



An ISO 9001:2008 Company

PRODUCT RANGE

- ✓ Temperature Sensor
- ✓ Non Contact IR Thermometer
- ✓ Infrared Line Scanner
- ✓ PID Controller
- ✓ Thermal Imager
- ✓ Kiln Shell Scanner
- ✓ High Temperature camera

www.tspl-india.com

In 1982, the manufacturing facility of the company was set-up at Industrial estate, Makhapura in Ajmer and in a few years Toshniwal Sensors became a recognized leader in the field of Temperature measurement. In due course TSPL became distributor in India for a range of Products such as PID Controllers, Kiln Shell Scanners, High Temperature Cameras, Thermal Imagers, Non Contact Pyrometers, Oxygen Analyzers, Data Loggers, Gas and Humidity Sensors etc. We have implemented our Quality Management Systems as per ISO 9001:2008, ensuring quality assurance from raw material stage to finish stage of products. Our Emphasis is on Providing good quality solution at a very competitive price.

It is our intention to continue to build on our already vast product offering, as well as our service capabilities to bring the best possible products and services to our valued customers. We believe our strong emphasis on growth and technological progression will continue to improve our capability to satisfy customers' needs well into the future..

• THERMOCOUPLES

A thermocouple consists of two dissimilar metallic wires joined at one end, known as hot junction. When the hot junction is heated, an emf is produced which corresponds to the temperature difference between the hot junction and free ends known as cold junction. This thermo emf is measured by galvanometric/potentiometer metric/digital instruments, to display temperature.

We offer a large variety of thermocouples and assemblies (Type J, K, R, S & B) for use in virtually all industrial applications. Thermocouples offered by us have high accuracy, reproducibility and high sensitivity and confirm to international standards. Thermocouples with outer metallic protection sheaths grade SS316, SS310, SS446, Inconel-600/800 or ceramic tubes type 610 and 710 or special coatings of Tungsten Carbide or PTFE can be provided depending upon customer's requirement.



TRI LEVEL THERMOCOUPLES

For distributor and Fore hearth of a Glass industry we offer Hardened Platinum material giving a significantly improved performance over conventional Platinum and its alloys. Simplex Thimble Thermocouples and Tri Level Thimble Thermocouples monitor the condition of the glass before forming into shapes. The sensors Provide feedback to heaters allowing temperature control across the glass channel. Tri Level Sensors have three measuring points at defined positions along the Sensor length. Glass depths are often around 150 mm. Three measuring points say 25, 75, and 125mm from the bottom give the temperature profile of the glass flow. A thimble of 200mm is normally adequate .

• RTD (Resistance Temperature Detector)

For temperature measurement in the range, -200°C to + 600°C Resistance Temperature Detector (RTD) is preferred to Thermocouple and other sensors because of its higher accuracy, reliability, compact size and faster response. RTDs find use in almost all industries like plastic and rubber processing, food industries, pharmaceuticals, chemical & petrochemical plants and power plants. It is also used in diesel engines & ships, process control and laboratories for temperature measurement and control.

RTDs are available with single or double resistance elements and in 2, 3 or 4 wire circuits. Various types of protection sheaths for protection of the element and screw-in threaded bushes either fixed (welded) or adjustable by screws (for non-pressure application) or by compression fitting (for pressure application) for mounting are available.




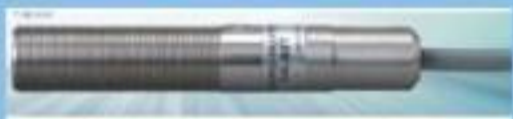
FEATURES

- High accuracy and stability
- Fast response & high insulation resistance
- Wide temperature range (-200°C to +600°C)
- Needs only copper cables for long run.

• **PORTABLE INFRARED THERMOMETERS :**

<p>TB-350</p>  <p>Temp. Range: -50°C to +350°C DS Ratio: 8:1</p>	<p>TB-550</p>  <p>Temp. Range: -50°C to +550°C DS Ratio: 8:1 (Economy model)</p>	<p>TB-1300</p>  <p>Temp. Range: -50°C to +1300°C DS Ratio: 50:1</p>	<p>TB-1600</p>  <p>Temp. Range: -50°C to +1600°C DS Ratio: 50:1</p>
<p>PT-2LD</p>  <p>Temp. Range: -40°C to +510°C DS Ratio: 10:1</p>	<p>PT-S80</p>  <p>Temp. Range: -30°C to +600°C DS Ratio: 33:1, Coaxial laser marker</p>	<p>PT-U80</p>  <p>Temp. Range: -30°C to +600°C DS Ratio: 33:1/35 point memory, USB out</p>	<p>KTL-PRO</p>  <p>Temp. Range: +200°C to +2000°C DS Ratio: 270:1 Output: 4-20mA</p>

• **ONLINE INFRARED THERMOMETERS :**

<p>BA Series</p>  <p>Temp. Range: 0°C to +500°C DS Ratio: 30:1 Output: 4-20mA</p>	<p>SA-80T-2A</p>  <p>Temp. Range: 0°C to +200°C DS Ratio: 500:80 Output: 4-20mA</p>	<p>SA-80T-4A</p>  <p>Temp. Range: 0°C to +400°C DS Ratio: 500:80 Output: 4-20mA</p>	
<p>Pyrospot Series 10</p>  <p>Temp. Range: 10°C to +3000°C Output: 4-20mA</p>	<p>Pyrospot Series 11</p>  <p>Temp. Range: +150°C to +3000°C Output: 4-20mA</p>	<p>Pyrospot Series 40/44</p>  <p>Temp. Range: +40°C to +2500°C Output: 4-20mA</p>	<p>Pyrospot Series 30/34</p>  <p>Temp. Range: +600°C to +1800°C Output: 4-20mA</p>

• **PORTABLE THERMAL IMAGERS :**

TI-160



General Purpose Thermal Imaging Camera, 160 x 120 Pixels resolution. Temp. Range : -20°C to + 350°C

TI-395



General Purpose Thermal Imaging Camera, 384 x 288 Pixels resolution. Temp. Range : -20°C to upto + 1200°C With Visual Camera

TI-175



General Purpose Thermal Imaging Camera, 160 x 120 Pixels resolution. Temp. Range : -20°C to upto + 1200°C With Visual Camera

TI-600



High Resolution Thermal Imaging Camera, 640 x 480 Pixels resolution. Temp. Range : -40°C to upto + 1200°C With Visual Camera

• **ONLINE THERMAL IMAGERS :**

Pyroview 640L



Temperature Range: -20 ° C to 500 ° C in different spectral range | 640 x 480 pixels

Pyroview 380 Compact



Temperature Range: -20 ° C to 2500 ° C in different spectral range | 384 x 288 pixels

Pyroview 380



Temperature Range : -20 ° C to 1250 ° C in different spectral range | 384 x 288 pixels

Pyroview 640N Compact



Temperature Range: +600°C to +1500°C (optional 2500°C) | 640 x 480 pixels

Pyroview 160L



Temperature Range: -20°C to upto 500°C | 160 x 120 pixels

Pyroview 320L



Temperature Range: -20°C to upto 500°C | 320 x 240 pixels

Pyroview 512N



Temperature Range: 600°C to upto 3000°C | 512 x 384 pixels

Pyroview 320N



Temperature Range: 300°C to upto 1200°C | 320 x 256 pixels

• **Early Fire Detection System**

PYROVIEW / PYROSOFT FDS software enables users to check the temperature inside a particular region of interest. An alarm will be raised in the event that predefined temperature limit are exceeded and the current infrared image will be saved. This infrared fire detection system are suitable for use in Waste bunkers, Paper factories, Recycling storage, Forests and Wood buildings. Because of the early recognition and warning, fire fighting is started instantly with a high efficiency, ecological and material damages are avoided.



• **INFRARED LINE SCANNERS :**

**Pyroline
128 Compact**



Temperature Range :0°C to 1300°C in different spectral ranges- 128 pixels – for fixed-mounted applications

**Pyroline
256 Compact**



Temperature Range :0°C to 1300°C in different spectral ranges- 256 pixels – for fixed-mounted applications

**Pyroline
128L**



Temperature Range :0°C to 550°C in different spectral ranges- 128 pixels – for instant non-contact measurement

**Pyroline
256L**



Temperature Range :0°C to 550°C in different spectral ranges- 256 pixels – for instant non-contact measurement

• **PID CONTROLLERS :**

**SR1 & SR3
Series**



Low cost general purpose digital PID controller in size 48 X 48mm and 96 x 96mm

**SRS11A/12A/
13A/14A Series**



Multi-input & multi-range performance and 2-output heating & cooling control

**SR-80
Series**



Digital multi-function PID controller

**SR-90
Series**



Digital multi-function PID controller

SR-253 Series



High accuracy digital PID controller

MR-13 Series



Three channel digital PID controller

SD-16A



Digital Indicator

KR-16A



Digital Indicator & Selector Switch

FP- 23



High Spec. Program Controller

FP-93 Series



Digital programmable PID controller

EM-51 Series



Digital Servo Controller

EM-70 Series



Digital Servo Controller

• KILN SHELL SCANNERS

Gesotec Industrial Technologies- world's leading Optronic Solutions with smart XMM Sensors System solutions with eXpert -sensors for advanced industrial iMaging and non contact temperature Measurement.

Over 800 Kiln Shell Scanners installed around the world. Gesotec is OEM supplier to AGEMA®, Krupp-Polysius®, Siemens® etc.

Gesotec's Millennium-TMCx series of high performance infrared linescanners define a new industrial standard for mechanical scanning electro-optical high speed pyrometers. With the unique modular design for easy maintenance and customizing the Millennium scanners incorporate state of the art components for non-contact infrared linescanning, allowing both, high speed and high resolution continuous process monitoring. Eight standard versions of the TMCx- linescanners are available, with a variety of temperature ranges, thermal- and spatial resolutions, and with spectral filtering adapted to the specific application. The modular design of the TMCx sensors allows Gesotec to customize every unit individually at very reasonable cost to the users technical and commercial advantage.



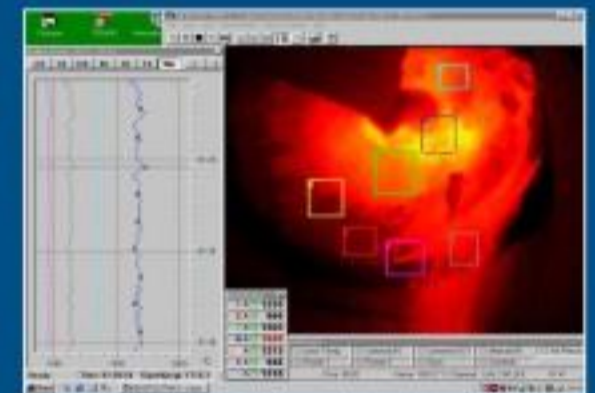
• HIGH TEMPERATURE CAMERA

Advanced Industrial Temperature Monitoring & Control

PYROVIPER- furnace probe camera models "PV2x" with integrated "two- dimensional-pyrometry" provide state-of-the-art infrared imaging for industrial high temperature process scenarios. The rugged industrial solid-state Infrared-FPA/CCD imaging sensor has the advantage of no "moving system parts". It gives the operator the ability to observe the process conditions with great visual details while simultaneously measuring accurate temperatures of virtually any object- or region- of interest within the systems field of view (FOV).

Sensor modules are mounted to the "process wall" together with an air-cooled wall-box. Normally no additional water cooling is required. A heat resistant housing and an automatic retracting device ensure safe operation. All Pyroviper lens- & sensor- assemblies can be air- purged and cooled by two separate air supply lines. The heavy-duty furnace lens is available with usable lengths between 406mm and 1143mm, thus covering even most demanding installation conditions.

Both, The Image and the temperature- information of the process is "observed" via wide angle optics of advanced design and transferred by a special relay lens system to the high-Tec remote control sensor module, an enhanced solid-state infrared imager. The resulting signals are transmitted via coax- or via fiber-optic cable (up to 2km) to the smart Data-Acquisition-Controller "PDAC-2" that usually is located in - or near - the process control room



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