



➤ **Guarantee for safe
thermal processes**

**Measuring systems for process recording,
analysis and optimization**

globalPoint

Guarantee for safe thermal processes



globalPoint ICS has been one of the leading international suppliers of measuring technology for all soldering processes for more than 20 years. We are setting global benchmarks with precise, innovative and reliable systems as well as intelligent, user-friendly software.

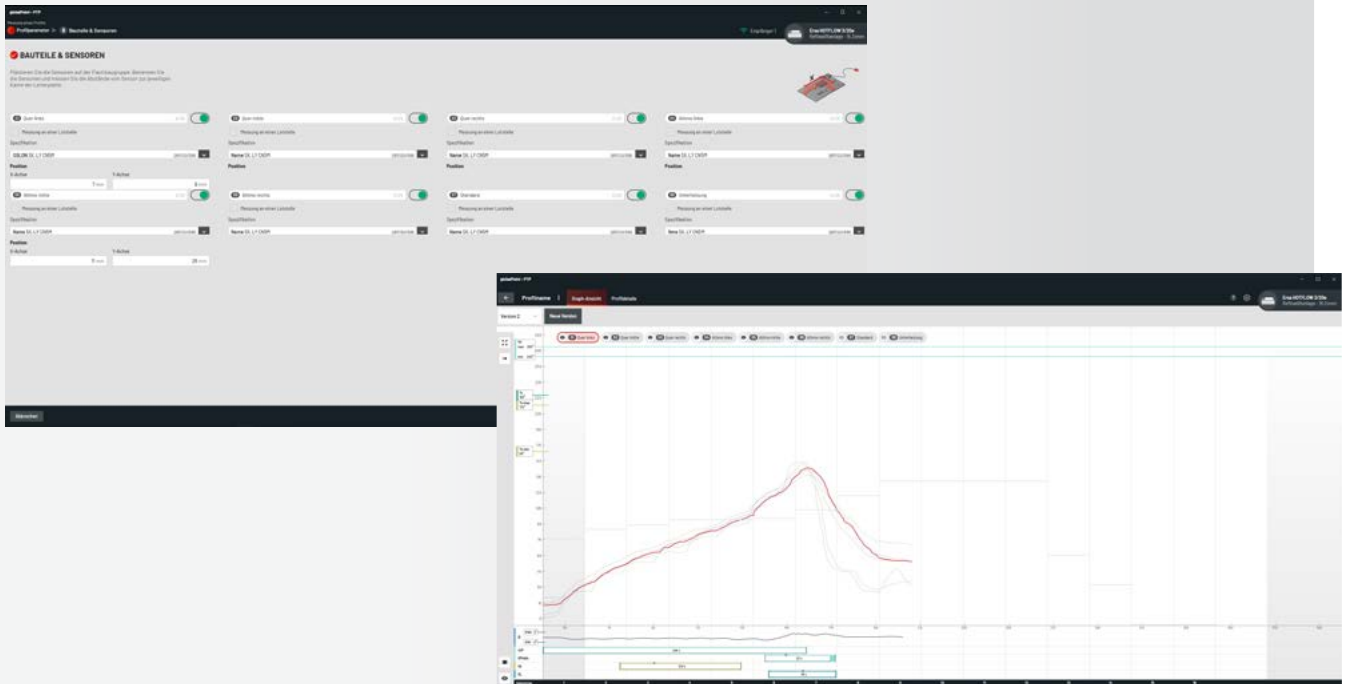
Our range covers measuring technology for reflow systems, vacuum/vapour phase soldering systems, wave soldering systems and selective soldering systems as well as the matching measuring boards.

The **PTP® Professional Temperature Profiler** products are based on current research results, cutting-edge technologies and the best materials.

- > **Reflow Soldering**
- > **Vacuum Soldering**
- > **Vapour Phase Soldering**
- > **Wave Soldering**
- > **Selective Soldering**

➤ PTP® software

For process recording, analysis and optimisation



➤ PTP® software

- Makes operation easier
- Profile prediction
- Adaptations for the new Profiler XT generation (extended measuring range, battery status, up to 20 channels) with tried-and-trusted Bluetooth real-time data transmission
- New measuring board tool MBT.EXE for managing customer-specific or PTP® measuring boards
- Download of the current upgrade software PTP® (Windows® Vista/7 or higher)

The **PTP® software** provides outstanding solutions for parameter calculation, process evaluation, profile comparison and documentation.

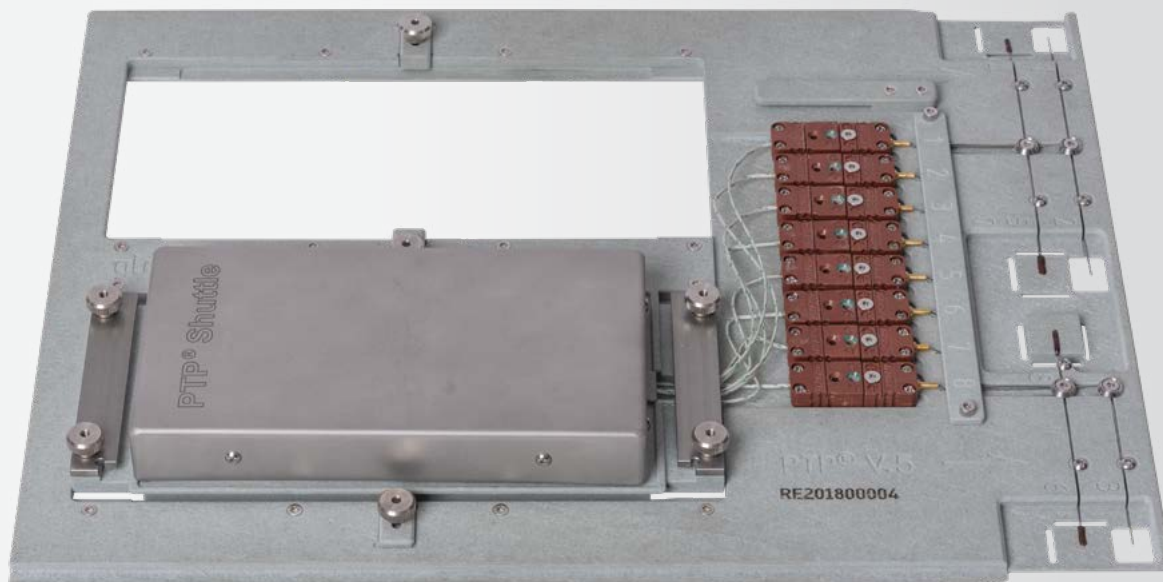
In addition, it guarantees a physically correct profile optimisation following only one measurement.

TECHNICAL HIGHLIGHTS

- Freely editable protocols with profile, gradient and module diagrams
- Automatic profile evaluation with 6 parameters
- Precise profile prediction after only one measurement!
- 3D profile display
- Display of continuous gradient curve
- Free software updates from the website
- High-precision interpolating 7-point calibration
- Data export to MS Excel
- Wizard for automatic profile comparison
- Real-time 8-channel radio data transmission plus internal temperature and battery charge 0-100%
- Comparative superposition of 2 measurements (18 profiles can be shown)
- Calculation of the module stress factor

➤ Reflow-Convection

PTP® measuring system for process recording, analysis and optimization



Measuring board REFLOW V5 (OGP-RE001) with PTP® Shuttle (OGP-SH001)

➤ Measuring board REFLOW V5

- Recording of the cross profiles and gradients over the entire transport length and width
- Measuring of thermal zone separation as well as atmospheric temperature
- Recording of the complete energy input of the system as a basis for evaluating the process capability of a PCB and comparison of the different soldering systems

The **measuring board REFLOW V5** and **measuring electronics PTP®** make an ideal and versatile instrument for process recording, analysis and optimisation available. The **measuring board REFLOW V5** has eight thermocouples of the highest accuracy class. These are placed permanently stable on specially designed measuring fields. The **measuring board REFLOW V5** is used to check the system parameters as well as their optimisation in the soldering system.

The **PTP® Shuttle** has been designed for the **measuring board REFLOW V5** and provides thermal protection for the **PTP® electronics**. The extenders included allow the transport widths to be adapted accordingly. The **PTP® electronics** have been designed as a real-time Bluetooth connection between the transmitter module TX and receiver module RX and has an

optimum design for the soft soldering processes reflow-convection, wave and selective soldering. Exclusive use of standard interfaces makes maximum flexibility possible. A built-in Li-ion battery guarantees at least four hours of continued use and requires 30 minutes to be recharged on average. The integrated battery charge display and monitoring of the electronics internal temperature guarantees maximum safety and interruption-free operation.

The **PTP® software** provides outstanding solutions for parameter calculation, process evaluation, profile comparison and documentation. In addition, it ensures a physically correct profile optimisation following only one measurement.

➤ Reflow-Convection

Technical data & order information

TECHNICAL HIGHLIGHTS

- Intelligent Bluetooth connection makes data transmission and display possible in real time
- 8 measuring channels with 24 bit resolution
- Measuring interval from 100 ms; measuring time up to 200 min
- Internal temperature monitoring and triple integrated thermal protection
- Electronics: RoHS-compliant with standard USB interface and miniature thermal connector
- Freely editable protocols with profile, gradient and module diagrams
- Automatic profile evaluation with 6 parameters
- Precise profile prediction after only one measurement!
- 3D profile display
- Free software updates
- High-precision interpolating 7-point calibration
- Modern power management with lithium-ion battery and charge state display in real time via radio signal as well as internal temperature display

TEMPERATURE MEASUREMENT

Measuring range	-150 to 1,350 °C
Measuring accuracy	±0,5 °C
Resolution	0.1 °C
Measuring interval	0.1 s to 2 s
Measuring range	8 channels for Ni/CrN

DIMENSIONS PTP® ELECTRONIC TRANSMITTER

Length	86 mm
Width	86 mm
Height	23 mm

DIMENSIONS MEASURING BOARD

Length	390 mm
Width	300 mm
Height	14 mm

RECEPTACLE FOR THERMAL PROTECTION BOX

Length	224 mm
Width	101 mm
Width adjustable up to	310 mm
Height above pin chain	25 mm

DIMENSIONS THERMAL PROTECTION BOX

Length	211 mm
Width	101 mm
Height	30-33 mm

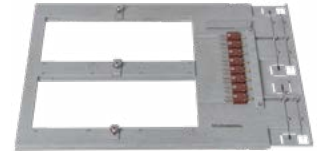
FURTHER SERVICES

Customer-specific measuring boards

Customer-specific software features

ORDER DATA

> OGP-RE001



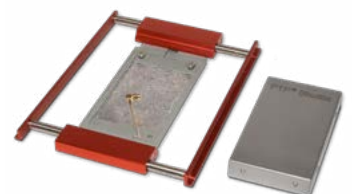
1x measuring board REFLOW V5 with 8 thermocouples Ni/CrNi

> OGP-ME001



1x PTP® electronics + software
1x calibration PTP® electronics (incl. certificate with DKD reference)
1x aluminium case with insert for electronics and Shuttle

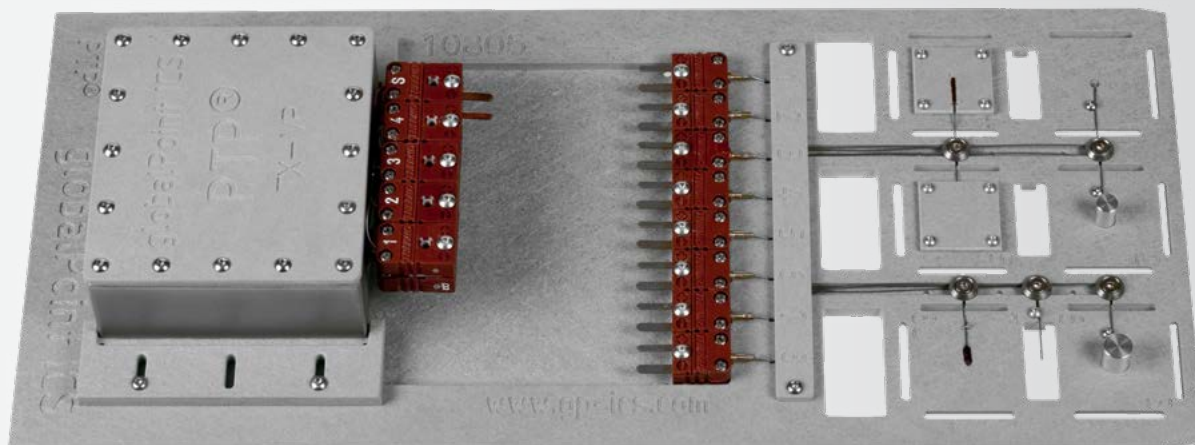
> OGP-SH001



1x PTP® shuttle, E-carrier and thermal protection

➤ Reflow Vapour Phase/Vacuum

PTP® measuring system for process recording, analysis and optimisation



Measuring board VAPOURPHASE VP (OGP-VPE001) with PTP® electronics (OGP-ME002)

➤ Measuring board VAPOURPHASE VP

- Recording of gradients over different thermal masses
- Measuring of temperatures of upper and underside especially for multi-layer PCBs
- Measurement of the atmospheric temperature
- Measurement of the liquidus temperature of solder pastes
- Recording of the temperature curve on BGA components (top and ball side)
- Evaluation of the thermal behaviour under high component load

The **measuring board VAPOURPHASE VP** and the **measuring electronics PTP®** make an ideal and versatile instrument for process recording, analysis and optimisation available.

The **measuring board VAPOURPHASE VP** is equipped with 8 thermocouples of the highest accuracy class. These are placed permanently stable on specially designed measuring fields. The measuring board is used to check the system parameters and their optimisation in the soldering system.

The **PTP® electronics VP** are designed as a real-time Bluetooth connection between the transmitter module TX and receiver module RX, and has an optimum design for the vapour phase/vacuum process. Exclusive use of standard interfaces makes maximum flexibility and minimum thermal load on the process possible thanks to very

low mass of the measuring electronics. The integrated battery charge display and monitoring of the electronics internal temperature are the basis for maximum safety and interruption-free operation.

The **PTP® software** provides outstanding solutions for parameter calculation, process evaluation, profile comparison and documentation. In addition, it guarantees a physically correct profile optimisation following only one measurement.

➤ Reflow Vapour Phase/Vacuum

Technical data & order information

TECHNICAL HIGHLIGHTS

- Intelligent Bluetooth connection makes data transmission and display possible in real time
- 8 measuring channels 0.1 °C resolution (24 bit ADC) and 0.5 °C accuracy
- Measuring interval from 100 ms; measuring time up to 200 min
- Continual control and display of internal temperature
- Electronics: RoHS-compliant with standard USB interface and miniature thermal connector
- Freely editable protocols with profile, gradient and module diagrams
- Automatic profile evaluation with 6 parameters
- Suitable for use in vacuum processes
- 3D profile display
- Display of continuous gradient curve
- Free software updates via the website
- High-precision interpolating 7-point calibration
- Modern power management with lithium-ion battery and charge state display via radio signal

TEMPERATURE MEASUREMENT

Measuring range	-150 to 1,350 °C
Measuring accuracy	±0,5 °C
Resolution	0.1 °C
Measuring interval	0.1 s to 2 s
Measuring range	8 channels for Ni/CrN

DIMENSIONS PTP® ELECTRONIC VP TRANSMITTER

Length	100 mm
Width	90 mm
Height	40 mm

DIMENSIONS MEASURING BOARD

Length	390 mm
Width	175 mm
Height	14 mm

AMBIENT CONDITIONS MEASURING BOARD

Ambient temperature from	280 to 300 °C
Max. ambient temperature for 20 s is	350 °C
Max. height with electronics	43 mm
Guaranteed radio contact even in vacuum systems	
Free field range	> 300 m

FURTHER SERVICES

Customer-specific measuring boards

Customer-specific software features

ORDER DATA

> OGP-VP001



1x measuring board VAPOURPHASE VP with 8 thermocouples Ni/CrNi

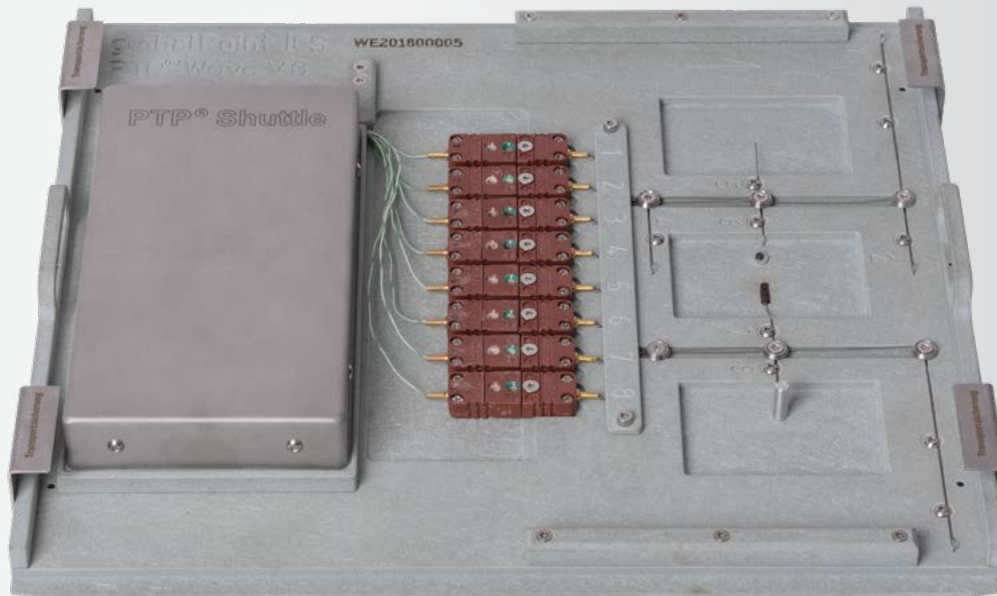
> OGP-ME002



1x PTP® electronics VP + software
 1x calibration PTP® electronics (incl. certificate with DKD reference)
 1x aluminium case with insert for electronics and Shuttle

➤ Wave

PTP® measuring system for process recording, analysis and optimisation



Measuring board WAVE V6 (OGP-WE001) with PTP® shuttle hood

➤ Measuring board WAVE V6

- Recording of the cross profiles over the entire transport length and width
- Measurement of the pre-heating temperature of the PCB top/bottom
- Measurement of the atmospheric temperature
- Measurement of dwell times left, centre and right
- Measurement of the transport speed
- Recording of the energy input in a measuring dummy as a basis for evaluating the risk to sensitive components (electrolyte condensers)
- High-temperature antenna onboard

The **measuring board WAVE V6** and **measuring electronics PTP®** make an ideal and versatile instrument for process recording, analysis and optimisation available.

The **measuring board WAVE V6** has eight thermocouples of the highest accuracy class. These are placed permanently stable on specially designed measuring fields. The measuring board is used to check the system parameters and their optimisation in the soldering system.

The **PTP® measuring system** is designed as a real-time Bluetooth connection between the transmitter module TX and receiver module RX, and has an optimum design for the wave and selective processes. Exclusive use of standard interfaces makes maximum flexibility possible. A built-in Li-ion battery guarantees

at least four hours of continued use and requires 30 minutes to be recharged on average. The integrated battery charge display and monitoring of the electronics internal temperature guarantees maximum safety and interruption-free operation.

The **PTP® software** provides outstanding solutions for parameter calculation, process evaluation, profile comparison and documentation. In addition, it guarantees a physically correct profile optimisation in compliance with the process.

Technical data & order information

TECHNICAL HIGHLIGHTS

- > Intelligent Bluetooth connection makes data transmission and display possible in real time
- > 8 measuring channels with 24 bit resolution
- > Measuring interval from 100 ms; measuring time up to 200 min
- > Internal temperature monitoring and triple integrated thermal protection
- > Electronics: RoHS-compliant with standard USB interface and miniature thermal connector
- > Freely editable protocols with profile, gradient and module diagrams
- > Automatic profile evaluation with 6 parameters
- > Precise profile prediction after only one measurement!
- > 3D profile display
- > Display of continuous gradient curve
- > Free software updates via the website
- > High-precision interpolating 7-point calibration
- > Modern power management with lithium-ion battery and charge state display via radio signal as well as internal temperature display

TEMPERATURE MEASUREMENT

Measuring range	-150 to 1,350 °C
Measuring accuracy	±0,5 °C
Resolution	0.1 °C
Measuring interval	0.1 s to 2 s
Measuring range	8 channels for Ni/CrN

DIMENSIONS PTP® ELECTRONIC TRANSMITTER

Length	86 mm
Width	86 mm
Height	23 mm

DIMENSIONS MEASURING BOARD

Length	330 mm
Width	300 mm
Height	14 mm

AMBIENT CONDITIONS MEASURING BOARD

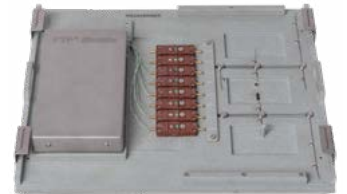
Ambient temperature from	280 to 300 °C
Max. ambient temperature for 20 s is	350 °C
Max. height with Shuttle	25 mm
Range with measuring insert in wave soldering systems at least	10 m
Free field range	> 300 m

FURTHER SERVICES

- Customer-specific measuring boards
- Customer-specific software features

ORDER DATA

> OGP-WE001



1x measuring board WAVE V6 with 8 thermocouples Ni/CrNi and shuttle hood

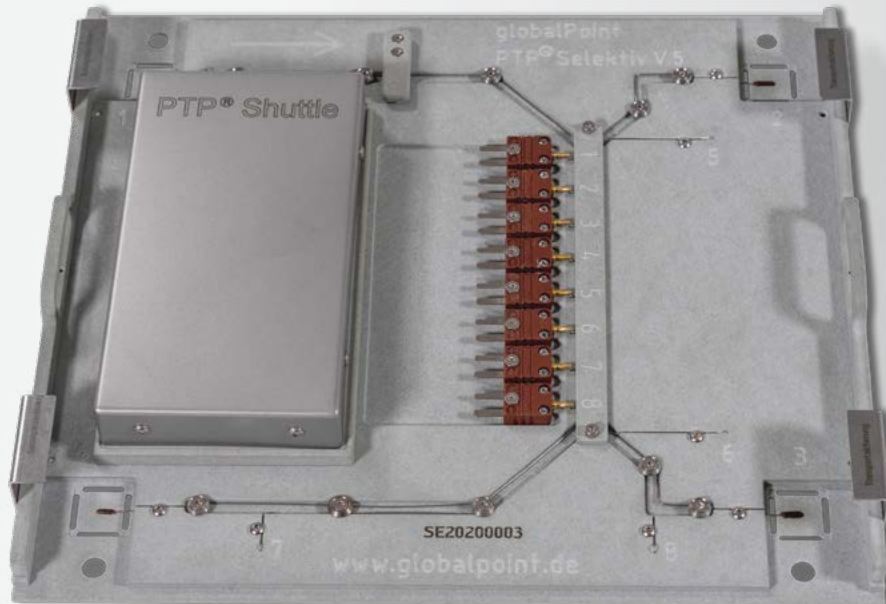
> OGP-ME001



1x PTP® electronics + software
 1x calibration PTP® electronics (incl. certificate with DKD reference)
 1x aluminium case with insert for electronics and Shuttle

➤ Selective

PTP® measuring system for process recording, analysis and optimisation



Measuring board WAVE V6 (OGP-SE001) with PTP® shuttle hood

➤ Measuring board SELECTIVE V5

- Recording of the pre-heating temperature of the PCB top/bottom
- Measurement of the pre-heating temperature of the PCB top/bottom
- Measurement of the solder temperature at the nozzle
- Measurement of the traverse speed in X and Y direction
- High-temperature antenna onboard

The **measuring board SELECTIVE V5** and **measuring electronics PTP®** make an ideal and versatile instrument for process recording, analysis and optimisation available.

The **measuring board SELECTIVE V5** has eight thermocouples of the highest accuracy class. These are placed permanently stable on specially designed measuring fields. The measuring board is used to check the system parameters and their optimisation in the soldering system.

Due to the integrated calibration holes at the corner positions, the measuring board can also be used for the mechanical calibration of the soldering system.

The **PTP® measuring system** is designed as a real-time Bluetooth connection between the transmit-

ter module TX and receiver module RX, and has an optimum design for the wave and selective processes. Exclusive use of standard interfaces makes maximum flexibility possible. A built-in Li-ion battery guarantees at least four hours of continued use and requires 30 minutes to be recharged on average. The integrated battery charge display and monitoring of the electronics internal temperature guarantees maximum safety and interruption-free operation.

The **PTP® software** provides outstanding solutions for parameter calculation, process evaluation, profile comparison and documentation. In addition, it guarantees a physically correct profile optimisation in compliance with the process.

Technical data & order information

TECHNICAL HIGHLIGHTS

- Intelligent Bluetooth connection makes data transmission and display possible in real time
- 8 measuring channels with 24 bit resolution
- Measuring interval from 100 ms; measuring time up to 200 min
- Internal temperature monitoring and triple integrated thermal protection
- Electronics: RoHS-compliant with standard USB interface and miniature thermal connector
- Freely editable protocols with profile, gradient and module diagrams
- Automatic profile evaluation with 6 parameters
- Precise profile prediction after only one measurement!
- 3D profile display
- Display of continuous gradient curve
- Free software updates via the website
- High-precision interpolating 7-point calibration
- Modern power management with lithium-ion battery and charge state display via radio signal as well as internal temperature display

TEMPERATURE MEASUREMENT

Measuring range	-150 to 1,350 °C
Measuring accuracy	±0,5 °C
Resolution	0.1 °C
Measuring interval	0.1 s to 2 s
Measuring range	8 channels for Ni/CrN

DIMENSIONS PTP® ELECTRONIC TRANSMITTER

Length	86 mm
Width	86 mm
Height	23 mm

DIMENSIONS MEASURING BOARD

Length	330 mm
Width	300 mm
Height	30 mm

AMBIENT CONDITIONS MEASURING BOARD

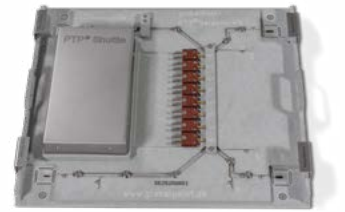
Ambient temperature from	280 to 300 °C
Max. ambient temperature for 20 s is	350 °C
Max. height with Shuttle	25 mm
Range with measuring insert in selective soldering systems at least	10 m
Free field range	> 300 m

FURTHER SERVICES

- Customer-specific measuring boards
- Customer-specific software features

ORDER DATA

> OGP-SE001



1x measuring board Selective V5 with 8 thermocouples Ni/CrNi and shuttle hood

> OGP-ME001



1x PTP® electronics + software
 1x calibration PTP® electronics (incl. certificate with DKD reference)
 1x aluminium case with insert for electronics and Shuttle

↗ Worldwide – Our Sales & Service Network



Current contact information can be found
at any time at www.globalpoint.de

↗ **globalPoint ICS GmbH & Co. KG**
Otto-Schott-Str. 1
97877 Wertheim/Germany

Phone +49 9342 800-266
Fax +49 9342 800-127
info@gp-ics.de
service@gp-ics.de
www.globalpoint.de

globalPoint