



# Pro-Tech diagnostic sensor catalog

**PHILIPS**

**RESPIRONICS**

As a leader in the development, manufacturing, and supply of sensors to the sleep diagnostics industry, we offer a full line of high-performance, quality Pro-Tech sensors to help you obtain the data you need. Our sensor product line includes quality sensors that detect respiratory airflow, respiratory effort, snoring, periodic limb movements, and sleep position.

We are strongly committed to research and development that enables us to provide products that create a better experience for both clinicians and their patients.

Our sensors also meet important AASM accreditation standards. The AASM scoring rules have guidelines regarding the use of certain types of sensors in order for sleep labs to meet accreditation standards. We have included an appendix on page 19 that will assist you in the selection of our products that meet the AASM scoring guidelines.





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## Airflow sensors

### Cannulas



Our Pro-Flow and Pro-Flow Plus cannulas offer optimal performance and patient comfort. The nasal prongs are soft and narrow and specifically designed for pressure transducer airflow monitoring. The prong size minimizes nasal resistance and provides maximum patient comfort.

The Pro-Flow cannula product line also incorporates narrow kink-resistant tubing to help ensure excellent response to high-frequency signals such as snoring. All Pro-Flow and Pro-Flow Plus cannulas have a hydrophobic, anti-microbial filter inline to help prevent patient cross-contamination and transducer failure from moisture.

### Pro-Flow Plus nasal/oral cannulas



Developed to address monitoring of mouth-breathing patients, the Pro-Flow Plus has an oral prong that detects pressure changes in the mouth. They are available in adult and pediatric sizes.

### Pro-Tech airflow sensors

Description	Part number
Nasal cannula adult, (60 per case)	P1259
Pro-Flow adult (10 pack)	P1301
Pro-Flow adult 8.25" (60 per case)	P1306
Pro-Flow adult 8.25" (5 pack)	P1309
Pro-Flow adult 1.1M (20 per case)	P1317-20
Pro-Flow adult 16" (60 per case)	P1328-60
Pro-Flow adult 16" (5 pack)	P1390
Nasal cannula pediatric (60 per case)	P1263
Pro-Flow pediatric (10 pack)	P1302
Pro-Flow pediatric 8.25" (60 per case)	P1330
Pro-Flow pediatric 8.25" (10 pack)	P1331
Pro-Flow pediatric 1.1M (20 per case)	P1321-20
Pro-Flow pediatric 16" (60 per case)	P1381
Nasal cannula pediatric small (60 per case)	P1267
Pro-Flow pediatric small (10 pack)	P1303
Pro-Flow pediatric small 1.1M (20 per case)	P1323-20
Pro-Flow sample pack, includes P1259 (qty: 2) and P1295 (qty: 2)	P1258

Description	Part number
Nasal oral cannula adult (30 per case)	P1295
Pro-Flow Plus adult (5 pack)	P1300
Pro-Flow Plus adult 8.25" (30 per case)	P1308
Pro-Flow Plus adult 1.1M (10 per case)	P1319-10
Nasal Oral cannula adult 8.25" (30 per case) no filter	P1334
Pro-Flow Plus adult 16" (30 per case)	P1343
Nasal cannula pediatric (30 per case)	P1354
Pro-Flow Plus pediatric 16" (30 per case)	P1383

### Pro-Flow MultiPurpose and Pro-Flow Plus MultiPurpose cannulas

These cannulas are designed to concurrently monitor airflow and end-tidal CO<sub>2</sub>. This enables the monitoring of three parameters (airflow, snore, and EtCO<sub>2</sub>) with one patient interface. These cannulas can be used with most pressure transducers and continuous sampling capnographs.

The Pro-Flow MultiPurpose cannula is available for both pediatric and adult patients. There are both nasal only and nasal-oral models. The airflow connection has a hydrophobic anti-microbial filter and the other connector is a Luer Lok fitting.



### Pro-Flow MultiPurpose nasal cannulas

Our Pro-Flow MultiPurpose nasal cannulas sample EtCO<sub>2</sub> while concurrently detecting airflow.

Description	Part number
Nasal cannula adult (30 per case)	P1350
Pro-Flow MultiPurpose adult (5 pack)	P1368
Nasal cannula pediatric (30 per case)	P1346
Pro-Flow MultiPurpose pediatric (5 pack)	P1369
Nasal cannula pediatric small (30 per case)	P1348
Pro-Flow MultiPurpose cannula pediatric small (5 pack)	P1370

### Pro-Flow Plus MultiPurpose cannulas

Our Pro-Flow Plus MultiPurpose cannulas sample EtCO<sub>2</sub> while concurrently detecting airflow.

Description	Part number
Nasal oral cannula, adult (30 per case)	P1373
Pro-Flow Plus MultiPurpose adult (5 pack)	P1374
Nasal Oral cannula pediatric (30 per case)	P1366
Pro-Flow Plus MultiPurpose pediatric (5 pack)	P1375

Special note: Pro-Tech cannulas are designed to optimize nasal and oral signal transfer. Pro-Tech cannulas use special filters to prevent moisture contamination to the pressure transducer and the possible transfer of airborne disease from patient to patient.

### Cannula accessories

Description	Part number
Cannula adapter kit	P1324
Cannula titration filter (50 pack)	P1107
Cannula titration filter (10 pack)	P1109
RUSleeping RTS kit	1041483



We provide both thermocouples and thermistors compatible with most major PSG systems. Our comfortable and easy-to-place sensors continue to be a leader at sleep testing facilities around the world. Variations include the ability to monitor oral/nasal separately and/or together with adult and pediatric sizes, and disposable thermocouples. Insulated tips eliminate artifact and are available in single and separate channel versions.

### Specifications:

Sensor technology: thermocouple and thermistor

Typical PSG settings:

- Sensitivity: 2 – 30  $\mu\text{V}/\text{mm}$
- Low frequency filter: 0.16 Hz or lower
- High frequency filter: 15 Hz

Typical signal amplitude: 400  $\mu\text{V}$  peak-to-peak  
(three element single channel sensor)

Output impedance: 7 Ohms

Standard connector type: 1.5 mm safety connector

Wire length: 7.0 feet (2.13 meters)

### Reusable thermocouple (cannula style)

Description	Part number
Thermocouple 6" single element adult	P1221
Airflow sensor 1 channel, adult	P1222
One channel ADAM nasal only	P1228
One channel ADAM nasal and oral	P1229
One channel BREEZE nasal and oral	P1229-4523
Airflow sensor 1 channel pediatric	P1223
Airflow sensor 1 channel pediatric small nasal bridgemount	P1214
Airflow sensor 2 channel adult	P1224
Airflow sensor 2 channel ADAM nasal and oral	P1230
Airflow sensor 2 channel pediatric	P1225
Airflow sensor 3 channel adult	P1226
Airflow Sensor 3 channel pediatric	P1227

### Disposable thermocouple

Description	Part number
Reusable wireset	P1238
Disposable airflow sensors (10 pack)	P1242
BreathSensor cable	P1332
BreathSensor cable (Suzanne)	P1333
BreathSEN cable SD20 adult	P1112
BreathSEN cable Sandman Pocket adult	P1154

### Reusable thermistor

Description	Part number
Thermistor 1 channel adult 1.5mm Alice 5	P1274
Airflow sensor 1 channel adult (Alice 4)	P1286
Airflow sensor 1 channel adult (Alice 3)	P1246
Airflow sensor 1 channel, adult (Suzanne)	P1312
Airflow sensor 1 channel adult (Sandman Express)	P1364
Airflow sensor 1 channel adult (Embletta)	P1274-249
Airflow sensor 1 channel pediatric (Alice 5)	P1336
Airflow sensor 1 channel pediatric (Alice 4)	P1299
Airflow sensor 1 channel pediatric (Alice 3)	P1298
Airflow sensor 1 channel pediatric (Suzanne)	P1313
Airflow sensor 1 channel pediatric (Embletta)	P1298-249
Airflow sensor 1 channel pediatric (Sandman Express)	P1378
Airflow sensor 1 channel pediatric small nasal bridgemount (Alice 5)	P1337
Airflow sensor 1 channel pediatric small nasal bridgemount (Alice 4)	P1297
Airflow sensor 1 channel pediatric small nasal bridgemount (Alice 3)	P1296
Airflow sensor 1 channel pediatric small nasal bridgemount (Suzanne)	P1314
Airflow sensor 3 channel pediatric	P1227
Thermistor airflow nasal-oral adult (Alice PDx)	P1388

## Oral airflow sensors



Description	Part number
Thermocouple, with 1.5mm safety connectors	P1273
Thermistor (Embletta)	P1273-249
Thermistor 1 channel adult oral 1.5mm (Alice 5)	P1360
Thermistor 1 channel adult oral (Alice 4)	P1285
Thermistor 1 channel adult oral (Alice 3)	P1284
Thermistor 1 channel adult 20" (Flaga)	P1275
Thermistor adult oral (Alice 5)	P1344
Oral thermistor adult (Alice PDx)	P1379

# Pressure transducers

## PTAF2 Pressure Transducer



The PTAF2 is a pressure-based transducer designed to generate accurate respiratory signals. Other features include high and low level outputs, unfiltered or filtered airflow output, snoring output, and remote-control options. It is used in either AC or DC configurations and during nCPAP titrations. Using the PTAF2 along with Pro-Tech cannulas helps ensure signal integrity and patient comfort. PTAF2 is warranted for one year.

### Specifications:

- Sensor technology: differential pressure transducer
- Jackbox connection: AC or DC
- Output types: airflow and snore
- Cannula connector: dual female Luer Lock
- Size: 4.96" (126mm) x 2.76" (70mm) x .95" (24mm)
- Weight: .29 lbs. (30 grams (with battery))
- Power source: 9 volt battery, alkaline
- Battery life: 1000 hours
- Input pressure range: +/- 25 cm H<sub>2</sub>O
- High level outputs (typical):
  - 2.0V peak to peak (+/- 1V)
- Low level outputs (typical):
  - 600  $\mu$ V peak to peak (+/- 300  $\mu$ V)
- Output cable connectors:
  - Varies by polygraph manufacturer
- Output cable length:
  - 7 ft. (2.13 m) (extensions available)

## PTAF2

Description	Part number
PTAF2 startup kit	P1287
Kit contains: 1287: PTAF2 module; 9V alkaline battery; 1258: cannula sample pack; airflow cable(s) and snore cable	

Please have the make and model number of polygraph you are using when you contact our customer service department to receive the correct cable configuration for your unit.

## PTAF2 cables

Description	Part number
Low level cable 1.5mm connector	P1075
Low level cable 1/8 male connector	P1076
Low level cable 3/32 male connector	P1077
High level cable 1/8 male connector	P1078
High level cable 1/8 female connector	P1079
High level cable 3/32 male connector	P1080
High level cable 1/4 male connector	P1081
High level cable 6-4 modular connector	P1082
EXT cable with coupler 25' connector	P1087-025
EXT cable with coupler 50' connector	P1087-050
EXT cable with coupler 100' connector	P1087-100
EXT cable with coupler 200' connector	P1087-200
High level cable 3.5mm connector	P1138



## PTAF Lite



The PTAF Lite is a small, piezo-style pressure transducer and is a lightweight AC device. This product is warranted for one year.

### Specifications:

Sensor technology: piezo style pressure transducer

Jackbox connection: AC only

Output types: airflow and snore

Cannula connector: single female luer lock

Size: 2.13" (54mm) x 1.38" (35mm) x .58" (15mm)

Weight: 25 grams

Power source: none required

Input pressure range: +/- 25mc H<sub>2</sub>O

Description	Part number
PTAF Lite startup kit	P1289
PTAF Lite for Alice 5	P1304
Kit contains: 1258: cannula sample pack; 1289: PTAF Lite	

Please have the make and model number of polygraph you are using when you contact our customer service department to receive the correct configuration for your unit.

### Pressure accessories

Description	Part number
Cannula titration filter (50 pack)	P1107
Cannula titration filter (10 pack)	P1109
Cannula adapter kit	P1324
CPAP titration kit	P1327
CPAP titration kit Alice PDx	P1391

## Respiratory Inductive Plethysmography



Our affordable zRIP technology provides true breathing movement tracings with no false paradoxing and accurate signals for the detection of respiratory effort. The zRIP sensor belts have been designed for complete patient coverage and are fully washable. The zRIP modules are available in a SUM RT (breath-to-breath summation) and in a non-sum model.

### zRIP specifications

Typical polygraph settings:

**Sensitivity:** Approximately 10-50  $\mu\text{v}/\text{mm}$  per channel. Adjustment of the sensitivity up or down is typically required. Response is dependent upon such variables as sensor application and patient effort.

**Low frequency filter/time constant:** .16 Hz/1 second or longer. Shorter time constants or higher low frequency filter settings will significantly attenuate waveforms. Longer time constants or lower low-frequency filter settings will display more information regarding patient effort.

**High Frequency Filter:** 35 Hz

**Battery:** two AAA replaceable batteries with green light indicator button to check batteries. 600 hours continuous operation.

## zRIP startup kits

Description	Part number
zRIP kit adult Kit contains: P1133: 2 each zRIP wiresets; P1732: zRIP driver module; P1806: 2 each zRIP adult effort belts	P1808
zRIP Sum RT kit adult Kit contains: P1133: 2 each zRIP wiresets; P1733: zRIP Sum RT driver module; P1806: 2 each zRIP adult effort belts	P1839
zRIP kit adult (Alice 5) Kit contains: P1133: 2 each zRIP wiresets; P1736: zRIP driver module (Alice 5); P1806: 2 each zRIP adult effort belts	P1818
zRIP kit adult (Alice 4) Kit contains: P1133: 2 each zRIP wiresets; P1735: zRIP driver module (Alice 4); P1806: 2 each zRIP adult effort belts	P1816
zRIP kit adult (Alice 3) Kit contains: P1133: 2 each zRIP wiresets; P1734: zRIP driver module (Alice 3); P1806: 2 each zRIP adult effort belts	P1812
zRIP kit adult (Bio-logic) Kit contains: P1133: 2 each zRIP wiresets; P1738: zRIP driver module (Bio-logic); P1806: 2 each zRIP adult effort belts	P1820
zRIP kit adult Alice PDx Kit contains: 2 each P1170 wiresets, 2 each P1806 zRIP adult effort belts	P1837
zRIP kit adult QDC Kit contains: 1 each P1176 abdomen cable, 1 each P1177 ribcage cable and 2 each P/N 1806 zRIP adult effort belts only	P1841
zRIP kit pediatric Kit contains: P1133: 2 each zRIP wiresets; P1732: zRIP driver module; P1807: 2 each zRIP pediatric effort belts	P1809
zRIP Sum RT kit pediatric Kit contains: P1133: 2 each zRIP wiresets; P1733: zRIP Sum RT driver module; P1807: 2 each zRIP pediatric effort belts	P1840
zRIP kit pediatric (Alice 5) Kit contains: P1133: 2 each zRIP wiresets; P1736: zRIP driver module (Alice 5); P1807: 2 each zRIP pediatric effort belts	P1819
zRIP kit pediatric (Alice 4) Kit contains: P1133: 2 each zRIP wiresets; P1735: zRIP driver module (Alice 4); P1807: 2 each zRIP pediatric effort belts	P1817
zRIP pediatric (Alice 3) Kit contains: P1133: 2 each zRIP wiresets; P1734: zRIP driver module (Alice 3); P1807: 2 each zRIP pediatric effort belts	P1815
zRIP kit pediatric (Bio-logic) Kit contains: P1133: 2 each zRIP wiresets; P1738: zRIP driver module (Bio-logic); P1807: 2 each zRIP pediatric effort belts	P1821
zRIP kit pediatric QDC Kit contains: 1 each P1176 abdomen cable, 1 each P1177 ribcage cable and 2 each P1807 zRIP pediatric effort belts only	P1842



### zRIP – non-kit part number list

Description	Part number
zRIP driver module	P1732
zRIP Sum RT driver module	P1753
zRIP module (Alice 5)	P1736
zRIP module (Alice 4)	P1735
zRIP module (Alice 3)	P1734
zRIP module (Bio-logic)	P1738
zRIP adult effort sensor 24" – 75" (61cm – 190cm)	P1806
zRIP adult effort sensor large 45" – 123" (114cm – 312cm)	P1822
zRIP Pediatric effort sensor 16" – 42" (41cm – 107cm)	P1807
zRIP wireset	P1133
zRIP wireset (Medcare)	P1137
zRIP wireset (Alice PDx)	P1170
zRIP cable abdomen (QDC)	P1176
zRIP cable ribcage (QDC)	P1177

# Respiratory effort sensors

## Piezo respiratory effort



Easy to apply for all sizes of patients, the low profile of the sensor straps maximizes patient comfort during sleep studies. The belting solutions with our piezo effort sensors range from stretch Velcro® straps to one-size-fits-all (CT2 versions). Our piezo effort sensors are compatible with most PSG systems and plug directly into standard AC channels. All sensors are latex free.

### Specifications:

Typical polygraph settings:

- Sensitivity: 2-30  $\mu\text{V}/\text{mm}$
- Low frequency filter: 0.15 Hz or lower
- High frequency filter: 15Hz

Typical signal amplitude:

600  $\mu\text{V}$  peak-to-peak

Standard connector type:

1.5 mm safety connector

Wire length:

7.0 feet (2.13 meters)

## Piezo respiratory effort kits

Description	Part number
One channel kit, adult, 1.5" Kit contains: P1420: adult Velcro strap kit 1.5"; P1460: piezo sensor 1.5"	P1461
Two channel plus kit, adult 1.5" Kit contains: P1420: 2 each adult Velcro strap kit 1.5"; P1460: 3 each piezo sensor 1.5"	P1463
One channel kit, adult 1.5" (Alice 4) Kit contains: P1420: adult Velcro strap kit 1.5"; P1571: piezo sensor, 1.5" (Alice 4)	P1572
One channel kit, adult 1.5" (Alice 3) Kit contains: P1420: adult Velcro strap kit 1.5"; P1547: piezo sensor, 1.5" (Alice 3)	P1548
One channel kit, pediatric 1" Kit contains: P1448: pediatric Velcro strap kit 1"; P1453: pediatric piezo sensor 1"	P1462
Two channel plus kit, pediatric 1" Kit contains: P1448: 2 each pediatric Velcro strap kit 1"; P1453: 3 each pediatric piezo sensor 1"	P1464

## Piezo respiratory effort sensors

Description	Part number
Piezo sensor 1.5"	P1460
Piezo sensor 1.5" (Alice 4)	P1571
Piezo sensor 1.5" (Alice 3)	P1547
CT2 piezo sensor adult	P1582
CT2 piezo sensor adult (Bio-logic Traveler)	P1582-249
CT2 piezo sensor adult (Alice 5)	P1586
CT2 piezo sensor adult (Alice 4)	P1804
CT2 piezo sensor adult (Alice 3)	P1803
CT2 piezo sensor adult (Suzanne)	P1589
CT2 piezo sensor adult, (Embletta)	P1800
CT2 adult chest (Sandman Pocket)	P1823
CT2 adult abdominal (Sandman Pocket)	P1824
Piezo sensor 1" pediatric	P1453
CT2 piezo sensor pediatric	P1585
CT2 piezo sensor pediatric (Alice 5)	P1587
CT2 piezo sensor pediatric (Alice 4)	P1814
CT2 piezo sensor pediatric (Alice 3)	P1813
CT2 piezo sensor pediatric (Suzanne)	P1584
CT2 pediatric chest (Sandman Pocket)	P1825
CT2 pediatric abdominal (Sandman Pocket)	P1826

## Straps and extensions



### Straps and extensions

Description	Part number
CT1 adult Velcro strap kit 1.5" Kit contains: P1421: adult Velcro strap 1.5", size 1; P1422: adult Velcro strap 1.5", Size 2; P1423: adult Velcro strap 1.5", size 3	P1420
CT1 pediatric Velcro strap kit 1.5" Kit contains: P1417: pediatric Velcro strap 1.5", size 1; P1418: pediatric Velcro strap 1.5", size 2; P1419: pediatric Velcro strap 1.5", size 3	P1416
CT1 pediatric Velcro strap kit 1" Kit contains: P1449: pediatric Velcro strap 1", size 1; P1450: pediatric Velcro strap 1", size 2; P1451: pediatric Velcro strap 1", size 3; P1452: pediatric Velcro strap 1", size 4	P1448
CT2 extension strap	P1592

# Body position sensors

## Body position sensors



Description	Part number
SPI sensor DC with 3.5mm mono connector	P1664
SPI sensor DC with 1.5mm safety connector	P1664-WS2074
SPI resistive flaga	P1676
SPI sensor with 220 connector (Bio-logic)	P1692
Body position sensor (Alice 5)	P1694
Body position sensor (Alice 4)	P1707
Body position sensor (Alice 3)	P1706
SPI sensor DC (Suzanne)	P1695
Body position sensor (Sandman SD20)	P1719
Body position sensor resistive (Bio-logic T2)	P1737
Body position sensor DC with 3.5mm female connector	P1746
Body position sensor (Sandman Pocket)	P1744

Our Body Position Sensors have the versatility to identify the primary sleep positions: prone, supine, left, right and upright. Body position can be continuously monitored no matter how much the patient moves during sleep testing. The success of many sleep test sessions is dependent on patient relaxation. We have designed our Body Position Sensors with comfort in mind; they easily and comfortably attach to the thoracic respiratory effort belt. Our Body Position Sensors are compatible with most computer PSG systems on the market.

### Specifications:

Typical signal amplitude:

Prone: 0.62 VDC

Supine: 0.41 VDC

Left: 0.19 VDC

Right: 0.78 VDC

Upright: 0.0 VDC

All positions are +/- 10% over the life of the battery

Output impedance: 78.8 KOhms

Wire length: 7.0 feet (2.13 meters)

# Snore sensors and microphones

## Snore sensors and microphones



Description	Part number
Piezo snore sensor	P1696
Snore microphone (Alice 4)	P1704
Snore microphone (Alice 3)	P1703
Snore microphone (Suzanne)	P1705
Snore microphone	P1716
Snore sensor (Embletta)	P1718

We offer two snore sensing options: piezo sensors and microphones. Utilizing a thin piezo crystal, the snore sensor provides an accurate, reproducible signal. The snore microphone is designed to provide a thin baseline and clear responsive signals. The piezo sensor and microphone are compatible with most PSG systems.

### Piezo snore sensor

#### (P1696, P1718) specifications:

Typical polygraph settings:

- Sensitivity: 20-75  $\mu\text{V}/\text{mm}$
- Low frequency filter: 5 Hz
- High frequency filter: 70 Hz

Typical signal amplitude: 1000  $\mu\text{V}$  peak-to-peak

Wire length: 7.0 feet (2.13 meters)

### Snore microphone – dynamic

#### (P1716) specifications:

Typical polygraph settings:

- Sensitivity: 20-75  $\mu\text{V}/\text{mm}$
- Low frequency filter: 10 Hz
- High frequency filter: 70 Hz

Typical signal amplitude: 1000  $\mu\text{V}$  peak-to-peak

Wire length: 7.0 feet (2.13 meters)

### Snore microphone (P1704, P1703, P1705) – electret specifications:

Typical polygraph settings: Refer to PSG manual

Typical signal amplitude: 1000  $\mu\text{V}$  peak-to-peak

Wire length: 7.0 feet (2.13 meters)

## Periodic Limb Movement



Our Periodic Limb Movement (PLM) sensors detect a patient's leg or arm movement during sleep studies and provide clean, reliable signals while permitting the utmost patient comfort. Piezo technology is sensitive to subtle movements and requires no skin preparation prior to patient application. Using kits, multiple sensors can be configured to combine PLM signals onto a single channel.

### Specifications:

Sensor technology: piezo

Typical polygraph settings:

- Sensitivity: 10-50  $\mu\text{V}/\text{mm}$
- Low frequency filter: 5 Hz
- High frequency filter: 70Hz

Typical signal amplitude: 700  $\mu\text{V}$  peak-to-peak

Connector type: 1.5 mm safety connector

Wire length: 11.0 feet (3.35 meters)

### Periodic Limb Movement

Description	Part number
PLM sensor	P1697
PLM sensor kit	P1698
Kit contains: P1697: PLM sensor; P1689: Velcro strap, PLM large; P1690: Velcro strap, PLM small	
PLM sensor kit, 2 sensors	P1699
Kit contains: P1697: 2 each PLM sensor; P1689: 2 each Velcro strap, PLM large; P1690: 2 each Velcro strap, PLM small; P1097: 1.5mm safety male jumper wireset	
1.5mm male jumper wireset	P1097
PLM Velcro strap large	P1689
PLM Velcro strap small	P1690



## Sensor tester



The ST-3 Sensor Tester is the solution for verifying functionality of sleep equipment and accessories. The ST-3 checks and verifies EEG electrodes and wires for continuity. The square wave generator feature verifies channels of the polygraph, and helps ensure that the jackbox inputs and DC hi-level boxes are functional. In addition, respiratory effort belts, snore sensors, airflow sensors, and PLM sensors can be tested for output.

### Specifications:

Size: 2.76" (70mm) x 4.96" (126mm)

Weight: 130 grams (with battery)

Power: 9 volt battery, alkaline

## Sensor tester

Description	Part number
ST-3 sensor tester kit	P1711
Kit contains: P1315: continuity test wireset;	
P1710: ST-3 sensor tester	
ST-3 sensor tester kit (Alice)	P1722
ST-3 continuity test wireset	P1315

## Education

We offer a complete line of in-lab and portable diagnostic equipment and screening tools, as well as equipment used in the treatment of sleep disorders.

Visit [www.respironics.com/products](http://www.respironics.com/products) to see our complete line of products.

Visit [www.pro-tech.com/products/product-selector](http://www.pro-tech.com/products/product-selector) to determine the Pro-Tech sensor for your system.



### Education

Description	Part number
Introduction to Diagnostic Equipment for the Sleep Technologist – Nasal Airflow Pressure Transducer, Pulse Transit Time, Respiratory Inductance Plethysmography	1052673

## Appendix: AASM scoring manual guidelines and Pro-Tech sensor application

AASM scoring manual guideline – adults	Pro-Tech sensor
<p>Thermal airflow</p> <p>Adults VIII.1.A: “The sensor to detect absence of airflow...is an oronasal thermal sensor”</p>	Oronasal thermocouple P1222
<p>Flow nasal pressure</p> <p>Adults VIII.1.B: “The sensor for detection of... hypopnea is a nasal air pressure transducer...”</p>	<p>PTAF2 Startup kit P1287</p> <p>Nasal cannulas: adult (60 per case) P1259</p>
<p>Respiratory effort</p> <p>Adults VIII.1.C: “The sensor for detection of respiratory effort is.... inductance plethysmography.”)</p>	Respiratory Inductance Plethysmography: zRIP adult kit P1808
AASM scoring manual guideline – children	Pro-Tech sensor
<p>Thermal airflow</p> <p>Children VIII.1.A: “The sensor to detect absence of airflow....is an oronasal thermal sensor.”</p>	Oronasal thermocouple P1223
<p>Flow nasal pressure</p> <p>Children VIII.1.B: “The sensor for detection of... hypopnea is a nasal air pressure transducer...”</p>	<p>PTAF2 startup kit P1287</p> <p>Nasal cannulas: pediatric (60 per case) P1263</p>
<p>Respiratory effort</p> <p>Children VIII.1.C: “The sensor for detection of respiratory effort is.... inductance plethysmography.”</p>	Respiratory Inductance Plethysmography: zRIP pediatric kit P1809
<p>Hypoventilation</p> <p>Children VIII.1.E: “Acceptable methods for assessing alveolar hypoventilation.... end-tidal PCO<sub>2</sub> monitoring.”</p> <p>Enable EtCO<sub>2</sub> and pressure monitoring simultaneously from both nostrils using one cannula.</p>	Pro-Flow MultiPurpose Cannula: pediatric (30 per case) P1346



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Royal Philips Electronics**

**How to reach us**

[www.philips.com/healthcare](http://www.philips.com/healthcare)

Fax: +31 40 27 64 887

**Asia**

+852 2821 5888

**Europe, Middle East, Africa**

+31 40 27 87246

**Latin America**

+55 11 2125 0764

**North America**

+1 425 487 7000

800 285 5585 (toll free, US only)

Philips Respironics  
1010 Murry Ridge Lane  
Murrysville, PA 15668

Customer Service  
+1 724 387 4000  
800 345 6443 (toll free)

Respironics Europe, Middle East, Africa  
+33 1 47 52 30 00

Respironics Asia Pacific  
+852 3194 2280

[www.philips.com/respironics](http://www.philips.com/respironics)

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