



OMIKA



ABOUT US

Omika Sensors Private Limited designs, develops, manufactures and markets highly engineered temperature measurement and control products such as Thermocouples, RTD's, Thermowells, Temperature Gauges, Pressure Gauges, nfrared pyrometers & Accessories for almost all possible applications & processes. We serve a wide range of industries like Power, Oil & Gas, Petrochemical, Speciality chemical, Steel, Glass, Nuclear, Pharmaceutical, Cement etc. We are knowledge based solution providers who believe in engaging all our resources to deliver cost-effective and long lasting solutions to our customers.

We provide not just high-quality, high-performance & cost effective products that comply with global standard requirements, but also develop innovative customized solutions that deliver additional value to the customers.



TEAM

Founded in 2021, we are a team of experienced professionals with experience of more than 10 years in field instrumentation, temperature & pressure measurement. Our experienced team of application specialists and engineers are here to help for build a solution that works for you. We have deep application know-how and responsive service & support centers.

SALES & SUPPORT

We are backed by effective sales & service centers across India. Our regional offices are present in Madhya Pradesh, Rajasthan, Delhi, West Bengal, Gujarat & Maharashtra.

VISION

Our mission is to become the foremost enterprise & leaders in the market of temperature and pressure measurement. We are continuously expanding our presence across India to achieve our vision of becoming leading providers of temperature and pressure measurement solution .

INDUSTRIES

- 🏭 Chemical & Fertilizer
- 🏠 Glass
- 🏗️ Cement
- ⚡ Power
- 🛢️ Oil & Gas
- 🏭 Steel
- 🍷 Food & Beverage
- 💊 Pharmaceuticals



THERMOCOUPLE

Two dissimilar metals which are joined at one end forming a hot junction and the open wire end acting as the cold junction. When hot junction gets heated, a voltage difference will occur between both junctions due to the electromotive force.

Thermocouples are available in both accuracy (Standard & Special) as per IEC 60584 / ANSI MC 96. 1 & IS 7358.

- ✓ Base metal thermocouples (K, J, T, E, N)
- ✓ Noble metal thermocouples (R, S, B)
- ✓ Special thermocouples on customer requirements.

Specifications

Type	MI Type / Non MI Type
Configuration	Simplex / Duplex / Triplex or on request
Temperature Range	As per thermocouple table
Accuracy	Class 1, Class 2
Sheath Material	SS316, SS310, Inconel 600, HRS446, Pyrosil etc.
Sheath Diameter	1, 1.5, 2, 3, 4.5, 6, 8, 9.5, 10, 12.7 or on request
Sheath Length	20 mm to 60 meter or on request
Enclosure Material	Die cast / SS316 / SS304
Enclosure Approval	CCOE / ATEX / IP etc.

Thermocouple Conductor Combinations, Operating Range & Accuracy				
Thermocouple Type	Temperature Range (Continuous)	Conductors +/-	Accuracy	
			Standard	Special
K	-200 to 1260°C	Nickel-Chromium Vs. Nickel-Aluminium	± 2.2°C or ± 0.75%	± 1.1°C or ± 0.4%
T	-200 to 370°C	Copper Vs. Copper-Nickel	± 1.0°C or ± 0.75%	± 0.5°C or ± 0.4%
J	0 to 760°C	Iron Vs. Copper-Nickel	± 2.2°C or ± 0.75%	± 1.1°C or ± 0.4%
N	-200 to 1260°C	Nicrosil Vs. Nisil	± 2.2°C or ± 0.75%	± 1.1°C or ± 0.4%
E	-200 to 870°C	Nickel-Chromium Vs. Copper-Nickel	± 1.7°C or ± 0.5%	± 1.0°C or ± 0.4%
R	0 to 1450°C	Platinum 13% Rhodium Vs. Platinum	± 1.5°C or ± 0.25%	± 0.6°C or ± 0.1%
S	0 to 1550°C	Platinum 10% Rhodium Vs. Platinum	± 1.5°C or ± 0.25%	± 0.6°C or ± 0.1%
B	0 to 1600°C	Platinum 30% Rhodium Vs. Platinum 6% Rhodium	± 0.5°C	----



RESISTANCE TEMPERATURE DETECTOR (RTD)

Temperature measuring sensors which use the correlation between metal resistance and temperature to measure the temperature of a body. As metal temperature increases its electric resistance also increases. It means temperature of metal is directly proportional to metal resistance.

RTD's are available in all accuracy class (refer below table) as per DIN / IEC 60751 & IS 2848

Metal Resistance can be:

- ✓ $R_t = R_0(1+\alpha t)$
- ✓ R_t = Resistance of RTD at temperature t
- ✓ R_0 = Resistance of RTD at 0°C
- ✓ α = Temperature coefficient of resistance
- ✓ t = Temperature difference

Specifications

Type	MI Type / Non MI Type
Configuration	Simplex / Duplex with 2 wire, 3 wire & 4 wire
Temperature Range	SPRT / SSPRT : - 200° to 850°C Industrial : -200° C to 400°C
Accuracy	Class A, Class B, DIN 1/3, DIN 1/5, DIN 1/10
Sheath Material	SS316, SS316L
Sheath Diameter	3, 4.5, 6, 8, 9.5, 10; Other on request
Sheath Length	20mm to 40meter; Other on request
Enclosure Material	Die cast / SS316 / SS304
Enclosure Approval	CCOE / ATEX / IP etc.

Tolerance / +°c					
°C	Class B	Class A	1/3 DIN	1/5 DIN	1/10 DIN
-200	1.3	0.55	0.44	0.26	0.13
-100	0.8	0.35	0.27	0.16	0.08
0	0.3	0.15	0.10	0.06	0.03
100	0.8	0.35	0.27	0.16	0.08
200	1.3	0.55	0.44	0.26	0.13
300	1.8	0.75	0.60	0.36	-
400	2.3	0.95	0.77	-	-
500	2.8	1.15	-	-	-
600	3.3	1.35	-	-	-
650	3.6	1.45	-	-	-



THERMOWELL

To protect temperature sensores (RTD / Thermocouple), A thermowell is used as a protection tube which is closed from one end.

Thermowell is available in many designs and materials according to application / process requirements.

Specification

Type	General : Bar-Stock, Fabricated Special : Van-stone, Protection Tube, Helical Strake, Velocity Collar etc.
Configuration	Threaded, Flanged, Welded
Tip Style	Straight, Tapered, Stepped
Thermowell Material	General : SS316, SS310, Inconel 600, Inconel 800, HRS446 Exotic : Hastelloy C, Monel, Ceramic, Tungsten carbide, Tantalum, Titanium
Sleeve	Tantalum, Titanium, Hastelloy, PTFE etc.
Coating	Ceramic, Tungsten carbide, Stellite, PTFE etc.



Testing Facility

- ✓ Insulation Resistance test
- ✓ Helium leak test
- ✓ Response time test
- ✓ Hardness test
- ✓ Radiography Test (Junction / Welding joint)
- ✓ Hydro Test (Internal / External)
- ✓ N2 Test
- ✓ Hardness test
- ✓ DP Test
- ✓ Autoclave
- ✓ High Voltage Test
- ✓ Bore concentration

Note : NACE, IBR & MTC 3.1 are provided as per customer requirements.

TEMPERATURE GAUGE

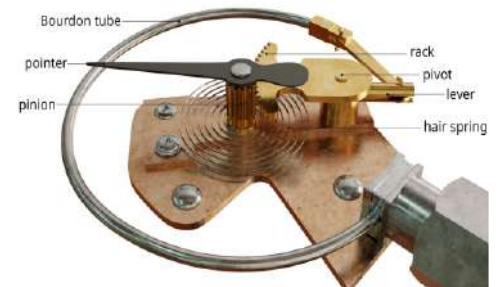
Omika provides a variety of temperature gauges to cater to a wide range of industrial applications.

Bimetal Dial Thermometer

A bimetallic thermometer converts the media's temperature into mechanical displacement using a bimetallic strip. The bimetallic strip consists of two different metals having different coefficients of thermal expansion.

Gas Filled Dial Thermometer

With a gas-actuated temperature gauge the stem, the capillary and the Bourdon tube are joined together into one unit. The instrument is filled with inert gas. If the temperature changes, the internal pressure will also change. The pointer is moved by the action of the pressure via a measuring tube.



Specifications

Dial Size	50 mm, 63 mm, 100 mm, 150 mm
Scale Range	Bimetallic : -50 to 500 Deg.C (Maximum Range 500 Deg.C) Gas filled : -200 to 800 Deg.C (Maximum Range 800 Deg.C)
Positional Mounting	Bottom Entry/Back Entry/Every Angle Entry
Process Connection	1/8", 1/4", 3/8", 1/2", 3/4", 1" (BSP or NPT), Matric on request
Stem Diameter	6mm/8mm/10mm/12mm
Stem Length	Bimetallic : 50 mm to 1500 mm (Maximum 1500 mm Stem Length) Gas filled : 100 mm to 15000 mm (Maximum 15 meter with capillary)
Gauge Accuracy	+/- 1 % F.S.D./Class 1 as per EN-13190
Case & Bezel	SS-304/SS-316, Snap Action Bayonet Type Bezel
Stem Material	SS-304/SS-316/SS-310
Window	Plain Glass/Acrylic Glass/Toughened Glass/Safety Glass
Protection	Weatherproof to IP - 65, IP - 67, IP - 68 (IS/IEC : 60947 / IEC : 60529)
Pointer	Aluminium, black, micrometer adjustable
Over range	125% FSD (upto max temp range of 500°C)
Reset	Micrometer Pointer (standard) External (optional)
Optional	Silicon Oil Filled / Dual Scale/ Colour Band/ Thermowell etc.

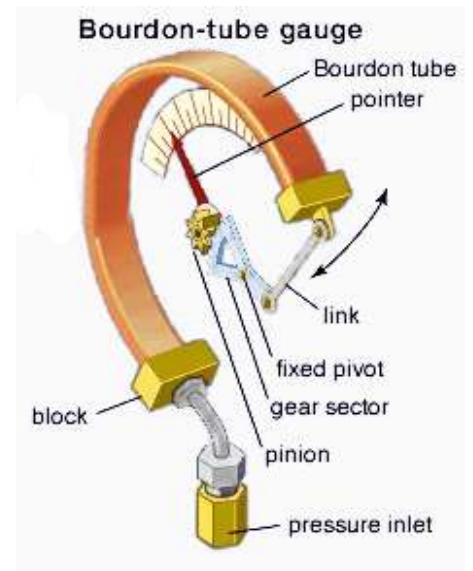


PRESSURE GAUGE

This instrument is used for measuring the condition of a fluid (liquid or gas) that is specified by the force that the fluid would exert when at rest, on a unit area. Omika provides a variety of pressure gauges to cater a wide range of industrial applications.

Bourdon-tube Gauge

The device consists of a flattened circular tube coiled into a circular arc. One end is soldered to a central block and is open to the fluid whose pressure is to be measured; the other end is sealed and coupled to the pointer spindle. When the pressure inside the tube is greater than the outside pressure, the tube tends to straighten, thus turning the pointer, hence the pressure could be read on a circular scale.



Specifications

Dial Size	50 mm, 63 mm, 100 mm, 150 mm
Accuracy	1%FS (1.6% for 63mm)
Ranges	0.6, 1 to 2,500 Kg/cm ² (Bar) -1 to 0/0.6/1.5/5 Kg/cm ² (Bar)
Pressure Type	Gauge, vacuum and compound
Process Connection	Bottom / Lower back / Center back / Panel mounted
Process Connection Size	1/4", 3/8", 1/2", 3/4" (BSP or NPT), Matric on request
Material	Bourdon Tube : SS316 (Optional SS316L etc.) Socket : SS316L Case & Bezel : SS304 (Optional SS316/SS316L etc.) Pointer : Aluminum (optional micrometer adjustment) Dial : Aluminum (Marking option available on request) Movement: SS304
Weather Protection	IP65 / IP66 / IP67
Environmental Conditions	Ambient temperature : -40 ... 60 °C Medium temperature : Max. 200 °C (dry) Max. 100 °C (liquid filled) Storage temperature : -40 ... 65 °C
Overpressure Limit	125% FS Short time
Optional	Diaphragm seals, valves, electric contacts, dampener, gauge saver, syphon etc.



DIAPHRAGM PRESSURE GAUGE

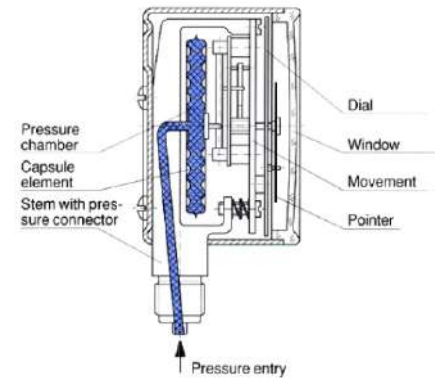
Capsule Pressure Gauge

Capsule pressure gauges are used to measure extreme low pressures as low as 16 mbar. The case houses a sensitive element built up from two diaphragms welded together to form a capsule. When the pressure is applied to the capsule the capsule deflects outwards or inwards.

This capsule is placed in a movement system that converts this linear displacement of the capsule into a rotating movement of the pointer.

Specifications

Dial Size	63 mm, 100 mm, 125 mm, 150 mm
Ranges	-600.....600 Mbar
Pressure type	Gauge, vacuum and compound
Socket	SS316L
Process Connection	1/8", 1/4", 3/8", 1/2" (BSP or NPT), M20x1.5mm
Sensing Element	Capsule
Case & Bezel	SS304/SS316
Pointer	Aluminium (Optional micrometer adjustment)
Dial	Aluminium (Marking option available on request)
Capsule MOC	SS316



Features

- ✓ SS Measuring systems
- ✓ Liquid filled version
- ✓ Capsule MOC : SS316
- ✓ Accuracy : 1.6

Diaphragm Pressure Gauge

A diaphragm pressure gauge, also known as a membrane pressure gauge, is a device that utilizes the deflection of a flexible thin membrane called the 'diaphragm' to measure the pressure of the fluid in a system. The membrane isolates the inner-working components of the pressure gauge from the media, preventing any contamination.

This property makes the diaphragm pressure gauge suitable to use with corrosive or contaminated liquid or gaseous media.

Specifications

Dial Size	63 mm, 100 mm, 125 mm, 150 mm
Ranges	-1...0 to 7 Kg/cm ² (Bar)
Pressure type	Gauge, vacuum and compound
Process Connection	Gauge: 1/4", 3/8", 1/2", (BSP or NPT), M20x1.5, Flange Diaphragm : Screw, Flanged
Material	Sensing element : Diaphragm Socket : SS316L Case & Bezel : SS304 (Optional SS316/SS316L etc.) Pointer : Aluminum (optional micrometer adjustment) Dial : Aluminum (Marking option available on request) Diaphragm MOC : SS316L, Hastelloy C, Tantalum, Monel etc.



Features

- ✓ SS Measuring systems
- ✓ Liquid filled version
- ✓ Diaphragm MOC : SS316L
- ✓ Accuracy : 1.6

Various Design of Diaphragm Seals



Flanged Diaphragm Seal

- ✓ Flush Diaphragm
- ✓ Flushing Ring
- ✓ Large volume
- ✓ Used in high vibration application



Threaded Diaphragm Seal

- ✓ Rigid Construction
- ✓ Forged chamber
- ✓ Diaphragm laser welded
- ✓ Used in Viscous and corrosive media



High-Pressure Diaphragm Seal

- ✓ Separation design & economical
- ✓ All welded construction
- ✓ High pressure application
- ✓ Viscous & corrosive media



"1" Section Diaphragm Seal

- ✓ 1" section extension type
- ✓ Connection upto 1 1/2".
- ✓ Isolation applications
- ✓ Separation design

ACCESSORIES

Temperature Transmitter

- ✓ Sensor input : J, K, R, S, T, N, B, E & Pt100
- ✓ Dimensions : 44mm (Diameter) x 21mm (Height).
- ✓ Response Time : < 100 ms
- ✓ Accuracy : Thermocouple : 0.25% / Pt100 : 0.15%
- ✓ Isolation : Optional
- ✓ Cold junction : Available for thermocouple



Pressure Transmitter

Measuring sensors	Pressure range
Ceramic sensor	0 ... 15 psi up to 0 ... 6,000 psi
	0 ... 1 bar up to 0 ... 400 bar & kg/cm2
	0 ... 100 kPa up to 0 ... 40,000 kPa
Piezo resistive sensors	0 ... 1.5 psi up to 0 ... 3,600 psi
	0 ... 0.1 bar up to 0 ... 250 bar & kg/cm2
	0 ... 10 kPa up to 0 ... 25,000 kPa

- ✓ Process connection: 1/2" NPT (M) Other on request
- ✓ Accuracy : ≤ 0.5 % FS (Optional ≤ 0.25 % FS)
- ✓ Power supply : 11-28 VDC
- ✓ Electric connection : 4-Pin angle connector
- ✓ Output signal : 4-20 mA Optional 0-5 VDC (3W), 0-10 VDC (3W)



Indicators / Controllers

- ✓ Input : J,K,T,N,E,R,S,B, Pt100
- ✓ Accuracy : 0.3% FS
- ✓ Dimension : 48H X 96W X 100L / 96H x 96W x 96L
- ✓ Display : Ultra bright LED display
- ✓ Relay : 2 relay alarms with 6 function options.
- ✓ Output : 4 to 20mA for retransmission
- ✓ Communication interface : Rs485



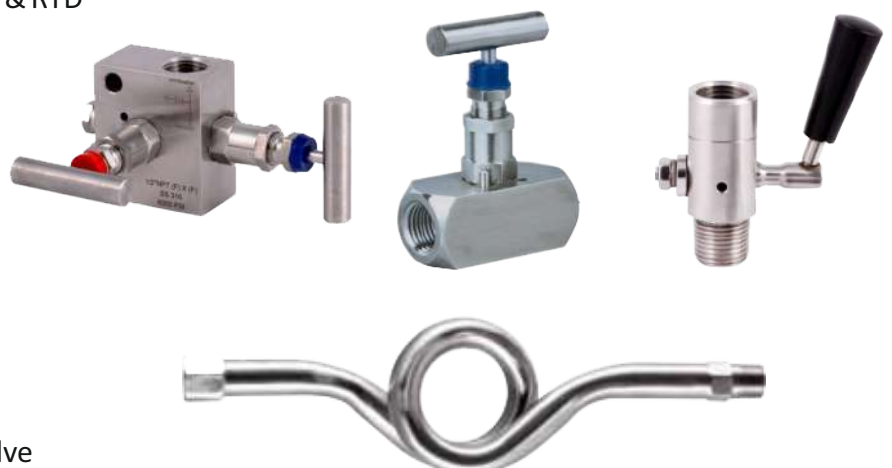
TE Connectors

- ✓ Plug & Jack connector for thermocouple & RTD
- ✓ Standard and Heavy duty
- ✓ Lemo connectors



PG Accessories

- ✓ Manifold 2way / 3Way / 5 way
- ✓ Syphon
- ✓ Snubber
- ✓ Gauge saver
- ✓ Gauge cock / Isolation Valve / Needle Valve



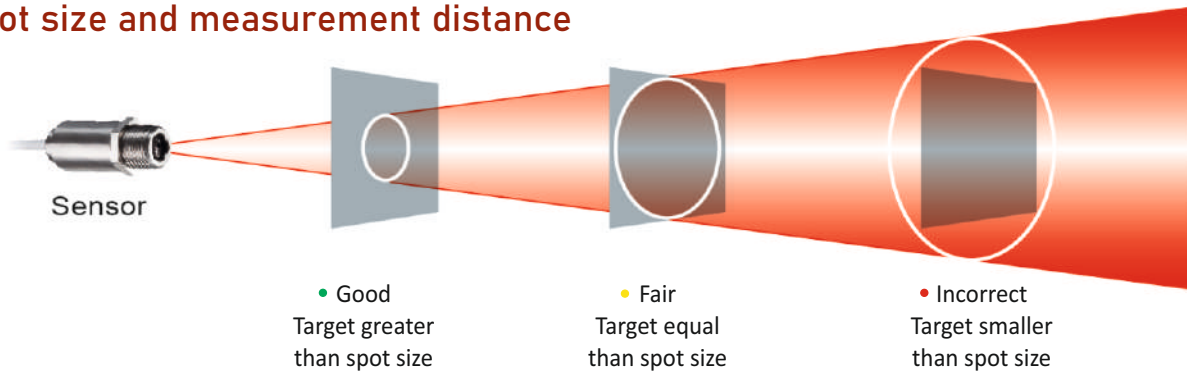
OPTICAL PYROMETER (OPTIKA) :

Omika infrared pyrometers are well suited for spot temperature measurement in various industries like steel, glass, cement, research & development etc.

We use innovative approach to handle the unstable targets and intermediate conditions common to process industries via achieving a higher degree of accuracy far better than other products available in the market.



(A) Spot size and measurement distance



(B) Choosing the right spectral range for your application

We are able to offer appropriate measurement devices for most applications throughout a wide product range. The following explanation helps to find the right wavelength for your application:

Spectral Range	Application
8 – 14 μm	for non-metal surfaces
0.5, 1.0, 1.6, 2.3 μm	mainly for liquid metals and metal surfaces
3.43 μm	for thin plastic films like PE, PP and PS
3.9 ; 4.24; 4.64 μm	for special applications
5.0 μm	for glass surfaces
7.9 μm	for plastic foils and glass surfaces

Pyrometers	Spectral Range	Temperature Range	Optical Resolution	Accuracy	Interface	Analog Output
Single colour	1.0 / 1.6 μm	250....2200°C	300:01:00	+/- 0.3%	USB, RS 232, RS 485, Ethernet, Profibus	0/4-20 mA, 0-5/10V, T/C
	2.3 μm	50....1800°C	300:01:00	+/- 0.3%	USB, RS 232, RS 485, Ethernet, Profibus	0/4-20 mA, 0-5/10V, T/C
	0.5 μm	1000....2000°C	150:01:00	+/- 0.3%	USB, RS 232, RS 485, Ethernet	0/4-20 mA, 0-5/10V, T/C
	5.0 μm	100....1650°C	70:01:00	+/- 1%	USB, RS 232, RS 485, Ethernet	0/4-20 mA, 0-5/10V, T/C
	8-14 μm	-50....1030°C	75:01:00	+/- 1%	USB, RS 232, RS 485, Ethernet	0/4-20 mA, 0-5/10V, T/C
Ratio	0.8-1.1 μm	525....3000°C	100:01:00	+/- 0.5%	USB, RS 232, RS 485	2x0/4-20mA
	1.45-1.75 μm	275....3000°C	100:01:00	+/- 0.3%	USB, RS 232, RS 485	2x0/4-20mA
Portable	1.0 / 1.6 μm	650....1600°C	300:01:00	+/- 0.3%	USB	
	0.5 μm	1000....2000°C	150:01:00	+/- 0.3%	USB	
	8-14 μm	0....1300°C	120:01:00	+/- 1%	USB	

MASTER SENSOR (High accuracy sensors for laboratory use)

Semi Standard Platinum Resistance Thermometer (SSPRT)

Metal sheathed SSPRT is ideal for field and lab use. All the SSPRT's are metal sheathed and less fragile and more affordable range of true Semi Standard Platinum Resistance Thermometers.

Specifications

Temperature Range	-200°C to 670°C
Sheath Material	Inconel 600
Sheath Diameter	6mm
Drift	±30m°C at 0°C after 100 hours at 670°C
Extension leads	1.5 mtr. long teflon Insulated silver plated copper cable
Stability	0.01°C
Handle Dimension	15mm (OD) X 100mm(L)
Optional	1) 5 Point calibration form any NABL Accredited Lab 2) 5 Fixed Point Calibration from any NABL Accredited Lab 3) Miniature connector



Ordering code :
SSPRT - Length in mm - Optional

Noble Metal Master Thermocouple

Omika offers finest platinum and platinum-rhodium alloy, these R Type and S type thermocouples cover a temperature range of 0 °C to 1450 °C with uncertainties as good as 0.15 °C over most of that range.

Specifications

No. of Element	Simplex
Temperature Range	0 to 1500°C
Sheath Material	Alumina (99.7 % pure Al ₂ O ₃)
Sheath length	450mm
Extension Cable	1.5mtr. Long Teflon insulated cable with male/female miniature connector
Sheath Diameter	6mm
Handle Dimension	15mm (OD) X 100mm(L)



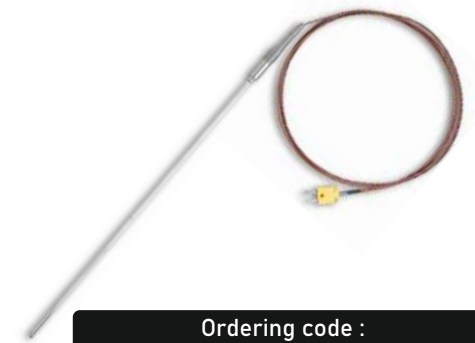
Ordering code :
MTC- R/S - Length in mm - Optional

Base Metal Master Thermocouple

Class 1 accuracy K type and N type thermocouple which is calibrated with NABL Accredited Lab is mainly used in Industries as a secondary master sensor. It is very handy to carry for field calibration as ceramic sheathed thermocouples are fragile. It works together with readout device to measure Temperature or change of temperature. It has wide applications for dry-wells or temperature baths.

Specifications

No. of Element	Simplex
Temperature Range	0 to 1200°C
Sheath Material	Inconel 600
Sheath length	400mm
Extension Cable	1.5mtr. Long Teflon insulated cable with male/female miniature connector
Sheath Dia	6mm
Handle Dimension	15mm (OD) X 100mm(L)



Ordering code :
MTC - K/N - Length in mm - Optional

Optional : All master sensors shall be available with 5 points NABL Accredited calibration.

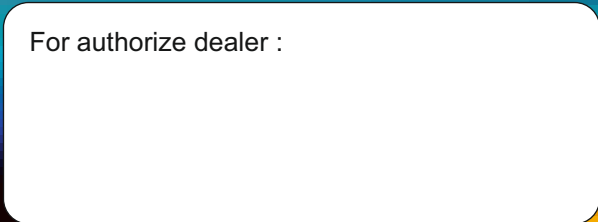


ONE STEP SOLUTION...



- Thermocouple
- RTD
- Thermowell
- Temperature Gauge
- Pressure Gauge
- Diaphragm Seal
- Accessories (TE, TG & PG)
- Pyrometers (Optika)
- Master Sensor

For authorize dealer :



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