change for batteries.

• Use to test the following liquids:
• Propylene glycol
• Ethylene glycol
• Battery fluid
• Does not degrade like litmus paper; Allows for more accurate readings
• Easy viewing: cushioned eye piece adjusts to most visual needs.
• Smooth focus adjustment for reliable repeat testing

753a Refrigerant Leak Detector c/w Pump

£149.95 exc. VAT

• 0.1 oz/yr Sensitivity to meet F-Gas Regulations
• Detect all existing refrigerants & blends including 404A, PURON and R-507 (AZ50)
• One Hand Operation
• Easy to use Push Button Tick Adjust
• Hi - Lo Sensitivity Settings
• Faster Response with Pump to detect newer heavier blends quickly
• Audible & Visual Alerts
• 400 Hrs individual sensor life. One spare filter (user replaceable) supplied giving 800 Hrs life in total
• Pinpoint small leaks easily by elimination of background concentration with fully adjustable tic rate

510 Irradiance Solar Meter

£89.95 exc. VAT

The TPI 510 Solar Irradiance Meter displays results in either W/m2 or BTU to determine the optimal angle of inclination for siting of solar panels to achieve maximum efficiency.

Specifications

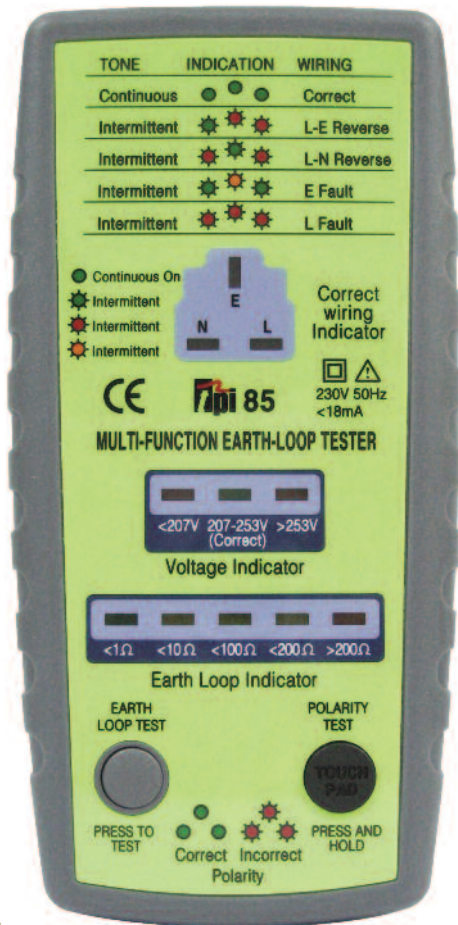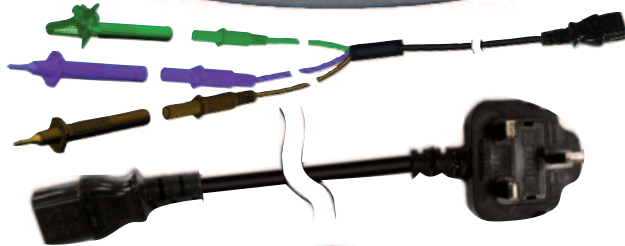|	
Accuracy:	typically within +/-10W/m^2 [+/-3BTU/(ft^{2*}h)] or +/-5%, whichever is greater in sunlight; additional temperature induced error +/-0.38W/m^2/°C [+/-0.12BTU/(ft^{2*}h)/°C] from 25°C
Display:	3-1/2 digits LCD with maximum reading 1999
Sampling:	approx. 0.25 second
Resolution:	0.1W/m^2 / 0.1BTU/(ft^{2*}h)
Range:	1999W/m^2 / 634BTU/(ft^{2*}h)

85C3 4-in-1 Part "P" Loop Tester

The TPI 85, 4-in-1 loop tester, is ideally suited to an engineer involved in Earth Loop testing for Part "P" of the 17th Edition wiring regulations.

2 test lead sets (included) enable the testing of:

- Socket Outlets
- At the point of connection of any in-line electrical item, such as pump, fan or motorised valve.

- Easy to Use
- Mains powered (no batteries required)
- Indicates Earth-Loop Impedance of the circuit
- Identifies correct or incorrect wiring of an electrical circuit
- Shows correct or incorrect voltage
- Identifies polarity faults

£124.95
exc. VAT

3 Year Warranty

The TPI 85C3 kit comes complete with TPI 85 unit, three-pin plug connector, fly test lead set with connectors, all in a specially designed zippered carry case.