

CEAM®
Control Equipment

Temperature Sensors

*Not only produce of sensors,
but supplier of knowledge
and experience into you sectors.*



Company Profile

Who Are We

CEAM is a reality with a long history of success that is continuously growing. This company started in 1967 with the production temperature sensors, and then evolved into many other technological areas and today operating with excellence, extending from the sensors (since the 1980s) to a wide range of electronic instruments. But, above all we have integrated them with innovative software solutions, such as the powerful and flexible industrial platform IoT - Cloud software called CWS-CWIZION, which, today is a transversal flagship that projects into the future, becoming an industrial standard reference and in continual evolution, ten years ahead of the market. Today, after fifty years, The CEAM Group is not just a company but a structured reality. It is solid from all aspects, continually growing with, an innovative business network model which unites and coordinates subsidiaries and support strategies that operate in total synergy with partners, guaranteeing a flexible result typical of the PMI. We think and act as a multinational company. It's not a coincidence that the NAME we chose is "Diversamente Grandi" (A collection middle and small companies creating a multinational network).

Our Mission

Through the years we have acquired an understanding of going from the production of single items to making each piece become an ingredient for global solutions, guaranteeing concrete results. Because of this none of our products are an end in itself. Even if though has a specific function it was designed to contribute to a global project.

Sustainable Development

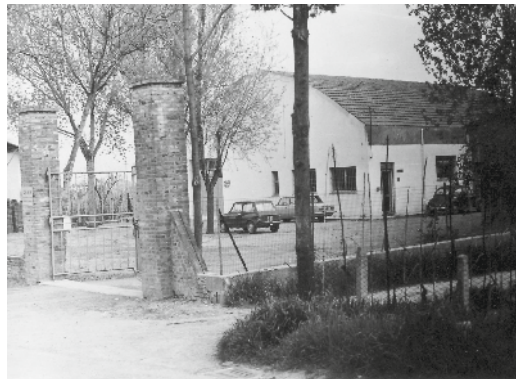
"I cannot hurt you without hurting myself. We are indissolubly connected", (Mahatma Gandhi).

There is finally a growing realisation of a future worth living is not possible without thinking about an authentic relationship between production and the world around us, with man at the centre of everything. We have always known this, and, for this reason we have worked hard, putting our ideas into practice with concrete actions every single day, creating a solution successfully.

For example, "www.diversamentebusiness.it" it's a solution that connects the world of people with disability and the production, thus creating not only wealth but above all dignity for all.

Quality

Maybe this word has been blown out of proportion, especially in the business world. For this reason one mustn't talk about quality but do what must be done and demonstrate it every day. So we won't waste time on this word. What we will say is that, to certify this status we have a prominent third party entity that continually supervises and guarantees that things are always carried out for the best results. We don't pay them to get a discount, but to find any possible errors or critical issues so as to allow us to improve.



1967

Francesco Campinoti, ex brilliant glass technician, founded The C.E.A.M. (Costruzioni Elettriche Apparecchi di Misura). They started producing sensors and thermocouples. These are special sensors for high temperatures used in particular in the glass and ceramic sector.

1980

At the age of 40, founder, Francesco Campinoti suddenly died of an incurable illness. With only his wife, a secretary and another employee the company seemed to have come to an end. But, a miracle occurred, Francesco's son, Simone, comes in to the company and started from scratch along a new path and great sacrifice.

Paola, Simone's sister entered the company after only a few years, taking care of the administrative part, substituting their mother and widow.

2000

Against all previsions, not only was the company, still, on its feet 20 years later. It even overcame every single crisis, big or small, thus continuing to grow and prosper creating a collaboration with other companies and enhancing results. This was the beginning of the acquisition of strategic third-party companies. By now the production was industrial and expanded, both, in terms of products and geographically working with the main national companies. Even international collaborations began. And the race continues.

2018

18 years later there have been other big and small steps taken forward. By now we have invested part of our profits in R&D, thus enabling us to produce excellence and innovation in every form. The implications are limitless for many. Even the dream of an industrial network, DIVERSELY BIG, is becoming an attractive and appealing reality. It is an ulterior assurance for all our many clients. The race with destination in the future is on.

2020

The growth of the CEAM group is now unstoppable, the creation of new strategic alliances continues and we are now engaged in new acquisitions of shares of companies synergistic to our working reality. After the opening of the branch office in Piedmont, the project for a new branch office in Lombardy starts. The flagship product of CEAM, the CWS IoT Web Cloud Tech Platform, is constantly growing with important new features and utility packages. The CWS Platform is now a standard product, with an exponential development, and the applications of this software have become exponential, from large plants to small vertical applications in all possible sectors.

CEAM Control Equipment member



Today the **CEAM group** is an industrial and structured entity, composed of various companies and divisions and, co-partners in many other companies whose collaboration with us goes towards the strengthening of the groups and its requirements.

Our group is always active in the original sector of **industrial instrumentation** and **process-control** with the CEAM Control Equipment, which still represents the main historical principal; not only from temperature sensors for glass and ceramic, today, with Business Unit produces a vast range of sensors for all the sectors (not only for temperature). We produce a complete range of electronic instruments and, above all, develop powerful software instruments; such as the Software Platform IOT-Web-Cloud-Global CWS, the open type (multiprotocol) for monitoring, traceability, remote control and Automation web for processing data.

For any elaboration regarding our line of products, **temperature sensors, process sensors, process instrumentation and CWS IoT Web software**, Related Services (**calibration service, platinum purchase service, formation service, assistance service and installation**). Our technical and commercial staff are at your disposal at this e-mail address-sales@ceamgroup.it or telephone number +39 0571 924181

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INDEX CEAM SENSOR GROUPS

T01

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *metal, ceramic and plastic construction*
Execution: *with connection head*



T02

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *traditional*
Execution: *straight-through cable connection*



T03

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *cable in magnesium oxide insulation MGO*
Execution: *straight-through cable connection*



T04

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *cable in magnesium oxide insulation MGO*
Execution: *straight-through overhead connector*



T05

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *traditional*
Execution: *eyelet cable connection*



T06

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *traditional*
Execution: *bayonet cable connection*



T07

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *traditional*
Execution: *complete miniature flexible cable*



T08

Probes: *thermocouples, resistance thermometers, thermistors*

Realization: *cable in magnesium oxide insulation MGO*

Execution: *with outer bare wires (tails), also usable as a replacement*

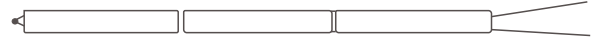


T09

Probes: *thermocouples, resistance thermometers, thermistors*

Realization: *traditional*

Execution: *with outer bare wires (tails), also usable as a replacement*



T10

Thermocouples

Realization: *metal and ceramic*

Execution: *with head connection and cap in platinum PLW, single, double and triple level*



T12

Control level probes
water - glass



T13

Thermowell



T14

Probes: *thermocouples, resistance thermometers, thermistors*

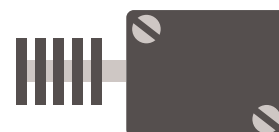
Realization: *L-shaped thermocouples.*



T15

Probes: *thermocouples, resistance thermometers, thermistors*

Execution: *wall-mounted for environmental measurements*



T16

Probes: *thermocouples, resistance thermometers, thermistors*
Execution: *adjustable clamp and hose clamp*



T17

Probes: *thermocouples, resistance thermometers, thermistors*
Execution: *with magnet*



T18

Probes: *thermocouples, resistance thermometers, thermistors*
Realization: *with contact pad in nylon or Teflon on rotating bodies, cylinders etc.*



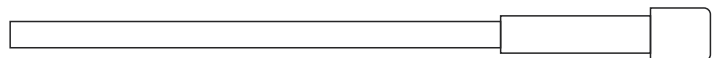
T19

Probes: *thermocouples, resistance thermometers, thermistors*
Execution: *portable in various executions*



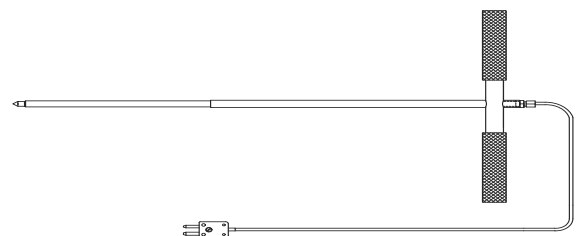
T20

Tubes / sampling casings



T32


Compost temperature probes with heap insertion handle bar



OXX

Probes: *thermocouples, resistance thermometers, thermistors*
Execution: *special (exclusive) according to clients design*



The background of the advertisement is a vertical photograph of an industrial setting. On the left side, there is a large, bright orange-red glow from molten metal, with thick white steam or smoke rising from it. In the foreground, there are dark, heavy-duty metal components, possibly part of a furnace or a casting machine. On the right side, the image shows a more complex industrial structure with various pipes, valves, and machinery, set against a lighter, overcast sky. The overall color palette is dominated by the orange and red of the molten metal, the greys and blacks of the machinery, and the white of the steam.

CEAM Control Equipment
has produced temperature
sensors, for every
category, construction
typology and application
sector, for more than 55
years

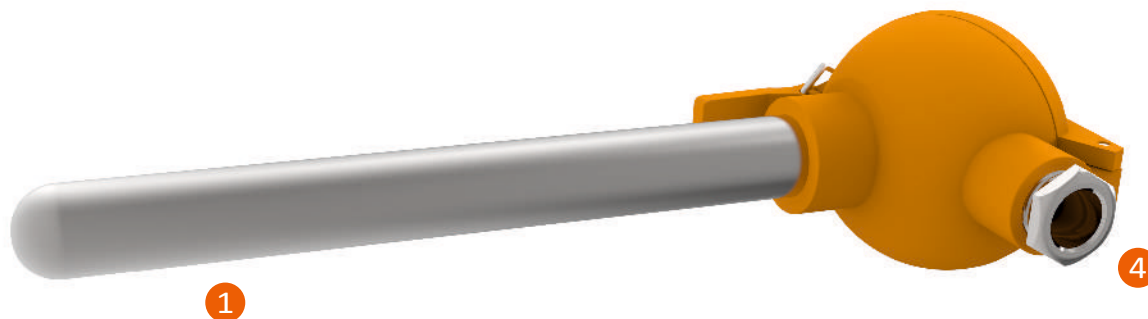
Thanks to the experience
and THE knowledge that we
have applied in this sector,
we have been able to
acquire our clients

*Not only do we produce
sensors but we also provide
solutions to your problems*

CEAM standard construction
categories are listed below.
As well as producing special
sensors we can produce
sensors specific to the
clients request

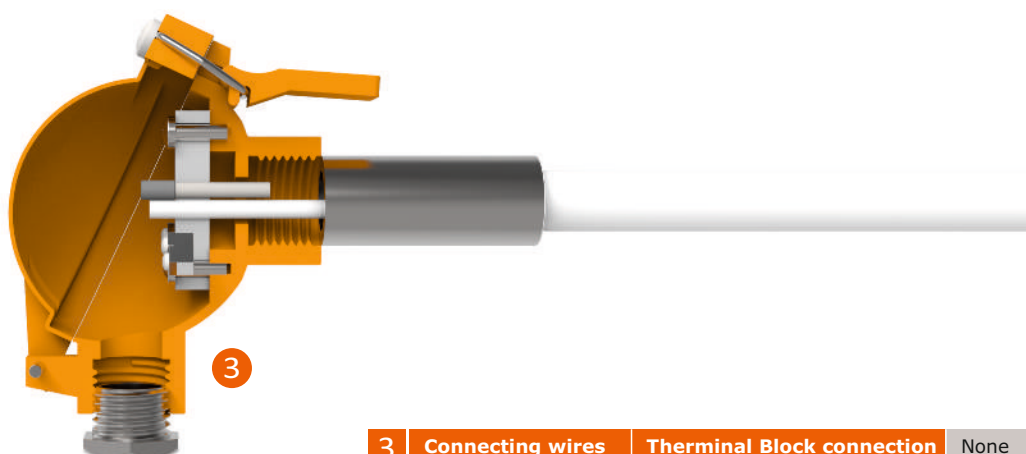
Temperature Sensors Category T01

Probes Category T01: Thermocouples, Resistance Thermometers or Thermostors, made in various types of constructions (Metal, Ceramic, Plastics).
Execution with connection head and with connector.

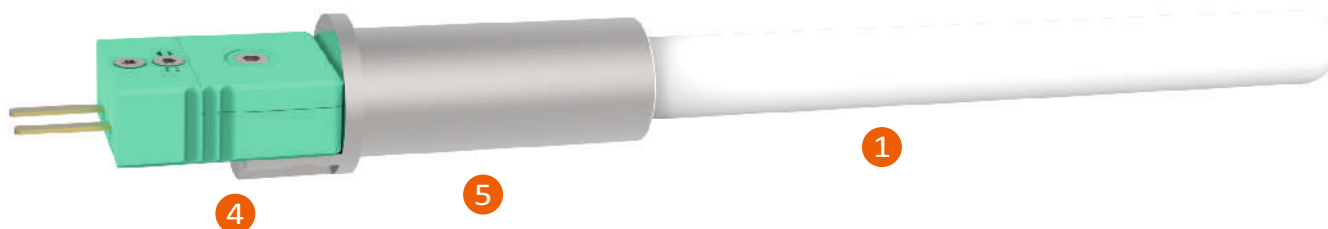


1 Protective casings / insulation (combinations with multiple casings are possible, even different from each other)	Metallic	Stainless Steel AISI304
		Stainless Steel AISI310
		Stainless Steel AISI316
		Inconel (various types available)
		Sandvik
		Stainless Steel 321
		Special
	Ceramics	Ceramic Ker 530
		CeramicKer 610
		Ceramic Ker 799
	Silicon Carbide - SIC	
	Special	
	Special	Quartz
		Special

2 Connection Process	Junction	Fixed - various wires
		Sliding - various wires
		Compression -various wires
	Flange - Available in various materials and dimensions	
	Special	



3 Connecting wires	Therminal Block connection	None (Only if connector is used)
		Ceramic
		Plastics
		In plastic material with inspection
	Converter 4-20 mA	Insulation
		No Insulation



4	Electrical connection	Connection Valves	DIN B
			BUS
			DANA
			Mignon
			Cylindrical
			Plastic
			STAINLESS STEEL
			DIN A
			ATEX
			Connectors
	Standard Ceramic		

5	Sleeve	None
		Stainless Steel AISI304
		Stainless Steel AISI310
		Stainless Steel AISI316
		Inconel (various typologies)
		Ceramic Ker 530
		Ceramic Ker 610
	Ceramic Ker 799	

6	TC Types	Thermocouple type T - Wires: various types available	
		Thermocouple type U - Wires: various types available	
		Thermocouple type J - Wires: various types available	
		Thermocouple type L - Wires: various types available	
		Thermocouple type E - Wires: various types available	
		Thermocouple type K - Wires: various types available	
		Thermocouple type N - Wires: various types available	
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50 - <i>CEAM CDWG Patent</i>	
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50 - <i>CEAM CDWG Patent</i>	
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50 - <i>CEAM CDWG Patent</i>	
		Resistance temperature / Digital sensors	PT100
			PT1000
			PT500
	NTC		
	PTC		
	DS18		
	Special		
Sensitive Elements	Single		
	Double		
	Triple		
	Special		

7	Internal TC	Insulator	Ceramic Ker 530	
			Ceramic Ker 610	
			Ceramic Ker 799	
			MGO - Mineral Insulator	Inconel
				Nicrosil
				Stainless Steel 321
	Stainless Steel 316			

8	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia

ATTENTION: If you do not see the technical specifications that you require, please contact our Technical-Commercial department, as many special variants are not all listed in the catalogue, but are produced.

Temperature Sensors Category T02

Probes Category T02: Thermocouples, Resistance Thermometers, Thermistors realized traditionally and executed with a straight cable connection.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
	Resistance Temperature / Digital Sensors	PT100
		PT1000
		PT500
		NTC
		PTC
	DS18	
	Special	
Sensitive Elements	Single	
	Double	
	Triple	
	Special	

2	Protection Casings / Tube	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Stainless Steel 321
			Aluminum
			Special
		Plastic Materials	PVC
			Nylon
			PTFE
			Silicon
			Special

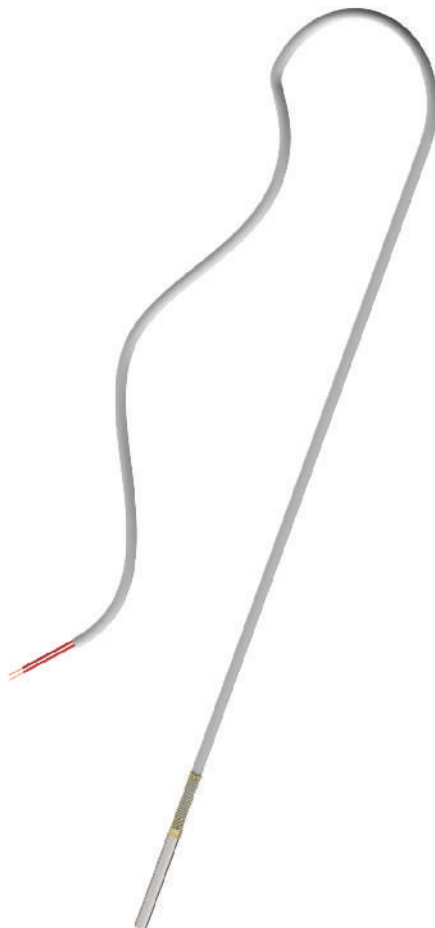


3	Fitting Process	Connection	Fixed- Wires
			Sliding - Various wires
			Compression - Varied

4	Electrical Connection	Free Wire Termination	Standard Plastic	
		Junction		
				Standard Ceramic
				Mignon Plastic
			Mignon Ceramic	

5	Cable Connection (Available in various lengths and diameters)	Silicon
		PVC
		PIFE
		Reinforced
		Special

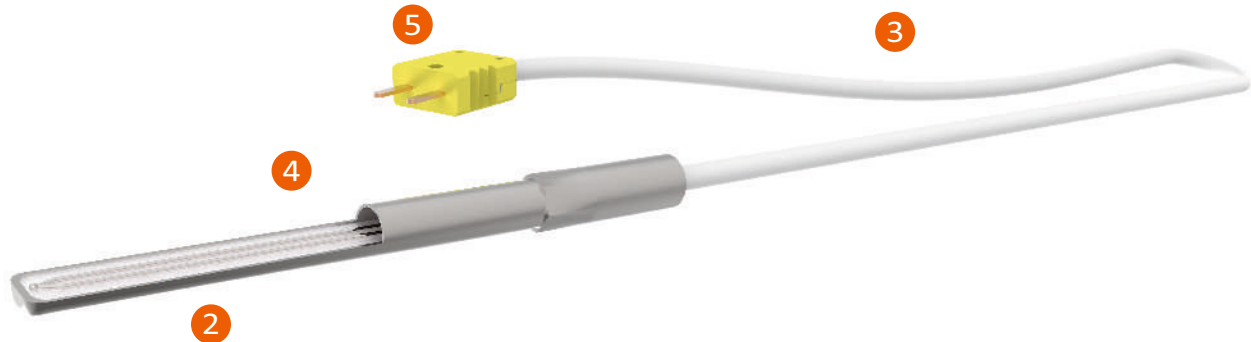
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T03

Probes Category T03: Thermocouples, Resistance Thermometers, Thermistors realized with mineral insulation MGO and executed with straight / bent connection cable.



1	TC types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires 0,25 - 0,35 - 0,50
		Resistance temperature / Digital Sensors
		PT100
		PT1000
		PT500
	NTC	
	PTC	
	DS18	
	Special	
	Sensitive Elements	
	Single	
	Double	
	Triple	
	Special	

2	Protective Casings MGO	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Stainless Steel 321
			Inconell
			Nicrosil
			Platinum
			Platinum / Rhodium
		Special	



3	Connection Cable (Available in various lengths and dimensions)		Silicon
			PVC
			PIFE
			Reinforced
			Special
4	Connection Process	Junction	Fixed - Various wires
			Sliding - Various wires
			Compression - Variant
5	Electrical Connection	Free wire Termination	
		Connectors	Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Ceramico Mignon
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6	
		Calibration ISO for comparison Of primary samples with Accredia	
		Calibration LAT - Accredia	



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Temperature Sensors Category T04

Probes Category T04: Thermocouples , Thermometers, Thermistors realized in mineral MGO insulation and executed with straight/bent cable connection.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
	Resistance Temperature / Digital Sensors	PT100
		PT1000
		PT500
		NTC
		PTC
		DS18
		Special
	Sensitive Elements	Single
		Double
		Triple
		Special

2	Protection Casings MGO	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Stainless Steel 321
			Inconel
			Nicrosil
			Platinum
			Platinum / Rhodium
			Special



3	Connection Process	Junction	
			Fixed - various wires
			Sliding - various wires
			Compression - various

4	Electrical Connection	Free Wire Termination	
		Connectors	Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

5	Certifications	
		ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with ACCREDIA



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Temperature Sensors Category T05

Probes Category T05: Thermocouple, Resistance Thermometers, Thermistors realized traditionally and executed with a straight cable connection.



1 TC Type	Thermocouple type T - Wires: various types available	
	Thermocouple type U - Wires: various types available	
	Thermocouple type J - Wires: various types available	
	Thermocouple type L - Wires: various types available	
	Thermocouple type E - Wires: various types available	
	Thermocouple type K - Wires: various types available	
	Thermocouple type N - Wires: various types available	
	Resistance Temperature	PT100
		PT1000
		PT500
		NTC
	PTC	
	DS18	
	Special	
Sensitive Elements	Single	
	Double	
	Triple	
	Special	

2 Tip	Metallic	Stainless Steel AISI304
		Stainless Steel AISI310
		Stainless Steel AISI316
		Stainless Steel 321
		Aluminum
		Zinc Plated
		Special

3 Connection Cable (Available in different lengths and dimensions)	Silicon
	PVC
	PIFE
	Reinforced
	Special



4	Electrical Connection	Free Wire Termination	
		Connector	
			Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

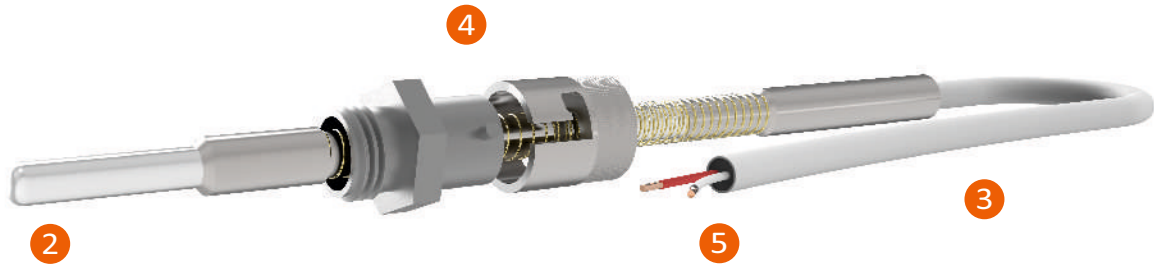
5	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T06

Probes Category T06: Thermocouples, Resistance Temperature, Termistors realized traditionally and/or in mineral MGO insulation and bayonet procedure with cable connection.



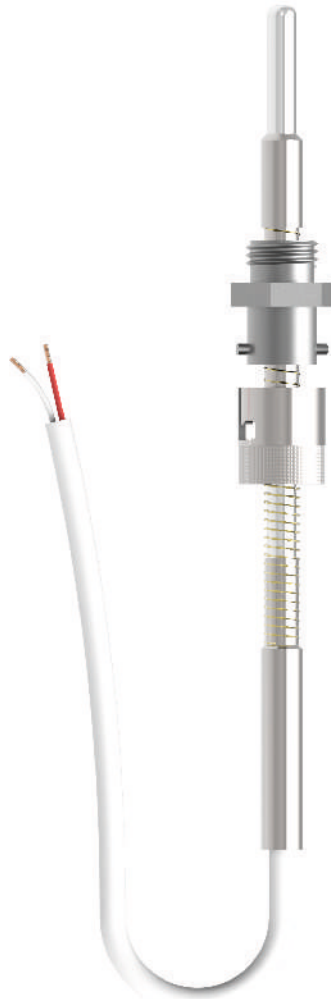
1	TC Types	Thermocouple type T - Wires: various possibilities Thermocouple type U - Wires: various possibilities Thermocouple type J - Wires: various possibilities Thermocouple type L - Wires: various possibilities Thermocouple type E - Wires: various possibilities Thermocouple type K - Wires: various possibilities Thermocouple type N - Wires: various possibilities
	Resistance Temperature	PT100 PT1000 PT500 NTC PTC DS18 Special
	Sensitive Elements	Single Double Triple Special

2	Casing Protection	Metallic	Stainless Steel AISI304 Stainless Steel AISI310 Stainless Steel AISI316 Stainless Steel 321 Inconell Nicrosil Platinum Platinum / Rhodium Special
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3	Connection Cable (Available in different lengths and dimensions)	Silicon PVC PTFE Reinforced Special
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4	Connection Process	Bayonet	With flap, available in various diameters and wires
			Home security, available in various diameters and threads
5	Electrical Connection	Termination wires	
		Connectors	Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6	
		Calibration ISO for comparison of primary samples with Accredia	
		Calibration LAT - Accredia	



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Temperature Sensors Category T07

Probes Category T07: Thermocouples, Resistance Temperature, Thermistors realized traditionally with miniature flexible cable procedure



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
	Resistance Temperature / Digital Sensors	PT100
		PT1000
		PT500
		NTC
		PTC
		DS18
		Special
	Sensitive Elements	Single
		Double
		Triple
		Special

2	Connection Cable (Available in various lengths and diameters)	Silicon
		PVC
		PTFE
		Reinforced
		Special



3	Electrical Connection	Termination Wires	
		Connectors	
			Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

4	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia
		Calibration LAT-Accredia



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Temperature Sensors Category T08

Probes Category T08: Thermocouples, Resistance Temperature, Thermistors realized with mineral MGO insulation and executed with bare tail procedure and also as spare parts.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
	Resistance Temperature / Digital Sensors	PT100
		PT1000
		PT500
		NTC
		PTC
		DS18
		Special
	Sensitive Elements	Single
		Double
		Triple
		Special

2	Protective Casings	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Stainless Steel 321
			Inconell
			Nicrosil
			Platinum
			Platinum / Rhodium
			Special



3 Electrical Connection Wire Termination

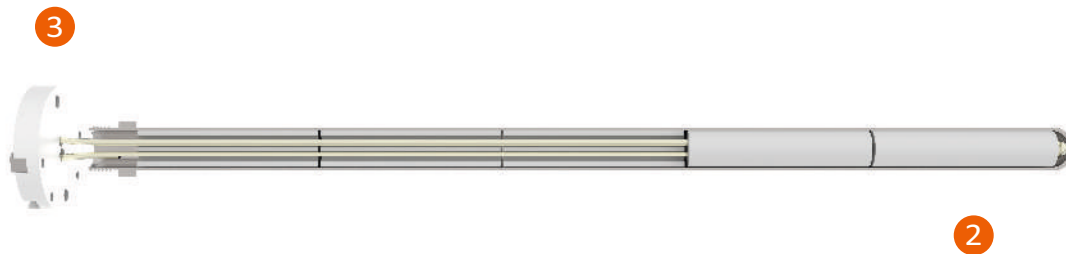
4	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T09

Probes Category T09: Thermocouples, Resistance Temperature, Thermistors realized traditionally with bare tail procedure and also as spare parts.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
		Resistance Temperature / Digital Sensor
		PT100
		PT1000
	PT500	
	NTC	
	PTC	
	DS18	
	Special	
	Sensitive Elements	
	Single	
	Double	
	Triple	
	Special	

2	TC Internal	Insulation	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
			Special



3	Electrical Connection	Therminal Block Connection	None (Only in case for connection use)
			Ceramic
			Plastic
			Plastic with inspection hole
		Converter 4-20 mA	insulated
			No insulation

4	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of primary samples with Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T10

Probes Category T10: Thermocouples, Resistance Temperature, Thermistors constructed in various typologies(Metallic, Ceramic), executed, both, with Head Connection and Cap in Platinum/Rhodium, or triple level.



1 TC Types	Thermocouple type T - Wires: various types available
	Thermocouple type U - Wires: various types available
	Thermocouple type J - Wires: various types available
	Thermocouple type L - Wires: various types available
	Thermocouple type E - Wires: various types available
	Thermocouple type K - Wires: various types available
	Thermocouple type N - Wires: various types available
	Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
	Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
	Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
Sensitive Elements	Single
	Double
	Triple
	Special

2 Electrical Connection	Connection Heads	DIN B
		BUS
		DANA
		Mignon
		Cylindrical
		Plastic
		Stainless Steel
		DIN A
		ATEX
	Connector	Standard Plastic
		Standard Ceramic

3 Wire Connection	Therminal Block Connection	None(Only for connection use)
		Ceramic
		Plastic
		Plastic with inspection hole
	Converter 4-20 mA	Insulation
		No Isolation

4 Sleeve	None
	Stainless Steel AISI304
	Stainless Steel AISI310
	Stainless Steel AISI316
	Inconel (various types available)
	Ceramic Ker 530
	Ceramic Ker 610
	Ceramic Ker 799



5	Protection Casings / Insulation (It is possible to combine multiple casings and even, with, different types)	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Inconel (Various types available)
			Sandvik
			Stainless Steel 321
			Special
		Ceramics	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
			Silicon Carbide - SIC
	Special		
	Special	Quartz	
		Special	
6	Internal TC	Insulator	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
		MGO - Insulation Mineral	Inconel
			Nicosil
			Stainless Steel 321
		Stainless Steel 316	
7	Tip	Standard	Platinum
			Platinum / Rhodium - 10 %
			Platinum / Rhodium- 20 %
			Titanium
		FKS / ODS	Platinum
			Platinum/ Rhodium - 10 %
		Platinum/ Rhodium - 20 %	
8	Connection Process	Junction	Landline- Various Wires
			Sliding-VariouS Wires
			Compression-VariouS Wires
		Flange -Available in various materials And dimensions	
		Special	
9	Certifications	ATEX EX II 3G/D (EEx d) IIB T6	
		Calibration ISO for Comparison of Primary Samples Accredia	
		Calibration LAT - Accredia	



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Temperature Sensors Category T12

Probes Category T12: Probes for controlling level of water-glass.



1	TC Types	Probe/Thermocouple level Water	Generic Steel/ Stainless Steel Wire-Variou diameters available
		Probe/Thermocouple level Glass	Platinum Wire-Wire: 0,25-0,35-0,50-0,80 1,00- (Special Diameter) Patent CDWG CEAM
			Platinum/Rhodium Wire 10% - Diameter: 0,25 - 0,35 - 0,50 - 0,80 - 1,00 - (Special Diameter) Patent CDWG CEAM
			Platinum/Rhodium 20% - Diameter: 0,25 - 0,35 - 0,50 - 0,80 - 1,00 - (Special Diameter) Patent CDWG CEAM
			Platinum Wire/Rhodium 40% - Diameter: : 0,25 - 0,35 - 0,50 - 0,80 - 1,00 - (Special Diameter) Patent CDWG CEAM

2	Electrical Connection	Connection Heads	DIN B
			BUS
			DANA
			Mignon
			Cylindrical
			Plastic
			Stainless Steel
			DIN A
			ATEX

3	Wire Connection	Therminal Block Connection	None(only for connection use)
			Ceramic
			Plastic
			Plastic with hole for inspection

4	Sleeve	None
		Stainless Steel AISI304
		Stainless Steel AISI310
		Stainless Steel AISI316
		Inconel (Various types available)
		Ceramic Ker 530
		Ceramic Ker 610
		Ceramic Ker 799



5	Protection Casings/Insulation (It is possible to combine multiple casings even using different types)	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Inconel (Various types available)
			Sandvik
			Stainless Steel 321
			Speciale
		Ceramics	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
			Silicon Carbide - SIC
	Special		
	Special	Quartz	
		Special	
6	TC Internal	Insulation	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
7	Tip	Standard	Platinum
			Platinum / Rhodium - 10 %
			Platinum / Rhodium - 20 %
			Titanio
		FKS / ODS	Platinum
			Platinum / Rhodium - 10 %
	Platinum / Rhodium - 20 %		
8	Connection Process	Junction	Landline-VariouS Wires
			Sliding-VariouS Wires
			Compression-VariouS Wires
		Support/Bracket Head	Various models and Dimensions available
		Flange	Various models and Dimensions available
	Special		
9	Certifications	ATEX EX II 3G/D (EEx d) IIB T6	
		Calibration ISO for comparison of primary samples with ACCREDIA	



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Temperature Sensors Category T13

Probes Category T13: Thermowells, External Protective Thermocouples, Resistance Temperature or Thermstors.



1	TC Types	Thermowell
		External Protective Thermowell

2	Electrical Connection	Head Connection	DIN B
			BUS
			DANA
			Mignon
			Cylindrical
			Plastic
			Stainless Steel
			DIN A
			ATEX
		Connection	Standard Plastic
		Standard Ceramic	

3	Sleeve	None
		Stainless Steel AISI304
		Stainless Steel ISI310
		Stainless Steel AISI316
		Inconel (Various types available)
		Ceramic Ker 530
		Ceramic Ker 610
	Ceramic Ker 799	



4 Protection Casings/ Insulation (It is possible to combine multiple casings even using different types)	Metallic	Stainless Steel AISI304
		Stainless Steel AISI310
		Stainless Steel AISI316
		Inconel (Various types available)
		Sandvik
		Stainless Steel 321
		Special
	Ceramics	Ceramic Ker 530
		Ceramic Ker 610
		Ceramic Ker 799
		Silicon Carbide - SIC
	Special	Quartz
	Special	

5 Connection Process	Junction	Landline - Various Wires
		Sliding - Various Wires
		Compression - Various Wires
	Support/Head Bracket	Various Models and Dimensions available
	Flange	Various Models and Dimensions available
	Special	

6 Certifications	ATEX EX II 3G/D (EEx d) IIB T6
	Calibration ISO for comparison of Primary Samples Accredia
	Calibration LAT - Accredia



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Temperature Sensors Category T14

Probes Category T14: Thermocouples, Resistance Temperature, or L-shaped Thermistors realized in various construction types: Metallic, Ceramic, Plastic.



1 TC Types	Thermocouple type T - Wires: various types available
	Thermocouple type U - Wires: various types available
	Thermocouple type J - Wires: various types available
	Thermocouple type L - Wires: various types available
	Thermocouple type E - Wires: various types available
	Thermocouple type K - Wires: various types available
	Thermocouple type N - Wires: various types available
	Thermocouple type R - Wires: 0,25 - 0,35 - 0,50 - Patent CDWG CEAM
	Thermocouple type S - Wires: 0,25 - 0,35 - 0,50 - Patent CDWG CEAM
	Thermocouple type B - Wires: 0,25 - 0,35 - 0,50 - Patent CDWG CEAM
Resistance Temperature / Digital Sensors	PT100
	PT1000
	PT500
	NTC
	PTC
	DS18
Sensitive Elements	Special
	Single
	Double
	Triple
	Special

2 Electrical Connection	Connection Head	DIN B
		BUS
		DANA
		Mignon
		Cylindrical
		Plastic
		Stainless Steel
		DIN A
		ATEX
	Connection	Standard Plastic
	Standard Ceramic	

3 Wire Connection	Therminal Block Connection	None (Only in case for connection use)
		Ceramic
		Plastic
	Plastic with inspection hole	
	Convertor 4-20 mA	Insulation
	None	

4 Sleeve	None
	Stainless Steel AISI304
	Stainless Steel AISI310
	Stainless Steel AISI316
	Inconel (Various types available)
	Ceramic Ker 530
	Ceramic Ker 610
	Ceramic Ker 799



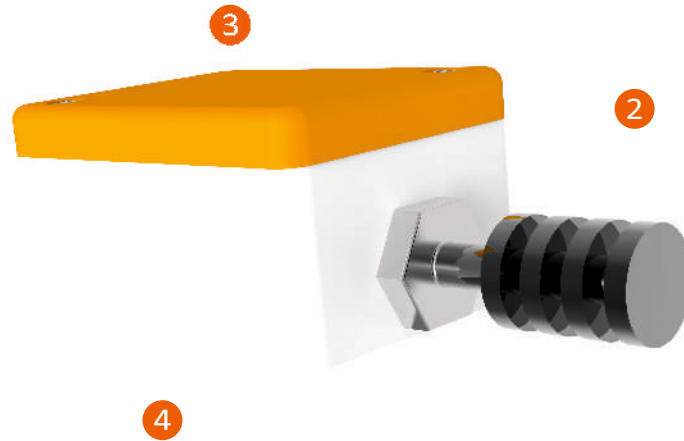
5	Protection Casings / Insulation (it is possible to combine multiple casings, even using different types)	Metallic	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Inconel (Various types available)
			Sandvik
			Stainless Steel 321
		Ceramics	Iron
			ARMCO
			Special
			Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
		Special	Carburo di Silicio - SIC
Syalon			
Special			
Quartz			
Special			
6	TC internal	Insulation	Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
		MGO - Insulation Mineral	Inconel
			Nicrosil
			Stainless Steel 321
Stainless Steel 316			
7	Connection Process	Junction	Landline - Various Wires
			Sliding - Various Wires
			Compression - Various Wires
		Flange	Various Models and Dimensions available
8	Certifications	ATEX EX II 3G/D (EEx d) IIB T6	
		Calibration ISO for comparison of Primary Samples Accredia	
		Calibration LAT -Accredia	



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Temperature Sensors Category T15

Probes Category T15: Thermocouples, Resistance Temperature, Thermistors , wall fitted procedure for environmental measurements.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
	Resistance Temperature/Digital Sensors	PT100
		PT1000
		PT500
		NTC
	PTC	
	DS18	
	Special	
Sensitive Elements	Single	
	Double	
	Triple	
	Special	

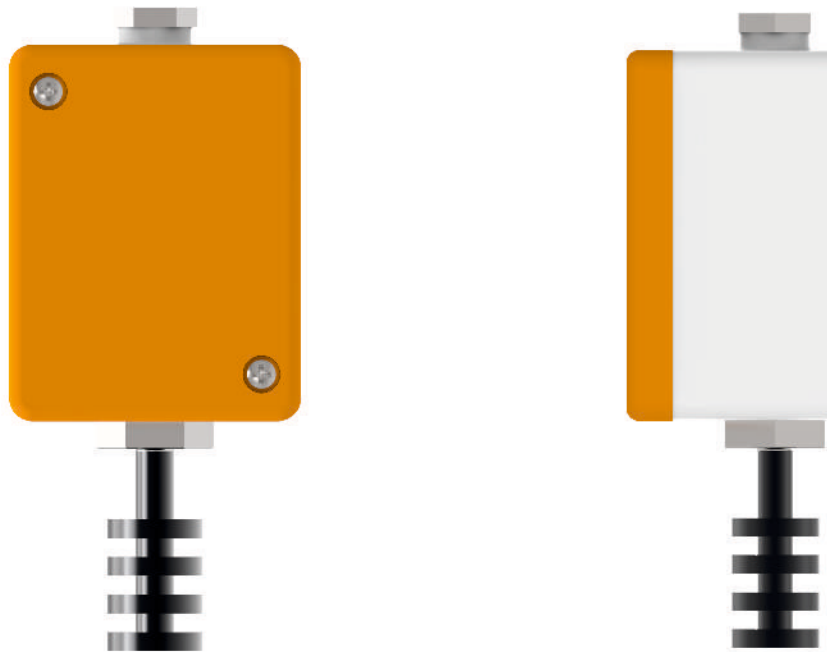
2	Protection Sensors	Metallics	Stainless Steel AISI304 Air-Tight
			Stainless Steel AISI304 Perforated
			Stainless Steel AISI316 Air-Tight
			Stainless Steel AISI316 Perforated
			Sintered Bronze Filter
			Aluminum
			Aluminum with Flaps
			Special
		Plastic material	PVC
			Nylon
		PTFE	
		Special	

3	Housing	Plastic
		Resin
		Light Alloy
		Metallic Box ATEX
		Special



4	Electrical Connection	Therminal Block Connection	None (only in case for connection use)
			Ceramic
	Convertor 4-20 mA	Plastic	
		Insulation	
			Not Insulated

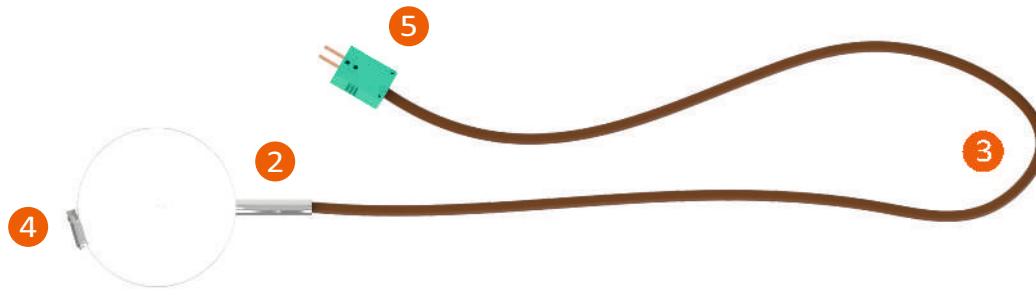
5	Certifications	ATEX EX II 3G/D'(EEx d) IIB T6
		Calibration ISO for Comparison of Primary Samples Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T16

Probes Category T16: Thermocouples, Resistance Temperature, Thermistors realized traditionally and using an adjustable string band procedure.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
	Resistance Temperature	PT100
		PT1000
		PT500
	NTC	
	PTC	
	DS18	
	Special	
Sensitive Elements	Single	
	Double	
	Triple	
	Special	

2	Protective Casings/Tube	Metallics	Stainless Steel AISI304	
			Stainless Steel AISI310	
			Stainless Steel AISI316	
			Stainless Steel 321	
			Sandvik	
			Stainless Steel 321	
			Aluminum	
			Special	
			Plastic Material	PVC
				Nylon
				PTFE
			Silicon	
		Special		

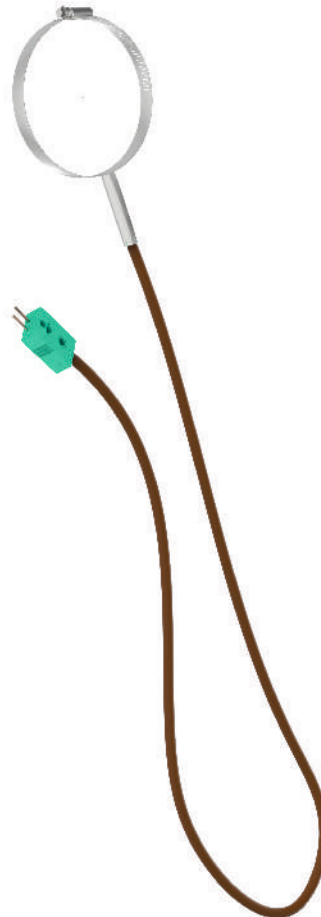
3	Connection Cable (Available in various lengths and diameters)	Silicon
		PVC
		PTFE
		Reinforced
		Special



4	Connection Process	Attachment Belt	
			Stainless Steel 304
			Stainless Steel 316
			Galvanized Iron
			Plastic
			Special

5	Electrical Connection	Termination Wires	
		Connector	
			Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

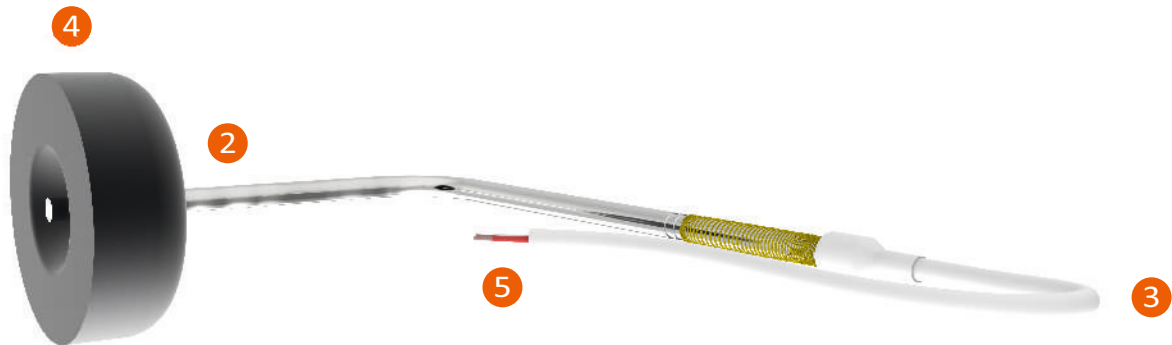
6	Certifications	
		ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T17

Probes Category T17: Thermocouples, Resistance Temperature, Thermistors realized traditionally using a rapid magnet attachment.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
	Temperature Resistance	PT100
		PT1000
		PT500
		NTC
		PTC
		DS18
		Special
	Sensitive Elements	Single
		Double
		Triple
		Special

2	Protective Casings	Metallics	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Stainless Steel 321
			Sandvik
			Stainless Steel 321
			Aluminum
			Special
		Plastic Material	PVC
			Nylon
			PTFE
			Silicon
			Special

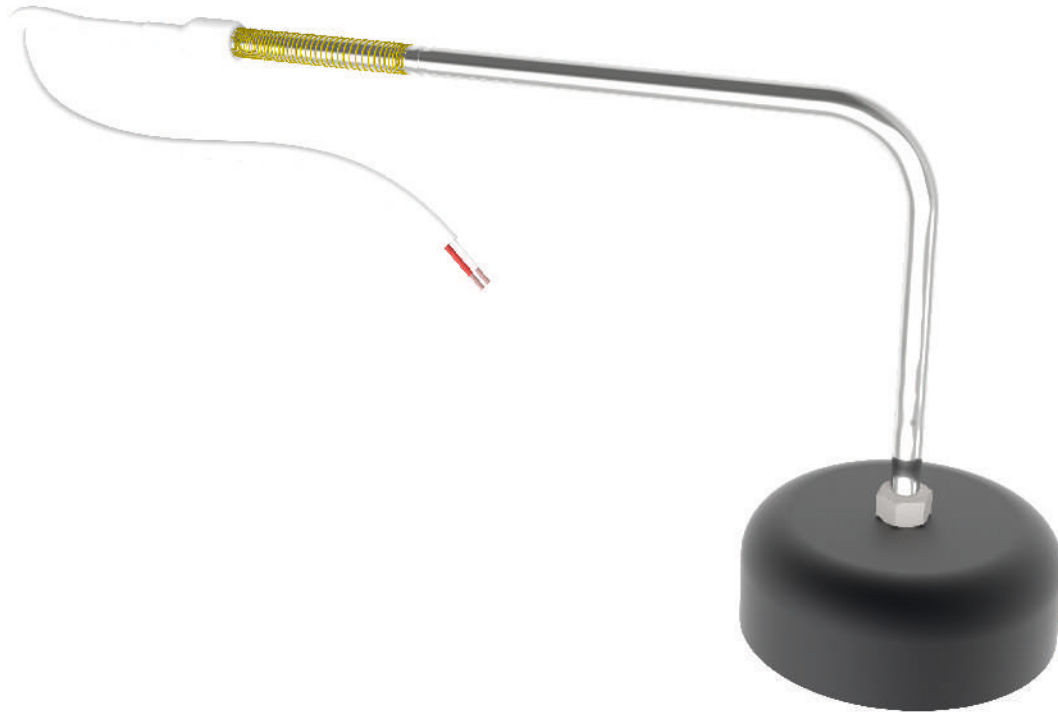
3	Cable Connection (Available in various lengths and diameters)	Silicon
		PVC
		PTFE
		Reinforced
		Special



3	Connection Process	Magnet (Available in various versions and diameters)
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5	Electrical Connection	Termination Wires	
		Connector	
			Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

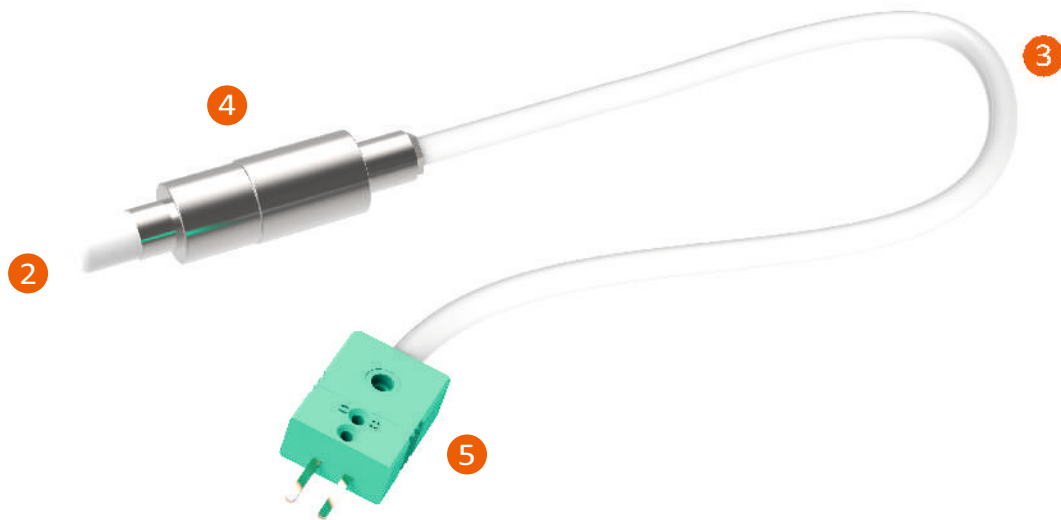
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T18

Probes Category T18: Thermocouples, Temperature Resistance. Thermistors, realization with contact pads for measuring rotating bodies, cylinders, surfaces etc.



1	TC Types	Thermocouple type T - Wires: various types available
		Thermocouple type U - Wires: various types available
		Thermocouple type J - Wires: various types available
		Thermocouple type L - Wires: various types available
		Thermocouple type E - Wires: various types available
		Thermocouple type K - Wires: various types available
		Thermocouple type N - Wires: various types available
		Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
		Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
	Temperature Resistance/Digital Sensors	PT100
		PT1000
		PT500
		NTC
		PTC
		DS18
		Special
	Sensitive Elements	Single
		Double
		Triple
		Special

2	Casings / Contact Surface	Plastic Material	PVC
			Nylon
			PTFE
			Silicon
			Special

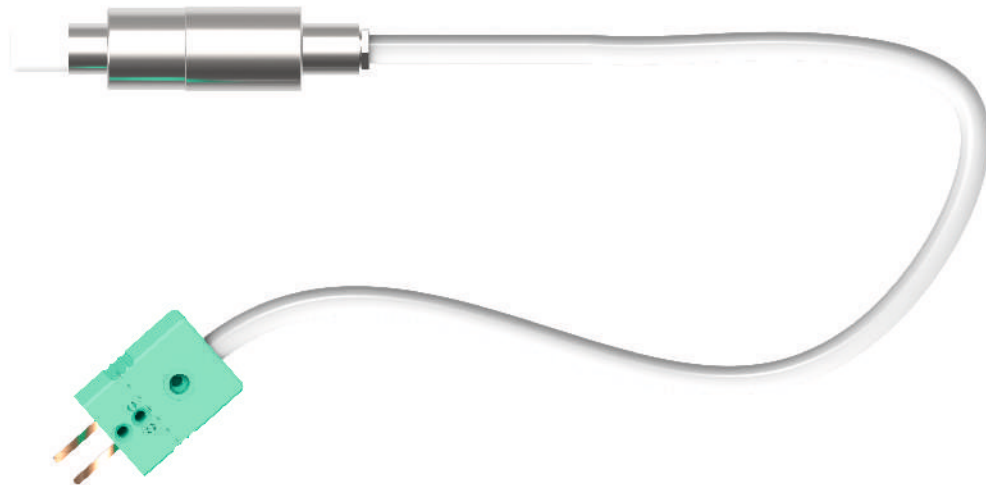
3	Connection Cable (Available in various lengths and diameters)	Silicon
		PVC
		PTFE
		Reinforced
		Special



4	Connection Process	Mounting Brackets	Stainless Steel 304
			Stainless Steel 316
			Galvanized Iron
			Plastic
			Aluminum
			Special
		Junction	Landline-VariouS Wires
			Sliding-VariouS Wires
			Compression-VariouS Wires
			Flange-Available in various lengths and diameters
		Special	

5	Electrical Connection	Termination Wires	
		Connector	Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Ceramic

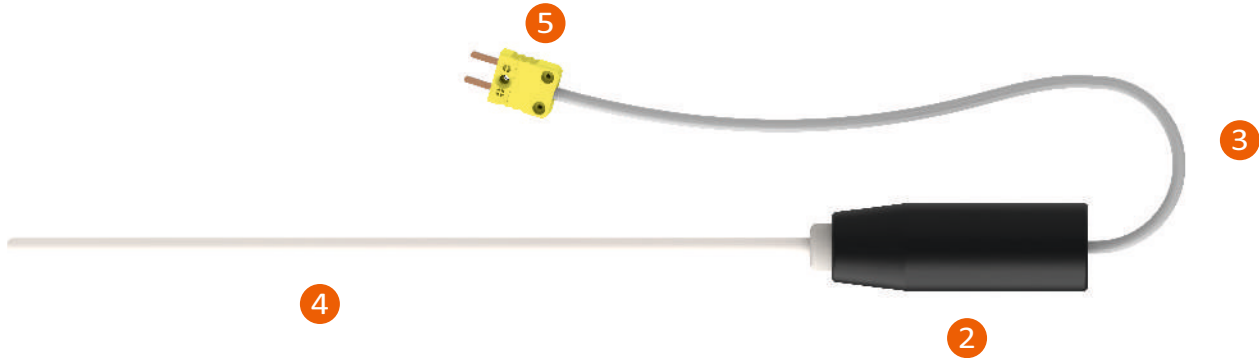
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T19

Probes Category T19: Thermocouples, Resistance Temperature, Thermistors, portable realization with various construction types.



1 TC Types	Thermocouple type T - Wires: various types available
	Thermocouple type U - Wires: various types available
	Thermocouple type J - Wires: various types available
	Thermocouple type L - Wires: various types available
	Thermocouple type E - Wires: various types available
	Thermocouple type K - Wires: various types available
	Thermocouple type N - Wires: various types available
	Thermocouple type R - Wires: 0,25 - 0,35 - 0,50
	Thermocouple type S - Wires: 0,25 - 0,35 - 0,50
	Thermocouple type B - Wires: 0,25 - 0,35 - 0,50
Resistance Temperature / Digital Sensors	PT100
	PT1000
	PT500
	NTC
	PTC
	DS18
	Special
Sensitive Elements	Single
	Double
	Triple
	Special

2 Handle	Plastic
	Bakelite
	Steel
	Picking Steel (for alimentary applications)
	Special

3 Cable Connection (Available in various lengths and diameters)	Silicon
	PVC
	PTFE
	Reinforced
	Special



4	Protective Casings	Metallics	Stainless Steel AISI304	
			Stainless Steel AISI310	
			Stainless Steel AISI316	
			Stainless Steel 321	
			Inconell	
			Nicrosil	
			Platinum	
			Platinum / Rhodium	
			Special	
			Metallic in MGO	
		Ceramics	Ceramic Ker 530	
			Ceramic Ker 610	
			Ceramic Ker 799	
			Silicon Carbide	
			Syalon	
			Special	
			Special	Quartz
				Special

5	Electrical Connection	Termination Wires	
		Connector	Standard Plastic
			Standard Ceramic
			Mignon Plastic
			Mignon Plastic

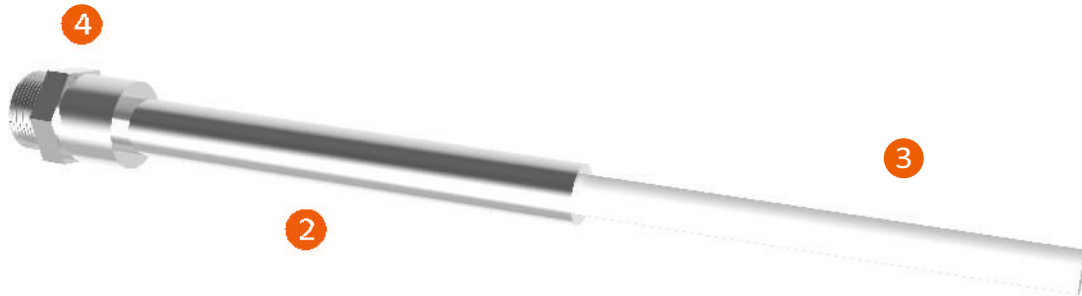
6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT - Accredia



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Temperature Sensors Category T20

Probes Category T20: Tubes/Sampling Casings.



1 TC Types	Process flue gas sampling pipes
	Pressure sampling pipes

2 Sleeve	None
	Stainless Steel AISI304
	Stainless Steel AISI310
	Stainless Steel AISI316
	Inconel (Various types available)
	Ceramic Ker 530
	Ceramic Ker 610
Ceramic Ker 799	





3	Protection Casings/Insulation (it is possible to combine multiple Casings even using different types)	Metallics	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Inconel (various types available)
			Sandvik
			Stainless Steel 321
		Ceramics	Special
			Ceramic Ker 530
			Ceramic Ker 610
			Ceramic Ker 799
			Silicon Carbide - SIC
		Special	Special
			Quartz
		Special	

4	Connection Process	Junction	Landline - Various Wires
			Sliding-Variou Wires
			Compression-Variou Wires
		Support/ Mounting Bracket	various models and dimensions available
			Flange
			Special

5	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT - Accredia



ATTENTION: if you do not see the technical specifications that you require please contact our Technical-Commercial department, as many special variants are not listed in the catalogue, but are produced.

Temperature Sensors Category T32

Probes Category T32: Compost Temperature Probe with handlebars inserted in an overlapping procedure.



1	TC Types	Thermocouple type T - Wires: various types available Thermocouple type U - Wires: various types available Thermocouple type J - Wires: various types available Thermocouple type L - Wires: various types available Thermocouple type E - Wires: various types available Thermocouple type K - Wires: various types available Thermocouple type N - Wires: various types available
	Temperature Resistance/Digital Sensors	PT100 PT1000 PT500 NTC PTC DS18 Special
	Sensitive Elements	Single Double Triple Special

2	Electrical Connection	Connection Head	DIN B BUS DANA Mignon Cylindrical Plastic Stainless Steel DIN A ATEX
		Cable	Silicon PVC PTFE Reinforced Special
		Connector	Standard Plastic Ceramic Standard



3	Wire Connections	Therminal Block Connection	None (only in case for connection use)
			Ceramic
			Plastic
			Plastic with inspection hole
		Convertor 4-20 mA	Insulated
			Non insulated

4	Protection Casings	Metallics	Stainless Steel AISI304
			Stainless Steel AISI310
			Stainless Steel AISI316
			Inconel (Various types available)
			Sandvik
			Stainless Steel 321
			Special

5	Internal TC	MGO - Insulator Mineral	Inconel
			Nicrosil
			Stainless Steel 321
			Stainless Steel 316
		Cable	Silicon
			PVC
			PTFE
			Reinforced
			Special
		Insulator	Ceramic Ker 530
		Ceramic Ker 610	
		Ceramic Ker 799	

6	Certifications	ATEX EX II 3G/D (EEx d) IIB T6
		Calibration ISO for comparison of Primary Samples Accredia
		Calibration LAT-Accredia



ATTENTION: if you do not see the technical specifications that you require please contact our Technical-Commercial department, as many special variants are not listed in the catalogue, but are produced.

Temperature Sensors Category 0XX

Probes Category 0XX: Thermocouples, Resistance Temperature, Thermistors with special procedure or on technical specification of the client.



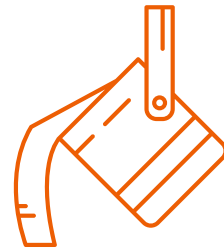
The sensor division of CEAM Control Equipment have produced and exported all over the world thousands of special temperature sensors or with specific requirements for over 50 years. Our sensors are used in all operative sectors ,wherever it is necessary to carry out temperature measurements with precision, reliability and safety. It's for this reason that we have (and still do) collaborated for many years with the most important companies and manufactures.

Each project is carefully studied for the application that is required or on the grounds of data, or plans that are given by the client. And, we even produce products for third parties. In fact there is a service, "Label Service", whereby with a minimal quantity of the products we can personalize them with the clients brands, name and codes.

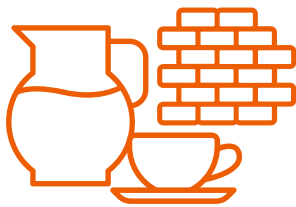
Lastly, thanks to the fact that CEAM, itself, produces the major part of its' sensor components we can guarantee an extremely rapid delivery service with our CFDS service (CEAM FAST Delivery Service), within a period of: 24H, 48H, or 7 working days.

The experience that we have matured over the years has allowed us to study and plan together with our clients to, always find the appropriate solution to their needs and requirements, achieving that set objective.

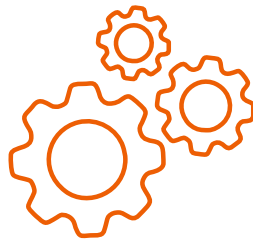
Reference Section



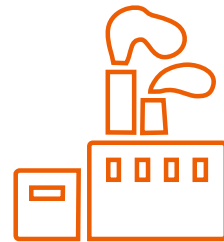
Foundries / Steelworks



Ceramics, Tiles, Bricks



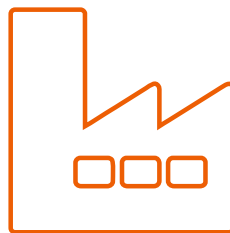
Machinery Manufacturers
Ovens and Plants



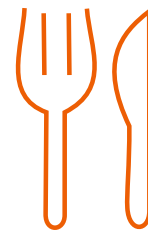
Chemical Industry
Petrol Chemistry /Plastic



Glass Industry



Pharmaceutical
Industry



Alimentary Industry /
Alimentary Storage



Hospital & Health



Waste Disposal Sector /
Waste Management /
Incinerators



Energy Sector /
Renewable Energy



Cement Plants



Water Depuration
and Drains



Museum Sector
Cultural Heritage

The background of the slide is a photograph of an industrial refinery or chemical plant. It features several tall, vertical distillation columns or towers, interconnected by a complex network of pipes, ladders, and metal walkways. The sky is a mix of blue and orange, suggesting a sunset or sunrise. The overall scene is industrial and technical.

Accessories and components for Temperature sensors

- Compensated Cables
- Ceramic Casings
- Insulators
- Therminal Block
- Electronic Therminal Block /
Signal Convertor
- Heads
- Flange
- Junctions

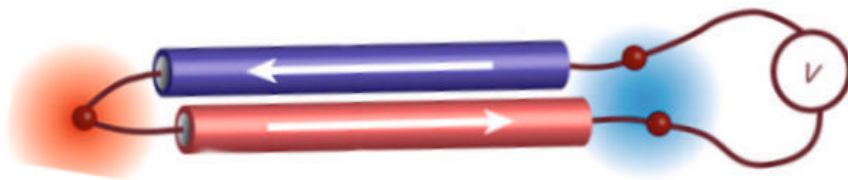
Compensated Cables

Compensated Cables T/C for T/C and RTD, Thermocouple, COMPENSATED Cables, EXTENSION Cables and SPECIAL Cables for thermocouples, with rigid and flexible formation, single and multiple, shielded and reinforced with braided and casings, with the possibility of realizing special products on clients specific requirements, lined and insulated with the following materials:

- Thermoplastics: PVC- PE (Polyethylene) – XLPE- (Polyurethane)
- Silicon Rubber
- Fluoropolymers: MFA-PFA-PTFE
- Polyamide- © Kapton
- Electrometer Fibres for high temperatures
- Ceramic Fibres for very temperatures

To connect and use the thermocouples correctly to the instruments, by extending the Cold Junction, in accordance with the SEEBECK Law. It is always necessary special cables that are all polarized and differentiated by type.

Specific calibrated cables have to be used for each type of thermocouple, connected with the correct polarization, without the addition of foreign cables. When using connectors you must make sure that they are, also compensated and correctly polarized. Doing otherwise will result in measurements always unstable and incorrect.



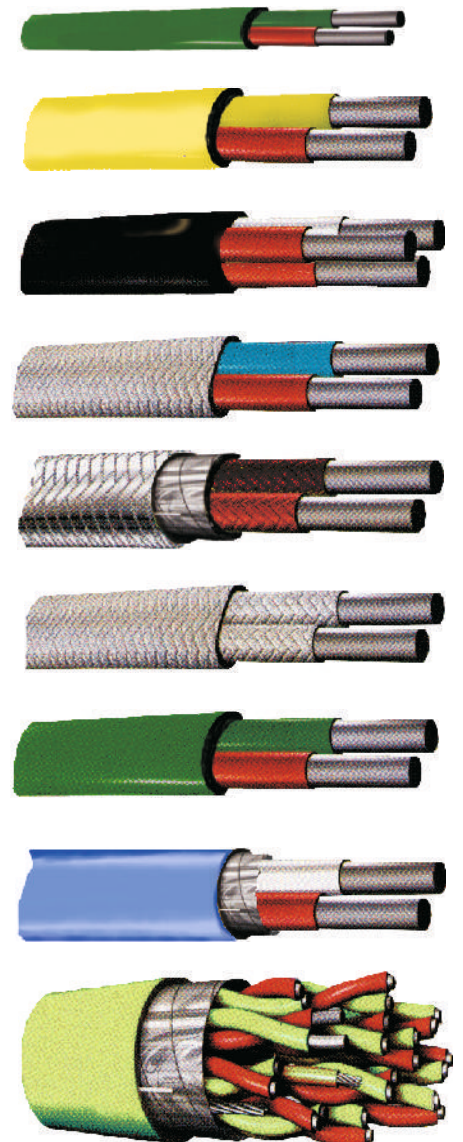
These cables can be of 3 types:

THERMOCOUPLE CABLES (T/CX): These cables are made with conductors made of the same material as the thermocouples. These cable are tested in the same range as thermocouples, so in fact they are thermocouples. They are used in special applications requiring maximum extension of calibration.

Generally, these cable are coated and insulated with high-performing materials.

EXTENSION CABLES (WX): These cables are constructed with conductors and are made with the same nominal structure as the corresponding thermocouples, but unlike those previous are tested in the range 0—200°C in accordance with standard DIN IEC 60584.

COMPENSATED CABLES (CX): These last type s of cables, the most common, are made of equivalent alloys which have the same thermo-electrical characteristics as the respective thermocouples, in accordance with standard DIN IEC 60584.



Depending on the use, round-shaped, oval-shaped or flat-shaped cables, can be insulated, and or, coated in the most suitable material and be supplied single or multiple with a simple coating or even shielded, and multiple structured coating, with various combined materials, starting from standard formulas up to special solutions, on request of the client, with MOQ (Minimum Order Quantity) and is extremely limited with a very short production period.

In addition to the special production, to make it easier for the client, CEAM puts at their disposal a vast range of cables in various calibrations and technical typologies always in STOCK, reels of various pieces, and also reels in various cuts for special quantities of over 200 meters.

TECHNICAL SPECIFICATIONS

SILICON RUBBER

The cables covered with silicon rubber have a good flexible characteristic, even at a low temperature, as far as -40°C, they have good mechanical and electrical properties, high resistance to hot air, physiological properties, reticulation to vapour, and guarantee an excellent thermal stability, a prolonged thermal resistance to hot air, but poor resistance to hot vapour exposure resistance, that is, if it is prolonged it can destroy the coating.

The silicone *cables* are flame retardant if exposed to the action of the fire, if a cable is attacked by the flames it crystallizes maintaining its characteristics for the time sufficient to allow the implementation of safety measures.

On request it is possible to make special compounds that increase the LOI by 25%, moreover the silicone cables are naturally inert, therefore particularly suitable for medical, pharmaceutical and food applications.

	Unit	Average	Std.	Nominal
Hardness	Soglia A	65÷70	70	70
Density	Gr/Cm ³	1,50	1,34	1,18
Allung. Breakage	%	350	400	500
Traction Res.	Mpa	5,5	7,5	9,5
Tear Res.	N/mm	20	21	45
Temp. Range	°C	-40÷180 - Special 250÷300		

FLUOR-BASED POLIMERS- MFA-PIA- PTFE

Insulation cables in MFA- PFA- PTFE, can be used with a wide temperature range, in which they maintain good mechanical, flexible and electrical characteristics, even at low temperatures, and over time.

When exposed to direct flame they burn but the flame does not propagate, and cease to burn when the flames are extinguished.

These types of coatings have an excellent resistance to corrosive and inorganic chemicals, oxidizing acids, mineral acids, metallic saline solutions and peroxides. They guarantee an excellent resistance, even with organic substances, such as; anhydrides, hydrocarbons, external aromatic mixtures, ketones and amines.

	Unit	MFB	MFA	PFA	PTFE
Density	g/cm ³	2,12÷2,17	2,12÷2,17	2,14÷2,17	2,14÷2,18
Oxygen Index	%	>95	>95	>95	>95
Melting Point	°C	280÷290	280÷290	300÷310	-----
Operat. Temp.	°C	-200÷210	-200÷250	-200÷260	-200÷280
Hardness	Shore D	60	90	60	60
Allung. Breakage	%	340	340	300	400
Electrical Res.	Ohm/Cm	10 ¹⁸	10 ¹⁸	10 ¹⁸	10 ¹⁸
Water Absorb.	%	<0.03	<0.03	<0.03	<0.03
Chemical Resis.	-----	Excellent	Excellent	Excellent	Excellent
Abrasion Resis.	-----	Good	Good	Good	Good

ELECTRO-GLASS FIBRE

Various types are available with a work range from 440-650 -900 °C.

	Unit	Polyamide	©Kapton
Operating Temp.	°C	-200÷300	-200÷300
Flame Resis.	-----	Good	Good
Flammable Threshold	UL-94	V-0	V-0
Insulation Character	-----	Excellent	Excellent
Solvent Resis.	-----	Excellent	Excellent
Radiation Resis.	-----	Excellent	Excellent

POLYAMIDE - © KAPTON

Durable and semi-transparent amber-colored insulation that has excellent physical characteristics, chemicals (to date no harmful solvents have been observed) combined with excellent electrical insulation characteristics .Combined with an excellent and extremely broad temperature range. These materials do not change with variation of temperature.

	Tipo E	Tipo R/S	Tipo Q
Temp. Max	400 °C	400 °C	400 °C
High Tem. Resist.	Excellent	Excellent	Excellent
Flame Resis.	Excellent	Excellent	Excellent
Flexibility	Good	Good	Good

























































CERAMIC FIBRE

Special coating used for application of very high temperatures, maintaining a significant tightness and flexibility up to very high temperatures. These fibres, also, guarantee a good chemical resistance.

Our ceramic fibres are distinguished for their particular characteristics from other inorganic fibres and offer superior performance and properties.

	Unit	Value
Composition	Al ₂ O ₃ SiO ₂ B ₂ O ₃	
Fiber Density	Gr/Cm ³	2,70
Working Temp.	°C	1200
Temp. Peak	°C	1370
Melting Point	°C	1800

International Extension Cable Color Codes

							
T/C Type	IEC	IEC Intrinsic Safe	ANSI	DIN	NFE	BS	JIS
T							
U							
J							
L							
E							
K							
W _x							
V _x							
N							
R/S							
B							

HI-TECH PROTECTIVE CERAMIC CASINGS

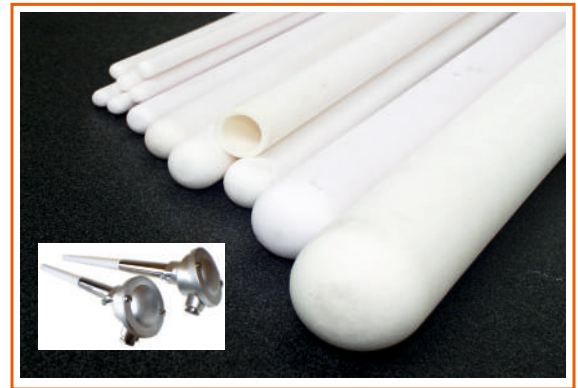
KER-530 - KER-610 - KER-799

Our protective ceramic casings and tubes are very high technological products, realized with prime quality materials and extremely advanced production techniques. And all of this is to be able to obtain excellent results in all conditions.

To guarantee the maximum quality and homogeneity of the product, each piece is individually printed isostatic presses at very high pressure. This productive process creates high density products, reducing to a minimum or even eliminating the minimal microporosity, especially in the sintered versions. Every artifact is created as a single piece without back ends or parts brought back later, which would weaken the structure, or in case of thermal shock would detach easily.

All the ceramic products are studied and realized in different ceramic qualities, and all in accordance with the standards DIN-VDE 0335/ IEC 672, and are suitable for general applications where high levels of chemical protection is necessary, even at elevated temperatures.

Thanks to these characteristics these products are particularly suitable for the protection of thermometric sensors, that are used in productive processes at high and very high temperatures, such as the glass or ceramic sector with durability results.



DIMENSION TOLLERANCE

Diam. mm		Toll. +/- mm
From		
0	4	0,15
4	6	0,20
6	8	0,25
8	10	0,30
10	13	0,35
13	16	0,40
16	20	0,45
20	25	0,50
25	30	0,55
30	35	1,30
35	40	1,33
40	45	1,35
45	50	1,65
50	55	1,70
55	60	1,75
60	70	2,10
70	80	2,45
80	90	2,80
90	100	3,15
125	140	4,25
170	185	5,45
200	250	6,60
250	300	7,30

Maximum curvature 0.5% of the total length

IN ACCORDANCE WITH DIN 40680

TECHNICAL CHARATERISTICS

Description	Um	Test	Material Type		
Trademark CEAM			GSI	GPY	GTE
Trademark DIN VDE 0335/IEC 672			C530	C610	C799
Dimensional Tolerance			Depending DIN 40680		
Color			White	White	White
Unit Weight	Kg / Dm ³	ASTM C 20	2,3	2,8	3,85
Water Absorbance	%	ASTM C 373	10	0	0
Rockwell Hardness	R 45 N	ASTM E 18			80
Rigidity to Bending	N/mm ²	ASTM F 417	120	200	360
Max. Working Temp.	°C		1600	1600	1800
Thermal Conductivity	W / m.°K	ASTM C 408	1,5	4	28
Coefficient of thermal Expansion					
20 - 100 °C			3,6	4,5	5,4
20 - 300 °C	x 10 ⁻⁶ °C	ASTM C 372	5,0	5,2	6,5
20 - 600 °C			5,6	5,8	7,7
20 - 1000 °C			6,4	6,7	8,5
Dielectric Constant		ASTM D 150			10
Dielectric Resistance	KV / mm	ASTM D 116			>10
Cooling Factor	x 10 ³	ASTM D 150			0,2
Resistance Capacity					
200 °C				10	10
400 °C	Ohm x cm	ASTM D 257		10	10
600 °C				10	10
Temperature Stability			Good	Good /Satisfy	Good /Satisfy
Chemical Resistanc.			Satisfy	Good	Very Good
TE Value	°C				1000

Note: Average Data Acquired from Laboratory Tests, Carried Out on a Sample Basis

HOW TO PLACE AN ORDER

GSI - Sheaths closed - Ker 530 @ DIN VDE 0335 - IEC 672 - Measurements expressed in mm.

Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.
2620	9	6	500	2552	16	12	500	2043	26	18	750
2619	9	6	1000	2040	16	12	750	2346	26	18	1150
2452	10	7	300	2042	16	12	1150	2355	60	50	500
2551	10	7	500	2041	17	13	1000				
2453	10	7	1000	2044	26	18	500				



GPY - Sheaths closed - Ker 610 @ DIN VDE 0335 - IEC - Measurements expressed in mm.

Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.
2045	9	6	500	2038	17	13	500	2664	55	36	580 **				
2618	9	6	1000	2036	17	13	600	2A285	55	46	700 **				
2A148	10	7	500	2031	17	13	750	2A367	60	50	500 **				
2A149	10	7	600	2032	17	13	1000								
2027	10	7	700	2033	17	13	1200								
2028	10	7	1000	2034	20	15	500								
2A329	14	10	600	2011	20	15	520								
2A088	15	11	300	2035	20	15	1100								
2030	15	11	500	2956	20	15	1400								
2A253	15	11	600	2A372	23	17	650								
2029	15	11	650	2005	23	17	1200								
2A254	15	11	700	2A315	24	19	1200								
2917	15	11	800	2451	26	18	500								
2A103	15	11	1000	2039	26	18	750								
2037	17	13	350	2A013	26	18	1000								

GTE - Sheaths closed - Ker 799 @ DIN VDE 0335 - IEC - Measurements expressed in mm.

Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.	Art.	D.Est.	D.Int.	Lungh.
2A180	6	4	200	2002	15	10	1000	2903	24	18	2500				
2A178	6	4	600	2018	15	10	1200	2A287	28	22	550**				
2343	6	4	900	2377	15	10	1700	2284	35	27	1000				
2A117	8	5	1000	2904	15	11	2020	2023	48	40	306				
2008	9	6	300	2905	15	11	2500	2022	48	40	459				
2009	9	6	500	2A396	16	12	300	2024	48	40	612				
2908	9	6	600	2A397	16	12	500	2024	48	40	612				
2010	9	6	700	2A398	16	12	700								
2268	9	6	1000	2A399	16	12	1000								
2A392	10	6	300	2A116	17	13	900								
2A393	10	6	500	2155	17	13	1200								
2A394	10	6	700	2003	20	15	520								
2A395	10	6	1000	2404	20	15	1000								
2A179	10	7	200	2006	24	18	500								
2A177	12	8	650	2007	24	18	600								
2342	12	8	900	2025	24	18	750								
2450	15	10	300	2026	24	18	1000								
2016	15	10	500	2927	24	18	1300								
2017	15	10	600	2162	24	18	1700								
2001	15	10	750	2902	24	18	2020								

** Note: Open Tubes

ADDITIONAL SERVICES

It is possible to carry out the following special processes on request:



- Made to measure perforation and cutting (diamond and/or laser processing)
- Special design processes
- Bonding accessories
- Supplying of products and special dimensions
- Personalized products service (Private Program Service)

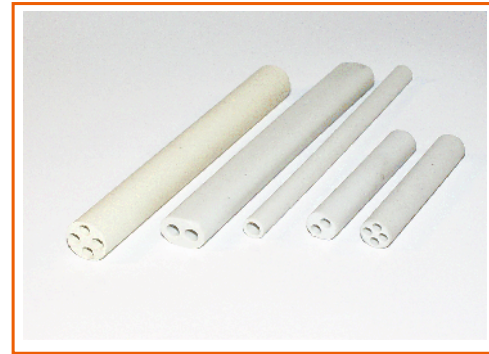
CERAMIC CABLE CARRIER INSULATORS

Our ceramic cable carrier insulators are realized with prime quality materials and extremely advanced production technologies. All of this in order ensure excellent results in all conditions.

To ensure the highest quality and homogeneity of the product each piece is drawn and printed with very high pressure.

All the products are studied and realized with different ceramic qualities and all in accordance with the standard DIN-VDE 0335/ IEC 672. They are suitable for general use where high levels are needed and also high temperatures.

Thanks to these characteristics they are particularly suitable for protection of sensitive wires in thermometric sensors which are used in productive processes at very high temperatures, such as the ceramic and glass sectors where it is necessary elevated quality sensors and with excellent results.



DIMENSIONAL TOLLERANCES

Diam.mm		
From	To	Toll. +/- mm
0	4	0,15
4	6	0,20
6	8	0,25
8	10	0,30
10	13	0,35
13	16	0,40
16	20	0,45
20	25	0,50
25	30	0,55
30	35	1,30
35	40	1,33
40	45	1,35
45	50	1,65
50	55	1,70
55	60	1,75
60	70	2,10
70	80	2,45
80	90	2,80
90	100	3,15
125	140	4,25
170	185	5,45
200	250	6,60
250	300	7,30

Maximum Curvature 0,5% of Total Length

According with DIN 40680

TECHNICAL CHARACTERISTICS

Description	Um	Test	Material Types		
Trademark CEAM			IST Porcelain Termoelettrica	IPY	ITE
Trademark DIN VDE 0335/IEC 672				C610	C799
Dimensional toll.			According with 40680		
Color			White	White	White
Unit Weight	Kg / Dm ³	ASTM C 20	2,3	2,8	3,85
Water Absorbance	%	ASTM C 373	10	0	0
Rockwell Hardness	R 45 N	ASTM E 18			80
Rigidity to Bending	N/mm ²	ASTM F 417	120	200	360
Max. Working Temp.	°C		1100	1600	1800
Thermal Conductivity	W / m.°K	ASTM C 408	1,5	4	28
Coefficient of Thermal Conductivity					
20 - 100 °C				4,5	5,4
20 - 300 °C	x 10 ⁻⁹ °C	ASTM C 372		5,2	6,5
20 - 600 °C				5,8	7,7
20 - 1000 °C				6,7	8,5
Dielectric Constant		ASTM D 150			10
Dielectric Resistance	KV / mm	ASTM D 116			>10
Cooling Factor	x 10 ³	ASTM D 150			0,2
Resistance Capacity					
200 °C				10 ⁹	10 ¹⁵
400 °C	Ohm x cm	ASTM D 257		10 ⁶	10 ¹³
600 °C				10 ⁵	10 ¹¹
Temperature Stability			Good	Good / Satisfy	Buona /Satisfy
Chemical Resistanc.			Satisfy	Good	Very Good
TE Value	°C				1000

Average Data Acquired from Laboratory Tests ,Carried Out on a Sample Basis

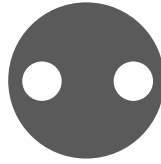
INSULATOR SHAPES



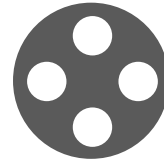
**Oval
2 Holes**



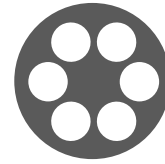
**Round
1 Hole**



**Round
2 Holes**



**Round
4 Holes**



**Round
6 Holes**

Bead Shape



Mushroom Shape



HOW TO PLACE AN ORDER

IST - Insulators- Thermoelectric Porcelain & Stealite- Measurements expressed in millimeters

Art.	UM	Descr.	D.Est	Length	N.holes	D.holes	Shape
2147	kg	Bead	3.3	4.2	1	6.5	cylindrical
2153	kg	Bead	5.3	6.0	1	2.5	cylindrical
2085	kg	Bead	11.3	11.8	1	6.5	cylindrical
2360	kg	Cap	23/13	5+15	1	7.0	mushroom

Art.	UM	Descr.	D.Est	Lungh.	N.holes	D.holes	Shape

GPY - Insulators-Ker 610@DIN VDE 0335-IEC-Measurements expressed in millimeters

Art.	UM	Descr.	D.Est	Lungh.	N.Holes	D.Holes	Shape
2157	No.	Insulator	4.0	10.0	4	1.0	Round
2743	No.	Insulator	4.0	50.0	1	2.0	Round
2046	No.	Insulator	4.0	100.0	4	1.0	Round
2047	No.	Insulator	4.0	700.0	2	1.0	Round
2051	No.	Insulator	4.0	800.0	2	1.0	Round
2345	No.	Insulator	4.0	1000.0	4	1.0	Round
2778	No.	Insulator	4.5	50.0	2	1.5	Round
2269	No.	Insulator	5.0	10.0	2	1.8	Round
2341	No.	Insulator	5.0	100.0	2	1.5	Round
2048	No.	Insulator	5.0	1000.0	4	1.0	Round
2900	No.	Insulator	6.0	25.0	1	4.0	Round
2901	No.	Insulator	6.0	50.0	1	4.0	Round
2138	No.	Insulator	6.0	100.0	1	4.0	Round
2012	No.	Insulator	8.0	50.0	2	3.0	Round
2014	No.	Insulator	8.0	50.0	4	2.5	Round
2665	No.	Insulator	10.0	100.0	4	3.0	Round

Art.	UM	Descr.	D.Est	Lungh.	N.Holes	D.Holes	Shape
2084	No.	Insulator	12.0	100.0	2	4.0	Oval
2013	No.	Insulator	12.0	100.0	1	6.0	Round
2089	No.	Insulator	12.0	100.0	4	3.5	Round
2087	No.	Insulator	14.0	100.0	4	4.0	Round

ITE - Insulators-Ker 799@ DIN VDE 0335- IEC -Measurements expressed in millimeters

Art.	UM	Descr.	D.Est	Lungh.	N.Fori	D.Fori	Forma
2344	No.	Insulator	2,6	1000.0	4	0.6	Round
2A384	No.	Insulator	3,0	1100.0	2	0.8	Round
2050	No.	Insulator	4,0	1000.0	2	1.0	Round
2093	No.	Insulator	4,0	1000.0	4	1.0	Round
2A269	No.	Insulator	4,0	1300.0	4	1.0	Round
2252	No.	Insulator	4,5	1000.0	6	0.8	Round
2679	No.	Insulator	4,5	1100.0	4	1.0	Round
2678	No.	Insulator	4,5	1100.0	6	0.8	Round
2254	No.	Insulator	4,5	1700.0	6	0.8	Round
2A286	No.	Insulator	6,0	1000.0	4	1.3	Round

Art.	UM	Descr.	D.Est	Lungh.	N.Fori	D.Fori	Forma
2049	No.	Insulator	8,5	1000.0	4	1,5	Round
2899	No.	Insulator	8,5	2060.0	4	1,8	Round
2898	No.	Insulator	8,5	2500.0	4	1,8	Round

Therminal Block Sensors

Range of Therminal Block Connections for Temperature Sensors

Measurements List:

A=Diameter - B=Length - C=Distances fixing holes

D=Quantity of terminal available - E=Compatibility with connection heads, simply by reducing unnecessary use.

BCI-A Series

Ceramic Terminal Board

A: 15 mm

B: 20 mm

C: None

D: 2 - 4 - Terminals

E: TCI



Screw Terminal

BDB-C Series

Ceramic Terminal Board

A: 43 mm

B: 20 mm

C: 34 mm

D: 2 - 4 - 6 - Terminals

E: TDB - TPT - TCE - TEX - TIN and TDA with Adapter



Welding Terminal

BMI-A Series

Ceramic Terminal Board

A: 25 mm

B: 23 mm

C: 19 mm

D: 2 - 4 Clamps - Terminals

E: TMI



Screw Terminal

BDB-D Series

Ceramic Terminal Board

A: 43 mm

B: 20 mm

C: 34 mm

D: 2-4-6 Clamps - Terminals

E: TDB - TPT - TCE - TEX - TIN and TDA with Adapter



Welding Terminal

BMI-B Series

Ceramic Terminal Board

A: 25 mm

B: 23 mm

C: 19 mm

D: 2 - 4 Clamps - Terminals

E: TMI



Welding Terminal

BDB-E Series

Ceramic Terminal Board

A: 43 mm

B: 23 mm

C: 34 mm

D: 2-4-6 Clamps - Terminals

E: TDB - TPT - TCE - TEX - TIN and TDA with Adapter



Welding Terminal

BDB-A Series

Ceramic Terminal Board

A: 43 mm

B: 23 mm

C: 34 mm

D: 2-4-6 Clamps - Terminals

E: TDB - TPT - TCE - TEX - TIN and TDA with Adapter



Screw Terminal

BDA-A Series

Ceramic Terminal Board

A: 55 mm

B: 26 mm

C: 45 mm

D: 2 - 4 Clamps - Terminals

E: TDA series



Screw Terminal

BDB-B Series

Ceramic Terminal Board

A: 43 mm

B: 23 mm

C: 34 mm

D: 2-4 Terminals

E: TDB - TPT - TCE - TEX - TIN
and TDA with Adapter



Screw Terminal

BDA-B Series

Ceramic Terminal Board

A: 55 mm

B: 21 mm

C: 45 mm

D: 2 - 4 Terminals

E: TDA series



Screw Terminal

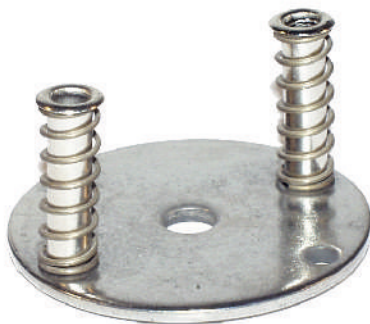
Accessory



Rubber Trimming
Available for:
All excluded BMI Series



Steel disk support of ceramic terminal board
Available for:
BDB-B BDB-C BDB-D Series
and Adaptor version for TDA connection head



Springy steel disk
Disponibile per - Available for:
BDB-B BDB-C BDB-D Series



Fittings

ATTENTION: if the specifications that you require are not catalogued, please contact our Technical-Commercial department, as many models are not listed in the catalogue, but are manufactured and available.

Therminal Block C827-A

T/C DIN-B Head

2 Wire Technique

Configurable 2 Wire Transmitter for T/C – RTD – OHM

Completely Configurable via USB

C827 is a two-wire transmitter, with a micro processor circuit, designed and built with the latest technology, self-powered by the classical 4-20 mA.

The transmitter is completely configurable and is free of trimmer, jumper or any other mechanical device that could create problems.

The input accepts the most common thermocouple and thermo-resistance sensors, and, also linear resistive signals (Ohm.)

Transmitter housing is the compact cylinder typically suitable for internal housing in the classical connection head type Don B, typically compatible with thermocouple and made of plastic material and a circuit protected by a special coating, which ensures maximum protection against atmospheric agents, humidity, dust and other factors.

The instrument can be fully configured via the optional software kit, and doesn't even require installation and USB convertor cable for connection to the PC.

Thanks to these features the device is truly universal and easily adaptable for every operation, even extreme ones.



Input Type - Ranges - PRECISIONS

Input	Type	Range	Min.Rang	Precision
RTD	PT100	-200÷850°C(-	20°C	<0.1% f.s.
	Cu50	-50÷150°C(-58÷302°F)	20°C	

Input	Type	Range	Min.Ran	Precision
	Resistenza (Ohm)	0 ÷ 4500Ω	500Ω	<0.1% f.s.

Input	Type	Range	Min.Ran	Precision
	T	-200 ÷ 400 °C	500K	<0.1% f.s.
	E	-100 ÷ 1000 °C	50°C	
	J	-100 ÷ 1200 °C	50°C	
	K	-180 ÷ 1372 °C	50°C	
	N	-180 ÷ 1300 °C	50°C	
	S	-50 ÷ 1760 °C	500°C	
	R	-50 ÷ 1768 °C(-58 ÷ 3214,4	500°C	
	B	400 ÷ 1820 °C	500°C	

TECHNICAL CHARACTERISTICS

Function: Two wire configurable insulated signal convertor transmitter –New Version 2017.

Technology: SMD circuit with micro processor .

Input: Configurable for T/C – RTD – Ohm (See full table).

T/C CJC cold joint compensation: Configurable automatically.

Range and accuracy :Consult Complete Table Input below.

Output: 4 :- 20 m A Straght-lined(Resolution 0,3 ù A).

Time response: Within a second.

Temperature Drift 0,0075% FS/°C.

Insulation: 1500 Vrms (1mm – W/O Spark) –Insulation Resistance : >100 Mohm (Under 500 Vdc).

Vibrations: 4g/2 – 150 Hz.

Power Supply: 12 :- 40 Vdc).

Recommendation: 12 :-40 Vdc (Recommended 24 Vdc).

Operating and Storage Conditions: -40 :- 85°C – 5:-95 UR% Not Condensed .

Shock and vibrations: 4g/2 @ 150 > Hz (IEC 60 068 – 26).

Housing: Cylindrical with Encased Circuit.

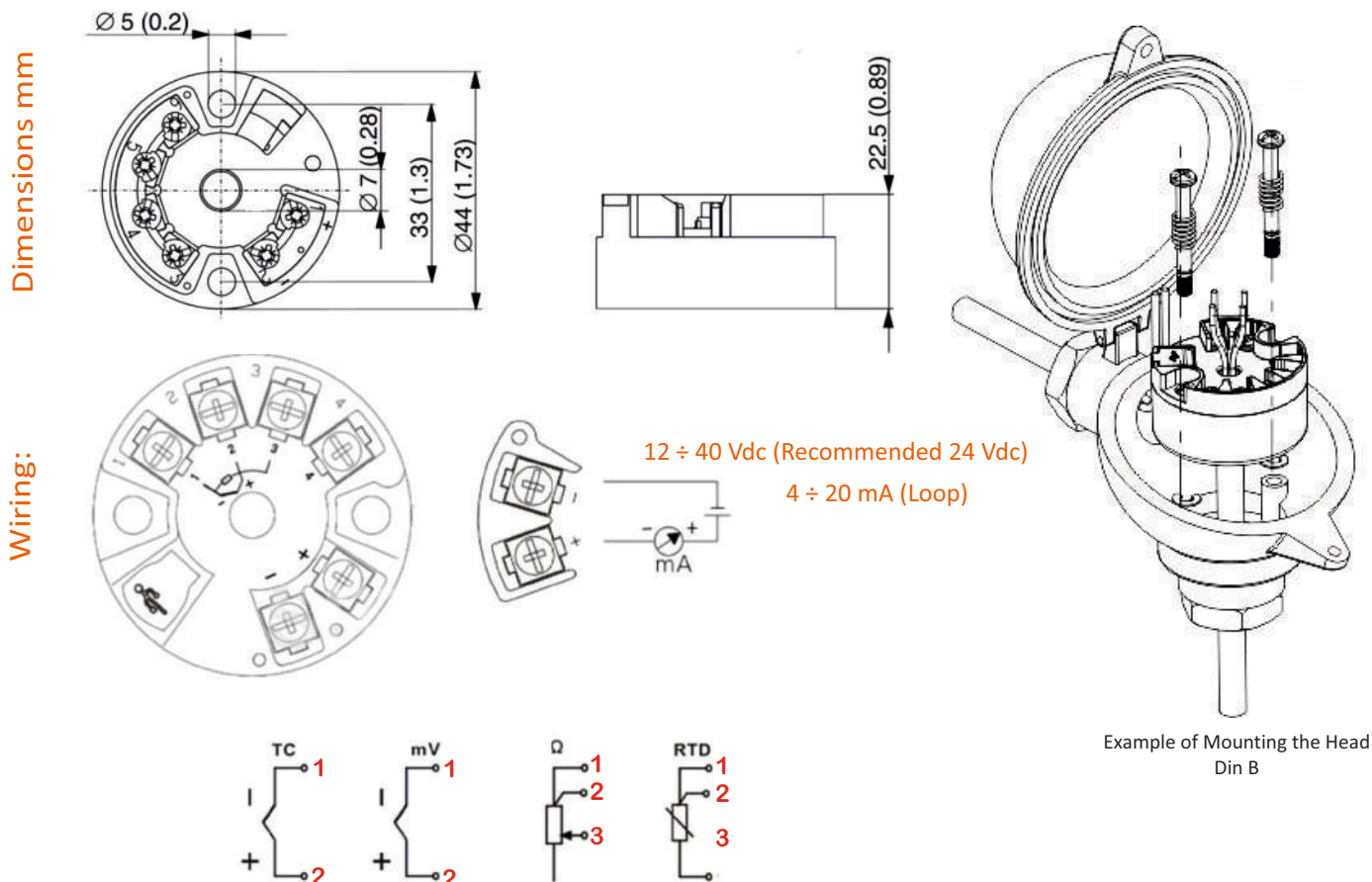
Assemblage: Internal Head Connection T/C Din Type "B" and Compatible (DIN 43729)- Optional Fitting for Din Rail

Electrical Connection: Screw Terminals

Dimensions: Diameter 44 mm – Height 22,5 mm.(Maximum Bulk) – Weight: Around 34 Grams.

Conformity: CE – GB/T1868 – IEC 61326-1

For more details please refer to the complete manual.



*Software Configuration of Windows,
Usable without Installation.*

HOW TO ORDER

The products, all possible accessories and alternatives can be viewed in our catalogue online, www.sensorstore.it, on the page specific for C827, also accessible with the QRCEAM system.



C827- I - Art. 5B276 - Trasm. Config. 2 2Wires per T/C - RTD -OHM - Da Testa T/C Din Tipo "B" - Insulated

Recommended Accessories:

C827-CA4-CFG - Cavo USB Activated Configuration - Art. 5B011

C827-SWT1-CFG-PRO - Professional Version of Software Configuration - Art. 5B012

Auxiliary Services:

Direct Assembly Service for Sensors –Supplying of Sensors Already Equipped with Transmitters. ISO or SIT Calibration and Certification Service.

"Private Label", Customization Product Service, for OEM Clients (Minimal Quantity Duty)

Other Proposed Combinations:

C801 -M -Power Supply 120 or 230 VAC – Triple Output 24 Vdc Din Rail Back Panel

C810 -1PH – Anti- disturbance Network Filter

C810 -FUL -1PH – Extra Voltage Protection-Voltage Mains – Ver. Mono-phase – Art. 5861

Gamma Connection Heads

For Temperature Sensors

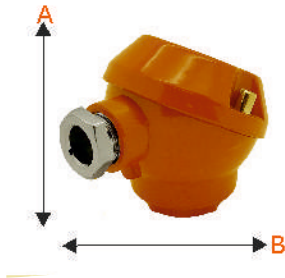
TCI Series

Protection: IP20
2-4 Clamps
Material: Chromate Brass
A: 64 mm
B: 22 mm



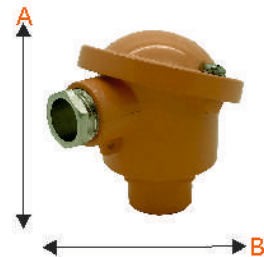
TMI Series

Protection: IP65
2-4-6 Clamps
Material: Painted Aluminium
A: 51 mm
B: 59 mm



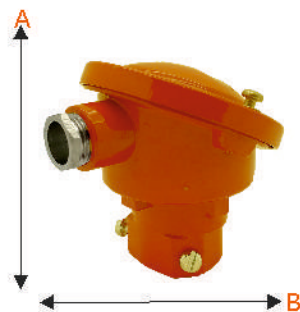
TDB Series

Protection: IP65
2-4-6 Clamps
Material: Painted aluminium
A: 73 mm
B: 75 mm



TDA Series

Protection: IP65
2-4-6 Clamps
Material: Painted aluminium
A: 92 mm
B: 100 mm

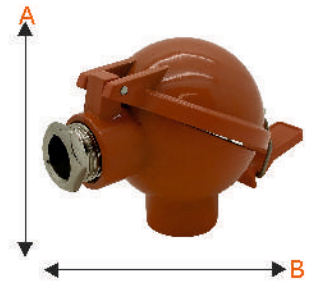


Standard Line ↑

Special Line ↓

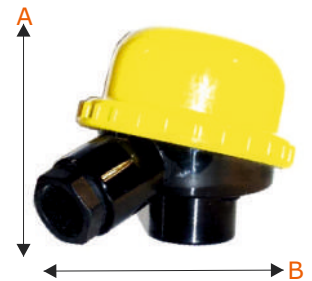
TCE1 Series

Protection:
IP65, 2-4-6 Clamps,
Material Alluminio Vem.,
A: 70 mm
B: 65 mm



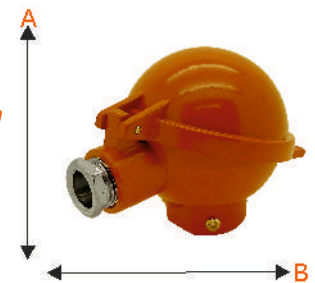
TPT Series

Protection: IP65
2-4-6 Clamps
Material: Nylon
A: 72 mm
B: 98 mm



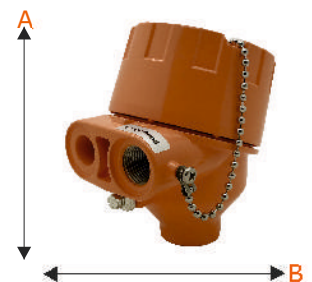
TCE Series

Protection: IP65
2-4-6 Clamps
Material: Painted Aluminium
A: 85 mm
B: 117 mm



TEX Series E0815

Protection: IP65,
2-4-6- Clamps
Material Alluminio Vem.,
A: 130 mm
B: 85 mm



SENSOR BLOCK FLANGES

General Characteristics:

Probe block flanges are ideal for fixing and the positioning of thermometric probes, fitted with a casing or straight metal sleeve.

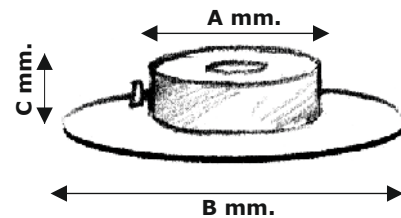
Once positioned at the desired height, the specially designed, flange stops the probe from sliding by tightening the lateral bolt or fitted to the wired version, thus, fixing the sleeve to the body of the probe.

It is made from cast iron and subsequently completed with machinery. They can be supplied in various versions, and if the standard products are not sufficient we can even make special versions (a minimum quantity is necessary).

The torque of the lateral bolt has to take into account the material of the casing or the sleeve of the probe, while being positioned at too high a pressure on thick small casings could irreversibly damage the probe.

Attention: Carefully tighten as excessive torque could irreversibly damage the fragile surfaces of the probe.

Thanks to these characteristics this device truly universal and easily adaptable for any operative situation, even extreme ones.

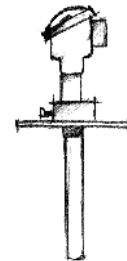


MEASUREMENTS AVAILABLE

FLANGE VERSION D.70 - ART. 2090
A = 32 mm. - B = 70 mm. - C = 18 mm.

FLANGIA VERSION D.100 - ART. 2599
A = 50 mm. - B = 100 mm. - C = 25 mm.

EXAMPLPE OF FLANGED APPLICATION



HOW TO ORDER

Bolt probe Diam. 70 – Diam. 70 Flanged – Art. 2090
Bolt probe Diam. 100 – Diam. 100 Flanged – Art. 2599
Flanged special procedure – Special Flanged Version – Art. 2600

When you order please specify the puncture holes required from the available versions indicated below:

Versions Available:

- Version with smooth drilling and clamping bolt
Available: 5 -7-9-11-13-18-22*-30-34 mm.

* Standard

- Gas pitched wire drilling version
Available: 1/8" - 1/4" - 3/8" - 1/2" - 3/4"- 1"

COMPRESSION-TYPE SLIDING CONNECTION

For the Installation of Thermometric Probes Without Wired Connection the casing

GENERAL CHARACTERISTICS:

This particular type of connector allows the installation of probes and thermowells equipped with rigid cylindrical metal sheaths, without a fixed welded connection, therefore with possibility to place, where you want, the height of the coupling on the probe sheath.

It's function is very simple, by inserting the sheath inside the central hole of the fitting it is possible to slide the probe in the axis, inside the junction until it reaches the desired altitude, after which tightening up the counter nut the internal ogive of the coupling will compress internally on the probe sheath and externally on the inner cone of the body fitting, thus ensuring hold on the pressure, both for gas and liquids.

You also get an excellent mechanical locking of the coupling position by calibrating the tightening torque to be compatible with the type of sheath.

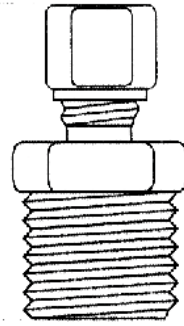
For the removal of the probe simply unscrew the upper nut. Therefore the probe can easily separated from the body of the coupling and extracted. But, for a possible replacement the body of the coupling can be reused. And, the ogive and the counter nut will remain remain irreversibly fixed to the sheath.

This type of connection can be used in both conditions.



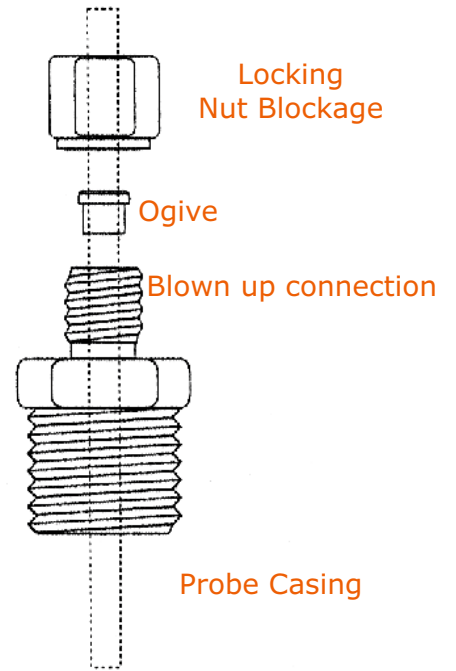


Length of Total Connection (L)



Tight Connection

Body
Wired Body



HOW TO ORDER

Art.	Model	Diam. mm.	Process connection	Leng. L.	Fitting material	Ogive
2066	Sliding fitting	4	1/8"		Nickel plated brass	Brass
2533	Sliding fitting	4	1/4"		Nickel plated brass	Brass
2873	Sliding fitting	5	1/4" NPT		Nickel plated brass	Brass
2324	Sliding fitting	6	1/8"		Nickel plated brass	Brass
2067	Sliding fitting	6	1/4"		Nickel plated brass	Brass
2285	Sliding fitting	8	1/4"		Nickel plated brass	Brass
2068	Sliding fitting	8	3/8"		Nickel plated brass	Brass
2525	Sliding fitting	8	1/2"		Nickel plated brass	Brass
2070	Sliding fitting	10	3/8"		Nickel plated brass	Brass
2069	Sliding fitting	10	1/2"		Nickel plated brass	Brass
2071	Sliding fitting	12	3/8"		Nickel plated brass	Brass
2072	Sliding fitting	12	1/2"		Nickel plated brass	Brass
2783	Sliding fitting	22	3/4"		Nickel plated brass	Brass
2774	Sliding fitting	22	1"		Nickel plated brass	Brass
2272	Sliding fitting	1,0	1/8"		AISI 316	AISI 316
2273	Sliding fitting	1,5	1/8"		AISI 316	AISI 316
2274	Sliding fitting	3,0	1/8"		AISI 316	AISI 316
2835	Sliding fitting	4,5	1/8"		AISI 316	AISI 316
2521	Sliding fitting	4,5	1/4"		AISI 316	AISI 316
2520	Sliding fitting	4,5	1/2"		AISI 316	AISI 316
2412	Sliding fitting	6,0	1/4"		AISI 316	AISI 316
2275	Sliding fitting	6,0	1/2"		AISI 316	AISI 316
2300	Sliding fitting	8,0	1/4"		AISI 316	AISI 316
2701	Sliding fitting	8,0	1/2"		AISI 316	AISI 316
2301	Sliding fitting	10,0	1/2"		AISI 316	AISI 316
2806	Sliding fitting	12,0	1/2"		AISI 316	AISI 316
2793	Sliding fitting	34,0	1"1/2		AISI 316	AISI 316
2431	Sliding fitting	35,0	1"1/2		AISI 316	AISI 316
2486	Sliding fitting					

On request, spare ogives are also available in other materials than the original.

ATTENTION: The data in this table may be subject to variations.

COMPENSATED CONNECTORS

PER T/C Tipo T-J-K-N-R/S-B-mV & RTD

Special compensated connectors for: thermocouples, temperature resistance and signals, are crucial components for good measurement results. Very often this measurement chain is overlooked. That is, if a good sensor is required for good results the connector is not less important.

A poor quality connector can obstruct efforts to achieve good quality measurements, damaging the entire productive process, even risking impairing equipment.

The CEAM Control Equipment connectors are made with prime materials of the highest quality, using contact elements made from metal sheets and bars worked with tool machinery to guarantee and ensure maximum reliability and sturdiness.

This range includes all the STD (Standard) and MIG (Mignon) versions, both male and female wired connectors, for panels and special versions for printed circuit boards. They are made with polycarbonate and are for particularly heavy duty high temperature applications and are also made in technical ceramic.

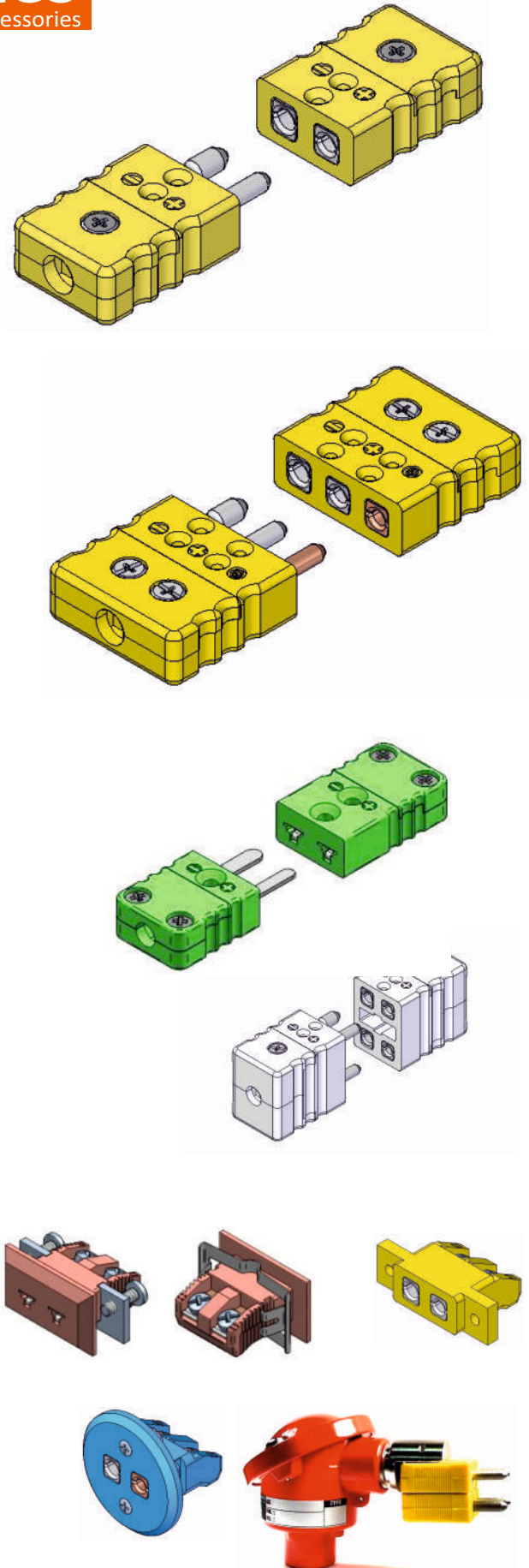
Both bi-polar versions, for T/Cs and signals, and tri-polar versions, for RTDs, are available.

They are indispensable for the rapid connection of sensor, made from alloys compatible with each type of thermocouple and do not introduce any type of error in the measurement loop. Also, they are designed for an obligatory insertion that does not allow a connection with inverted polarity, making it possible to easily replace the sensor without any errors, even by non-expert members of staff.

Thanks to their practicality, reliability and universal recognition it is a fact that these compensated connectors are recognized as a world standard.

Finally, to complete this vast range, and facilitate their use, we have a wide variety of fittings, such as; steel cable clamps, various types of cable presses, panels with multiple pre-drilling, and the handy and exclusive adaptor Art. 3054 (Which was created and developed by CEAM), used to firmly secure the connectors to the probe head, instead of the cable press. Thus avoiding the classical problem of the movable socket pulling on the cable on which the connector is mounted and with the connection being held only by the force of the terminals and often disengaging, creating false contacts.

ACS
Accessories



Mignon M/F
Plastics Max 200 °C

Mignon M/F
Ceramics Max 650 °C

Mignon F - For Rectangular Panel
Plastics Max 200 °C

Bracket Mounting Clip-spring Mounting

Panel cut-out: 8,1 x 16,1 mm

Mignon M/F - Duplex
Plastics Max 200 °C

Mignon M/F
Plastics Max 200 °C

Mignon M/F
Ceramics Max 650 °C

Mignon F - For Rectangular Panel
Plastics Max 200 °C

Panel cut-out: 12,9 x 25,5 mm
Panel thickness: 5mm max.

Standard M/F - Duplex
Plastics Max 200 °C

RTD Mignon M/F 3Poli
Plastics Max 200 °C

RTD Standard M/F 3Poli
Plastics Max 200 °C

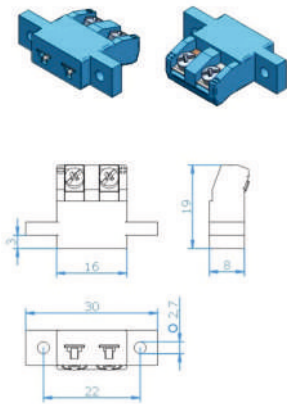
Mignon F Panel 3Poles
Rectangular Recess
Plastics Max 200 °C

Panel cut-out: 8,1 x 24 mm
Panel thickness: 3,0 mm

Standard F Panel 3 Poles
Rectangular Recess
Plastics Max 200 °C

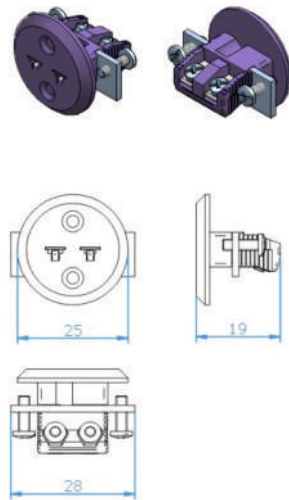
Panel cut-out: 12,9 x 36,6 mm
Panel thickness: 3,0 mm

Mignon F - Panel
Rectangular Recessed
Plastics 200 °C



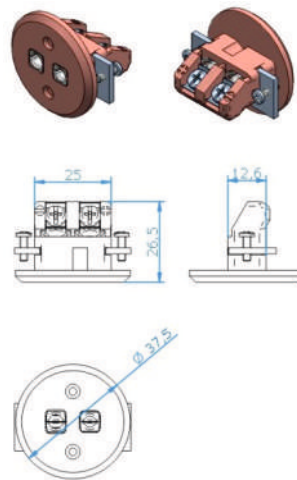
Panel cut-out: 8,1 x 16,1 mm
Panel thickness: 3,0 mm

Mignon F - For Rectangular Panel
Plastics Max 200 °C



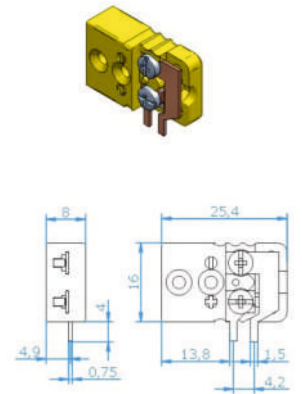
Panel cut-out: 17,5 mm diameter

Mignon F - For Rectangular Panel
Plastics Max 200 °C

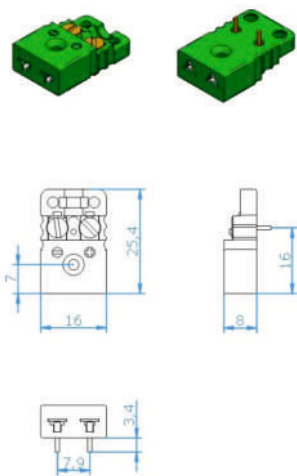


Panel cut-out: 27 mm diameter
Panel thickness: 5 mm max.

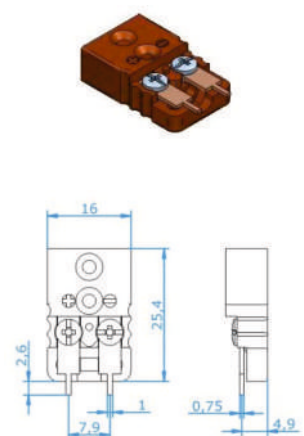
Mignon F - PCB Side
Plastics Max 200 °C



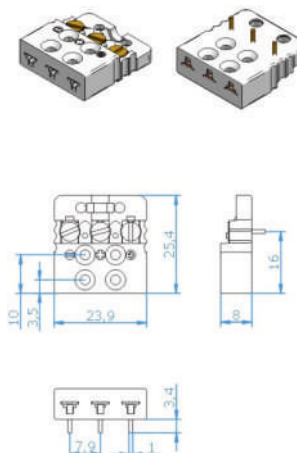
Mignon F - PCB Flat
Plastics 200 °C



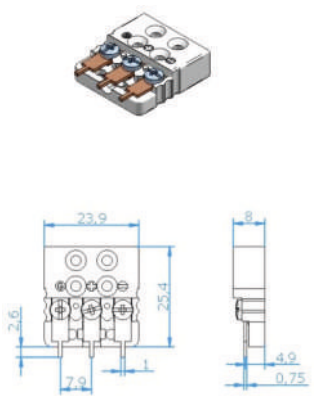
Mignon F - PCB Rear
Plastics 200 °C



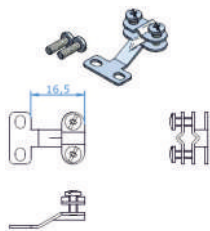
Mignon F 3 Poli - PCB Flat
Plastics 200 °C



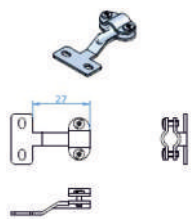
Mignon F 3 Poli - PCB Rear
Plastics 200 °C



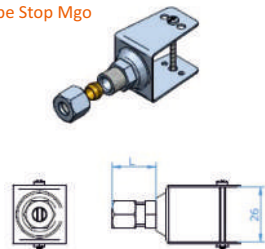
Steel Cable Clamp
For Mignon Connectors - MIN



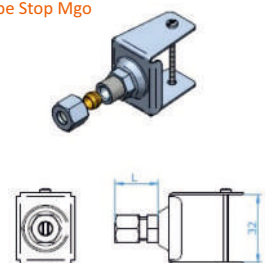
Steel Cable Clamp
For Standard Connectors - STD



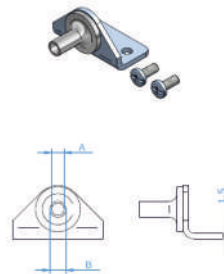
Steel Cable Clamp H26
Connectors Standard Plastic-Ceramic
Tube Stop Mgo



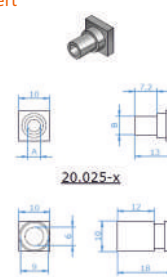
Steel Cable Clamp H32
Connectors 3 Pole Standard Plastic
Tube Stop Mgo



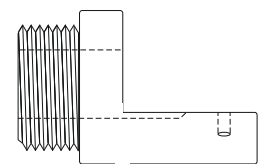
L-Bracket Crimp-Adapter



Crimp-Insert

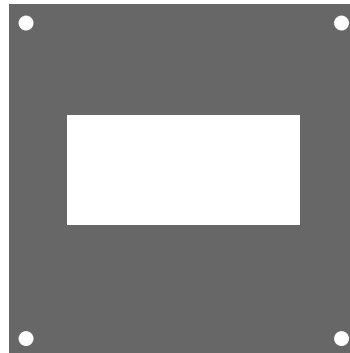


Standard Connector Adaptor
For Mounting on CablePress Head
Wired Connection 1/2" M
Art. 3054



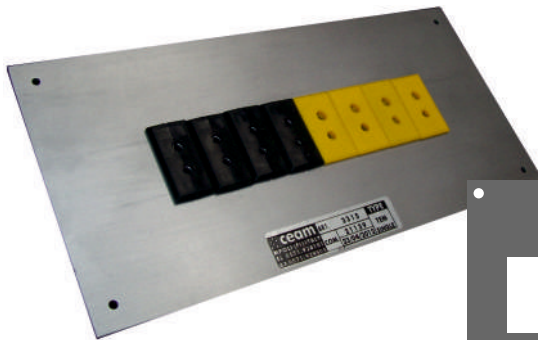
OTHER COMPLEMENTARY FITTINGS

A Wide Range of Perforated Panels for Standard/Mignon Panel Connectors in paintable satin aluminum.



Panel 110 x 110 mm
2 - 4 - 6 - 8 Posti
Standard Connector Panel

Panel 110 x 110 mm
2 - 4 - 6 - 8 - 12 - 24 - 48 Positions
Mignon Connector Panel



Panel 120 x 250 mm
12 - 24 positions
Standard Connector Panel

Panel 120 x 250 mm
48 positions Mignon Connector Panel



Panels with Special Dimensions
on your specifications

CDWG Patent

The CEAM patented technology is applicable to the manufacture of thermocouples with sensitive elements in precious metals.

The CDWG technology permits the reduction of the quantity of precious metal used, thus the reduction in price of the probe, without compromising the quality and reliability of the product. It just simply reduces waste.

CDWG Patent No. PI2003A000103



Observation:

Looking back through the years, when broken probes were returned to the company for regeneration we found that in all the applications, both glass and ceramics of, the probes had only the end part (due to exposure to process) worn out or even missing. But all the rest, that is good part of the remaining wires, were still perfectly intact and functional. Sensors are worn out only in the exposed and stressed part which generally represents, at most, 20-35% of its' length.

Keep in consideration that the duration of a probe is determined by the quality of the external protection (the casing) which must be suitable for the process, but also, and above all ,the measurement wire which, very often, is chosen with the logic of the lowest cost price to purchase.

The use of a more suitable probe is certainly more expensive, but its' longer duration actually makes it cheaper in the long run. And, the fact that it is not chosen, or taken into consideration, is incomprehensible. A taxi driver would never buy the most economical car for their job. They would ,surely, chose the most reliable and long lasting one, knowing full well that they will pay a higher price, but, in the long run is absolutely the best investment.

The Idea

Having studied the problem, and thanks to our know-how and proverbial imagination, we developed a new technology that allowed us to obtain the goal that seemed impossible to achieve, that is to make compatible greater reliability with maximum economical savings of the sensor.

Our Solution

That's how our patented CDWG technology was born, acronym for CEAM Differentiated Wires Gauge (Patent No. PI2003A000103).

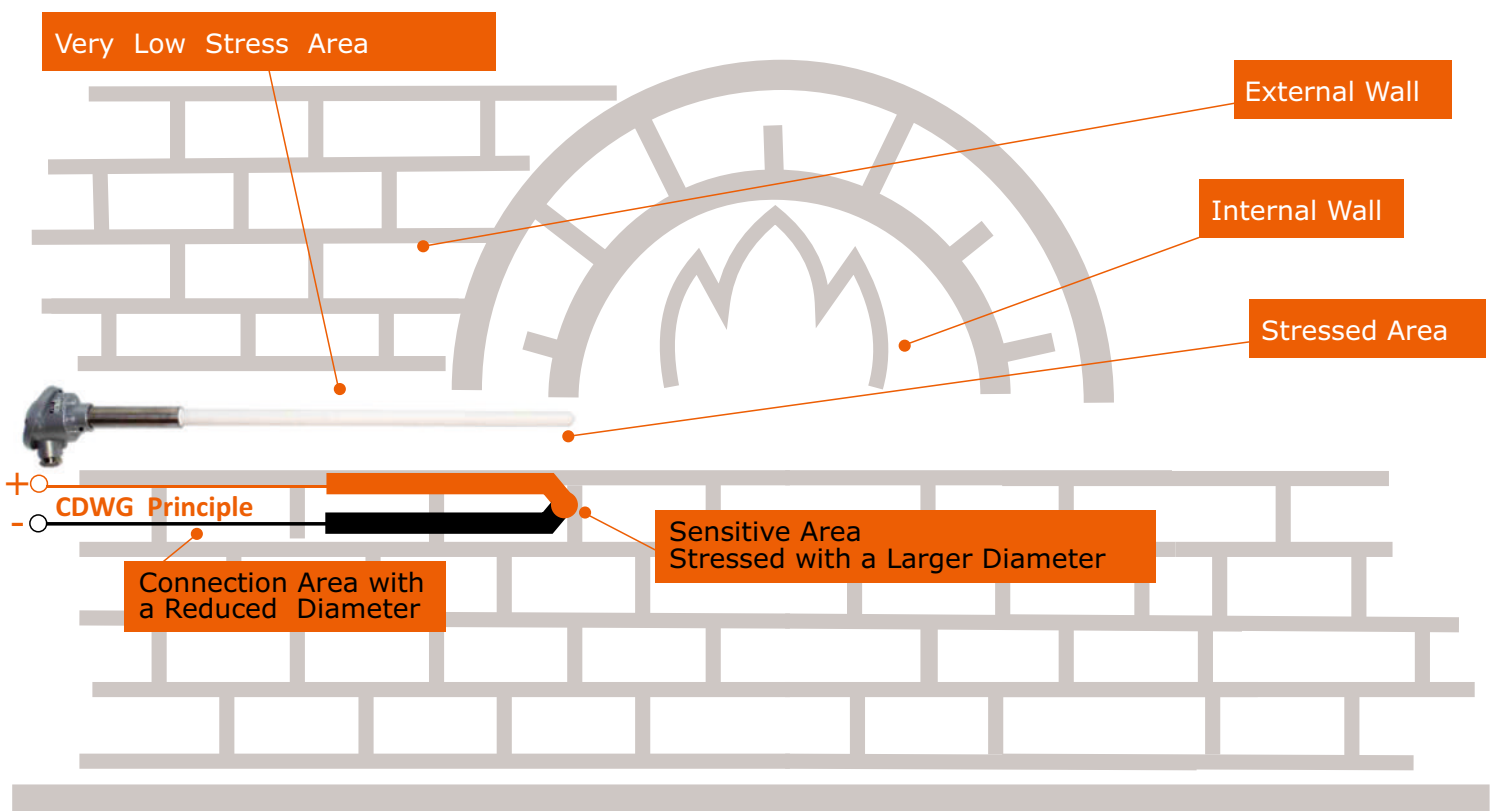
The idea is simple but original, by simply using a wire with a differentiated diameter on the two parts of the probe. That is to distribute the largest and most robust diameter at the terminal end part, which is also the most stressed, and, an inferior and more economical diameter in the rest of the probe seeing as it only serves to transmit the signal, and is not stressed at all.

The rest of the work is done via a mechanical construction, and the choice of external protection realized professionally without any compromise and using the best materials, on the market, that only a company with over 50 years of history, experience and success can do.

The result is a probe with a very competitive price, thanks to a lower quantity of precious metal used. It is a probe with an equivalent duration, if not longer, than the traditional probes because of a robust and uncompromising wire used in the most stressed part, where it is really needed.

Thanks to this new technology it is possible to rethink about sensors, without compromise or market conventions. And, is also possible to use wires with a superior diameter a lot greater than the market standards, which are particularly suitable for intensive use without waste or/and incompatible costs.

EXAMPLE OF A WALL OVEN



THE POWER OF IDEAS

BUYING PLATINUM

Thermocouple Wires – Melting Pots – Caps – Tubes



Precious metals ,such as PLATINUM, are contained in many technical devices, such as some types of thermocouples used in high temperature furnaces for ceramic or glass (and not only), sensors that break down and no longer work, and are found in the form of fine filaments. They produce an important residual value that we can recuperate to produce new sensors once they are properly processed.

For this reason we purchase materials in the form of: wires, tubes, crucibles, metal sheets also in, grains, flakes, and also thermocouples to be treated. We take care of dismantling and extracting the material without any burden or cost for those who supply it.

IMMEDIATE PAYMENT IN CASH
DIRECT WITHDRAWAL WITH OUR STAFF
GUARANTEED ABSOLUTE CONFIDENTIALITY
NO FORMALITY

There is a free gift for quantities over 200 grams

FOR MORE DETAILLS

For more details on service and privacy, please contact:

www.comproplatino.shop

You can also reach us with the **QRCEam** system.



CALIBRATION ISO VERIFICATION SERVICE

For Sensors & Industrial Instrumentation

The Laboratory:

CEAM Control Company has always been in the technological fore-front with an ISO certified quality system in parallel with its' production of sensors, instruments and systems ever since the 1980s. It has a well-equipped metrology laboratory, that primarily has the aim of operating the quality control on all its' products, with a vast range of calibration verification services, that are also available to third parties.

The metrology laboratory is continuously improved and updated both with the equipment and the procedures, which is also included in the UNI EN 9001 – 2015 certification for all the activities carried out, and is periodically checked by the DNV certification body. Today it operates as an independent unit and thanks to its' efficiency it is able to satisfy the needs of numerous clients and entities who place all their trust and their tools in us.

Operating in ISO mode, the laboratory performs calibration controls by scrupulously the standard procedures in compliance with the UNI EN 1400 standards using, for the various sizes, reference samples that are certified by Primary European ACCREDIA NAMAS DKD bodies. And, in some cases non-European countries with which there are signed framework cooperation agreements. The laboratory is equipped with specialized equipment. It would be impossible to name them all, so we will mention just some of the more representative ones:

- Below Zero Cryogenic Bath
- Calibration Ovens (Up to 1700°C)
- Black Body Ovens for Optical Thermometers
- Equalized Thermal Wells
- Desk and Pressure Generators
- Climatic Chamber for Sens. UR%
- Various Electronic Calibration Systems
- Various Multi meters and Analyzers
- Various Probe Samples
- Wind Sample Tube (Wind Flow)
- Hydraulic Sample Tube (Hydraulic Flow)
- Dust Calibration System

Furthermore, it should be noted that the laboratory and all its' equipment are totally controlled by the powerful, "Supervisione Monitoraggio Telecontrollo" system and CEAM CWS32-H01 Management, as most of the equipment is also produced by CEAM.

ATTENTION:

Only for certain quantities is laboratory staff equipped to carry out checks outside the facility, directly on the customer's Site.

Measurement Tools

Temperature

Thermometric Probes T/C – RTD – PTC – NT
Electronic Instruments & Transmitters
Data Loggers
Complete Measuring Line
Infrared & Non-Contact Thermometers
Thermometers in General



Pressure

Electronic Transmitters
Pressure Gauges
Data Loggers

Relative Humidity

Electronic Transmitters
Measurement gauges
Data Loggers
Climatic Chambers and Burn-in



Electrical Instruments

mA - mV - V - Ohm
Measurement Gauges
Multi-meters
Generation – Calibrator Read
Data Loggers

Combustion Analyzers

Gas: Air - O² - Co - So₂ - No - CH₄ @ 50% - CH₄ @ 2,5% (50 Iel)
Electro-chemical Analyzer
Analyzers O² with Zirconium Technology for Low and High Temperature
Gas Detector
Cell Analysis

Analysis Method:
Environment & Cold/Hot
Atmospheric Pressure & Under Pressure



Variants

Calibration Tubes for Speed & Air Flow Measurement Devices
Calibration tubes for measurement of Speed & Water Flow rate devices
Verification and Calibration Conduit for Dust Sensors

CEAM Control Equipment Certificate of Quality

Quality:

Maybe this is one of the most inflated words existing especially in the enterprising world. And, for this reason we believe that we should not talk about quality but should do it and demonstrate it every single day. We will not spend a word on it, in this sense, we will only say that to certify this status we have a leading third-party entity that constantly guarantees and supervises things are always carried out to the maximum. We pay them not obtain discounts, but to track down our mistakes and help us to improve continuously, every single day.

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificato no./Certificate No.:
56954-2009-AQ-ITA-SINCERT

Data prima emissione/Initial date:
02 luglio 2009

Validità:/Valid:
03 luglio 2018 - 02 luglio 2021

Si certifica che il sistema di gestione di/This is to certify that the management system of

CEAM CONTROL EQUIPMENT S.r.l - Sede Legale ed Operativa

Via Val d'Orme, 291 - 50053 Empoli (FI) - Italy

È conforme ai requisiti della norma per il Sistema di Gestione Qualità/
has been found to conform to the Quality Management System standard:

ISO 9001:2015

Questa certificazione è valida
per il seguente campo applicativo:

Progettazione, produzione, installazione e assistenza di termocoppie, forni di taratura, componenti e sistemi di regolazione di processo. Erogazione di servizi di taratura di trasduttori per temperatura, pressione, umidità, resistenza elettrica, tensione e corrente e relativa strumentazione industriale e analizzatori di combustione (EA: 19)

This certificate is valid
for the following scope:

Design, production, installation and assistance of thermocouples, furnaces assembly of components for control equipments and system process regulations. Calibration service for temperature, pressure, humidity, electric resistance, voltage, current transducers and relatives industrial instruments and combustion analyzer (EA: 19)

Luogo e Data/Place and date:
Vimercate (MB), 03 luglio 2018



SGQ N° 003 A
SGA N° 003 D
SSE N° 804 M
SQR N° 804 F

ENAS N° 809 P
PRO N° 002 B
PRO N° 004 C
SQR N° 002 G

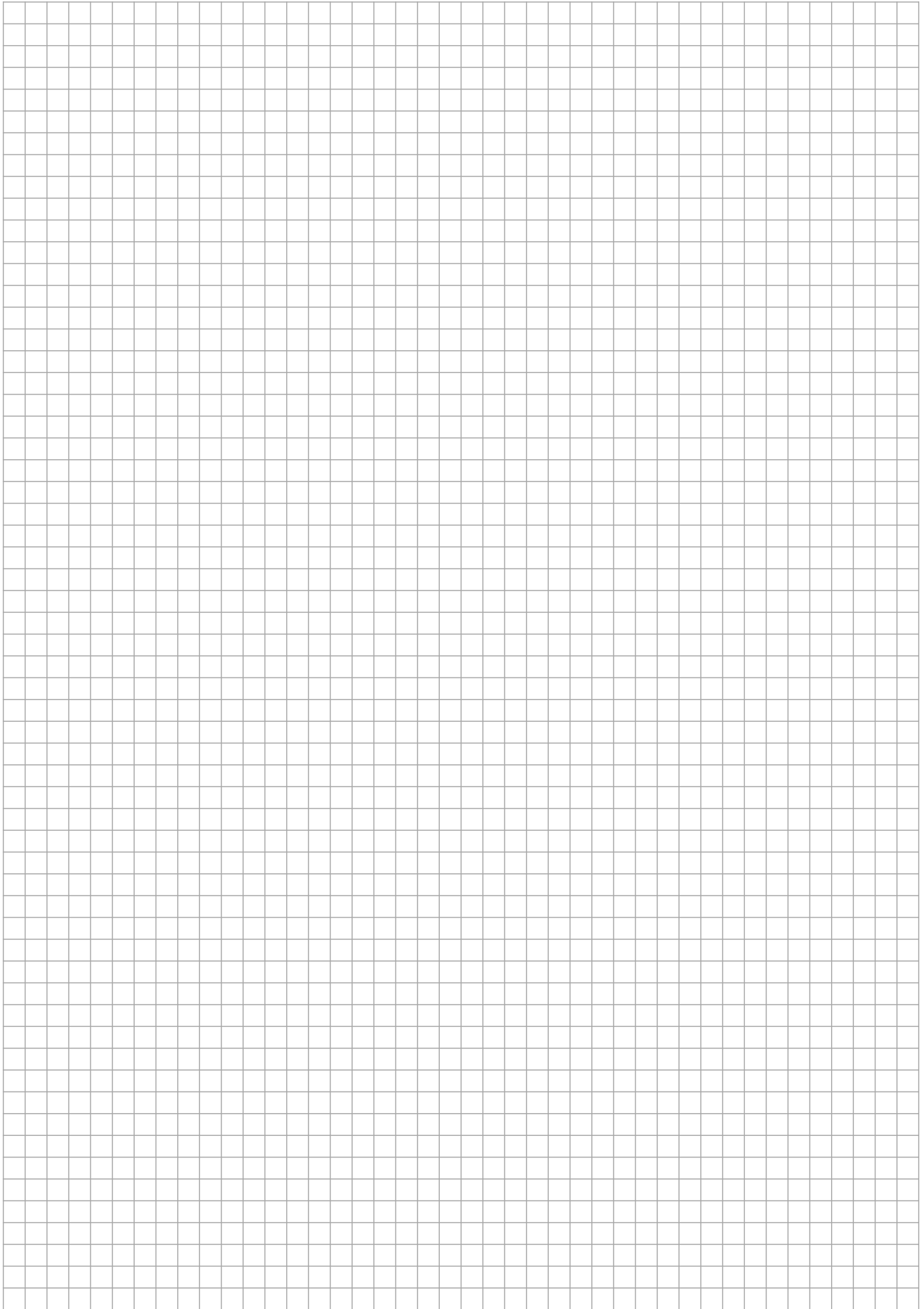
Membro di IFA EA per gli schemi di accreditamento
SGQ, SGA, PRO, PRE, ISI, GAG, LMI e LAT, di IFA IAF
per gli schemi di accreditamento ISO, SQA, SSL, PSP
e IFS e di IFA ILAC per gli schemi di accreditamento
LMI, MED, LAT e ISIR

Per l'Organismo di Certificazione/
For the Certification Body
DNV GL - Business Assurance
Via Energy Park, 14 - 20871 Vimercate
(MB) - Italy

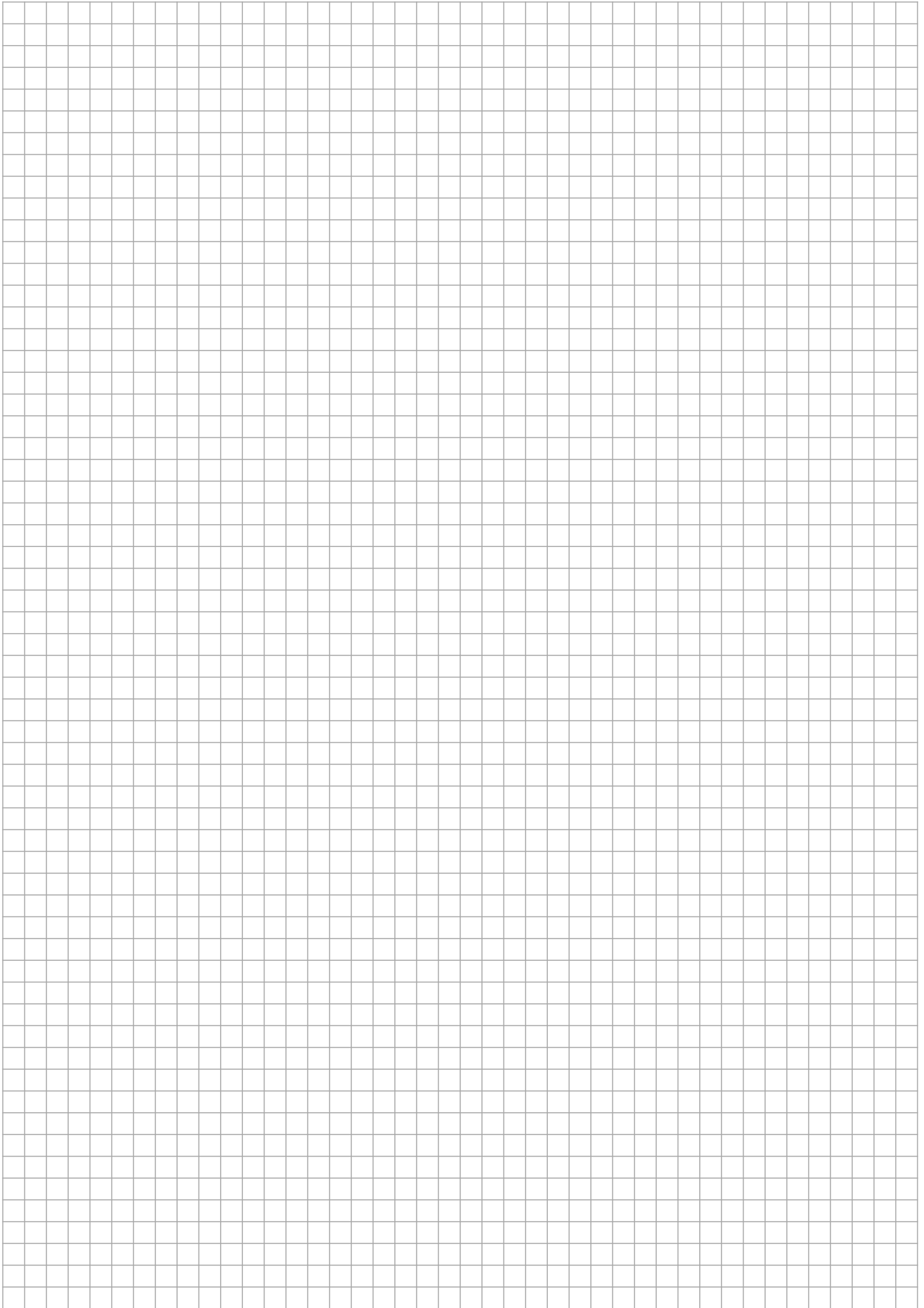
Zeno Beltrami
Management Representative

La validità del presente Certificato è subordinata al rispetto delle condizioni contenute nel Contratto di Certificazione/
Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DNV GL Business Assurance Italia S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy. TEL. 039 68 99 905. www.dnvgl.it

NOTE



NOTE





Ceam Control Equipment srl

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