



# TE SENSOR SOLUTIONS FOR HOME APPLIANCES

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TE Connectivity is one of the largest sensor companies in the world, with innovative sensor solutions that help customers transform concepts into smart, connected creations. With the recent acquisition of Measurement Specialties, a global designer and manufacturer of sensors and sensor-based systems, TE offers an unmatched range of both connectivity and sensor solutions. Sensor solutions include a rich portfolio of temperature, humidity, pressure and piezoelectric film technologies for a wide range of applications.

## APPLICATION SOLUTIONS



### Dishwasher

- Magneto-resistive sensor for spray arm block detection
- Temperature sensor for water temperature measurement and heater control



### Washing Machine

- Temperature sensor for water temperature measurement and heater control
- Pressure sensor for water level detection and pump control



### Clothes Dryer

- Humidity sensor for drying process control
- Thermopile for drying process control



### Cooktop

- Temperature sensor for induction or glass ceramic cooking plate control



### Household Oven

- Pyrolytic cleaning and cooking regulation
- Temperature sensor for induction or glass ceramic cooking plates



### Refrigerator

- Temperature sensor for fridge and freezer cabinet temperature control
- Humidity sensor for defrost energy management



### Microwave Oven

















- Humidity sensor for food humidity measurement
- Infrared temperature sensor for water/food temperature monitoring (contactless)



### Small Appliances

- Level/pressure sensor for control
- Temperature sensor for regulation
- Piezo film sensor for control buttons

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<b>Sensor</b>	<b>Humidity</b>	<b>Humidity</b>	<b>Piezo Film</b>	<b>Position</b>	<b>Pressure</b>	
<b>Product</b>	<b>HS1101LF</b>	<b>HTU3535PVBM/Wire</b>	<b>HTU383X/Wire</b>	<b>LDTCT Family</b>	<b>KMY, KMZ</b>	<b>MS5525DSO</b>
<b>Package</b>	Through hole TO39 with side opening plastic cap	Cost effective small size mini-module	Cost effective small size mini-module	Piezo film elements with or without mass and pins	SOT-223, E-line 4 pin	• Board mount • 24-bit digital small outline sensor
<b>Type</b>	Analog output	Analog voltage RH and NTC temperature	Digital RH and temperature	Cantilever beam with vertical or horizontal pins	Linear low field sensor	Gage, absolute, differential, compound
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Very robust and recognized component capable of withstanding most of the applications in the humidity world in very cost effective ways</li> </ul>	<ul style="list-style-type: none"> <li>• PTFE filter (optional)</li> <li>• Electronics fully protected (5 Volt)</li> <li>• Multiple connector choices</li> <li>• Based on HTU21</li> </ul>	<ul style="list-style-type: none"> <li>• PTFE filter (optional)</li> <li>• Electronics fully protected (5 Volt)</li> <li>• Multiple connector choices</li> <li>• Based on HTU21</li> </ul>	<ul style="list-style-type: none"> <li>• Very low cost</li> <li>• High sensitivity (1 V/g)</li> <li>• Ultra-low power (self generating)</li> </ul>	<ul style="list-style-type: none"> <li>• High sensitivity</li> <li>• Low hysteresis</li> <li>• Linear to uniaxial field strength</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure and temperature measurement</li> <li>• Single supply of 1.8 or 3.6Vdc</li> <li>• Top straight/ barb, flat top, o-ring seal</li> </ul>
						
<b>Sensor</b>	<b>Temperature</b>	<b>Temperature</b>	<b>Temperature</b>	<b>Temperature</b>	<b>Temperature</b>	
<b>Product</b>	<b>Axial Leaded Thermistors</b>	<b>TSYS Series</b>	<b>Platinum Thin Film Sensors</b>	<b>Push-in Sensors</b>	<b>Screw-in Sensors</b>	<b>Refrigeration Molded Probes</b>
<b>Package</b>	DO-35	QFN16, TDFN8	Wired component	Brass, copper or stainless steel closed-end tube	Brass, copper or stainless steel housing with integrated connector	PVC or TPE
<b>Type</b>	NTC, Analog output, Glass coated	Digital output, I2C, SPI, PWM, SDM (convertible to analog voltage)	<ul style="list-style-type: none"> <li>• Analog output</li> <li>Thin film platinum deposited on ceramic substrate, glass coated</li> <li>• Tube outline available</li> <li>• Connection via radial leads</li> </ul>	Epoxy potted element, miniature design	Epoxy potted element, rigid sheath	Overmolded
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Tight tolerance (<math>\pm 1\%</math>)</li> <li>• Max stability using high density (HD) chip</li> <li>• Hermetically sealed</li> <li>• Tinned &amp; Nickel plated leads</li> </ul>	<ul style="list-style-type: none"> <li>• Low power</li> <li>• Small size</li> <li>• Calibrated and ready to use</li> <li>• 16 bit resolution</li> </ul>	<ul style="list-style-type: none"> <li>• Long term stability</li> <li>• Interchangeability</li> <li>• Small dimensions</li> <li>• Short response time</li> <li>• High electrical insulation</li> </ul>	<ul style="list-style-type: none"> <li>• Corrosion resistant</li> <li>• Available with mounting tabs or clips</li> </ul>	<ul style="list-style-type: none"> <li>• Corrosion resistant</li> <li>• Different threads types</li> <li>• Connectors available</li> </ul>	<ul style="list-style-type: none"> <li>• Mounting clips available</li> </ul>
						
<b>Sensor</b>	<b>Temperature</b>	<b>Temperature</b>	<b>Temperature</b>			
<b>Product</b>	<b>Pipe Clamp Sensors</b>	<b>Pipe Mount Sensors</b>	<b>Boiler Sensors</b>	<b>Oven Sensors</b>		
<b>Package</b>	Plastic housing with metal insert	Copper or Stainless Steel housing	Brass housing	Rigid stainless steel housing		
<b>Type</b>	<ul style="list-style-type: none"> <li>• Overmolded</li> <li>• Epoxy potted</li> </ul>	<ul style="list-style-type: none"> <li>• Overmolded</li> <li>• Epoxy potted</li> </ul>	<ul style="list-style-type: none"> <li>• Screw</li> </ul>	<ul style="list-style-type: none"> <li>• Ceramic tube encapsulation</li> <li>• High temperature cable</li> </ul>		
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Different pipe diameters available</li> </ul>	<ul style="list-style-type: none"> <li>• Fast response time</li> <li>• Moisture resistant construction</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated connector</li> <li>• Corrosion resistant</li> <li>• Different threads types and connectors available</li> </ul>	<ul style="list-style-type: none"> <li>• High temperature</li> <li>• Easy integration/installation</li> <li>• Higher dielectric strength according to type</li> </ul>		

PRODUCT AND APPLICATION MATRIX	Force	Humidity	Piezo Film	Position	Pressure	Temperature	Vibration
Washing Machine	●		●	●	●	●	●
Microwave Oven	●		●			●	
Fans		●	●			●	
Refrigerators		●	●			●	
Dishwasher		●	●	●		●	
Clothes Dryer			●			●	
Dehumidifiers		●	●				
Domestic Ovens			●			●	
Cooking Plates			●			●	
Coffee Machines			●			●	
Hair Dryers			●			●	
Vacuums			●				

**Quality Statements:**

- AS/EN 9100
- EN 13980
- ESA 266
- ESCC266E
- ESCC 400C
- ISO 13485
- ISO 14001
- ISO 9001
- PART21G
- TS 16949

[te.com/en/products/sensors.html](http://te.com/en/products/sensors.html)

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