Temperature and pressure

Gesa

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Gesa Termómetros, S.L.

Our company is now serving 50 years of presence in the European market

Since our very beginning we devoted ourselves to the manufacture and commercialisation of precision instruments. We fabricate a wide range of standard instruments as well as under specification, but always according to standards such as DIN, ASTM, BS…

In the course of this time we have gained great experience on our customer's necessities both general and specific. Our products are effectively used in many areas comprehending:

- Shipyards and fishing industry
- Heating and refrigeration
- Chemical and petrochemical facilities
- Food and catering
- Irrigation and drainage

In this new version of our website will appreciate a more effective presentation of all our activities as well as easier to compose budgets queries or requests.

We manage more than 10,000 different references, many of which are in stock, so the usual delivery time is two or three days. For other fabrications and depending on the amount, the average time is usually about two weeks.

Our customer support includes technical advice necessary for the correct choice of instrument best suited to their needs.

We have the necessary metrology equipment for the issuance of certificates of calibration of all our instruments, both in temperature and pressure. All internal standards used in the manufacture and issuance of certificates of calibration are traceable to ENAC (National Accreditation).

Pressure gauges

Valves

Glass thermometers

Dial thermometers

Analogical thermometers

Dataloggers

Digital indicators for wall mounting

Therma-hygrometers

Infrared thermometers

Digital thermometers

PRESIÓN
PRESSION
PRESSURE

- Manómetros
  Manomètres
  Pressure gauges
- Válvulas
  Robinets
  Valves

TEMPERATURA
TEMPÉRATURE
TEMPERATURE

- Termómetros de vidrio
  Thermomètres en verre
  Glass thermometers
- Termómetros de dial
  Thermomètres à Cadran
  Dial thermometers
- Termómetros analógicos para diversos usos
  Thermomètres analogiques pour différentes applications
  Analog thermometers for multiple purposes

MEDIDORES DIGITALES
COMPTEURS DIGITAUX
DIGITAL INSTRUMENTS

- Registradores de datos / Dataloggers
  Enregistreurs de données
  Dataloggers
- Temperatura y humedad / Termohigrómetros
  Température et humidité / Thermo-Higromètres
  Temperature and Humidity / Therma- Hygrometer
- Termómetros infrarrojos
  Thermomètres Infrarouges
  Infrared Thermometers
- Termómetros digitales
  Thermomètres digitaux
  Digital thermometers

PRESIÓN
PRESSION
PRESSURE

Pressure gauge with plastic case

M 01 01

Designed to monitor pressure in systems not subjected to vibrations. Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.
Especially designed for pneumatic circuits, filters, pressure regulators...
Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Adjusted display
- Mounting: See attached diagram **A** or **B**
- Threaded connection: **Ø40**: 1/8"BSPT; **Ø50-Ø63**: ¼"BSPT (UNE-EN 10226-1)
- IP protection: IP44 (EN 60529 / IEC 529)
- Accuracy: Class 2.5
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating : ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+60°C
  - Fluid: 60°C
- Pressure range: **-1...0...25** Bar
- Scale: Bar/Psi
- Subdivision: According to standard EN 837-1
- Sensor: Bourdon tube ("C" form)
- Position pointer: Red pointer (only for ranges 0+4/0+6/0+12)

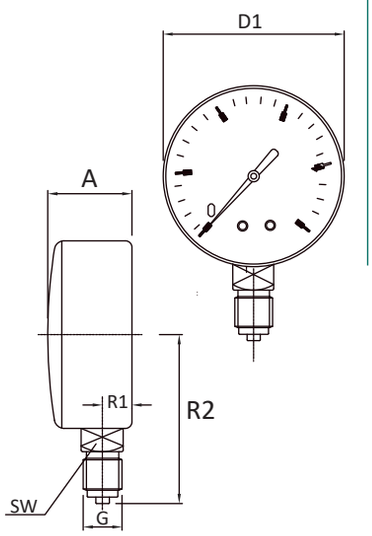
MATERIALS

- Case: Polyethylene
- Bourdon tube and moving parts: Copper alloy
- Threaded connection: Brass
- Display: Acrylic
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: Cu-Sn
- Red pointer: Red Plastic

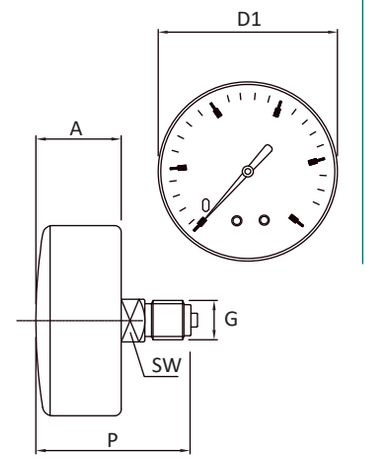
Application:

- Compressed air
- Compressor
- Air conditioning
- Hydraulics
- Pneumatic

A Bottom



B Back



DIMENSIONS (mm)									WEIGHT (g)
DN	Mounting	R1	A	D1	G	R2	SW	P	
Ø40	A	8	25	40	1/8" BSPT	37	11	-	40
Ø40	B	-	25	40	1/8" BSPT	-	11	39	45
Ø50	A	8	27	53	¼" BSPT	37	11	-	57
Ø50	B	-	27	53	¼" BSPT	-	11	47	73
Ø63	A	8	27	63	¼" BSPT	37	11	-	65
Ø63	B	-	27	63	¼" BSPT	-	11	47	79

How to order

1.Case diameter: Ø40 Ø50 Ø63

2.Pressure range (Bar): -1+0 0+2.5 0+6 0+12 0+25 0+1.6 0+4 0+10 0+16

3.Pressure Unit: Bar/Psi

4.Mounting: A B

5.Threaded connection: ¼"BSPT 1/8"BSPT

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 points certificate; Without certificate

	1	2	3	4	5	6	7
M0101 -							

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M 02 01

Pressure gauge with case in carbon steel

Designed to monitor pressure in systems not subjected to vibrations. Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.
Especially designed for pneumatic and hydraulic circuits.
Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Adjusted
- Mounting: See attached diagram **A** or **B**
- Threaded connection: **Ø63**: ¼"BSP; **Ø75**: ⅜"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
- IP protection: IP54 (EN 60529 / IEC 529)
- Accuracy: **Ø63-Ø75**: Class 2.5 / **Ø100**: Class 1.6
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+80°C
  - Fluid: 80°C
- Range: **-1...0...1000** Bar
- Scale: Bar/Psi
- Subdivision: According to standard EN 837-1
- Sensor element: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)

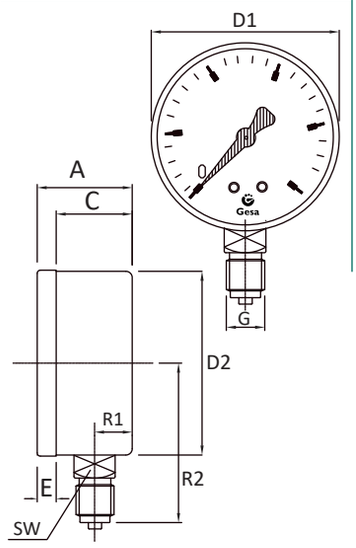
MATERIALS

- Case: Carbon steel painted in black
- Bourdon tube and moving parts: Copper Alloy
- Threaded connection: Brass
- Display: Glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: P<250 Bar: Cu-Sn; P>250 Bar: Cu-Ag

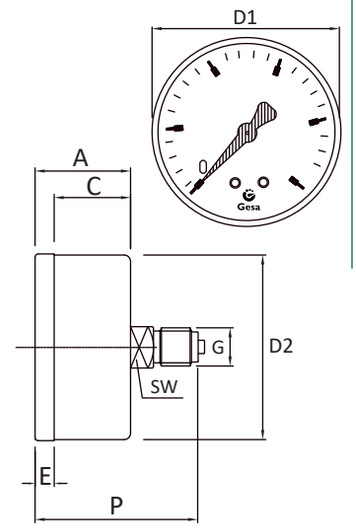
Application:

- Compressed air
- Compressor
- Air conditioning
- Hydraulics
- Pneumatics

A Bottom



B Back



DIMENSIONS (mm)												WEIGHT(g)
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	
Ø63	A	10	28	17	40	10	62	¼" BSP	51	14	-	110
Ø63	B	-	28	17	40	10	62	¼" BSP	-	14	46	122
Ø75	A	10	30	19	53	11	74	⅜" BSP	60	17	-	165
Ø75	B	-	30	19	53	11	74	⅜" BSP	-	17	55	170
Ø100	A	16	45	23	63	22	98	½" BSP	83	17	-	383
Ø100	B	-	45	23	63	22	98	½" BSP	-	17	75	405

How to order

1.Case diameter

Ø63 Ø75 Ø100

2.Pressure range (Bar)

-1+0 -1+1.5 -1+5 -1+12 -1+24 0+1 0+2.5 0+6 0+16 0+40 0+100 0+250 0+400 0+1000
-1+0.5 -1+3 -1+9 -1+15 0+0.6 0+1.6 0+4 0+10 0+25 0+60 0+160 0+315 0+600

3.Pressure scale

Bar/Psi

4.Mounting

A B

5.Threaded connection

¼"BSP ½"BSP ⅜"BSP
¼"BSPT ½"BSPT ⅜"BSPT

6.Connection material

Brass

7.Calibration certificate traceable to ENAC

7 points certificate
Without certificate

M0201 -

1	2	3	4	5	6	7

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Pressure gauge in stainless steel with sealed ring

M 03 01

Especially designed for difficult operating conditions like vibrations or rapid pressure changes. Suitable for use in systems with low viscosity that do not attack copper alloys such as cooling systems.
Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Sealed ring
- Mounting: See attached diagram **A** , **B**, **C** or **D**
- Threaded connection: **Ø63**: ¼"BSP; **Ø80**: ⅜"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
- IP protection: IP65 (EN 60529 / IEC 529)
- Accuracy: Class 1.6
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -20+50°C
  - Fluid: Brass connection: 80°C / Steel connection: 100°C
- Range: **-1...0...1000** Bar
- Scale: **Bar/Psi, Bar** or **cmHg**
- Subdivision: According to standard EN 837-1
- Antivibration fluid: Glycerine 99.8%
- Sensor: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)
- Overtemperature relief system: Upper plug

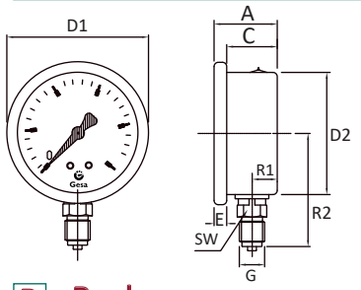
MATERIALS

- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: **Copper Alloy** or **AISI 316 Stainless steel**
- Threaded connection: **Brass** or **AISI 316 Stainless steel**
- Display: Polycarbonate
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: **P**<250 Bar: Cu-Sn; P>250 Bar: Cu-Ag / TIG Welding
- Overtemperature relief plug: Neoprene

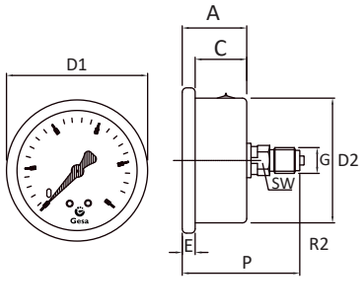
Application:

- **Ship supplies**
- **Irrigation systems**
- **Air conditioning**
- **Food industry**
- **Pneumatics**
- **Hydraulics**

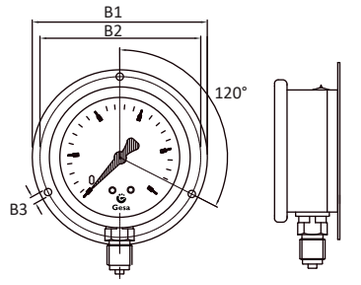
A Bottom



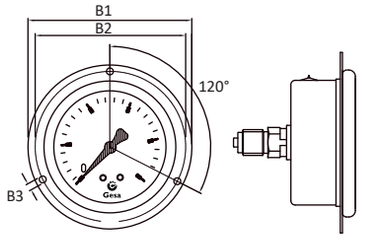
B Back



C Bottom with back flange



D Back with frontal flange



DIMENSIONS (mm) / WEIGHT (g)

DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	WEIGHT (g)
Ø63	A/C	10	29	23	68	6	61	¼ BSP	56	14	-	86	80	3,5	188
Ø63	B/D	-	29	23	68	7	61	¼ BSP	-	14	58	86	80	3,5	184
Ø80	A/C	10	30	22	88	8	80	⅜ BSP	60	17	-	112	104	5	335
Ø80	B/D	-	30	22	88	8	80	⅜ BSP	-	17	61	112	104	5	299
Ø100	A/C	16	37	29	109	8	99	½" BSP	83	21	-	132	124	5	550
Ø100	B/D	-	37	29	109	8	99	½" BSP	-	21	77	132	124	5	547

How to order

1.Case diameter: Ø63 Ø80 Ø100

2.Pressure range (Bar): -1+0 -1+0.5 -1+1.5 -1+3 -1+5 -1+9 -1+12 -1+15 -1+24 0+0.6 0+1 0+1.6 0+2.5 0+4 0+6 0+10 0+16 0+25 0+40 0+60 0+100 0+160 0+250 0+315 0+400 0+600 0+1000 -76+0

3.Pressure scale: Bar Bar/Psi cmHg

4.Mounting: A B C D

5.Threaded connection: ¼"BSP ¼"BSPT ¼" SAE ½"BSP ½"BSPT 7/16" SAE ⅜"BSP ⅜"BSPT

6.Connection material: Brass / AISI 316 Stainless steel

7.Antivibration fluid: Glycerine 99.8%

8.Calibration certificate traceable to ENAC: 7 Points Certificate / Without certificate

M0301 - | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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M3

M 03 04

Pressure gauge in stainless steel with bayonet closing

Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.
Especially designed for difficult conditions of use, as there are vibrations or quick changes of pressure. Manufactured according to standard EN 837-1

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Bayonet
- Mounting: See attached diagram **A** , **B**, **C** or **D**
- Threaded connection: **Ø63**: ¼"BSP; **Ø100-Ø150**: ½"BSP (UNE-EN 10226-1)
- IP protection: IP65 (EN 60529 / IEC 529)
- Accuracy: **Ø63**: Class 1.6; **Ø100-Ø150**: Class 1.0
- Pressure limits:
  - Static: Full scale
  - Oscillating: 0.9 end of scale
  - Maximum: 1.3 end of scale for a short period of time
- Temperature limits:
  - Environment: -20+50°C (Glycerine) / -20+80°C (dry)
  - Fluid: Brass connection: 80°C / Steel connection: 100°C (Glycerine), 200°C (dry)
- Range: **-1...0...1000** Bar
- Scale: **Bar/Psi, Bar** or **cmHg**
- Subdivision: According to standard EN 837-1
- Antivibration fluid: **Glycerine 99.8%** or **dry**
- Pointer: Micrometric adjustment
- Sensor element: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)
- Pressure relief system: Blow-out disc
- Overtemperature relief system: Upper plug

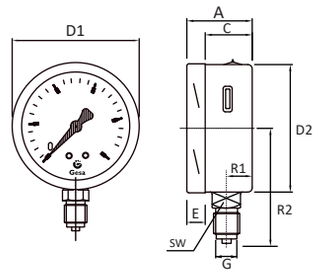
MATERIALS

- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: **Copper Alloy** or **AISI 316 Stainless steel**
- Threaded connection: **Brass** or **AISI 316 Stainless steel**
- Display: Safety glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: P<250 Bar: Cu-Sn; P>250 Bar: Cu-Ag / TIG Welding
- Blow-out disc and overtemperature relief plug: Neoprene

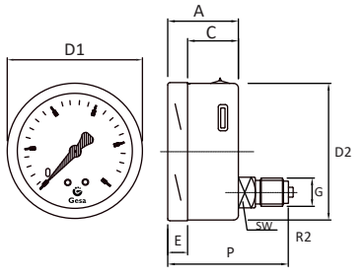
Application:

- Ship supplies
- Irrigation systems
- Air conditioning
- Food industry
- Pneumatics
- Hydraulics

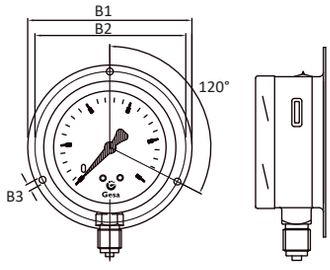
A Bottom



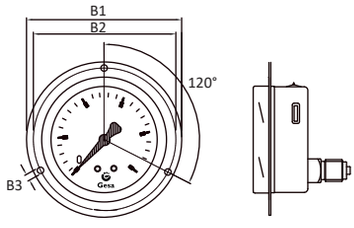
B Back



C Bottom with back flange



D Back with frontal flange



DIMENSIONS (mm)															WEIGHT (g)	
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	Without Glycerine	With Glycerine
Ø63	A/C	10	34	22	64	12	62	¼ BSP	55	14	-	86	80	3,5	158	230
Ø63	B/D	-	34	22	64	12	62	¼ BSP	-	14	56	86	80	3,5	157	228
Ø100	A/C	16	49	32	101	17	99	½" BSP	83	22	-	132	124	5	533	867
Ø100	B/D	-	49	32	101	17	99	½" BSP	-	22	86	132	124	5	550	890
Ø150	A/C	16	50	32	149	18	146	½" BSP	113	22	-	192	184	5	950	1712
Ø150	B/D	-	50	32	149	18	146	½" BSP	-	22	87	192	184	5	824	1750

How to order

1.Case diameter

Ø63 Ø100 Ø150

2.Pressure range (Bar)

-1+0 -1+1.5 -1+5 -1+12 -1+24 0+1 0+2.5 0+6 0+16 0+40 0+100 0+250 0+400 0+1000
-1+0.5 -1+3 -1+9 -1+15 0+0.6 0+1.6 0+4 0+10 0+25 0+60 0+160 0+315 0+600 -76+0

3.Pressure scale

Bar Bar/Psi cmHg

4.Mounting

A B C D

5.Threaded connection

¼"BSP ½"BSP ⅜"BSP
¼"BSPT ½"BSPT ⅜"BSPT
¼" SAE 7/16" SAE M20x150

6.Connection material

Brass
AISI 316 Stainless steel

7.Antivibration fluid

Glycerine 99.8%
Without fluid

8.Calibration certificate traceable to ENAC

7 Points Certificate
Without certificate

M0304 - | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

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Pressure gauge all in stainless steel with sealed ring

M 03 05

Especially designed for difficult operating conditions like vibrations or rap pressure changes. Suitable for use in systems with low viscosity that do not attack copper alloys such as cooling systems.
Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Sealed ring
- Mounting See attached diagram **A** , **B**, **C** or **D**
- Threaded connection **Ø63**: ¼"BSP; **Ø80**: ⅜"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
- IP protection IP65 (EN 60529 / IEC 529)
- Accuracy: Class 1.6
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of tim
- Temperature limits:
  - Environment: -20+50°C
  - Fluid: 100°C
- Range: **-1...0...1000** Bar
- Scale: **Bar/Psi, Bar** or **cmHg**
- Subdivision: According to standard EN 837-1
- Antivibration flui Glycerine 99.8%
- Sensor: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)
- Overtemperature relief system: Upper plug

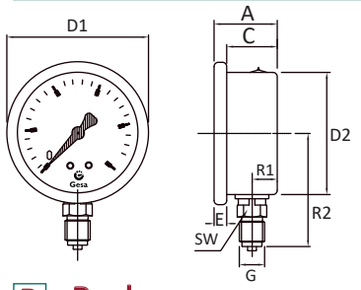
MATERIALS

- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: AISI 316 Stainless steel
- Threaded connection: AISI 316 Stainless steel
- Display: Polycarbonate
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: TIG Welding
- Overtemperature relief plug: Neoprene

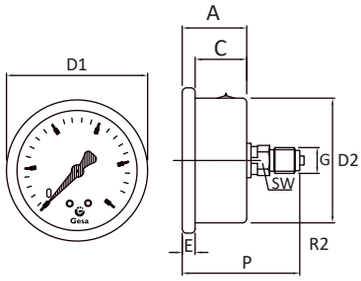
Application:

- Ship supplies
- Irrigation systems
- Air conditioning
- Food industry
- Pneumatics
- Hydraulics

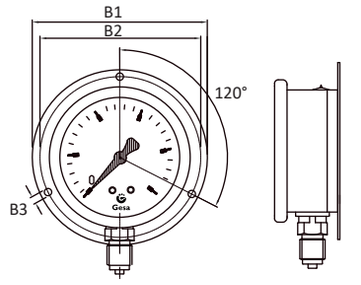
A Bottom



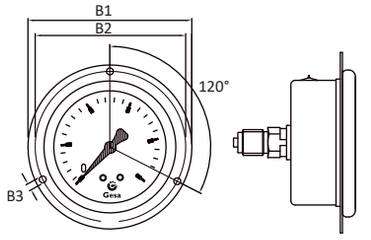
B Back



C Bottom with back flange



D Back with frontal flange



DIMENSIONS (mm) / WEIGHT (g)

DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	WEIGHT (g)
Ø63	A/C	10	29	23	68	6	61	¼ BSP	56	14	-	86	80	3,5	188
Ø63	B/D	-	29	23	68	7	61	¼ BSP	-	14	58	86	80	3,5	184
Ø80	A/C	10	30	22	88	8	80	⅜ BSP	60	17	-	112	104	5	335
Ø80	B/D	-	30	22	88	8	80	⅜ BSP	-	17	61	112	104	5	299
Ø100	A/C	16	37	29	109	8	99	½" BSP	83	21	-	132	124	5	550
Ø100	B/D	-	37	29	109	8	99	½" BSP	-	21	77	132	124	5	547

How to order

1.Case diameter
Ø63 Ø80 Ø100

2.Pressure range (Bar)
-1+0 -1+1.5 -1+5 -1+12 -1+24 0+1 0+2.5 0+6 0+16 0+40 0+100 0+250 0+400 0+1000
-1+0.5 -1+3 -1+9 -1+15 0+0.6 0+1.6 0+4 0+10 0+25 0+60 0+160 0+315 0+600 -76+0

3.Pressure scale
Bar Bar/Psi cmHg

4.Mounting
A B C D

5.Threaded connection
¼"BSP ½"BSP ⅜"BSP
¼"BSPT ½"BSPT ⅜"BSPT
¼" SAE 7/16" SAE

6.Connection material
AISI 316 Stainless steel

7.Antivibration fluid
Glycerine 99.8%

8.Calibration certificate traceable to ENAC
7 Points Certificat
Without certificat

M0305 - | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

M 03 06

Pressure gauge in stainless steel with bayonet closing

Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.
Especially designed for difficult conditions of use, as there are vibrations or quic changes of pressure. Manufactured according to standard EN 837-1

STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Bayonet
- Mounting See attached diagram **A** , **B**, **C** or **D**
- Threaded connection **Ø63**: ¼"BSP; **Ø100-Ø150**: ½"BSP (UNE-EN 10226-1)
- IP protection IP65 (EN 60529 / IEC 529)
- Accuracy: **Ø63**: Class 1.6; **Ø100-Ø150**: Class 1.0
- Pressure limits:
  - Static: Full scale
  - Oscillating: 0.9 end of scale
  - Maximum: 1.3 end of scale for a short period of tim
- Temperature limits:
  - Environment: -20+50°C (Glycerine) / -20+80°C (dry)
  - Fluid: 100°C (Glycerine), 200°C (dry)
- Range: **-1...0...1000** Bar
- Scale: **Bar/Psi, Bar** or **cmHg**
- Subdivision: According to standard EN 837-1
- Antivibration flui **Glycerine 99.8%** or **dry**
- Pointer: Micrometric adjustment
- Sensor element: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)
- Pressure relief system: Blow-out disc
- Overtemperature relief system: Upper plug

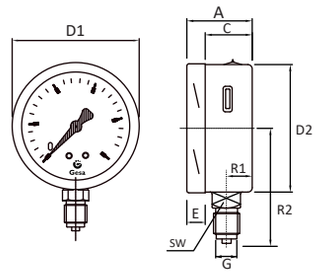
MATERIALS

- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: AISI 316 Stainless steel
- Threaded connection: AISI 316 Stainless steel
- Display: Safety glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: P<250 Bar: Cu-Sn; P>250 Bar: Cu-Ag / TIG Welding
- Blow-out disc and overtemperature relief plug: Neoprene

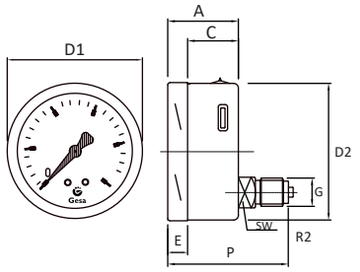
Application:

- Ship supplies
- Irrigation systems
- Air conditioning
- Food industry
- Pneumatics
- Hydraulics

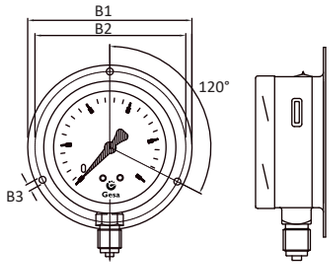
A Bottom



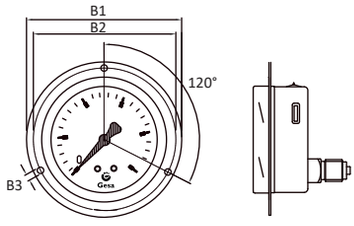
B Back



C Bottom with back flange



D Back with frontal flange



DIMENSIONS (mm)															WEIGHT (g)	
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	Without Glycerine	With Glycerine
Ø63	A/C	10	34	22	64	12	62	¼ BSP	55	14	-	86	80	3,5	158	230
Ø63	B/D	-	34	22	64	12	62	¼ BSP	-	14	56	86	80	3,5	157	228
Ø100	A/C	16	49	32	101	17	99	½" BSP	83	22	-	132	124	5	533	867
Ø100	B/D	-	49	32	101	17	99	½" BSP	-	22	86	132	124	5	550	890
Ø150	A/C	16	50	32	149	18	146	½" BSP	113	22	-	192	184	5	950	1712
Ø150	B/D	-	50	32	149	18	146	½" BSP	-	22	87	192	184	5	824	1750

How to order

1.Case diameter

Ø63 Ø100 Ø150

2.Pressure range (Bar)

-1+0 -1+1.5 -1+5 -1+12 -1+24 0+1 0+2.5 0+6 0+16 0+40 0+100 0+250 0+400 0+1000
-1+0.5 -1+3 -1+9 -1+15 0+0.6 0+1.6 0+4 0+10 0+25 0+60 0+160 0+315 0+600 -76+0

3.Pressure scale

Bar Bar/Psi cmHg

4.Mounting

A B C D

5.Threaded connection

¼"BSP ½"BSP ⅜"BSP
¼"BSPT ½"BSPT ⅜"BSPT
¼" SAE 7/16" SAE M20x150

6.Connection material

AISI 316 Stainless steel

7.Antivibration fluid

Glycerine 99.8%
Without fluid

8.Calibration certificate traceable to ENAC

7 Points Certificat
Without certificat

M0306 - | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Capsule pressure gauge with black steel case

M 04 01

Capsule pressure gauges with elastic element and moving parts in copper alloy manufactured according to EN 837-3 standards.

Especially suitable for gaseous media not subjected to vibrations with a maximum temperature not higher than 100ºC.

Application:

- **Gas facilities**
- **Low pressure**

STANDARD PARAMETERS

Design: EN 837-3
Closing: Bayonet
Mounting: See attached diagram **A**
Threaded connection: **Ø63**: ¼"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
IP protection: IP43 (EN 60529 / IEC 529)
Accuracy: **Ø63**: Class 1.6 / **Ø100**: Class 1.0
Pressure limits:
- Static: Full scale
- Oscillating: 0.9 end of scale
- Maximum: Full scale

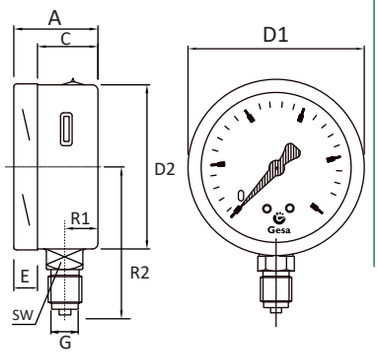
Temperature limits:
- Environment: -40+80°C
- Fluid: 100°C

Range: **0...600** mbar
Scale: mbar
Subdivision: According to standard EN 837-3
Sensor element: Capsule
Pointer: Micrometric adjustment

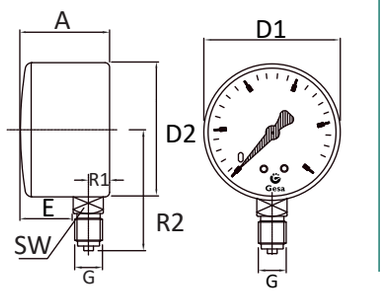
MATERIALS

Case: Carbon steel painted in black
Capsule and moving parts: Copper Alloy
Threaded connection: Brass
Display: **Ø63**: Acrylic (Adjusted closing)/ **Ø100**: Glass (Bayonet closing)
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: Cu-Sn

A Bottom Ø100



A Bottom Ø63



DIMENSIONS (mm)											WEIGHT (g)
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	
Ø63	A	11	38	-	66	22	66	¼ BSP	57	14	214
Ø100	A	16	49	32	101	17	99	½" BSP	83	22	559

How to order

1.Case diameter: Ø63, Ø100

2.Pressure range (Bar): 0+25, 0+40, 0+60, 0+100, 0+160, 0+250, 0+400, 0+600

3.Pressure scale: mbar

4.Mounting: A

5.Threaded connection: ¼"BSP, ½"BSP

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 point certificate, Without certificate

M0401 -	1	2	3	4	5	6	7

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

M 04 02

Capsule pressure gauge with zincked steel case

Capsule pressure gauges with elastic element and moving parts in copper alloy manufactured according to EN 837-3 standards.

Especially suitable for gaseous media not subjected to vibrations with a maximum temperature not higher than 100ºC.

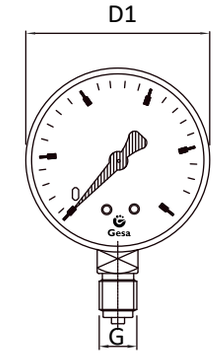
STANDARD PARAMETERS
Design: EN 837-3
Closing: Ring screwed to case
Mounting: See attached diagram **A**
Threaded connection: **Ø63**: ¼"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
IP protection: IP44 (EN 60529 / IEC 529)
Accuracy: Class 1.6
Pressure limits:
Static: Full scale
Oscillating: 0.9 end of scale
Maximum: Full scale
Temperature limits:
Environment: -40+80°C
Fluid: 100°C
Range: **0...2000** mbar
Scale: mbar
Subdivision: According to standard EN 837-3
Sensor element: Capsule

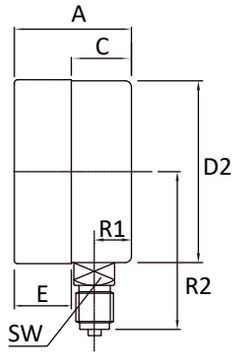
Application:

- **Gas facilities**
- **Low pressure**

MATERIALS
Case: Zincked carbon steel with screwed closing
Capsule and moving parts: Copper Alloy
Threaded connection: Brass
Display: Glass
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: Cu-Sn

A Bottom





DIMENSIONS (mm)											WEIGHT (g)
DN	**Mounting**	**R1**	**A**	**C**	**D1**	**E**	**D2**	**G**	**R2**	**SW**	
Ø63	A	12	38	16	64	22	62	¼ BSP	59	11	198
Ø100	A	15	64	26	107	38	105	½" BSP	90	22	738

How to order

1.Case diameter: Ø63, Ø100

2.Pressure range (Bar): 0+25, 0+40, 0+60, 0+100, 0+160, 0+250, 0+400, 0+600, 0+1000, 0+2000

3.Pressure scale: mbar

4.Mounting: A

5.Threaded connection: ¼"BSP, ½"BSP

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 point certificate, Without certificate

M0402 -	1	2	3	4	5	6	7

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Capsule pressure gauge with stainless steel case

M 04 03

Capsule pressure gauges with elastic element and moving parts in copper alloy manufactured according to EN 837-3 standards.

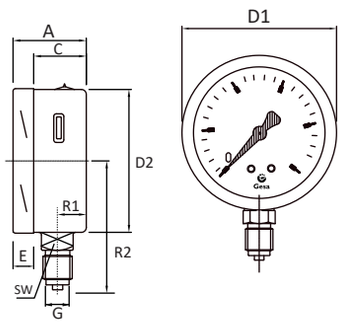
Especially suitable for gaseous media not subjected to vibrations with a maximum temperature not higher than 100ºC.

Application:
- **Gas facilities**
- **Low pressure**

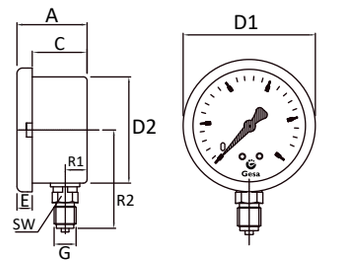
STANDARD PARAMETERS
Design: EN 837-3
Closing: Bayonet
Mounting: See attached diagram **A**
Threaded connection: **Ø63**: ¼"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
IP protection: IP65 (EN 60529 / IEC 529)
Accuracy: **Ø63**: Class 1.6 / **Ø100**: Class 1.0
Pressure limits:
Static: Full scale
Oscillating: 0.9 end of scale
Maximum: Full scale
Temperature limits:
Environment: -40+80°C
Fluid: 100°C
Range: **0...600** mbar
Scale: mbar
Subdivision: According to standard EN 837-3
Sensor element: Capsule
Pointer: Micrometric adjustment

MATERIALS
Case: AISI 304 Stainless steel with bayonet closing
Capsule and moving parts: Copper Alloy
Threaded connection: Brass
Display: Safety glass
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: Cu-Sn

A Bottom Ø100



A Bottom Ø63



DIMENSIONS (mm)											WEIGHT (g)
DN	**Mounting**	**R1**	**A**	**C**	**D1**	**E**	**D2**	**G**	**R2**	**SW**	
Ø63	A	10	37	27	74	10	66	¼ BSP	55	14	199
Ø100	A	16	49	32	101	17	99	½" BSP	83	22	545

How to order

1.Case diameter: Ø63, Ø100

2.Pressure range (Bar): 0+25, 0+40, 0+60, 0+100, 0+160, 0+250, 0+400, 0+600

3.Pressure scale: mbar

4.Mounting: A

5.Threaded connection: ¼"BSP, ½"BSP

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 point certificate, Without certificate

	1	2	3	4	5	6	7
M0403 -							

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

M 05 01

Pressure gauge for refrigeration systems with case in stainless steel

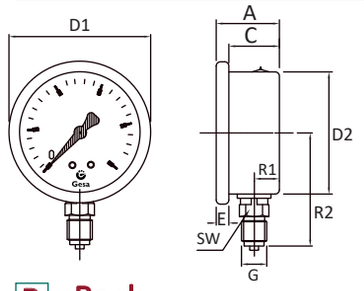
Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.
Especially designed for difficult conditions of use, as there are vibrations or quick changes of pressure.
Also useful for adverse ambients. Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS
Design: EN 837-1
Closing: Sealed ring
Mounting: See attached diagrams **A** , **B**, **C** or **D**
Threaded connection: **Ø63**: ¼"BSP; **Ø100**: ½"BSP (UNE-EN 10226-1)
IP protection: IP65 (EN 60529 / IEC 529)
Accuracy: Class 1.6
Pressure limits:
Static: ¾ end of scale
Oscillating: ⅔ end of scale
Maximum: Full scale for a short period of time
Temperature limits:
Environment: -20+50°C
Fluid: 80°C
Range: **-1+12** or **-1+24** Bar
Scale: Bar/R22/R134a/R404a/R507
Subdivision: According to standard EN 837-1
Antivibration fluid: Glycerine 99.8%
Sensor element: Bourdon tube ("C" form)
Overtemperature relief system: Upper plug

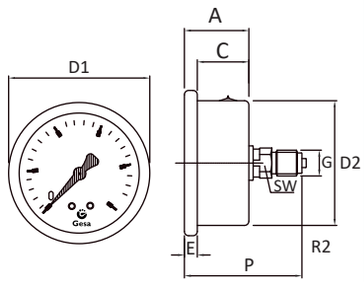
Application:
- Refrigeration
- Air conditioning
- Food industry

MATERIALS
Case and ring: AISI 304 Stainless steel
Bourdon tube and moving parts: Cu Alloy
Threaded connection: Brass
Visor: Polycarbonate
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: Cu-Sn
Overtemperature relief plug: Neoprene

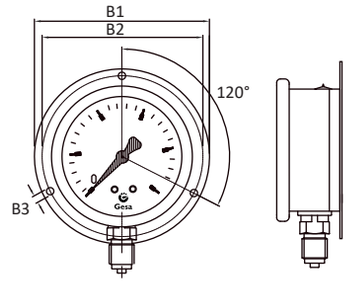
A Bottom



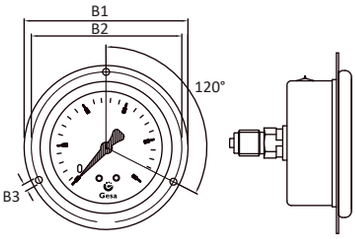
B Back



C Bottom with back flange



D Back with frontal flange



DIMENSIONS (mm)															WEIGHT (g)
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	
Ø63	A/C	10	29	23	68	6	61	¼ BSP	56	14	-	86	80	3,5	180
Ø63	B/D	-	29	23	68	6	61	¼ BSP	56	14	58	86	80	3,5	180
Ø100	A/C	12	37	29	109	8	99	½" BSP	87	21	-	132	124	5	607
Ø100	B/D	-	37	29	109	8	99	½" BSP	87	21	77	132	124	5	607

How to order

1.Case diameter: Ø63 Ø100

2.Pressure range (Bar): -1+12 -1+24

3.Pressure scale: Bar/R22/R134a/R404a/R507

4.Mounting: A B C D

5.Threaded connection: ¼"BSP ¼" SAE ½"BSP

6.Connection material: Brass

7.Antivibration fluid: Glycerine 99.8%

8.Calibration certificate traceable to ENAC: 7 point certificate / Without certificate

M0501 -	1	2	3	4	5	6	7	8

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Order it online!

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+34 94 676 63 64
info@termometros.com

Pressure gauge for refrigeration systems with case in carbon steel

M 05 02

Designed for refrigeration systems. Suitable for all liquid media that will not attack copper alloy parts.

Useful for systems where the gauge is not subjected to vibrations.

Manufactured according to EN 837-1 standards.

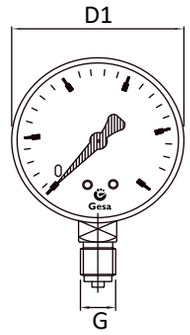
STANDARD PARAMETERS
Design: EN 837-1
Closing: Threaded Display
Mounting: Direct: free standing on the bottom connection
Threaded connection: **Ø63**: 7/16"SAE; **Ø100**: 1/2"BSP (UNE-EN 10226-1)
IP protection: IP43 (EN 60529 / IEC 529)
Accuracy: Class 1.6
Pressure limits:
Static: ¾ end of scale
Oscillating: ⅔ end of scale
Maximum: Full scale for a short period of time
Temperature limits:
Environment: -40+80°C
Fluid: 80°C
Range: **-1+12** or **-1+24** Bar
Scale: Bar/R22/R404a/R507
Subdivision: According to standard EN 837-1
Sensor element: Bourdon tube ("C" form)

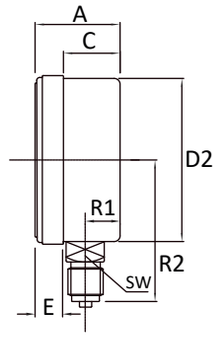
Application:

- **Refrigeration**
- **Air conditioning**
- **Food industry**

MATERIALS
Case: Carbon steel blue (-1+12 bar) or red (-1+24 bar)
Bourdon tube and moving parts: Cu Alloy
Threaded connection: Brass
Display and ring: Acrylic. Display and ring are a single piece threadable to the case
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: Cu-Sn

A Bottom





DIMENSIONS (mm) | WEIGHT (g)

DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	
Ø63	A	11	30	19	72	11	68	⅛ BSPT	55	14	121
Ø100	A	11	37	25	103	12	99	¼ BSPT	80	14	241

How to order

1.Case diameter: Ø63 Ø100

2.Pressure range (Bar): -1+12 -1+24

3.Pressure scale: Bar/R22/R404a/R507

4.Mounting: A B

5.Threaded connection: 1/2"BSP 7/16"SAE

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 point certificate / Without certificate

	1	2	3	4	5	6	7
M0502 -							

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

M 05 03

All stainless steel pressure gauge for refrigeration systems

Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts.

Especially designed for heavy duty conditions like vibrations or quick pressure changes. Manufactured according to EN 837-1 standards.

Application:

- Refrigeration
- Air conditioning
- Food industry

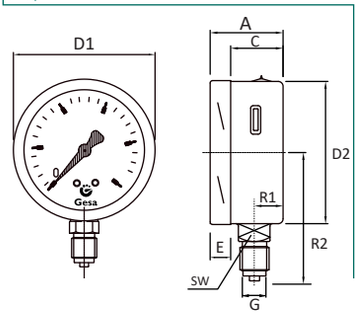
STANDARD PARAMETERS

- Design: EN 837-1
- Closing: Bayonet
- Mounting: See attached diagrams **A** or **B**
- Threaded connection: **½"BSP** or **¼"SAE** (UNE-EN 10226-1)
- IP protection: IP65 (EN 60529 / IEC 529)
- Accuracy: Class 1.0
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+80°C
  - Fluid: 80°C
- Range: **-1+12** or **-1+24** Bar
- Scale: Bar/R22/R134a/R404a/R507
- Subdivision: According to standard EN 837-1
- Antivibration fluid: **Glycerine 99.8%** or **dry**
- Sensor element: Bourdon tube ("C" form)
- Overtemperature relief system: Upper plug

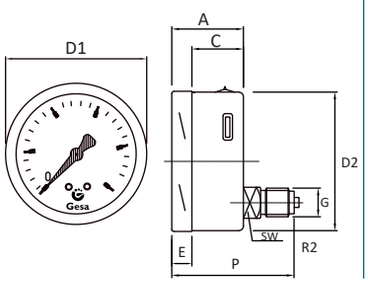
MATERIALS

- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: AISI 316 Stainless steel
- Threaded connection: AISI 316 Stainless steel
- Display: Safety glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: TIG welding
- Overtemperature relief plug: Neoprene

A Bottom



B Back



DIMENSIONS (mm)											WEIGHT (g)
DN	**Mounting**	**R1**	**A**	**C**	**D1**	**E**	**D2**	**G**	**R2**	**SW**	
Ø100	A	16	49	32	101	17	99	½" BSP	83	22	575
Ø100	B	-	49	32	101	17	99	½" BSP	83	22	536

How to order

1.Case diameter	2.Pressure range (Bar)	3.Pressure scale	4.Mounting
Ø100	-1+12 -1+24	Bar/R22/R134a/R404a/R507	A B C D

5.Threaded connection	6.Connection material	7.Antivibration fluid	8.Calibration certificate traceable to ENAC
½"BSP ¼"SAE	Brass AISI 316 Stainless steel	Glycerine 99.8% Dry	7 point certificate Without certificate

	1	2	3	4	5	6	7	8
M0503 -								

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Pressure gauge for welding

M 06 01

Bourdon type pressure gauges completely ungreased for O_2 and acetylene.
Manufactured according to UNE-EN 562 standards.
Working temperature is -40+60°C.
Designed for system where fluid temperature does not exceed 60°C

STANDARD PARAMETERS

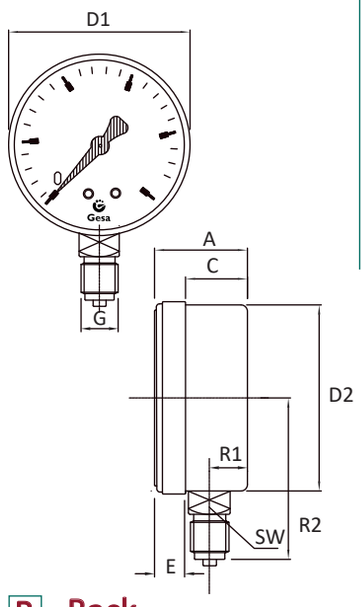
- Design: UNE-EN 562
- Closing: Threaded display
- Mounting: See attached diagrams **A** or **B**
- Threaded connection: **Ø50**: ¼"BSP ; **Ø63**: ¼"BSP (UNE-EN 562)
- IP protection: IP44 (EN 60529 / IEC 529)
- Accuracy: Class 2.5
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+60°C
  - Fluid: 60°C
- Range: **0+2.5**; **0+16**; **0+40**; **0+315** Bar
- Scale: Bar
- Subdivision: According to standard UNE-EN 562
- Sensor element: Bourdon tube(<60 Bar: Type "C"; >60 Bar: helical)

Application:
- **Welding**
- **Oxygen**
- **Acetylene**

MATERIALS

- Case: Black laquered steel
- Bourdon tube and moving parts: Copper Alloy
- Threaded connection: Brass
- Display and ring: Acrylic. Display and ring are a single piece threadable to the case
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: P<250 Bar: Cu-Sn; P>250 Bar: Cu-Ag

A Bottom



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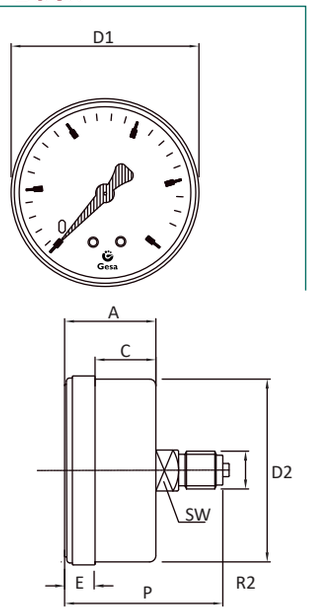

DIMENSIONS (mm) / WEIGHT (g)

DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	WEIGHT (g)
Ø50	A	10	28	17	57	12	52	¼ BSP	46	14	-	93
Ø50	B	-	28	17	66	12	52	¼ BSP	-	14	46	98
Ø63	A	10	29	17	57	12	61	¼ BSP	53	14	-	118
Ø63	B	-	29	17	66	12	61	¼ BSP	-	14	46	125

How to order

1.Case diameter: Ø50 | Ø63

2.Pressure range (Bar): 0+2.5 | 0+16 | 0+40 | 0+315

3.Pressure scale: Bar

4.Mounting: A | B

5.Threaded connection: ¼"BSP

6.Connection material: Brass

7.Calibration certificate traceable to ENAC: 7 point certificate | Without certificate

	1	2	3	4	5	6	7
M0601 -							

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M 07 01

Steel case pressure gauge for ammonia

Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts. Useful for system that are not submited to strong vibrations.

Especially designed for pneumatics and hydraulics.

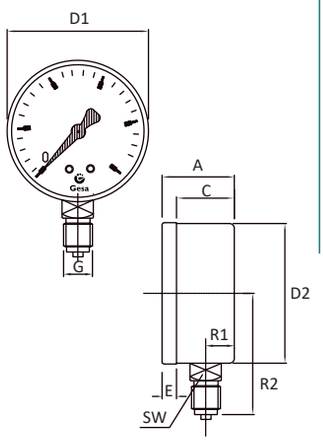
Manufactured according to EN 837-1 standards.

Application:
- Refrigeration
- Air conditioning
- Food industry

STANDARD PARAMETERS
Design: EN 837-1
Closing: Pressure adjusted
Mounting: See attached diagrams **A** or **B**
Threaded connection: ¼"BSP (UNE-EN 10226-1)
IP protection: IP44 (EN 60529 / IEC 529)
Accuracy: Class 1.6
Pressure limits:
Static: ¾ end of scale
Oscillating: ⅔ end of scale
Maximum: Full scale for a short period of time
Temperature limits:
Environment: -40+65°C
Fluid: 60°C
Range: **-1+15** or **-1+25** Bar
Scale: Bar/°C for refrigerant R717 (NH_3)
Subdivision: According to standard EN 837-1
Sensor element: Bourdon tube ("C" form)

MATERIALS
Case: Black laquered steel
Bourdon tube and moving parts: AISI 316 Stainless steel
Threaded connection: AISI 316 Stainless steel
Display: Acrylic
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: TIG welding

A Bottom



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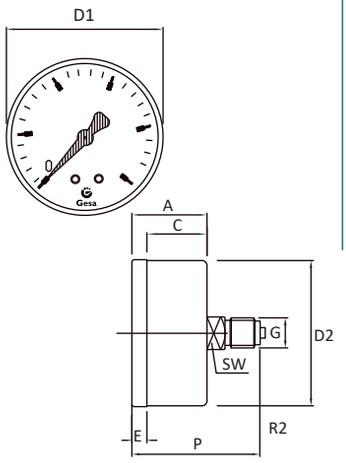

DIMENSIONS (mm)												WEIGHT (g)
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	
Ø63	A	11	28	18	63	10	62	¼ BSP	52	14	-	122
Ø63	B	-	28	18	63	10	62	¼ BSP	-	14	46	128

How to order

1.Case diameter: Ø63

2.Pressure range (Bar): -1+15 -1+25

3.Pressure scale: Bar/ ˚C R717 NH_3

4.Mounting: A B

5.Threaded connection: ¼"BSP

6.Connection material: AISI 316 Stainless steel

7.Calibration certificate traceable to ENAC: 7 point certificate / Without certificate

M0701 -	1	2	3	4	5	6	7

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All stainless steel pressure gauge for ammonia

M 07 02

Suitable for all gaseous and liquid media that will not obstruct the pressure system or attack copper alloy parts. Especially designed for refrigeration systems and ammonia.
Manufactured according to EN 837-1 standards.

STANDARD PARAMETERS

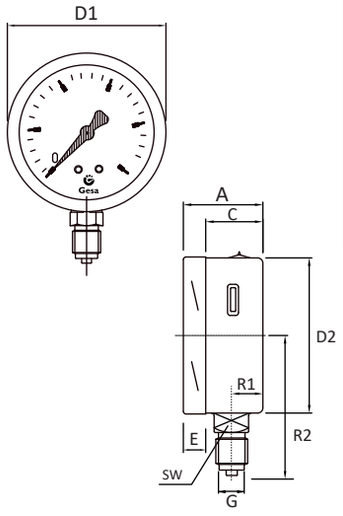
- Design: EN 837-1
- Closing: Bayonet
- Mounting: See attached diagrams **A** or **C**
- Threaded connection: ½"BSP (UNE-EN 10226-1)
- IP protection: IP65 (EN 60529 / IEC 529)
- Accuracy: Class 1.0
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+65°C
  - Fluid: 60°C
- Range: **-1+9, -1+12, -1+15** o **-1+25** Bar
- Scale: Bar/ °C for refrigerant R717 (NH_3)
- Subdivision: According to standard EN 837-1
- Pointer: Micrometric adjustment
- Sensor element: Bourdon tube (<60 Bar: "C" form; >60 Bar: helical)
- Pressure relief system: Blow-out disc
- Overtemperature relief system: Upper plug

MATERIALS

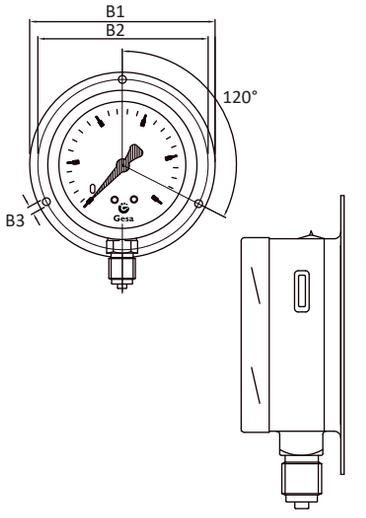
- Case: AISI 304 Stainless steel
- Bourdon tube and moving parts: AISI 316 Stainless steel
- Threaded connection: AISI 316 Stainless steel
- Display: Safety glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Welding: TIG welding
- Blow-out disc and overtemperature relief plug: Neoprene

Application:
- Refrigeration
- Air conditioning
- Food industry

A Bottom



C Bottom with back flange



DIMENSIONS (mm)															WEIGHT (g)
DN	Mounting	R1	A	C	D1	E	D2	G	R2	SW	P	B1	B2	B3	
Ø100	A	16	49	32	101	17	99	½" BSP	83	22	-	-	-	-	545
Ø100	C	16	49	32	101	17	99	½" BSP	83	22	86	132	124	5	566

How to order

1.Case diameter: Ø100

2.Pressure range (Bar): -1+9, -1+15, -1+12, -1+25

3.Pressure scale: Bar/ °C R717 NH_3

4.Mounting: A, C

5.Threaded connection: ½"BSP

6.Connection material: AISI 316 Stainless steel

7.Calibration certificate traceable to ENAC: 7 point certificate, Without certificate

M0702 -	1	2	3	4	5	6	7

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

M 08 01

Safety pressure gauge with phenolic case and solid front

The rugged phenolic case gives an excellent resistance to chemical agents, harsh weather and corrosion.

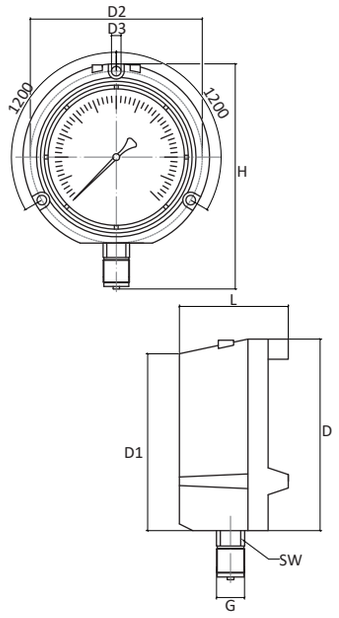
It is manufactured according to EN 837-1, BS1780 y ASME B 40.1.

STANDARD PARAMETERS
Design: EN 837-1, BS1780 y ASME B 40.1.
Closing: Safety closing
Mounting: See attached diagram **A**
Threaded connection: ½"BSP (UNE-EN 10226-1)
IP protection: IP55 (EN 60529 / IEC 529)
Accuracy: Class 1.0 (first and last 25% of the scale) / 0.5 (rest of the scale)
Pressure limits:
Static: Full scale
Oscillating: 90% end of scale
Maximum: 130% end of scale for a short period of time
Temperature limits:
Environment: -40+60°C
Fluid: 60°C
Range: **-1...0...1000** Bar
Scale: **Bar** or **Bar/Psi**
Subdivision: According to standard EN 837-1
Antivibration fluid: **Glycerine 99.8%, silicone oil** or **dry**
Pointer: Micrometric adjustment
Sensor element: Bourdon tube ("C" form)

Application:
- **Petrochemistry**
- **Gas facilities**

MATERIALS
Case and ring: Phenolic resin (PBTB) / Polypropylene
Bourdon tube and moving parts: AISI 316 Stainless steel
Threaded connection: AISI 316 Stainless steel
Display: Safety glass
Dial: White laquered aluminum
Pointer: Black laquered aluminum
Welding: TIG welding

A Bottom



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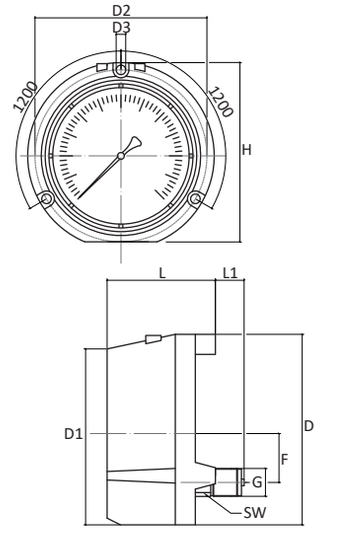


DIMENSIONS (mm)												WEIGHT (g)
DN	**Mounting**	**D**	**D1**	**D2**	**D3**	**F**	**H**	**G**	**L**	**L1**	**SW**	
Ø125	**A**	142.5	127	136.7	7.6	-	179	½" BSP	81	-	22	409
Ø125	**B**	142.5	127	136.7	7.6	44.5	179	½" BSP	81	30	22	421

How to order

1.Case diameter

Ø125

2.Pressure range (Bar)

-1+0	-1+5	-1+24	0+1.6	0+6	0+25	0+100	0+400
-1+0.6	-1+9	0+0.6	0+2.5	0+10	0+40	0+160	0+600
-1+3	-1+15	0+1	0+4	0+16	0+60	0+250	0+1000

3.Pressure scale

Bar
Bar/psi

4.Mounting

A B

5.Threaded connection

½"BSP

6.Connection material

Brass
Stainless steelAISI 316

7.Antivibration fluid

Silicon oil
Glycerine
Dry

8.Calibration certificate traceable to ENAC

7 point certificate
Without certificate

M0801 -	1	2	3	4	5	6	7	8

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Pressure gauges with diaphragm in stainless steel

SEP 101

Pressure gauges with diapraghm in AISI 316 Stainless steel. It is designed for high viscosity or corrosive fluids. Especially suitable for difficult operating conditions due to the existence of vibration or rapid pressure changes. Useful in harsh environments, and ammonia cooling systems.

STANDARD PARAMETERS

Pressure gauge

- Design: EN 837-1
- Closing: Bayonet
- Mounting: See attached diagram **A**
- Threaded connection: ½"BSP (UNE-EN 10226-1)
- IP protection: IP65 (EN 60529 / IEC 529)
- Accuracy: Class 1.0
- Pressure limits:
  - Static: ¾ end of scale
  - Oscillating: ⅔ end of scale
  - Maximum: Full scale for a short period of time
- Temperature limits:
  - Environment: -40+65°C
  - Fluid: 60°C
- Range: **0...25** Bar
- Scale: Bar
- Subdivision: According to standard EN 837-1
- Antivibration fluid: **Glycerine 99.8%** or **dry**
- Pointer: Micrometric adjustment
- Sensor element: Bourdon tube ("C" form)
- Pressure relief system: Blow-out disc
- Overtemperature relief system: Upper plug

Diaphragm

Temperature limit of the transmission liquid: Up to 200°C

MATERIALS

Pressure gauge

- Case and ring: AISI 304 Stainless steel
- Bourdon tube and moving parts: AISI 316 Stainless steel
- Threaded connection: AISI 316 Stainless steel
- Display: Safety glass
- Dial: White laquered aluminum
- Pointer: Black laquered aluminum
- Pressure gauge welding: TIG welding
- Blow-out disc and overtemperature relief plug: Neoprene

Diaphragm

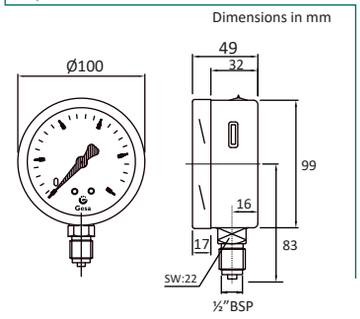
- Body: AISI 316 Stainless steel
- Tranmission liquid: Silicon oil
- Bolts: AISI 316 Stainless steel

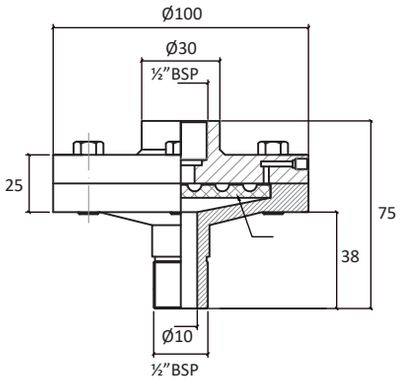
Application:

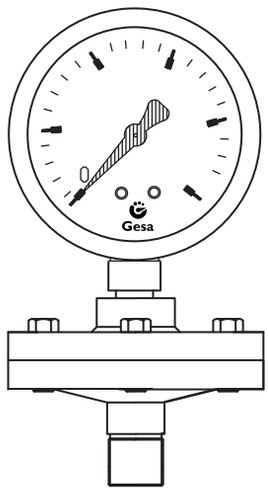
- Cooling
- Air conditioning
- Food
- Treatment Plants
- Hydraulic

A Bottom

Dimensions in mm







How to order

1.Case diameter	2..Pressure range (Bar)	3.Pressure scale	4.Mounting	5.Threaded connection
Ø100	0+2.5 0+6 0+16 0+4 0+10 0+25	Bar	A	½"BSP

6.Connection material	7.Antivibration fluid	8.Calibration certificate traceable to ENAC
AISI 316 Stainless steel	Glycerine 99.8% Dry	7 point certificate Without certificate

SEP 101 -

1	2	3	4	5	6	7	8

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S101

Screwed diaphragm seal with threaded connection

They are used to protect the manometer from corrosive, viscous, sediment and high temperature media.

Each medium requires a specific separator, this separator is universally used.

Application:

- **Plumbing**
- **Pipes**
- **Aggressive media**

STANDARD PARAMETERS

Sealing: PTFT (up o 260°C)

Limits of use

- Max PN: 25 bar
- Pressure range: -1 to 25 bar max
- Max process temperature: 400°C

Connection threads: **¼"BSP** or **½"BSP male** or **female**

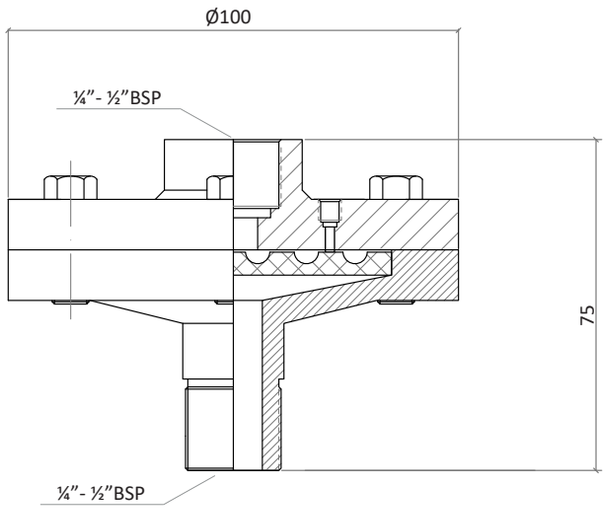
MATERIALS

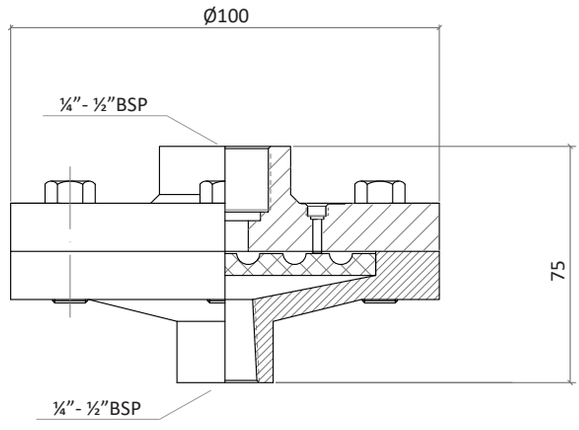
Body: AISI 316 Stainless steel

Diaphragm: AISI 316L Stainless steel Weldede to upper body

Bolts: AISI 316 Stainless steel

System fluid	Working range	Application	Instrument range
Silicone (Low Viscosity)	-40...130°C	General	-30...50°C
Silicone (Alta Viscosidad)	-30...240°C	High temperatures	-20...60°C
Fluorocarbon oil	-30...160°C	Salt and acids	-20...50°C
Glycerin	-5...100°C	Food	-5...40°C
Propylene glycol	-30...100°C	Food	-20...40°C





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Welded diaphragm seal with threaded connection

They are used to protect the manometer from the medium.

Each medium requires a specific separator, this separator is universally used.

Application:

- **Petrochemical industry**
- **Aggressive media**
- **Water treatment**

STANDARD PARAMETERS

Sealing: PTFT (Up to 260°C)

Limits of use

- Max PN: 100 bar
- Pressure range: -1 to 100 bar max
- Max process temperature: 400°C

Connection threads: **¼"BSP** or **½"BSP male** or **female**

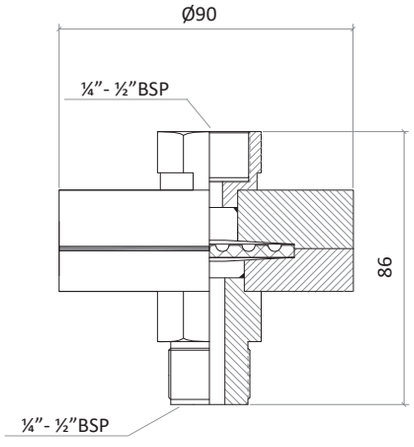
MATERIALS

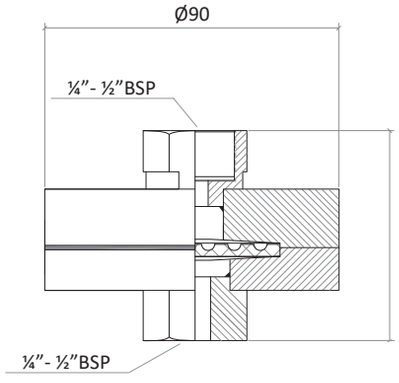
Body: AISI 316 Stainless steel

Diaphragm: AISI 316L Stainless steel Weldede to upper body

Bolts: Stainless steel

System fluid	Working range	Application	Instrument range
Silicone (Low Viscosity)	-40...130°C	General	-30...50°C
Silicone (Alta Viscosidad)	-30...240°C	High temperatures	-20...60°C
Fluorocarbon oil	-30...160°C	Salt and acids	-20...50°C
Glycerin	-5...100°C	Food	-5...40°C
Propylene glycol	-30...100°C	Food	-20...40°C





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S103

Welded diaphragm seal with threaded connection for high pressure

They are used to protect the manometer from the medium.

Each medium requires a specific separator, this separator is universally used.

Application:

- **Plumbing**
- **Pipes**
- **Aggressive media**

STANDARD PARAMETERS

Sealing: PTFT (Up to 260°C)

Limits of use

- Max PN: 600 bar
- Pressure range: 0 to 600 bar max
- Max preocess temperature: 400°C

Connection threads: **¼"BSP** or **½"BSP male** or **female**

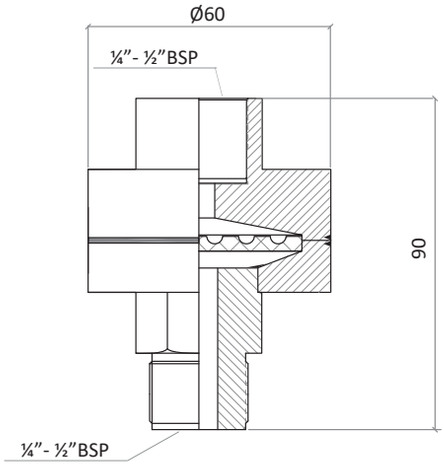
MATERIALS

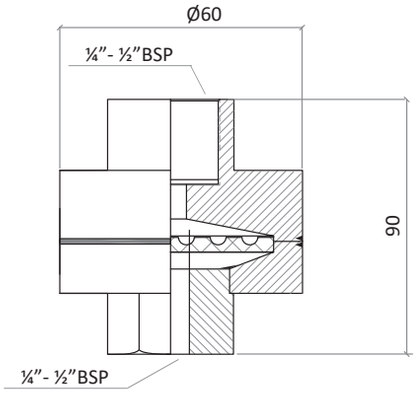
Body: AISI 316 Stainless steel

Diaphragm: AISI 316L Stainless steel Weldede to upper body

Bolts: Stainless steel

System fluid	Working range	Application	Instrument range
Silicone (Low Viscosity)	-40...130°C	General	-30...50°C
Silicone (Alta Viscosidad)	-30...240°C	High temperatures	-20...60°C
Fluorocarbon oil	-30...160°C	Salt and acids	-20...50°C
Glycerin	-5...100°C	Food	-5...40°C
Propylene glycol	-30...100°C	Food	-20...40°C





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Sanitary diaphragm seal for food industry with flanged connection

They are used to protect the manometer from the medium.

Each medium requires a specific separator, this separator is universally used.

Application:

- Food industry
- Aggressive media
- Water treatment

STANDARD PARAMETERS

Sealing: PTFT (Up to 260°C)

Limits of use

Max PN: 60 bar

Pressure range: 0 to 60 bar max

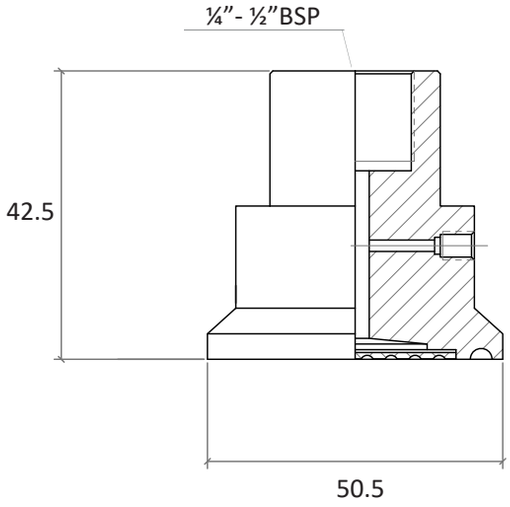
Max process temperature: 400°C

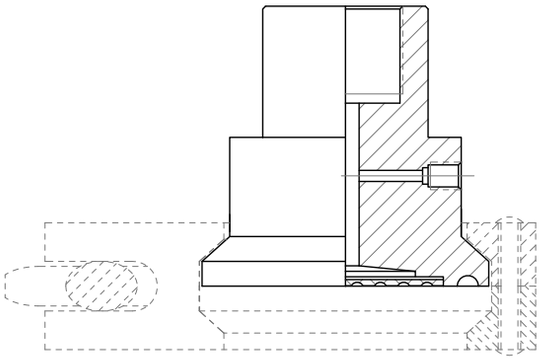
MATERIALS

Body: AISI 316 Stainless steel

Diaphragm: Welded AISI 316L Stainless steel

Clamp: AISI 316 Stainless steel





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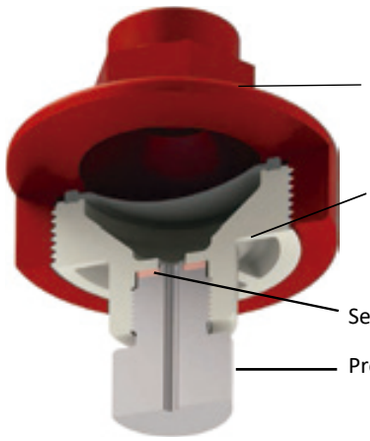
S121

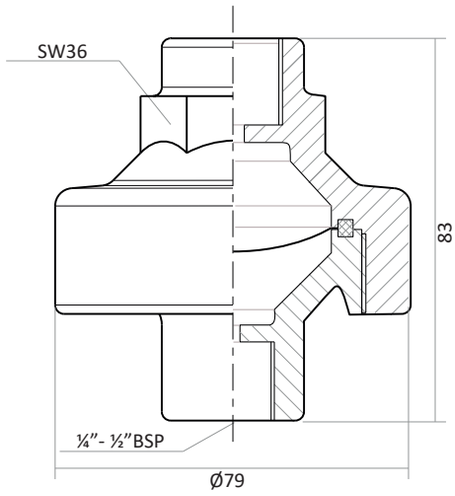
Plastic diaphragm seal with threaded connection

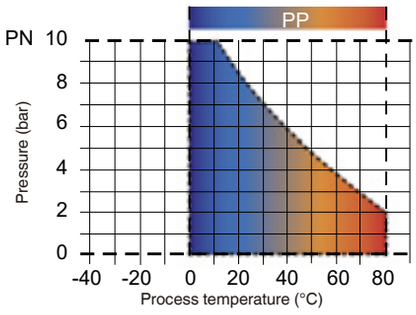
Versatile instrument for different application areas. Widely used in the facilities of water supply and wastewater treatment.

Application:

- Petrochemical industry
- Electroplating
- Water treatment







STANDARD PARAMETERS

Limits of use

Maximum nominal pressure: 10 bar

Pressure range: 0 to 10 bar max

Thread connection: **¼"BSP** or **½"BSP** female-female

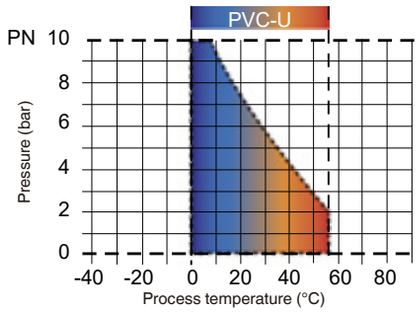
weight: 180g

MATERIALS

Upper body: Polypropylene (PP)

Lower body: Polyvinyl chloride (PVC-U)

Diaphragm: **FPM** or **PTFE**



STANDARD PARAMETERS

Limits of use

Maximum nominal pressure: 10 bar

Pressure range: 0 to 10 bar max

Thread connection: **¼"BSP** or **½"BSP** female-female

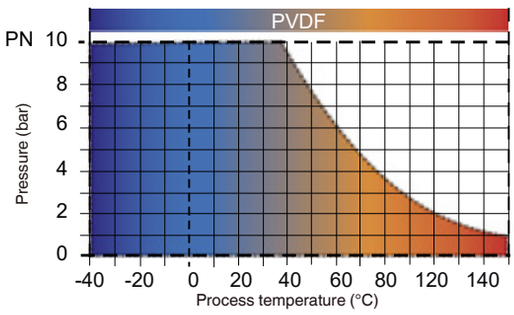
weight: 155g

MATERIALS

Upper body: Polypropylene

Lower body: Polypropylene

Diaphragm: **FPM** or **PTFE**



STANDARD PARAMETERS

Limits of use

Maximum nominal pressure: 10 bar

Pressure range: 0 to 10 bar max

Thread connection: **¼"BSP** or **½"BSP** female-female

weight: 250g

MATERIALS

Upper body: Polyvinylidene fluoride (PVDF)

Lower body: Polyvinylidene fluoride (PVDF)

Diaphragm: PTFE

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TP488

Pressure transmitter

The TP488 General Pressure Transducer consists of an OEM sensor housed in a stainless steel housing which gives it great resistance in gaseous or liquid media

Application:

- Petrochemical industry
- Power plants

STANDARD PARAMETERS

Type of pressure: **Gauge** or **Absolute**

Pressure range: **0...1000 bar**

Accuracy: ±0.5% full scale (FS)

Stability: <±0.3% FS/year

Thermal compensation: 0...50°C

Coefficient to 0°C: Typical: ±0.1% FS°C(<1bar) / Maximum: ±0.05 FS/°C (>1bar)

Output signal: 4~20mA DC (2 wires)

Resistance: < U-12 / 0.02(Ω)

Power supply: 12~28V DC

Electric connection: DIN43650

Connection threads: **¼"BSP**, **½"BSP** or **M20x1.5**

Limits of use

- Overpressure: 1.5 times FS
- Working temperature: -20...80°C
- Storage temperature: -40...100°C
- Max humidity: 95% RH
- Breakage pressure: 2 times FS
- IP protection: IP65
- Vibration: 10g
- Shock: 100g/11ms

Standard	Overpressure	Break
0...0.2 bar	1.5	2
0...0.4 bar	1.5	2
0...0.6 bar	1.5	2
0...1 bar	1.5	2
0...1.6 bar	2.4	3.2
0...2.5 bar	3.75	5
0...4 bar	6	8
0...6 bar	9	12
0...10 bar	15	20
0...16 bar	24	32
0...25 bar	37.5	50
0...40 bar	60	80
0...100 bar	150	200

MATERIALS

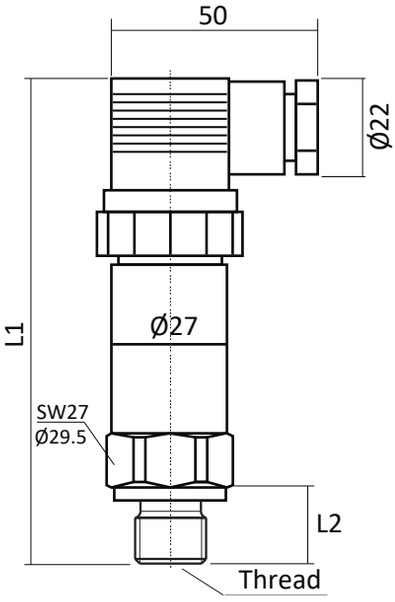
Body: Stainless steel 1Cr18Ni9Ti

Diaphragm: **Stainless steel 316L** or **Tantalum** welded to upper body

Pressure port: **Stainless steel 1Cr18Ni9Ti** or **Hastelloy**

O-ring: Viton

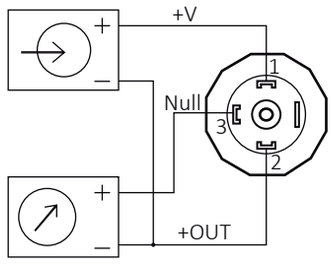
Dimensions in mm



thread	L1	L2
G ¼	15	112
G ½	18	115
M20x1.5	15	112

Connection diagram

4 pins according to DIN 43650



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Accesories

Vibrations

In systems subjected to severe vibrations it is necessary that the gauge pointer does not vibrate and prevent reliable pressure reading. To avoid it the manometer is filled with a liquid having certain viscosity which prevents the pointer vibration. The most common liquids are glycerine and silicon oil.

Glycerine or Silicon oil

Overpressure

In cases where the gauge must be installed in facilities subjected to great pressure. It is desirable to include a pressure limiting valve which prevents overpressure damaging the pressure gauge.

Pressure limiter

Pulsation

Processes in which significant increases and pressure drops require parts to cushion these sudden changes that can damage the instrument and cause leakage.

Damper pressure

Overheating

Temperatures in some of the systems subject to measurement can damage internal components of the gauge, so it is advisable to use heat sinks to ensure the operability of the instrument.

There are several accessories that meet this function, these are the most common.

Cooling tower

Coil damper

Capilar

Isolation

For installations where continuous pressure monitoring is not required, the use of valves to separate the pressure gauge system is recommended, either because the liquid can attack the internal parts in long exposures or because the use of the instrument alters the normal process operation.

Valve

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Pressure limiter

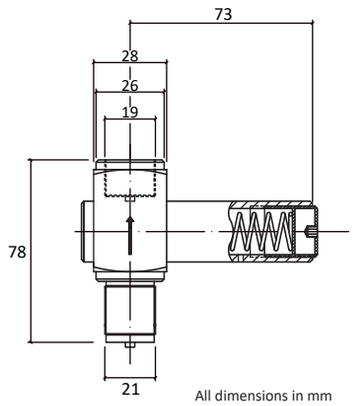
The pressure limiter protects the instrument from pressures that exceed their limit of security.
They allow the use of specialized pressure gauges in systems with large pressure changes. The limiter can be adjusted to the maximum pressure by the pressure gauge and supported when it is exceeded the limiter blocks the duct protecting the pressure gauge.

STANDARD PARAMETERS

- Maximum pressure supported: 600 Bar
- Temperature of the fluid: -40 to 120°C
- Instrument connection: ½"BSP Female
- Process connection: ½"BSP Male
- Degreased for O_2: Up to 50 Bar and 60°C

MATERIALS

- Body and wetted parts: AISI 316 Stainless steel
- Gasket/O-ring: Viton



All dimensions in mm

How to order

1.Model	2.Degreased for O_2
Bellows (200 mbar to 4 Bar)	Yes
Piston (6 Bar to 400 Bar)	No

M0901- [1] [2]

Cooling tower

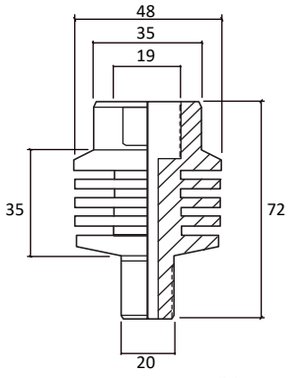
Designed to protect the gauge of the high process temperatures. The air cools the liquid in contact with the surface

STANDARD PARAMETERS

- Maximum pressure supported: 1000 Bar
- Maximum working pressure: 300°C
- Instrument connection: ¼"NPT Female
- Process connection: ¼"NPT Male

MATERIALS

- Body and wetted parts: AISI 316 Stainless steel



All dimensions in mm

How to order **Reference: M0903**

Cooling tower

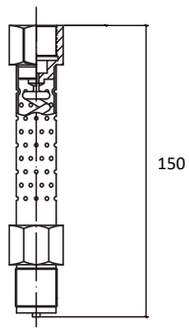
Designed to protect the gauge of the high process temperatures. The air cools the liquid in contact with the surface

STANDARD PARAMETERS

- Maximum pressure supported: 1000 Bar
- Maximum working pressure: 300°C
- Instrument connection: ¼"NPT Female
- Process connection: ¼"NPT Male

MATERIALS

- Body and wetted parts: AISI 316 Stainless steel



How to order **Reference: M0904**

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Coil damper

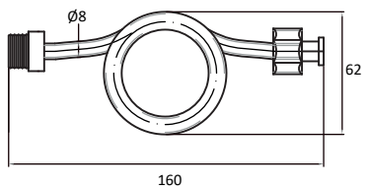
Designed to protect the gauge from media at high temperatures, like steam. Also to reduce the effect of sudden changes in pressure. For initial installation must fill the siphon with water or other equivalent liquid

STANDARD PARAMETERS

Maximum pressure supported: 12 Bar
Temperature of the fluid: -40 to 120°C
Instrument connection: Female
Process connection: Male

MATERIALS

Body and wetted parts: AISI 316 Stainless steel



All dimensions in mm

How to order

1.Instrument connection / process

½"BSP Female / Male
¼"BSP Female / Male
⅜"BSP Female / Male

M0902 - 1 [ ]

Capillary extension

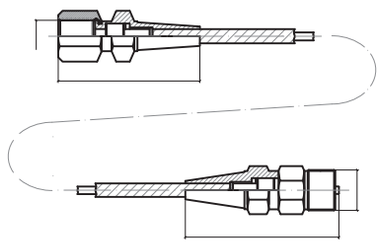
Designed to connect the gauge to a remote system and perform remote readings, it also cools the system´s filling liquid providing protection to gauge. For installation it requires the measuring instrument available a flange or rim for paneling or a support for the extension

STANDARD PARAMETERS

Maximum pressure supported: 600 Bar
Temperature of the fluid: -40 to 120°C
Instrument connection: ¼"BSP Female
Threaded connection: ¼"BSP Male
Capillary length: **1m, 1.5m, 2m** or **2.5m**

MATERIALS

Body and wetted parts: AISI 316 Stainless steel



How to order

Reference: M0905

Pointer dampener

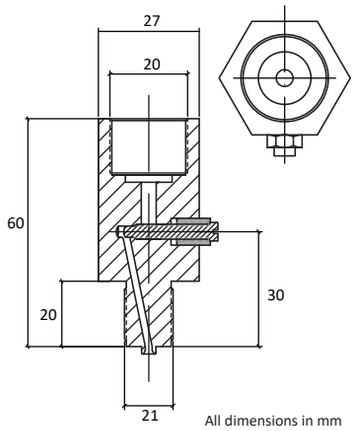
Designed to protect pressure measuring instruments from pulsating pressure applications. Sudden pressure changes are damped before they reach the sensing element, protecting it from high stress. It makes readings easier and prolongs the life of the instrument.

STANDARD PARAMETERS

Maximum pressure supported: 400 Bar (6000psi)
Temperature of the fluid: -25 to 200°C
Instrument connection: ½"BSP Female
Threaded connection: ½"BSP Male

MATERIALS

Body and wetted parts: **AISI 316 Stainless steel** or **brass**
Adjustment screw: AISI 316 Stainless steel Gasket: Viton



All dimensions in mm

How to order

Reference: M0906

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PRESIÓN
PRESSION
PRESSURE

Brass nickel plated ball valves

V 01 25

The ball valves PN 20/25, have been constructed in accordance with the following European Standards:

- **UNE EN ISO 228**
- **UNE EN 22768**

The most frequent applications of the ball valve are opening/closing.

It is not advisable to use them in partially open service for a long time under conditions of high pressure drop across the valve.

STANDARD PARAMETERS

Structure: See attached diagrams **A** or **B**

Handle: Lever

Axis: Antileak system

IP protection: IP56

Usage limits:

Maximum nominal pressure: 20-25 bar

Working temperature: -20 to 150°C (Without steam)

Threaded connection: ¼"BSP, ⅜"BSP, ½"BSP, ¾"BSP, 1"BSP, 1 ¼"BSP, 1 ½"BSP or 2"BSP

MATERIALS

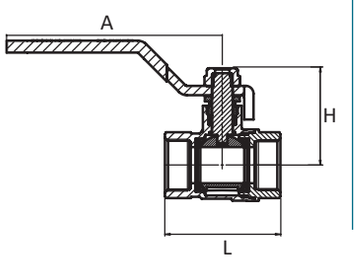
Body: Brass nickel plated

Handle: Stainless steel AISI 304 and plastic injected with rough texture.

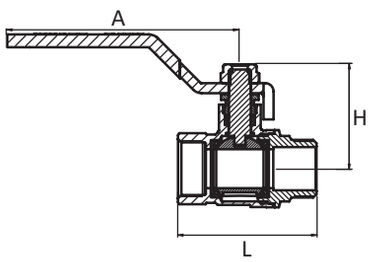
Application:

- Plumbing
- Irrigation
- Pipes
- Circuits

A Female - Female



B Male - Female



DIMENSIONS (mm)						WEIGHT (g)
Structure	**Threads**	**Max PN**	**A**	**L**	**H**	
Female - Female	¼"BSP	20 bar	83	36.7	31.5	126
	⅜"BSP	20 bar	83	39.8	31.5	147
	½"BSP	25 bar	83	43.6	37.9	153
	¾"BSP	25 bar	96	50	38.7	209
	1"BSP	25 bar	106	55.5	48.3	329
	1 ¼"BSP	25 bar	134	69.3	54	512
	1 ½"BSP	25 bar	141	78.3	67.5	737
	2"BSP	25bar	165	94	72.5	1160
Male- Female	¼"BSP	20 bar	85	42.9	31.5	130
	⅜"BSP	20 bar	85	43.7	31.5	153
	½"BSP	25 bar	83	49.3	37.9	162
	¾"BSP	25 bar	97	55.9	38.7	219

How to order

1.Structure

A B

2.Threaded connection

¼"BSP ¾"BSP 1 ½"BSP
⅜"BSP 1"BSP 2"BSP
½"BSP 1 ¼"BSP

V0125 - [1] [2]

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VP 03 25

Brass nickel plated Ball valve for pressure gauges

Useful to isolate the pressure gauge from the system.
The most common applications of this ball valve are opening and closing.
It is not recommended to use them in partly open services for long periods of time and under high pressure drops.

STANDARD PARAMETERS

Structure: See attached diagrams **A** or **B**

Handle: Lever

Axis: Antileak system

IP protection: IP56

Usage limits:

- Maximum nominal pressure: 25 bar
- Working temperature: -20 to 50°C (Without steam)

Threaded connection: ¼"BSP, ⅜"BSP or ½"BSP

MATERIALS

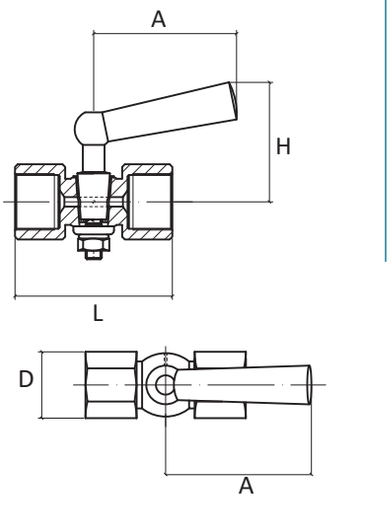
Body: Brass nickel plated

Handle: Polyethylene

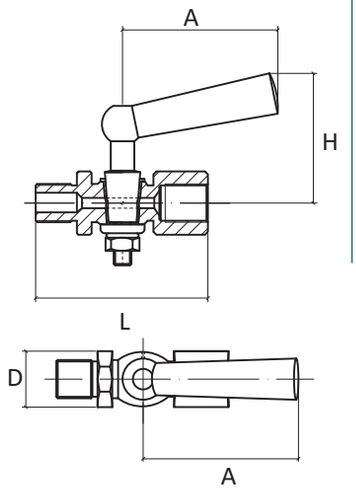
Application:

- Plumbing
- Irrigation
- Pipes
- Circuits

A Female - Female



B Male - Female



DIMENSIONS (mm)							WEIGHT (g)
Structure	**Threads**	**Max PN**	**A**	**L**	**H**	**D**	
Female - Female	¼"BSP	25 bar	60	57.9	50	19	105
	⅜"BSP	25 bar	60	58.6	50	21.1	130
	½"BSP	25 bar	60	57.9	50	24.5	150
Male- Female	¼"BSP	25 bar	60	57.9	50	19	111
	⅜"BSP	25 bar	60	58.6	50	21.1	134
	½"BSP	25 bar	60	57.9	50	24.5	145

How to order

1.Structure — **2.Threaded connection**

A B ⇨ ¼"BSP ⅜"BSP ½"BSP ⇨ **VP0325 -** [1] [2]

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V2

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Chromed brass mini valve

MV 01 16

Opening / Closing: The most common application of these Valves is in installations where the flow is interrupted regularly

It is not recommended to use them in partly open services for long periods of time and under high pressure drops.

Application:
- **Plumbing**
- **Irrigation**
- **Pipes**
- **Circuits**

STANDARD PARAMETERS

Structure: See attached diagrams **A** or **B**

Handle: Short lever

IP protection: IP56

Usage limits:

Maximum nominal pressure: 16 bar

Working temperature: 0 to 90°C (Without steam)

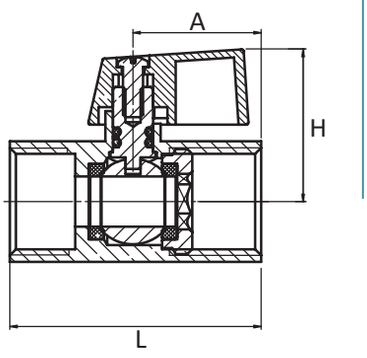
Threaded connection: ¼"BSP, ⅜"BSP or ½"BSP

MATERIALS

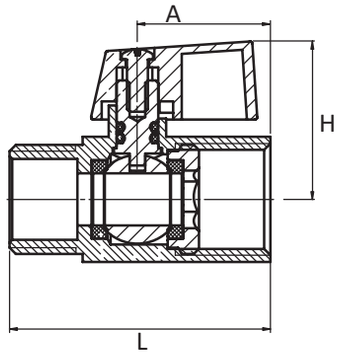
Body: Chromed brass

Handle: Epoxy coated brass

A Female - Female



B Male - Female



DIMENSIONS (mm)						WEIGHT (g)
Structure	**Threads**	**Max PN**	**A**	**L**	**H**	
Female - Female	¼"BSP	16 bar	23	43	28.5	110
	⅜"BSP	16 bar	23	44.5	28.5	110
	½"BSP	16 bar	26	50	30	125
Male- Female	¼"BSP	16 bar	23	44.5	28.5	95
	⅜"BSP	16 bar	23	44.5	28.5	95
	½"BSP	16 bar	25	50	28.5	114

How to order

1.Structure

A B

2.Threaded connection

¼"BSP ⅜"BSP ½"BSP ¾"BSP 1"BSP 1 ¼"BSP 1 ½"BSP 2"BSP

MV0116 - 1 | 2

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V3

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TEMPERATURA
TEMPÉRATURE
TEMPERATURE

Termómetros de vidrio
Thermomètres en verre
Glass thermometers

V-shaped thermometer

C 01 01

Liquid expansion thermometers for temperatures from -60°C to 600°C.
These instruments are very tough, easy to install and reliable. They resist extreme working conditions: vibrations, humidity, outdoors conditions, aggressive media like sea water or ammonia.
Useful to control fluid temperature in pipes or tanks from ship engines, refrigeration systems, boilers, HVAC systems, etc.

STANDARD PARAMETERS

Design: DIN 16181/16182/16185/16186/16189/16190/16195

Structure: The glass insert is secured by an aluminum case where the temperature range is printed. The metallic stem is fixed into the system by male or female thread or Bolt.

Case dimension (H): **110, 150 or 200mm**

Mounting: See attached diagrams **A** , **B** or **C**

Connection system: **Male** or **female thread** or **bolt**

Threads: **Standard BSP, metrics** or **NPT**

Stem length (L), including thread: **25-500mm**

Stem diameter (Ø) : 10mm (optional 8mm)

Range: Aluminium case:**-60...0...600°C / Polyamide case: -60...0...200°C**

Scale: **°C printed on the right side of the case** or **double scale °C/°F**

MATERIALS

Case: **Anodized aluminium gold or silver coloured / polyamide**

Insert: Prismatic glass with white strip for T<450°C and Round glass with yellow back for T>450°C

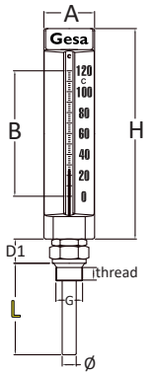
Thread and Stem: **Brass, Steel, Stainless steel AISI 304, AISI 316** or **316L**

Thermometric liquid: **Blue** or **red alcohol** for T<200°C / Mercury for T>200°C

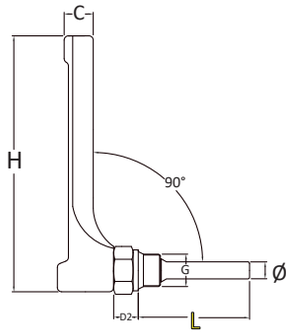
Application:
- **Heating**
- **Boilers**
- **Naval Sector**

DIMENSIONS(mm)								WEIGHT (g)	DIN
Mounting	H	A	B	C	D1	D2	Ø		
Straight	110	36	60	17	20	-	10	230	DIN 16181
	150	36	90	17.5	20	-	10	285	DIN 16185
	200	36	130	17.5	20	-	10	320	DIN 16189
Angle 90°	110	36	60	17	-	48	10	230	DIN 16182
	150	36	90	17	-	48	10	275	DIN 16186
	200	36	130	17	-	48	10	310	DIN 16190
Angle 135°	110	36	60	17	20	-	10	230	-
	150	36	90	17.5	20	-	10	275	-
	200	36	130	17.5	20	-	10	310	DIN 16191

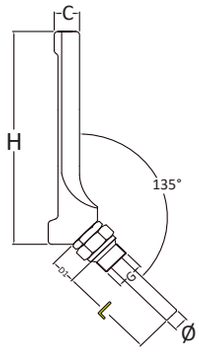
A Straight



B Angle 90°



C Angle 135°



How to order

1.Case size in mm (H)
110
150
200

2. Case material
Aluminium
Polyamide

3.Case Color
Gold
Silver

4.Mounting
A B C

5.Temperature Range (°C)
-10+50 0+120 0+400
-30+50 0+160 0+500
0+60 0+200 0+600
0+100 0+300

6.Temperature scale
Single ơC
Double ơC / ơF

Temperature range according to DIN 16195

Tmp. in °C	H	Subdivision °C/line	Maximum error	Liquid
-60+40	110	2	2	Alcohol
	150	1		
	200	1		
-30+50	110	1	2	Alcohol or Mercury
	150		2	
	200		1	
0+60	110	1	2	
	150		2	
	200		1	
0+100 0+120	110	2	2	
	150	1	2	
	200	1	1	
0+160 0+200	110 150 200	2	2	
0+300	150 200	2	2	Mercury
0+400		5	5	
0+500		10	5	
0+600		10	5	

7.Thermometric liquid
Blue alcohol
Red alcohol
Mercury

8.Stem length in mm (L), including thread
25 40 55 70 85 110 135 200 270 400
30 45 60 75 90 120 140 220 300 450
35 50 63 80 100 130 160 250 350 500

9.Stem diameter in mm (Ø)
Ø10
Ø8

10.Stem material
Brass
Chromed carbon steel — Stainless st. AISI 304
Galvanized carbon steel — Stainless st. AISI 316

11.Threads
½" BSP male — ¾" BSP male — M18x150male — Female crazy nut
½" BSPT male — ¾" NPT male — M20X150 male — Without threaded connection
½" NPT male — Bolt Ø16 mm — M22X150 male — More threads on demand
⅜" BSP male — Bolt Ø18 mm — M27X200 male

12.Logo
GESA
Without Logo

13.Calibration certificate traceable to ENAC
3 points — 6 points
4 points — 7 points
5 points — Without certificate

	1	2	3	4	5	6	7	8	9	10	11	12	13
C0101 -													

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) ESPAÑA

C 02 01

V-shaped thermometer: Glass inserts

Liquid expansion thermometers for temperatures from -60°C to 600°C.
These replacement glass inserts for the industrial thermometers C0101 are very tough, easy to install and reliable.

STANDARD PARAMETERS

Design: DIN 16181/16182/16185/16186/16189/16190/16195

Structure: The glass insert is secured by an aluminum case where the temperature range is printed. The metallic stem is fixed into the system by male or female thread or through a bolt

Dimension according to the case size (H): **110**, **150** or **200mm**

Mounting: See attached diagrams **A**, **B** or **C**

Stem length (**L**), including thread: **25-500mm**

Insert diameter (Ø) : 6.25mm

Range: **-60...0...600°C**

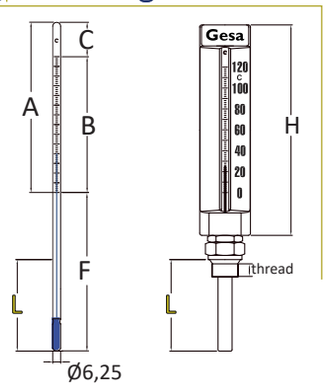
Scale:**°C** or **double scale °C and °F**

MATERIALS

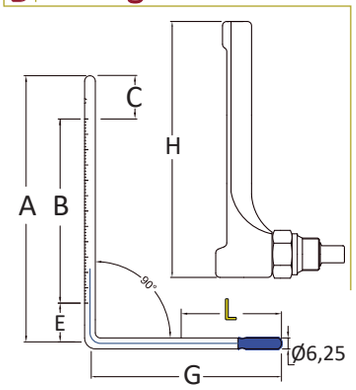
Insert: Prismatic glass with white strip for T<450°C and Round glass with yellow back for T>450°C

Thermometric liquid: Blue or red alcohol for T<200°C / Mercury for T>200°C

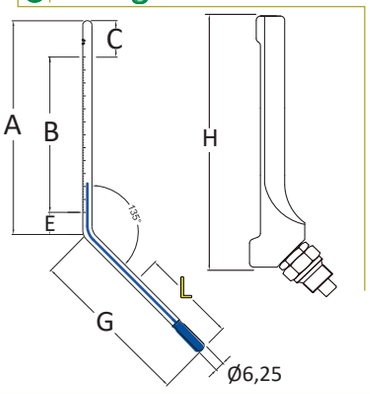
A Straight



B Angle 90°



C Angle 135°



DIMENSIONS(mm)						WEIGHT (g)	DIN
Mounting	H	A	B	C	E		
Straight	110	76	60	16	-	11	DIN 16181
	150	113	90	23	-	13	DIN 16185
	200	153	130	23	-	18	DIN 16189
Angle 90°	110	86	60	15	11	11	DIN 16182
	150	124	90	18	16	13	DIN 16186
	200	174	130	24	20	18	DIN 16190
Angle 135°	110	86	60	15	11	11	-
	150	124	90	18	16	13	-
	200	174	130	24	20	18	DIN 16191

Application:

- **Heating**
- **Boilers**
- **Naval Sector**

Liquid operation limits

		Minimum operation temp. (°C)	Maximum operation temp. (°C)
Mercury	Hg	-38	+800
Ethanol	C_2H_6O	-110	+110
Toluene	C_7H_6	-115	+135
Etil Benzoate	$C_{12}H_{16}O_2$	-40	+220

Stem lenght

	H=110mm		H=150mm		H=200mm	
L	F	G	F	G	F	G
40	81	66	87	66	97	66
63	104	89	110	89	120	89
100	141	126	147	126	157	126
160	201	186	207	186	217	186
200	241	226	247	226	257	226

Temperature range according to DIN 16195

Tmp. in °C	H	Subdivision °C/line	Maximum error	Líquid
-60+40	110	2	2	Alcohol
	150	1		
	200	1		
-30+50	110	1	2	Alcohol or mercury
	150		2	
	200		1	
0+60	110	1	2	
	150		2	
	200		1	
0+100 0+120	110	2	2	
	150	1	2	
	200	1	1	
0+160 0+200	110	2	2	
	150			
	200			
0+300	150	2	2	Mercury
0+400		5	5	
0+500	200	10	5	
0+600		10	5	

How to order

1.Case dimension (H)
110
150
200

2.Mounting
A B C

3.Temperature range (°C)
-10+50 0+100 0+200 0+500
-30+50 0+120 0+300 0+600
0+60 0+160 0+400

4.Temperature scale
Single ɑC
Double ɑC / ɑF

5.Termometric liquid
Blue alcohol
Red alcohol
Mercury

6.Stem length in mm (L), including thread
25 40 55 70 85 110 135 200 270 400
30 45 60 75 90 120 140 220 300 450
35 50 63 80 100 130 160 250 350 500

7.Calibration certificate traceable to ENAC
3 points 6 points
4 points 7 points
5 points Without certificate

1	2	3	4	5	6	7
C0201 -						

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V-shaped thermometer: Protection sheaths

They are used to enhance safety at the point where the thermometer is fixed to the facility. They are required when operating pressure is over 16 bar.These accessories also prevent facility stoppages whenever the thermometer has to be replaced. They resist extreme hard conditions: vibrations, humidity, high temperature, outdoor installations.

STANDARD PARAMETERS

Design: DIN 16179

Structure:

BD- Two welded pieces, female connection to the thermometer and male connection to the process
BE- A single piece, female connection to the thermometer and male connection to the process
BS- A single piece, female connection to the thermometer and welded to the process
CD-Two welded pieces, male connection to the thermometer and male connection to the process
CE- A single piece, male connection to the thermometer and male connection to the process
CS- A single piece, male connection to the thermometer and welded to the process

Connection system: **Male thread** or **Welded**

Threads: **Standard BSP**, **metrics** or **NPT**

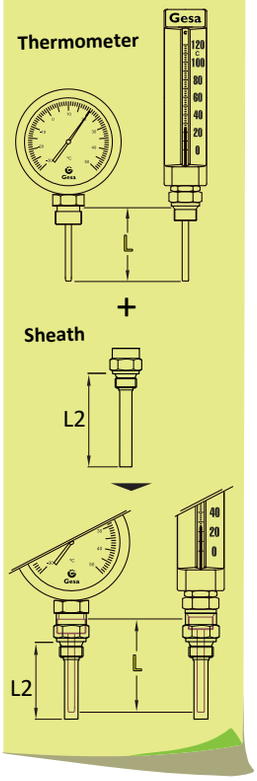
Stem length (**L**), including thread: **25-500mm**

Stem diameter (Ø): **Ø12, Ø13, Ø14, Ø17 or Ø22**

MATERIALS

Brass / Carbon steel /Stainless steel AISI 304, 316 or **316L**

Sheath Mounting



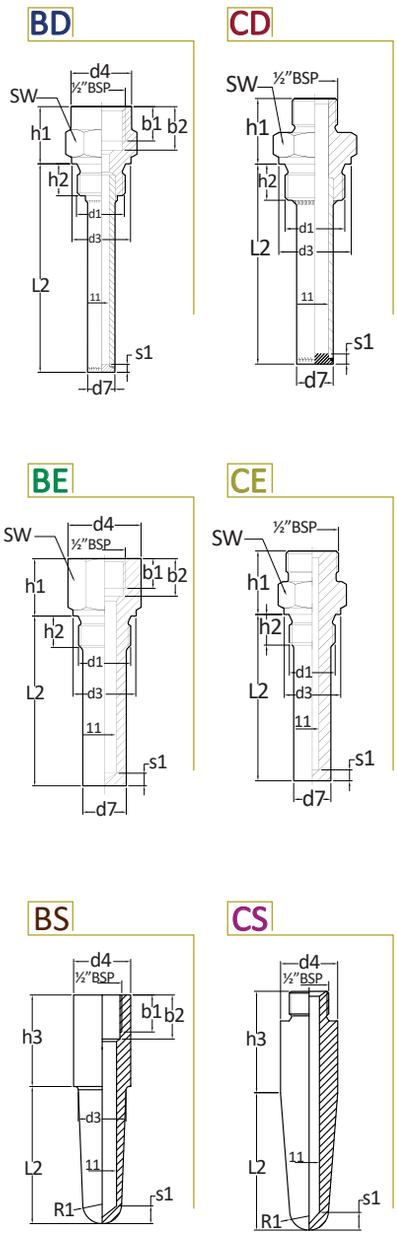
DIMENSIONS(mm)

		d1	d3	d4	d5	d7	r1	s1	h1	h2	h3	b1	b2	sw	L2
BD	M20x1.5	25	27	-	13	-	2	22	12	-	16	25	27	L - 18	
	½"BSP														
	M27x2	32	32	-	13	-	2	26	15	-	20	25	32	L - 22	
	¾"BSP														
BE	M20x1.5	25	27	-	17	8,5	7,5	22	12	-	16	25	27	L - 11	
	½"BSP														
	M27x2	32	32	-	22	9,5	7,5	26	15	-	20	25	32	L - 15	
	¾"BSP														
BS	-	-	30	25	-	8,5	7,5	-	-	39	16	19	-	L - 18	
	-	-	36	26	-	9,5	7,5	-	-	45	20	24	-	L - 18	
CD	M20x1.5	25	-	-	13	-	2	22	12	-	-	-	27	L - 18	
	½"BSP														
	M27x2	32	-	-	13	-	2	26	15	-	-	-	32	L - 22	
	¾"BSP														
CE	M20x1.5	25	-	-	13	8,5	2	25	25	-	-	-	27	L - 18	
	½"BSP														
	M27x2	32	-	-	13	9,5	2	29	32	-	-	-	32	L - 22	
	¾"BSP														
CS	-	-	24	-	-	8,5	7,5	-	-	39	-	-	-	L - 18	
	-	-	30	-	-	9,5	7,5	-	-	45	-	-	-	L - 18	

L2 measures the distance of the stem and thread in the protection sheath
L measures the distance of the stem and thread in the thermowell

Operation limits

		BD	BE	BS	CD	CE	CS
Maximum pressure bar	Brass	25	150	160	25	150	160
	Steel	40	150	160	25	150	150
Maximum temperature °C	Brass	160	300	300	160	300	300
	Steel	400	300	400	400	300	400



How to order

1.Model

BD BE BS
CD CE CS

2.Stem length in mm (L)

63 100 160 200

3.Stem diameter in mm

Ø12 Ø13 Ø14
Ø17 Ø22

4.Threaded connection

½" BSP male ½" BSP Female

5. Stem Material

Brass
Chromed carbon steel
Galvanized carbon steel
Stainless steel AISI 304
Stainless steel AISI 316

C0301 -	1	2	3	4	5

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V-shaped thermometer: Thermowell

Thermometer replacements for temperatures from -60°C to 600°C.
These instruments are very tough, easy to install and reliable

STANDARD PARAMETERS

Design: DIN 16179

Structure: **For thermometers Straight/Angle 135°** and **Angle 90°**

Connection system : **Male** or **female thread** or **Bolt**

Threads: **Standard BSP**, **metrics** or **NPT**

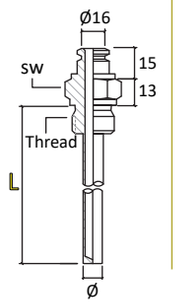
Stem length (**L**), including thread: **25-500mm**

Stem diameter (Ø): **Ø8, Ø10 or Ø12mm**

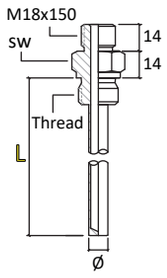
MATERIALS

Brass / Chromed or Galvanized carbon steel / Stainless steel AISI 304, 316 or **316L**

Angle 90°



Straight Angle 135°



How to order

1.Model

Angle 90° | Straight Angle 135°

2.Stem lenght in mm (L)

30	45	80	130	250	400
35	50	100	160	300	450
40	63	120	200	350	500

3.Stem diameter in mm

Ø8 | Ø10 | Ø12

4.Threaded connection

½" BSP male	¾" NPT male	M22X150 male
½" NPT male	M16X150 male	M27X200 male
⅜" BSP male	M18X150 male	Bolt Ø16mm
¾" BSP male	M20X150 male	Bolt Ø18mm

5.Stem material

Brass
Chromed carbon steel
Galvanized carbon steel
Stainless steel AISI 304
Stainless steel AISI 316

C0302 - | 1 | 2 | 3 | 4 | 5 |

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V-shaped thermometer: Replacement cases

Thermometer replacements for temperatures from -60°C to 600°C.
These instruments are very tough, easy to install and reliable

STANDARD PARAMETERS

Case dimension: **110, 150** or **200mm**

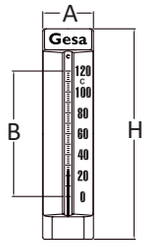
Case color: **Gold** or **Silver**

Mounting: **Straight, Angle 90** or **Angle 135**

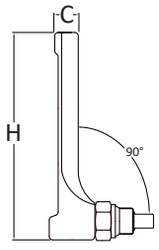
MATERIALS

Aluminium or **Polyamide**

A Straight

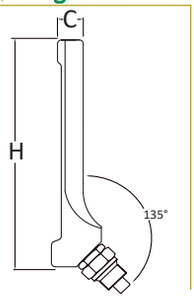


B Angle 90°



DIMENSIONS(mm)					WEIGHT (g)	DIN
Mounting	**H**	**A**	**B**	**C**		
Straight	110	36	60	17	230	DIN 16181
	150	36	90	17.5	285	DIN 16185
	200	36	130	17.5	320	DIN 16189
Angle 90°	110	36	60	17	230	DIN 16182
	150	36	90	17	275	DIN 16186
	200	36	130	17	310	DIN 16190
Angle 135°	110	36	60	17	230	-
	150	36	90	17.5	275	-
	200	36	130	17.5	310	DIN 16191

C Angle 135°



How to order

1.Case dimension (H)

110
150
200

2.Case material

Aluminium
Polyamide

3.Case color

Gold
Silver

4.Mounting

A B C

5.Temperature range (°C)

-10+50	0+120	0+400
-30+50	0+160	0+500
0+60	0+200	0+600
0+100	0+300	

6.Temperature scale

Single ɑC
Double ɑC / ɑF

7.Logo

GESA
Without Logo

C0202 - | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

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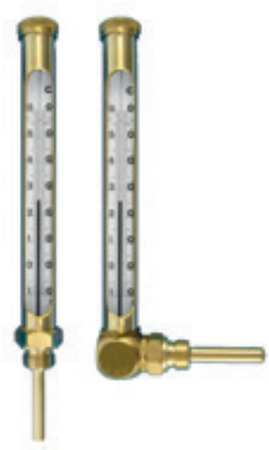
Industrial glass thermometers with opal scale

Liquid expansion thermometers for temperatures from -40°C to 200°C.
These instruments are very tough, easy to install and reliable.
They resist extreme hard conditions: vibrations, humidity, indoor and outdoors.



STANDARD PARAMETERS

Design: DIN 16167, DIN 16174, DIN 16168, DIN 16175

Structure: The opal is secured by a metallic case. The temperature range is printed on the opal. The metallic stem is fixed into the system by male or female thread or through a bolt.

Case dimension (HxØF): **145xØ20**, **170xØ20, 200xØ22** or **260xØ22mm**

Mounting: See attached diagrams **A** or **B**

Connection system: **Male** or **female thread** or **Bolt**

Threads: **Standard BSP**, **metrics** or **NPT**

Stem length (**L**), including thread: **40-300mm**

Stem diameter (ØV) : **10** or **12mm**

Range: **-40...0...200°C**

Scale: **°C** or **double scale °C /°F**

MATERIALS

Case: **Chromed steel, Stainless steel AISI 316** or **Brass**

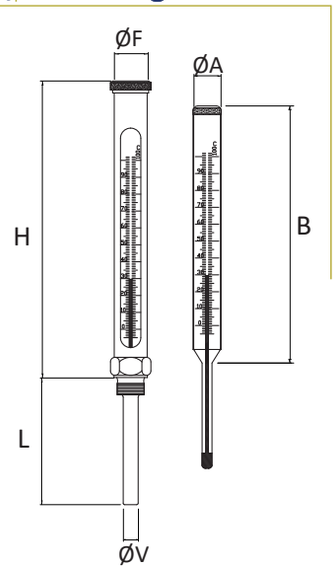
Scale: Opal

Insert: Glass

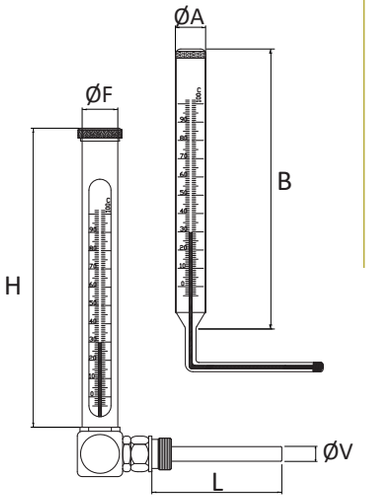
Thread and Stem: **Chromed steel, Stainless steel AISI 316** or **Brass**

Termometric liquid: **Blue** or **red alcohol**

A Straight



B Angle 90°



Application:

- **Heater**
- **Boilers**
- **Naval sector**

DIMENSIONS(mm)						WEIGHT (g)	DIN
Mounting	**H**	**B**	**ØF**	**ØA**	**ØV**		
Straight	145	135	20	16	10	81	-
	170	160	20	16	10	81	DIN 16167
	200	190	22	18	10	130	-
	260	220	22	18	10	152	DIN 16174
Angle 90°	145	135	20	16	10	81	-
	170	160	20	16	10	81	DIN 16168
	200	190	22	18	10	130	-
	260	220	22	18	10	152	DIN 16175

Temperature range according to DIN 16195

Tmp. in °C	H	Subdivision °C/line	Maximum error	Liquid
-40+40	145	1	2	Blue alcohol
	170			
	200			
	260			
-10+50 -10+60 0+60 0+100 0+120	145	2	1	
	170	1		
	200			
	260			
0+150 0+200	145	2	2	
	170			
	200			
	260			

How to order

1.Case dimension
145xØ20mm
170xØ20mm
200xØ22mm
260xØ22mm

2.Case material
Brass
Chromed steel
Stainless steel AISI 316

3.Mounting
A B

4.Temperature range (°C)
-40+40 0+60 0+120 0+200
-10+60 0+100 0+150

5.Temperature scale
Single ɑC
Double ɑC / ɑF

6.Thermometric liquid
Blue alcohol
Red alcohol
Mercury

7.Stem length in mm (L), including thread
40 55 100 250
45 63 160 300
50 80 200

8.Stem diameter in mm (ØV)
Ø10
Ø12

9.Stem material
Brass
Chromed carbon steel Stainless steel AISI 304
Galvanized carbon steel Stainless steel AISI 316

10.Threaded connection
½" BSP male ¾" BSP male M18x150male Without threaded connection
½" BSPT male ¾" NPT male M20X150 male More threads on demand
½" NPT male Bolt Ø16 mm M22X150 male
⅜" BSP male Bolt Ø18 mm M27X200 male

11.Calibration certificate traceable to ENAC
3 points 6 points
4 points 7 points
5 points Without certificate

	1	2	3	4	5	6	7	8	9	10	11
F0101 -											

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W 01 01

Solid Stem Glass Thermometers W0101th protection sheath

Solid stem glass thermometers protected in a metallic sheath 10mm diameter with a ring at the upper side for hanging.

Useful for high and under zero temperatures.

The scale marked on the thermometer is acid and alkali proof.

STANDARD PARAMETERS

Structure: The stem glass is fixed and secured with a plug located at each end of the sheath. In the upper side, the sheath is complemented with a ring useful for hang. See attached diagram **A**

Upper closing: **Rounded, Ball** or **Ring**

Stem dimension (Hv x Øv): **200xØ6mm, 300xØ6mm** or **400xØ6mm**

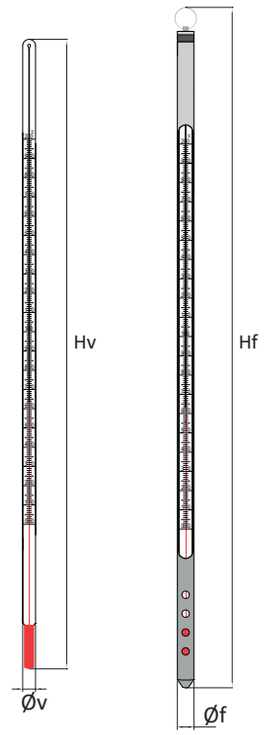
Sheath dimension: **218xØ10mm**, **318xØ10mm** or **418xØ10mm**

Range: **-50...0...500°C**

Scale: **°C stamped on the glass**

Glass rod: White strip (Low temperatures) / Yellow strip (High temperatures)

A Straight



Application:
- Heating
- Boilers
- Naval sector
- Fridges
- Laboratories
- General

MATERIALS

Sheath: Brass

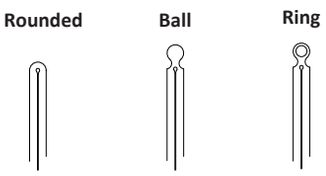
Stem: Round glass

Thermometric liquid: Blue or red alcohol for temp<200°C / Mercury for temp.>200°C

Temperature range according to DIN 16195 (H=300mm)

Tmp. in °C	Subdivision °C/line	Maximum error	Líquid
-50+50	1	2	Alcohol
-40+40 -10+100 0+60 0+100	1	1	
0+200	2	2	
0+300	2	2	Mercury
0+500	10	5	

Upper closing



How to order

1.Model

With brass sheath
Without sheath

2.Temperature range

-50+50 -10+100 0+100 0+300
-40+40 0+60 0+200 0+500

3.Thermometric liquid

Blue alcohol
Red alcohol
Mercury

4.Upper closing

Rounded Ball Ring

5.Stem Length

200mm
300mm
400mm

6.Calibration certificate traceable to ENAC

3 points 5 points 7 points
4 points 6 points Without certificate

W0101 -	1	2	3	4	5	6

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TEMPERATURA
TEMPÉRATURE
TEMPERATURE

Termómetros de dial
Thermomètres à Cadran
Dial thermometers

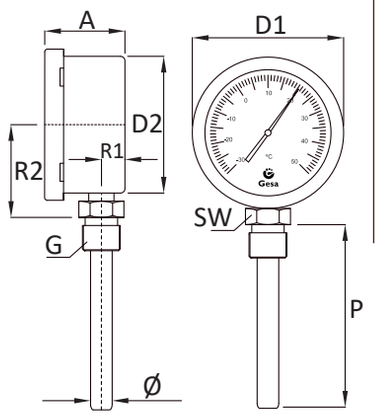
Bimetallic dial thermometer in stainless steel

D 01

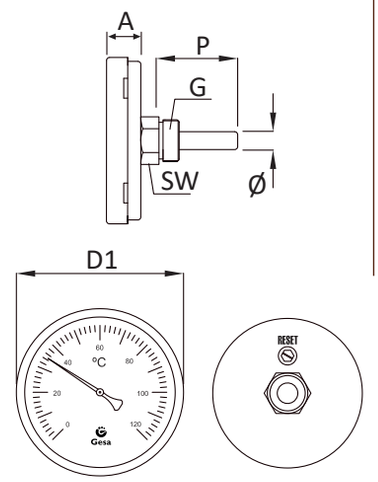
Dial thermometers with bimetallic strip, inner components in copper alloy. Manufactured according to EN 13190. Radial or back connection.

Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.

A Bottom



B Back



STANDARD PARAMETERS

- Design: EN 13190
- Mounting: See attached diagrams **A** or **B**
- Closing: **A**: Bayonet; **B**: Sealed ring
- IP protection: IP54 (EN 60529)
- Accuracy: **Ø80**: Class 1.6 / **Ø100-Ø150**: Class 1.0
- Usage limits:
  - Working temperature: -40+65°C
  - Fluid overtemperature: maximum 10% end of scale
  - Max. pressure on stem: 16 bar
- Temperature range: **-30+50; 0+60; 0+120; 0+200; 0+400** °C
- Sensor element: Bimetallic strip
- Stem length: **50; 65; 100; 150; 200; 250; 300** mm
- Process connection: **Plain Bulb, Sliding on the stem, protection sheath** or **crazy nut**
- Threaded connection (G): **½"NPT, ½"BSP** or **¾"BSP** / **Male** or **Female**

Application:

- **Compressed air**
- **Compressors**
- **HVAC**
- **Hydraulics**
- **Pneumatics**

MATERIALS

- Case and ring: AISI 304 Stainless steel
- Moving parts and bimetallic strip: Copper alloy
- Threaded connection: **Brass** or **AISI 316 Stainless steel**
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Bulb/Stem: AISI 316 stainless steel

DIMENSIONS (mm) / WEIGHT (g)

DN	Mounting	R1	A	D1	Ø	R2	SW	D2	WEIGHT (g)
Ø80	A	12	47	84	11	54	22	75	212
Ø80	B	-	17	84	11	-	22	-	99
Ø100	A	13	50	110	11	65	22	100	285
Ø100	B	-	20	110	11	-	22	-	176
Ø150	A	15	50	160	11	90	22	150	545
Ø150	B	-	20	160	11	-	22	-	485

Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
-30+50 0+60	-20+40 +10+50	1	1.5
0+120 0+200	+20+100 +20+180	2	3
0+400	+50+350	5	8

How to order

1.Case diameter: Ø80 Ø100 Ø150

2.Temperature range (°C): -30+50 0+60 0+120 0+200 0+400

3.Mounting: A B

4.Stem length (mm): 50 65 100 150 250 300

5.Process connection: Protection sheath, Sliding on stem / Plain bulb, Crazy nut

6.Threaded connection: ½"BSP, ¾"BSP, ½"NPT

7.Connection type: Male, Female

8.Connection material: Brass, AISI 316 Stainless steel

9.Calibration certificate traceable to ENAC: 3 points, 4 points, 5 points, 6 points, 7 points, Without certificate

	1	2	3	4	5	6	7	8	9
D01 -									

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D 02

Bimetallic dial thermometer in stainless steel with orientable stem

Dial thermometers with bimetallic strip, inner components in copper alloy. Manufactured according to EN 13190.

Orientable stem makes it a versatile instrument, useful for a wide variety of applications.

Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.

STANDARD PARAMETERS

- Design: EN 13190
- Mounting: See attached diagram **E**
- Closing: Bayonet
- IP protection: IP54 (EN 60529)
- Accuracy: Class 1.6
- Usage limits:
  - Working temperature: -40+65°C
  - Fluid overtemperature: maximum 10% end of scale
  - Max. pressure on stem: 16 bar
- Temperature range: **-40+60; 0+120; 0+200; 0+300; 0+400** °C
- Sensor element: Bimetallic strip
- Stem length: **150; 200; 250** mm
- Process connection: **Sliding on the stem** or **Plain bulb**
- Threaded connection (G): **½"BSP, ¾"BSP** or **½"NPT** / **Male** or **Female**

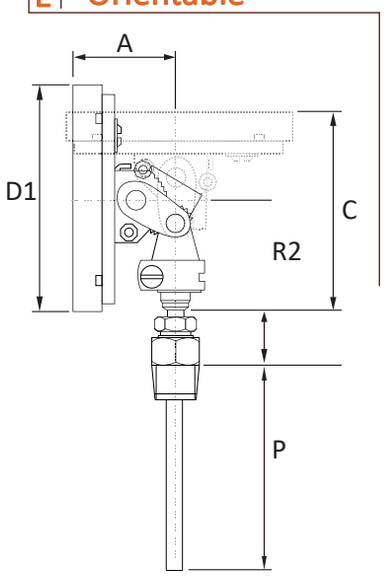
MATERIALS

- Case and ring: AISI 304 Stainless steel
- Moving parts and bimetallic strip: Copper alloy
- Threaded connection: AISI 316 Stainless steel
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Stem: AISI 316 stainless steel

Application:

- Compressed air
- Compressors
- HVAC
- Hydraulics
- Pneumatics

E Orientable



DIMENSIONS (mm)									WEIGHT (g)
DN	Mounting	R1	A	D1	Ø	R2	SW	D2	
Ø100	E	12	47	84	8	54	22	75	425
Ø150	E	-	17	84	8	-	22	-	642

Temperature scale according to DIN 16206			
Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
-40+60	-30+40	1	1.5
0+120 0+200	+20+100 +20+180	2	3
0+300 0+400	+50+250 +50+350	5	8

How to order

1.Case diameter: Ø100 | Ø150

2.Temperature range (°C): -40+60 | 0+120 | 0+200 | 0+300 | 0+400

3.Stem length (mm): 150 | 200 | 250

4.Process connection: Sliding on stem | Plain bulb

5.Threaded connection: ½"BSP | ¾"BSP | ½"NPT

6.Connection type: Male | Female

7.Calibration certificate traceable to ENAC: 3 points | 4 points | 5 points | 6 points | 7 points | Without certificate

D02 -	1	2	3	4	5	6	7

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Bimetallic dial thermometer in zincked steel

D 03

Dial thermometers with bimetal strip with internal copper alloy elements. Manufactured according to EN 13190 standard.

They are economic instruments especially designed for heating and cooling applications.

STANDARD PARAMETERS

- Design: EN 13190
- Mounting: See attached diagrams **A** or **B**
- Closing: **A**: Bayonet; **B**: Sealed ring
- IP protection: IP56 (EN 60529)
- Accuracy: Class 2.5
- Temperature limits:
  - Room temperature: -40+65°C
  - Fluid overtemperature: maximum 10% end of scale
  - Max. pressure on stem: 16 bar
- Temperature range: **-20+60; 0+120** °C
- Sensor element: Bimetallic strip
- Stem length (P): **50; 65; 100** mm
- Process connection: Trough protection sheath
- Threaded connection (G): ½"BSP Male

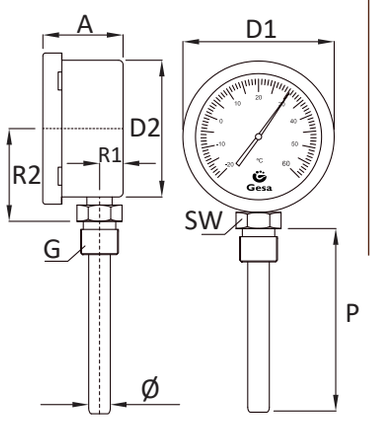
Application:

- **Heating systems**
- **Refrigeration**

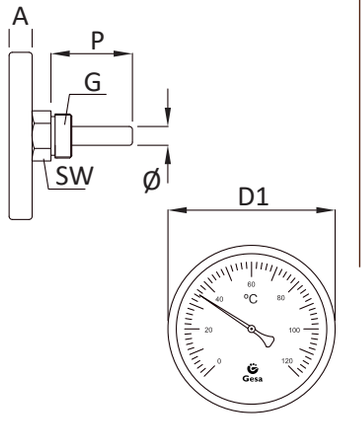
MATERIALS

- Case and ring: Zincked steel
- Moving parts and bimetallic strip: Copper alloy
- Threaded connection: **Brass** or **AISI 316 Stainless steel**
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Stem: Brass

A Bottom



B Back



DIMENSIONS (mm)									WEIGHT (g)	
DN	Mounting	R1	A	D1	Ø	R2	SW	D2	P=50mm	P=100mm
Ø63	A	12	47	68	11	44	22	60	174	184
Ø63	B	-	12	63	11	-	22	-	134	147
Ø80	A	13	50	84	11	54	22	75	204	216
Ø80	B	-	13	80	11	-	22	-	-	176

Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
-20+60	-10+50	1	2
0+120	+20+100	2	3

How to order

1.Case diameter: Ø63 Ø80

2.Temperature range (°C): -20+60 0+120

3.Mounting: A B

4.Stem length (mm): 50 65 100

5.Connection material: Brass / AISI 316 Stainless steel

6.Calibration certificate traceable to ENAC

3 points 6 points
4 points 7 points
5 points Without certificate

D03 -	1	2	3	4	5	6

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D 22

Pyrometer with antivibration system for High Temperatures

Gesa

Gas expansion thermometers manufactured according to EN 13190 standard.
Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.

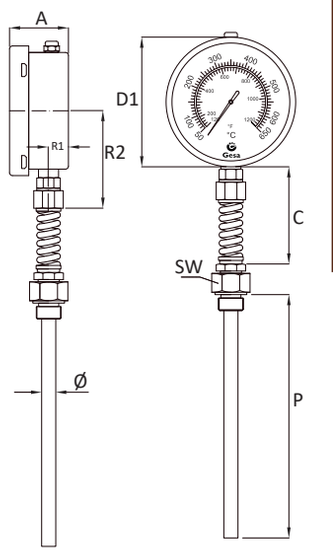
Especially designed to measure the temperature of the exhaust gases of the engines. The pyrometer box is filled with silicon oil serving as a vibration dampener.

STANDARD PARAMETERS
Design: EN 13190
Mounting: See attached diagrams **A** or **B**
Closing: Bayonet. Sealed by rubber gasket
IP protection: IP65 (EN 60529)
Accuracy: Class 1.6
Temperature limits:
Room temperature: -40+65°C
Fluid overtemperature: maximum 15% end of scale
Max. pressure on stem: 50 bar
Temperature range: +50+650 °C/°F
Sensor element: Bourdon tube (Inert gas expansion)
Stem length (P): **150; 200; 300; 400** mm
Process connection: Sliding on the stem
Threaded connection: **½"BSP, ½"NPT, ⅜"BSP, ¾"BSP, M20x150** or **M22x150**
Antivibration liquid: Silicon oil
Vibration damping system: **Spring** or **Silent block (mesh)**

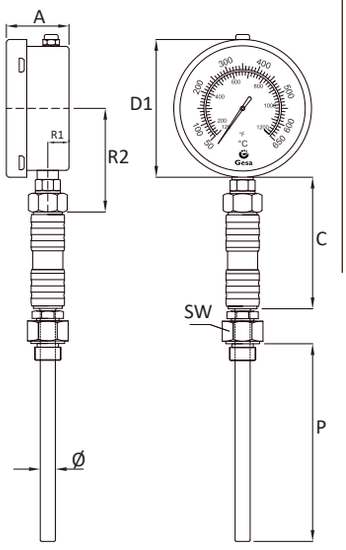
Application:
- **Engines**
- **HVAC**

MATERIALS
Case and ring: AISI 304 Stainless steel
Moving parts and bourdon tube: Stainless steel
Threaded connection: AISI 316 Stainless steel
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum
Stem: AISI 316 Stainless steel

A Spring



B Silent block (mesh)



DIMENSIONS (mm)									WEIGHT (g)
DN	**Tipo**	**R1**	**A**	**D1**	**Ø**	**R2**	**SW**	**C**	
Ø100	**A**	12	50	112	12	83	27	103	1020
Ø100	**B**	12	50	112	12	84	27	130	1020

Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
+50+650	+100+600	10	10

How to order

1.Vibration damping system
A **B**

2.Stem length (mm)
150 300
200 400

3.Threaded connection
½"BSP ⅜"BSP M20x150 More on demand
½"NPT ¾"BSP M22x150

4.Connection type
Male
Female

5.Calibration certificate traceable to ENAC
3 points 6 points
4 points 7 points
5 points Without certificate

	1	2	3	4	5
D22 -					

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Rigid high temperature pyrometer

D 23

Gas expansion thermometers manufactured according to EN 13190 standard. Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.

Especially designed to measure the temperature of the exhaust gases of the engines. The pyrometer box is filled with silicon oil serving as a vibration dampener.

STANDARD PARAMETERS

- Design: EN 13190
- Mounting: See attached diagrams **A** or **B**
- Closing: Ring threaded to case. Sealed by rubber gasket
- IP protection: IP65 (EN 60529)
- Accuracy: Class 1.6
- Temperature limits:
  - Room temperature: -40+65°C
  - Fluid overtemperature: maximum 15% end of scale
  - Max. pressure on stem: 50 bar
- Temperature range: +50+650 °C/°F
- Sensor element: Bourdon tube (Inert gas expansion)
- Stem length (P): **150; 200; 300; 400** mm
- Process connection: Sliding on the stem
- Threaded connection: **½"BSP, ½"NPT, ⅜"BSP, ¾"BSP, M20x150** or **M22x150**
- Antivibration liquid: Silicon oil
- Vibration damping system: Rigid

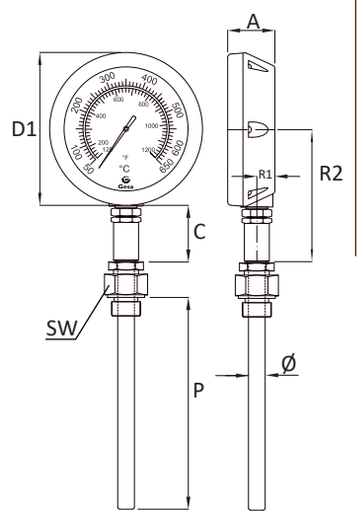
Application:

- **Engines**
- **HVAC**

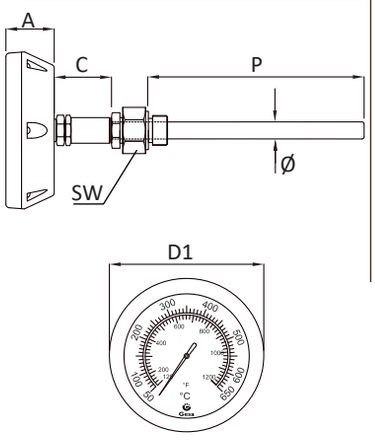
MATERIALS

- Case and ring: Black anodized aluminum
- Moving parts and bourdon tube: Copper alloy
- Threaded connection: AISI 304 Stainless steel
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Stem: AISI 304 Stainless steel

A Bottom



B Back



DIMENSIONS (mm)									WEIGHT (g)
DN	**Mounting**	**R1**	**A**	**D1**	**Ø**	**R2**	**SW**	**C**	
Ø100	A	12	32	118	12	100	27	42	877
Ø100	B	-	32	118	12	-	27	42	877

Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
+50+650	+100+600	10	10

How to order

1.Mounting

A B

2.Stem length (mm)

150 300
200 400

3.Threaded connection

½"BSP ⅜"BSP M20x150 More on demand
½"NPT ¾"BSP M22x150

4.Connection type

Male
Female

5.Calibration certificate traceable to ENAC

3 points 6 points
4 points 7 points
5 points Without certificate

	1	2	3	4	5
D23 -					

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D 31

Dial thermometer with capillary in stainless steel

Gas expansion thermometers manufactured according to EN 13190 standard
Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.
Bottom connection to panel through back flange.

Especially designed for remotely measuring temperatures in chemical, petroleum and food industries.

Application:

- Chemical Industry
- Oil industry
- Food
- HVAC
- Cooling

STANDARD PARAMETERS

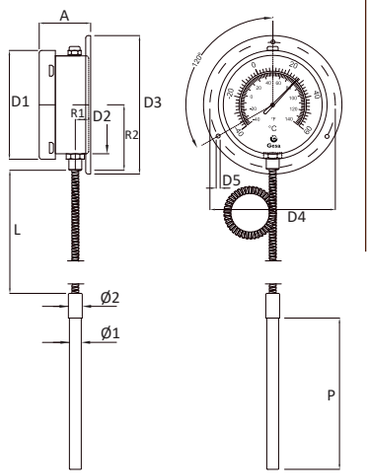
Design: EN 13190
Mounting: See attached diagram **C**
Closing: Bayonet. Sealed by rubber gasket
IP protection: IP65 (EN 60529)
Accuracy: Class 1.6
Temperature limits:
- Room temperature: -40+60°C
- Fluid overtemperature: maximum 10% end of scale
- Max. pressure on stem: 25 bar. For upper pressures see C0301

Temperature range: **0+120; 0+200; 0+400; +50+650** °C/°F
Sensor element: Bourdon tube (Inert gas expansion). Room temperature compensator by bimetallic strip
Capillary length (L): **3; 5; 8** m
Stem length (P): **150; 250** mm
Process connection: **Plain Bulb, Sliding on the stem** or **crazy nut**
Threaded connection: **½"BSP, ½"BSPT, ½"NPT, ⅜"BSP, ¾"BSP, M20x150** or **M22x150**
Antivibration liquid: **Glycerine** or **dry**
Overtemperature relief system: Upper plug

MATERIALS

Case and ring: AISI 304 Stainless steel
Moving parts and bourdon tube: Copper alloy
Capillary: AISI 304 Stainless steel
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum
Capillary coating: AISI 316 Stainless steel
Bulb/Stem: AISI 316 Stainless steel
Threaded connection: AISI 316 Stainless steel

C Bottom with back flange



DIMENSIONS (mm)												WEIGHT (g)		
DN	Mounting	A	Ø1	Ø2	R1	R2	D1	D2	D3	D4	D5	L=3m	L=5m	L=8m
Ø100	C	52	10	12	14	67	110	100	140	124	4	782	835	1016
													Glycerine +271g	

Temperature scale according to DIN 16206			
Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
0+120 0+200	+20+100 +20+180	2	3
0+400	+50+350	5	8
+50+650	+100+600	10	10

How to order

1.Temperature range (°C)
0+120 0+200 0+400 +50+650

2.Stem length (mm)
150 250

3.Capillary length (L) in mm
3 5 8

4.Process connection
Crazy nut
Sliding on stem
Plain bulb

5.Threaded connection
½" BSP ⅜" BSP
½" BSPT M20X150
½" NPT M22X150
⅜" BSP Other threads

6.Connection type
Male
Female

7.Antivibration liquid
Glycerine
Dry

8.Calibration certificate traceable to ENAC
3 points 6 points
4 points 7 points
5 points Without certificate

	1	2	3	4	5	6	7	8
D31 -								

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Dial thermometer with capillary in PVC coated stainless steel

D 32

Gas expansion thermometers manufactured according to EN 13190 standard
Reliable tools that withstand extreme working conditions: engine vibration, humidity and aggressive media such as seawater.

Especially designed to measure temperatures remotely.

STANDARD PARAMETERS

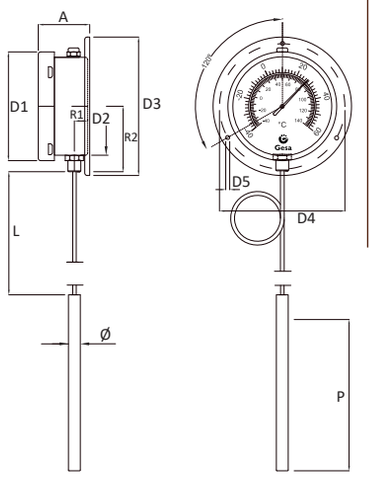
- Design: EN 13190.
- Mounting: See attached diagram **C**
- Closing: Bayonet. Sealed by rubber gasket
- IP protection: IP56 (EN 60529)
- Accuracy: Class 1.6
- Temperature limits:
  - Room temperature: -40+60°C
  - Fluid overtemperature: maximum 10% end of scale
  - Max. pressure on stem: 25 bar. For upper pressures see C0301
- Temperature range: -60+40 °C
- Sensor element: Bourdon tube (Inert gas expansion). Room temperature compensator by bimetallic strip
- Capillary length (L): **3; 5; 8** m
- Stem length (P): 100 mm
- Process connection: **Plain Bulb, Sliding on the stem** or **crazy nut**
- Threaded connection: **½"BSP, ½"BSPT, ½"NPT, ⅜"BSP, ¾"BSP, M20x150** or **M22x150**
- Overtemperature relief system: Upper plug

Application:
- **Chemical Industry**
- **Oil industry**
- **Food**
- **HVAC**
- **Cooling**

MATERIALS

- Case and ring: AISI 304 Stainless steel
- Moving parts and bourdon tube: Copper alloy
- Capillary: AISI 304 Stainless steel
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Capillary coating: PVC
- Bulb/Stem: AISI 316 Stainless steel
- Threaded connection: AISI 304 Stainless steel

C Bottom with back flange



DIMENSIONS (mm)											WEIGHT (g)			Temperature scale according to DIN 16206			
DN	Mounting	A	Ø	R1	R2	D1	D2	D3	D4	D5	L=3m	L=5m	L=8m	Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
Ø100	C	41	8	14	67	110	100	140	124	4	448	483	542	+50+650	+100+600	10	10

How to order

1.Capillary length (L) in mm
3 5 8

2.Process connection
Crazy nut
Sliding on stem
Plain bulb

3.Threaded connection
½" BSP ⅜" BSP
½" BSPT M20X150
½" NPT M22X150
⅜" BSP Other threads

4.Connection type
Male
Female

5.Calibration certificate traceable to ENAC
3 points 6 points
4 points 7 points
5 points Without certificate

	1	2	3	4	5
D32 -					

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D 33

Dial thermometer with plastic case and copper capillary

Gas expansion thermometers with Bourdon elastic element and an environmental temperature compensator through bimetallic strip.
These simple instruments are especially designed to measure temperatures remotely in cooling and refrigeration chambers.

STANDARD PARAMETERS

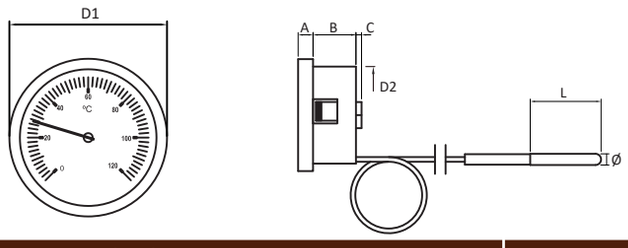
- Design: EN 13190
- Mounting: See attached diagram **B**
- Closing: Bayonet. Sealed by rubber gasket
- IP protection: IP43
- Accuracy: Class 2.5
- Temperature range: **-40+40** or **0+120**°C
- Sensor element: Bourdon tube (Inert gas expansion). Room temperature compensator by bimetallic strip
- Capillary length (L): 1.5m
- Stem length (P): 100 mm
- Process connection: Plain bulb

MATERIALS

- Case and ring: Polyethylene
- Moving parts and bourdon tube: Copper alloy
- Bulb/stem: Copper alloy
- Display: Polyethylene
- Dial: Polyethylene
- Pointer: Polyethylene
- Capillary coating: PVC
- Stem: Copper alloy

Application:
- Chemical Industry
- Food
- HVAC
- Cooling

B Back



DIMENSIONS (mm)									WEIGHT (g)	Temperature scale according to DIN 16206			
DN	Mounting	A	Ø	B	C	D1	D2	L		Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
Ø50	C	8	6	23	3	58	52	30	57	-40+40	-30+30	1	2
										0+120	+20+100	2	3

How to order

1.Temperature range (°C)

-40+40 0+120

2.Calibration certificate traceable to ENAC

3 points 6 points
4 points 7 points
5 points Without certificate

D33 - 1 2

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Bimetallic thermometer with frontal flange for oven panelling

D 41

For any oven, especially designed to be placed in the mouth of large furnaces.

Easy installation and handling. Connection via frontal flange, perfect for paneling.

Do not expose to fire directly.

STANDARD PARAMETERS

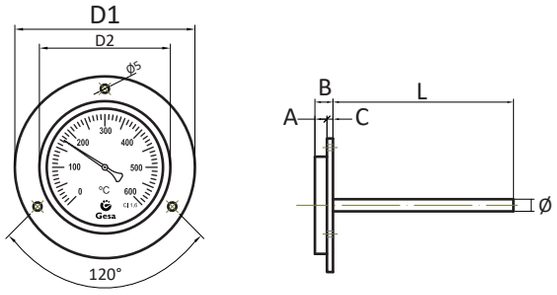
Design: EN 13190
Mounting: See attached diagram **B**
Closing: Sealed ring
IP protection: IP56
Accuracy: Class 1.6
Temperature range: 0+600°C
Sensor element: Bimetallic strip
Stem length (L): **100; 150; 200; 300; 400** or **500** mm
Connection to the furnace/oven: Through frontal flange

MATERIALS

Case and ring: AISI 304 Stainless steel
Moving parts and bimetallic stripe: Copper alloy
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum
Stem: AISI 304 Stainless steel

Application:
- **Furnaces / Kilns**
- **Wood fired ovens**

B Back



DIMENSIONS (mm)								WEIGHT (g)			Temperature scale according to DIN 16206			
DN	Mounting	A	Ø	B	C	D1	D2	L=150mm	L=300m	L=500m	Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
Ø100	B	10	8	15	5	110	80	168	214	294	0+600	+50+550	10	10

How to order

1.Stem length in mm (L)

100 200 400
150 300 500

2.Calibration certificate traceable to ENAC

3 points 6 points
4 points 7 points
5 points Without certificate

D 41 - [1] [2]

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D 42

Bimetallic thermometer with brass stem and protection sheath for oven

For any oven, especially designed to be placed in the mouth of large furnaces.

Easy installation and handling. Direct connection using a protection sheath.

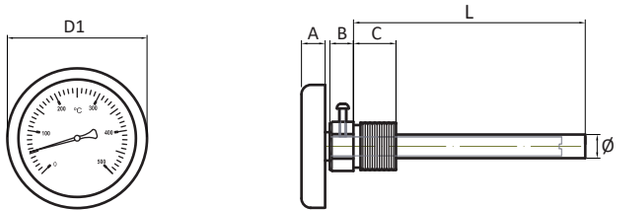
Do not expose to fire directly.

STANDARD PARAMETERS
Design: EN 13190
Mounting: See attached diagram **B**
Closing: Embedded
IP protection: IP56
Accuracy: Class 1.6
Temperature range: 0+500°C
Sensor element: Bimetallic strip
Stem length (L): **150; 200; 300; 400** or **500** mm
Connection to the furnace/oven: Through protection sheath with ½"BSP thread

MATERIALS
Case and ring: Zincked steel
Moving parts and bimetallic strip: Copper alloy
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum
Stem and protection sheath: Brass

Application:
- **Furnaces / Kilns**
- **Wood fired ovens**

B Back



DIMENSIONS (mm)							WEIGHT (g)			Temperature scale according to DIN 16206			
DN	Mounting	A	Ø	B	C	D1	L=150mm	L=300m	L=500m	Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
Ø63	B	10	10	10	18	63	123	142	172	0+500	+50+450	10	10

How to order

1.Stem length in mm (L)

150 200 300 400 500

2.Process connection

Plain bulb
Protection sheath

3.Calibration certificate traceable to ENAC

3 points 4 points 5 points 6 points 7 points Without certificate

D 42 -	1	2	3

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Bimetallic thermometer for oven doors

D 43

Especially designed to be placed in oven doors and iron stoves. Does not include protection sheath. It is recommended not to expose the thermometer to fire directly.
Installation is very simple, a way through the door of sufficient diameter is required, once inserted the rod a threaded ring fastens the instrument to the door.

STANDARD PARAMETERS

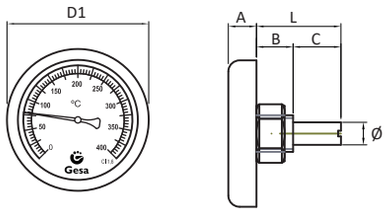
- Design: EN 13190
- Mounting: See attached diagram **B**
- Closing: Embedded
- IP protection: IP56
- Accuracy: Class 1.6
- Temperature range: 0+400°C
- Sensor element: Bimetallic strip
- Stem length (L): 30 mm
- Connection to the furnace/oven: Through a threaded nut

MATERIALS

- Case and ring: AISI 304 Stainless steel
- Moving parts and bimetallic strip: AISI 316 Stainless steel
- Display: Glass
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum
- Stem: AISI 316 Stainless steel

Application:
- **Furnaces / Kilns**
- **Wood fired ovens**

B Back



DIMENSIONS (mm)									WEIGHT (g)
DN	Mounting	A	B	D1	Ø	L	SW	C	
Ø40	B	10	35	42	8	55	27	20	54
Ø50	B	10	13	52	8	30	27	17	57

Temperature scale according to DIN 16206			
Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
0+400	+50+350	5	8

How to order

1.Case diameter

Ø40 Ø50

2.Stem length in mm (L)

55 30

3.Calibration certificate traceable to ENAC

3 points 5 points 7 points
4 points 6 points Without certificate

D 43 -	1	2	3

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D 44

Bimetallic thermometer for oven

This is an oven thermometer in stainless steel with a Ø55mm dial and color coded areas.

The green section indicates the minimum temperature at which should be preserved food trays in the catering sector.

It also has a stand to place it upright and a ring to hang it from oven trays or shelves.

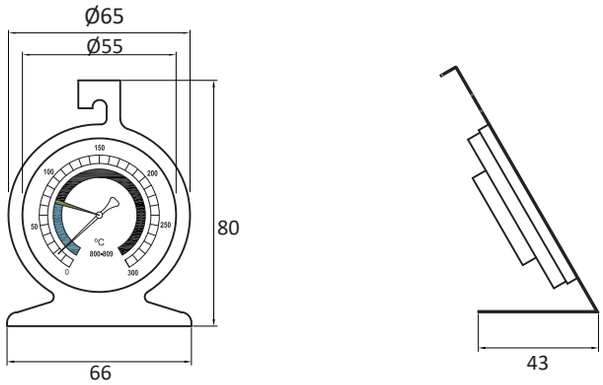
STANDARD PARAMETERS
Design: EN 13190
Mounting: See attached diagram
Closing: Embedded
IP protection: IP56
Accuracy: Class 1.6
Temperature range: 0+300°C
Sensor element: Bimetallic strip
Oven placement: Place thermometer in the central area
Weight: 48g

MATERIALS
Case and ring: Stainless steel
Moving parts and bimetallic strip: Copper alloy
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum

Application:

- **Kitchen ovens**
- **Wood fired ovens**
- **Catering**

DIMENSIONS (mm)



Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
0+300	+50+250	10	10

How to order

1.Calibration certificate traceable to ENAC

3 points	5 points	7 points
4 points	6 points	Without certificate

1

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D 51

Bimetallic thermometer for catering with penetration probe

This thermometer is specifically designed to measure the full range of temperatures in any kitchen. It is useful for restaurants or amateurs to check the right temperature in their cooking processes.
These thermometers needs to be left in place for a few seconds in order to generate a stable reading, it may also be left in place in refrigerators, cold chambers or any controlled environments that requires regular temperature readings. It also includes a protective cover for the probe.

STANDARD PARAMETERS

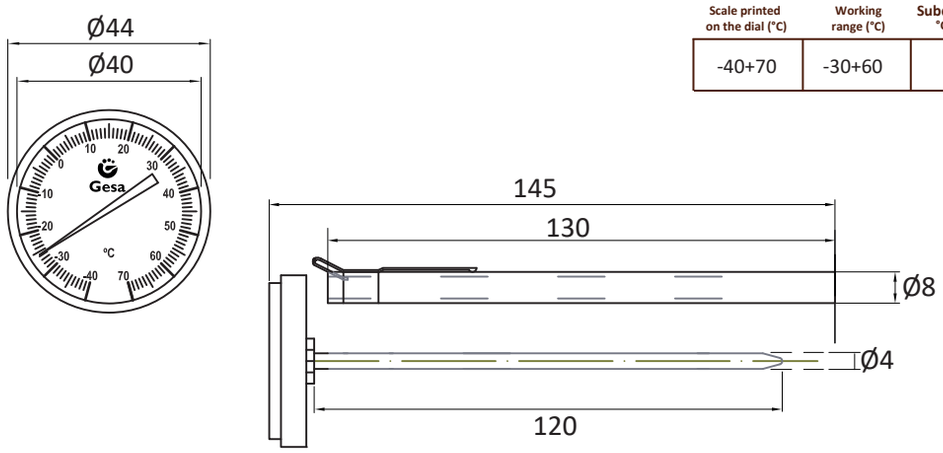
- Design: EN 13190
- Mounting: See attached diagram
- Closing: Embedded
- IP protection: IP56
- Accuracy: Class 1.6
- Temperature range: -40+70°C
- Sensor element: Bimetallic strip
- Weight: 24g

Application:
- Kitchen
- Meat
- Refrigerators

MATERIALS

- Case and ring: Stainless steel
- Moving parts and bimetallic strip: Copper alloy
- Display: Acrylic
- Dial: White lacquered aluminum
- Pointer: Black lacquered aluminum

DIMENSIONS (mm)



Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
-40+70	-30+60	1	1.5

How to order

1.Calibration certificate traceable to ENAC

3 points	5 points	7 points
4 points	6 points	Without certificate

1

D 51 - [ ]

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D 61

Bimetallic thermometer for pipes

Thermometer with spring attachment for pipes.

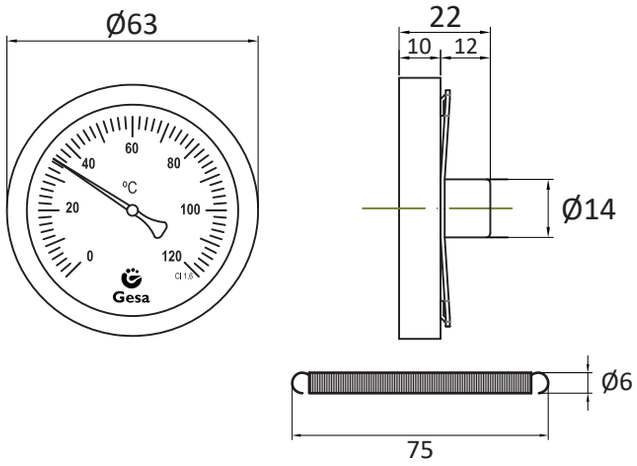
This thermometer can be placed non-invasively in installations making it an effective and versatile control tool.

STANDARD PARAMETERS
Design: EN 13190
Mounting: See attached diagram
Closing: Embedded
IP protection: IP56
Accuracy: Class 2.0
Temperature range: **0+120 or 0+200**°C
Sensor element: Bimetallic strip
Weight: 54g

MATERIALS
Case and ring: Zincked steel
Moving parts and bimetallic strip: Copper alloy
Display: Glass
Dial: White lacquered aluminum
Pointer: Black lacquered aluminum

Application:
- **Heating systems**
- **Piping**

DIMENSIONS (mm)



Temperature scale according to DIN 16206

Scale printed on the dial (°C)	Working range (°C)	Subdivision °C/line	Maximum error
0+120	20+100	2	1.5
0+200	20+180	5	8

How to order

1.Temperature range (°C)

0+120 0+200

2.Calibration certificate traceable to ENAC

3 points 5 points 7 points
4 points 6 points Without certificate

D 61 - [1] [2]

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Milk frothing thermometer for barista

This thermometer for milk or coffee incorporates a dial with a °C/°F scale and color coded areas indicating the optimum cooking temperature, this makes them simple and easy to use.
Each thermometer is supplied with a jug mounting probe clip for a perfect fit to jars or any other containers. It also includes a protective cover for the probe.

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature range: -10 to 110°C
Temperature scale: °C/F
Probe dimensions: Ø4x175mm
Dial diameter: Ø45
MATERIALS
Clip, stem and ring: AISI 304 Stainless steel
Display: Glass

Application:
- Cafeteria
- Barista

How to order

1.Calibration certificate traceable to ENAC

3 points	6 points	
4 points	7 points	
5 points	Without certificate	

800-800 - 1

Clip thermometer for fryers

This stainless steel thermometer for fryers measures the oil temperature in any type of fryer in a range from 0 to 300°C. Simply insert the thermometer stem into the oil for accurate temperature reading.
The dial is marked with the ideal temperature for frying meat, poultry, fish or chips.

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature range: 0 to 300°C
Temperature scale: °C
Probe dimensions: Ø4x150mm
Dial diameter: Ø50
MATERIALS
Clip, stem and ring: AISI 304 Stainless steel
Display: Glass

Application:
- Restaurants
- Cafeteria
- Kitchen

How to order

1.Calibration certificate traceable to ENAC

3 points	6 points	
4 points	7 points	
5 points	Without certificate	

800-805 - 1

Poultry oven thermometer

The poultry oven thermometer ensures perfect and precisely cooked poultry. Insert the thermometer into the thickest part of the chicken, turkey or similar (between the thigh and chest) before putting it in the oven.

The poultry will be ready when the dial reaches the green area (+ 85°C).

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature range: 85°C
Temperature scale: °C
Probe dimensions: Ø4x55mm
Dial diameter: Ø20
MATERIALS
Stem and ring: AISI 304 Stainless steel
Display: Glass

Application:
- Restaurants
- Kitchen ovens

How to order

800-850

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TEMPERATURA
TEMPÉRATURE
TEMPERATURE

Termómetros analógicos para diversos usos
Thermomètres analogiques pour differentes applications
Analog thermometers for multiple purposes

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Caption for the symbols

Caption

- ENAC traceable calibration
- Compatible with K-type thermocouple probes
- Compatible with PT100 probes
- Compatible with Lumberg connectors
- Measures relative humidity
- Calculation of average temperature
- Sound alarm
- Calculation of differential temperature
- Memory for maximum and minimum temperature
- Backlit display
- Infrared
- Auto off system for battery saving
- Folding probe
- IP protection against ingress of water and dust
- Timer
- Automatic screen rotation
- Suitable for use in food processing
- Probe included / The number indicates the cable length
- Antibacterial silver-based additive in plastic housing
- Fine adjustment to 0.0˚C
- Registration data in the form of graphs and tables
- Data report generation in PDF
- The instrument can be used multiple times
- The instrument is single use

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Wall room thermometers

Max/min thermometer with adjustable roof

Reference: **803-304**

STANDARD PARAMETERS	
Sensor element:	Liquid expansion
Temperature Range:	-40 to 50°C
Scale:	Celsius (°C)
Dimensions:	227x90x45mm

MATERIALS

ABS plastic

Application:
- Home
- Outdoor
- Greenhouses
- Cold rooms

MAX MIN

Standard wall thermometer

Reference: **803-410**

STANDARD PARAMETERS	
Sensor element:	Liquid expansion (blue alcohol)
Temperature Range:	-30 to 50°C
Scale:	Celsius (°C)
Dimensions:	207x55x10mm

MATERIALS

ABS plastic

Application:
- Home
- Outdoor
- Greenhouses
- Cold rooms

Standard wall thermometer

Reference: **803-413**

STANDARD PARAMETERS	
Sensor element:	Liquid expansion (blue alcohol)
Temperature Range:	-30 to 50°C
Scale:	Celsius (°C)
Dimensions:	265x66x10mm

MATERIALS

ABS plastic

Application:
- Home
- Outdoor
- Greenhouses
- Cold rooms

Double scale aluminium thermometers

Reference: **803-471**

STANDARD PARAMETERS	
Sensor element:	Liquid expansion (blue alcohol)
Temperature Range:	-10 to 100°C
Scale:	Celsius-Fahrenheit (°C/F)
Dimensions:	250x50mm

MATERIALS

Aluminium

Application:
- Home
- Outdoor
- Greenhouses
- Cold rooms
- Saunas

Double scale aluminium thermometers

Reference: **803-472**

STANDARD PARAMETERS	
Sensor element:	Liquid expansion (blue alcohol)
Temperature Range:	-30 to 50°C
Scale:	Celsius-Fahrenheit (°C/F)
Dimensions:	250x50mm

MATERIALS

Aluminium

Application:
- Home
- Outdoor
- Greenhouses
- Cold rooms

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Fridge and freezer thermometers

Analogical

These fridge and freezer thermometers will ensure your fridge or freezer is always at the correct temperature, keeping your food healthy and safe to eat.

Reference: **800-000**

Dial fridge or freezer thermometer

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature Range: -30 to 30°C
Scale: Celsius (°C)
Dimensions: Ø70x60mm
Fixation: hung or free-standing

MATERIALS
Housing: ABS plastic

Application:
- Fridges
- Refrigerators
- Cold rooms

Reference: **800-100**

Dial fridge or freezer thermometer

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature Range: -30 to 30°C
Scale: Celsius (°C)
Dimensions: Ø52mm
Fixation: Hung

MATERIALS
Housing: ABS plastic

Application:
- Fridges
- Refrigerators
- Cold rooms

Reference: **800-923**

Dial fridge or freezer thermometer

STANDARD PARAMETERS
Sensor element: Bimetallic strip
Temperature Range: -30 to 30°C
Scale: Celsius (°C)
Dimensions: Ø50x60mm
Fixation: hung or free-standing

MATERIALS
Housing: Stainless steelAISI 304

Application:
- Fridges
- Refrigerators
- Cold rooms

Reference: **803-925**

Double scale fridge thermometer

STANDARD PARAMETERS
Sensor element: Liquid expansion
Temperature Range: -40 to 20°C
Scale: Celsius-Fahrenheit (°C/F)
Dimensions: 122x30x20mm
Fixation: Hung

MATERIALS
Housing: ABS plastic and Stainless steel fixations

Application:
- Fridges
- Refrigerators
- Cold rooms

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Thermometers for different applications

Soil thermometer

This thermometer is specifically designed to measure soil temperature. The housing design makes it easy to insert and protects it from dirt.

This thermometers needs to be left in place for a few seconds in order to generate a stable reading.

A regular wipe down is recommended in order to remove any debris that may have adhered.

Application:
- Greenhouses
- Crops
- Climatology

Reference: 803-795

STANDARD PARAMETERS
Sensor element: Liquid expansion (red alcohol)
Temperature Range: -10 to 110°C
Scale: Celsius (°C)
Dimensions: Ø10x30mm

MATERIALS
Housing: ABS plastic

Thermometer for pools and fish farms

Floating thermometer to adequate water temperature in pools, ponds and fish farms.

It also includes a string that allows it to be tied in a fixed position or to recover it from distance measurements.

Application:
- Pools
- fish farms

Reference: TPISCF 0-50

STANDARD PARAMETERS
Sensor element: Liquid expansion (blue alcohol)
Temperature Range: 0 to 50°C / 30 to 120°F
Scale: Celsius-Fahrenheit (°C/F)
Dimensions: Ø50x60mm

MATERIALS
Housing: ABS plastic

Solid-stem thermometer with stainless steel pocket

Solid stem glass thermometers protected by a stainless steel sheath with a ring at the upper side for hanging.

This thermometer is still the choice of most reliable for measuring the temperature in liquids such as water or others of a more corrosive nature.

Application:
- Conditioning
- Refrigeration
- Hiking
- Naval engine

Reference: W0101FUNDA

STANDARD PARAMETERS
Sensor element: Liquid expansion (blue alcohol)
Temperature Range: -40 to 40 / -10 to 110 / -10 to 80°C
Scale: Celsius (°C)
Glass insert: Ø6x150mm
Pocket length: Ø10x170mm

MATERIALS	
Rod: Glass	Sheath: Stainless steel AISI 304

Thermometer for wort and dairies

This glass thermometer with opal scale is ideal for its use in must factories or dairies. The thermometer has a protective wire cage with a hanging ring.

Application:
- Wort
- Dairies

Reference: F010144CAJAULA

STANDARD PARAMETERS
Sensor element: Liquid expansion (blue alcohol)
Temperature Range: -40 to 40
Scale: Celsius (°C)
Glass insert: Ø6x150mm
Sheath length: Ø30x350mm

MATERIALS		
Rod: Glass	Sheath: Wire	Scale: Opal

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Opal scale thermometers

Thermometer for fish

Long operational life without maintenance, its spiky finishing allows you to measure temperatures in fish or other foods.

STANDARD PARAMETERS	
Sensor element: Liquid expansion	
Temperature Range: -10 to 60°C / -40 to 40°C / 0 to 100°C	
Scale: Celsius (°C)	
Sheath dimensions: Ø16x165mm	Sheath stem dimensions: Ø6x125mm
Opal scale dimensions: Ø11x140mm	Rod dimensions: Ø3x90mm
Weight: 94g	

MATERIALS
Sheath: Stainless steel AISI 316
Rod: Glass with opal scale

Application:
- Frozen food

Reference: B-170

Oil tank thermometer

Glass thermometer with opal scale, brass protection shath and upper clamp ring. The sheath can be easily disassembled to replace the rod in case of break. Its rugged construction makes it durable and its simplicity prevents costly maintenance.

The deposit allows sample collection and thus remote reading.

The different temperature ranges make this instrumnt useful for a wide variety of applications such as friorific chambers, naval engines, HVAC, etc.

STANDARD PARAMETERS	
Sensor element: Liquid expansion	
Temperature Range: -10 to 60°C / -40 to 40°C / 0 to 100°C/°F	
Scale: Celsius(°C) or Celsius-Fahrenheit (°C/F)	
Sheath dimensions: Ø22x250mm	
Opal scale dimensions: Ø18x190mm	Rod stem dimensions: Ø7x50mm
Weight: 200g	

MATERIALS
Sheath: Brass
Rod: Glass with opal scale

Application:
- Liquid samples
- Tanks
- Seawater

Reference: Petrolero

Opal scale thermometer with brass sheath

Glass thermometer with opal scale, brass protection sheath and upper clamp ring.

The sheath can be easily disassembled to replace the rod in case of break. Its rugged construction makes it durable and its simplicity prevents costly maintenance.

The different temperature ranges make this instrumnt useful for a wide variety of applications such as frigorific chambers, naval engines, HVAC, etc.

STANDARD PARAMETERS	
Sensor element: Liquid expansion	
Temperature Range: -10 to 60°C / -40 to 40°C / 0 to 100°C/°F	
Scale: Celsius(°C) or Celsius-Fahrenheit (°C/F)	
Sheath dimensions: Ø22x250mm	
Opal scale dimensions: Ø18x190mm	Rod stem dimensions: Ø7x50mm
Weight: 190g	

MATERIALS
Sheath: Brass
Rod: Glass with opal scale

Application:
- Tanks
- Cold rooms

Reference: B-175

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Enregistreurs de données
Dataloggers

Digital

Dataloggers Tempmate®

Multi-Use temperature Datalogger Tempmate® M1

Reference: Tempmate M1

Designed to control the temperature in fixed locations such as warehouses, cold stores and industrial freezers.
It is also useful for monitoring the cold chain shipments sensitive to temperature changes such as pharmaceuticals, vaccines or food. The instrument incorporates USB port and generates automatic reports in PDF or Excel datasheet.

Application:
- Laboratories
- Cold storage
- Cold chain
- Pharmaceuticals

STANDARD PARAMETERS	
Measuring range: -30 to 70°C / -22 to 158°F	Scale: Celsius-Fahrenheit (°C/F)
Sensor element: NTC internal sensor	
Response time: 11 minutes	
Resolution: 0.1°C / °F	
Accuracy: ±0.5°C / ±0.9°F (-20 to 40°C)	
Recording interval: Programmable from 10 seconds to 24 hours	
Recording time: Programmable up to 12 months (depending on Recording interval)	
Memory: 32.000 readings	
Alarm type: Simple / Cumulative	
Alarm range: Adjustable up to 5 alarm limits	
IP protection: IP67	
Battery: 1x 3 volts CR2032 lithium coin cell (Replaceable)	
Battery life: 1 year (continuous use)	
Dimensions: 80x34x14mm	Weight: 25g
Data report: Autogenerated PDF or Excel (requires PDF reader or TempBase software)	
PC connection: USB connector	
Software: TempBase	

MATERIALS	
Housing: ABS plastic	Display: LCD

Multiuse · IP67 · PDF · ENAC

Accesories

Reference: TSN100

External probe -40 to 90°C

This external probe with NTC sensor and range of -40 to 90°C reduces the response time of the M1 datalogger to just 30 seconds. Besides its 1-meter wire allows for distance measurements.

1m

Reference: ACB100

Magnetic wall bracket

This support includes two magnets to adhere to metal surfaces and two screws enabling their fastening in any non-metal surface.

Single use temperature Datalogger Tempmate® S1

Reference: Tempmate S1

Designed to preserve the integrity of the cold chain. It monitors the temperature of goods from the supplier warehouses to the customer´s.
The instrument incorporates USB port and generates automatic reports in PDF.

Application:
- Transport
- Cold storage
- Cold chain
- Pharmaceuticals

STANDARD PARAMETERS	
Measuring range: -30 to 70°C / -22 to 158°F	Scale: Celsius-Fahrenheit (°C/F)
Sensor element: NTC internal sensor	
Resolution: 0.1°C / °F	
Accuracy: ±0.5°C / ±0.9°F (-20 to 40°C)	
Recording interval: 1 minute	
Recording time: 10 days	
Memory: 16.000 readings	
Alarm type: Simple / Cumulative	
Alarm range: Adjustable up to 5 alarm limits	
IP protection: IP67 / NEMA 6	
Battery: 1x CR2450 button cell (not replaceable)	
Shelf life: 2 year	
Dimensions: 83x47x7mm	Weight: 14.6g
Data report: Autogenerated PDF (requires PDF reader)	
PC connection: USB connector	

MATERIALS	
Housing: ABS plastic	Display: LED

1 use · IP67 · PDF · HACCP

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DIGITAL INSTRUMENTS

Temperatura y humedad / Termohigrómetros
Température et humidité / Thermo-Higromètres
Temperature and Humidity / Therma- Hygrometer

GF250A

Thermometer-Hygrometer with external sensor

Digital wall thermometers designed to measure temperature and humidity conditions in spaces regulated by the Royal Decree RD 1826/2009.

They are instruments that also show the measured values of humidity of the air, therefore also fulfills the Hygrometer function.

Includes mounting bracket with two-point anchor and external probe.

5m

ENAC

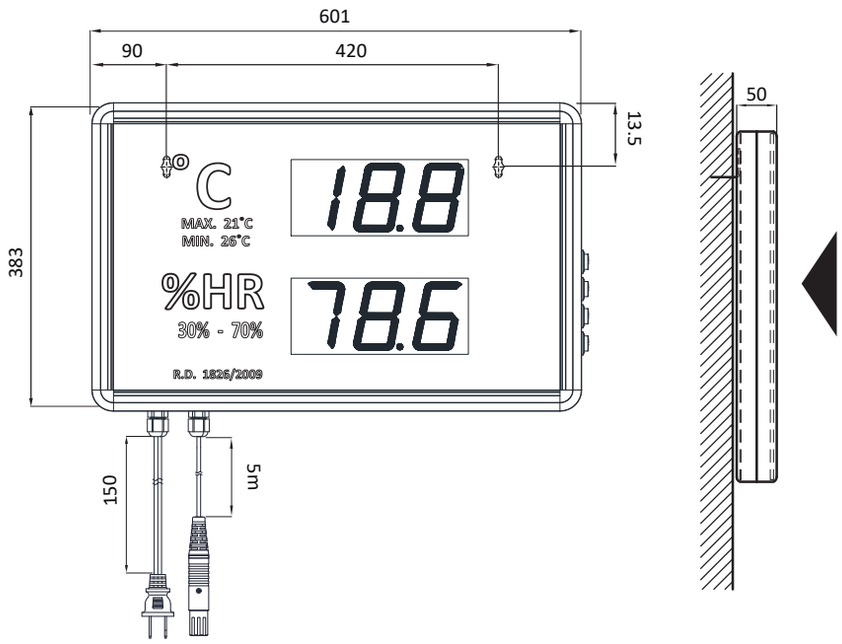
STANDARD PARAMETERS
Design: RD 1826/2009
IP protection: IP50
Range: -40+85°C / 0 to 100% RH
Accuracy: ±0.5°C / ±3% (from 20 to 80%) ±5% rest of the range
Resolution: Temperature: 3 digits / Humidity: 2 digits
Digit height: 127mm
Vision angle: 120°
Reading distance: 75m
Connection: Power supply 100-240VAC (1.5m cable with plug)
Weight: 5.4Kg

Application:

- Airports
- Malls
- Waiting rooms
- Stores

MATERIALS
Frame: Steel
Display: Polymethyl methacrylate 5mm thick

DIMENSIONS (mm)



How to order

1.Calibration certificate traceable to ENAC

3 points
4 points
5 points
6 points
7 points

GF250A - [1]

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Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) ESPAÑA

IN-2DP

Thermometer-Hygrometer with communications

Digital wall thermometers designed to measure temperature and humidity conditions in spaces regulated by the Royal Decree RD 1826/2009

They are instruments that also show the measured values of humidity of the air, therefore also fulfills the Hygrometer function

Includes mounting bracket with anchor in four points and data acquisition software. The external probe is necessary for the operation of the system

With system for direct connection to LAN

Application:

- Airports
- Malls
- Waiting rooms
- Stores

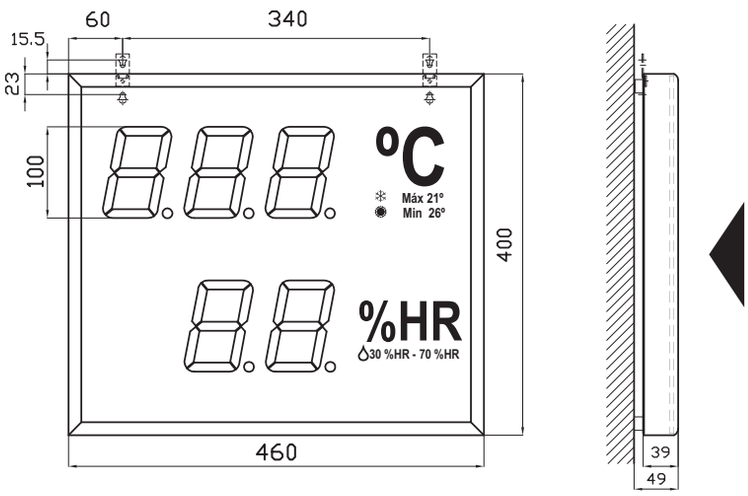
STANDARD PARAMETERS

Design: RD 1826/2009
IP protection: IP20
External sensor accuracy: -30+70°C / 0 to 99% HR
Internal sensor accuracy: ±0.5°C / ±3% (from 20 to 80%) ±5% rest of the range
Resolution: 3 digits / 2 digits
Digit height: 100mm
Vision angle: 120°
Reading distance: 40m
Connection: Power supply 230VAC (2m wire with plug)
Consumption: 6.5W
Weight: 3Kg

MATERIALS

Frame: Anodized aluminum
Display: Polymethyl methacrylate 5mm thick

DIMENSIONS (mm)



OPTIONS

TS-STH2
Probe for interior. Wall box with LCD screen and 4.5m of RS485 cable

Range	-30+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications interface	RS485
Communications protocol	TCP/ IP

TS-STH6
Probe with IP54 wall box and 5m RS485 wire

Range	-35+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications Interface	RS485
Communications protocol	TCP / IP

How to order

1. Sensor type

Internal sensor*
External sensor

2.Calibration certificate traceable to ENAC

3 points
4 points
5 points
6 points
7 points

*The model with internal sensor is not calibrable

IN-2DP- [1] [2]

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IN-2TH

Thermometer-Hygrometer with internal sensor

Digital wall thermometers designed to measure temperature and humidity conditions in spaces regulated by the Royal Decree RD 1826/2009.

They are instruments that also show the measured values of humidity of the air, therefore also fulfills the Hygrometer function.

Includes mounting bracket with anchor in four points. Does not include external probe

STANDARD PARAMETERS

- Design: RD 1826/2009
- IP protection: IP20
- Range: -30+70°C / 0 to 99% HR
- Accuracy: ±0.5°C / ±3% (from 20 to 80%) ±5% rest of the range
- Resolution: 3 digits / 2 digits
- Digit height: 100mm
- Vision angle: 120°
- Reading distance: 40m
- Connection: Power supply 230VAC (2m wire with plug)
- Consumption: 6.5W
- Weight: 3Kg

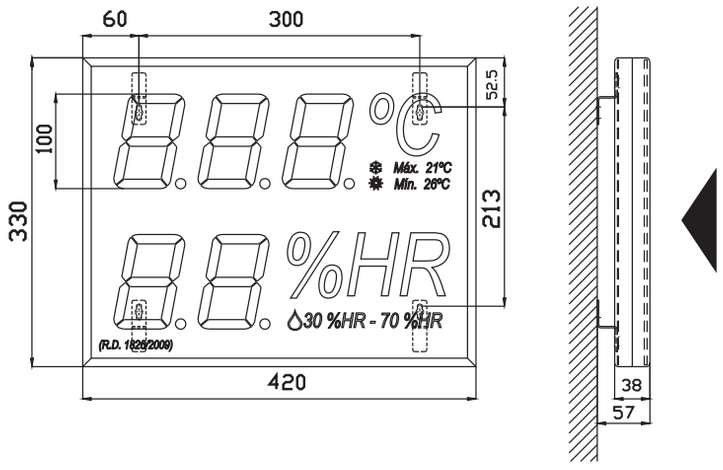
MATERIALS

- Frame: Anodized aluminum
- Display: Polymethyl methacrylate 5mm thick

Application:

- Airports
- Malls
- Waiting rooms
- Stores

DIMENSIONS (mm)



OPTIONS

TS-STH2
Probe for interior. Wall box with LCD screen and 4.5m of RS485 cable

Range	-30+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications interface	RS485
Communications protocol	TCP/ IP

TS-STH6
Probe with IP54 wall box and 5m RS485 wire

Range	-35+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications Interface	RS485
Communications protocol	TCP / IP

How to order

1. Probe type

TS-TH6
TS-TH2

2.Calibration certificate traceable to ENAC

3 points
4 points
5 points
6 points
7 points

IN-2TH- [1] [2]

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) ESPAÑA

IN-3DP

Thermometer-Hygrometer with time and date

Digital wall thermometers designed to measure temperature and humidity conditions in spaces regulated by the Royal Decree RD 1826/2009

They are instruments that also show the measured values of humidity of the air, therefore also fulfills the Hygrometer function

Includes mounting bracket with anchor in four points and data acquisition software. The external probe is necessary for the operation of the system

Every 5 seconds automatic change between time and date, includes remote control for setting Date and time

Application:

- Airports
- Malls
- Waiting rooms
- Stores

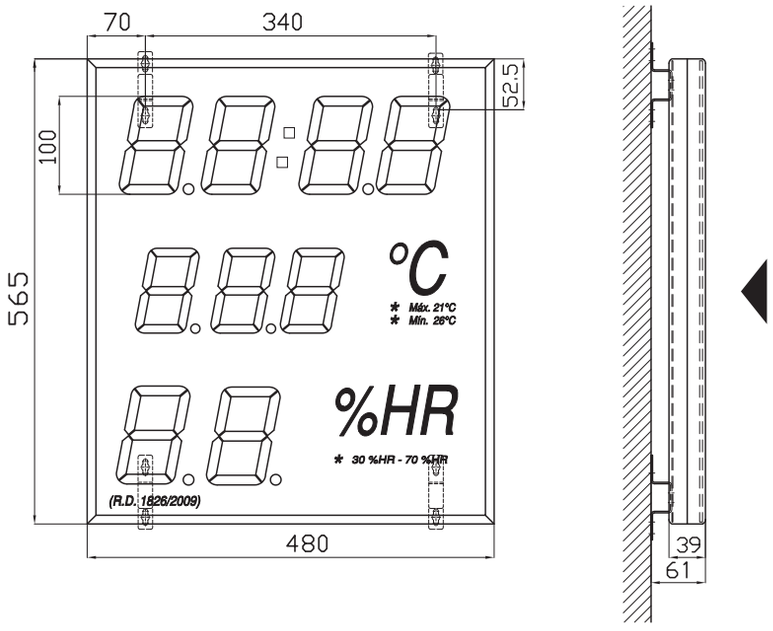
STANDARD PARAMETERS

- Design: RD 1826/2009
- IP protection: IP20
- Range: 0+50°C / 25 to 95% HR
- Accuracy: ±0.5°C / ±3% (from 20 to 80%) ±5% rest of the range
- Resolution: 3 digits / 2 digits
- Digit height: 100mm
- Vision angle: 120°
- Reading distance: 40m
- Connection: Power supply 230VAC (2m wire with plug)
- Consumption: 6.5W
- Weight: 3Kg

MATERIALS

- Frame: Anodized aluminum
- Display: Polymethyl methacrylate 5mm thick

DIMENSIONS (mm)



OPTIONS

TS-STH2
Probe for interior. Wall box with LCD screen and 4.5m of RS485 cable

Range	-30+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications interface	RS485
Communications protocol	TCP/ IP

TS-STH6
Probe with IP54 wall box and 5m RS485 wire

Range	-35+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications Interface	RS485
Communications protocol	TCP / IP

How to order

1. Probe type

TS-TH6
TS-TH2

2.Calibration certificate traceable to ENAC

3 points
4 points
5 points
6 points
7 points

IN-3DP- [1] [2]

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IN-3DP

Thermometer-Hygrometer multi-zone

Digital wall thermometers designed to measure temperature and humidity conditions in spaces regulated by the Royal Decree RD 1826/2009.

They are instruments that also show the measured values of humidity of the air, therefore also fulfills the Hygrometer function.

Includes mounting bracket with anchor in four points and data acquisition software. The external probe is necessary for the operation of the system.

Automatic zone change every 5 seconds

STANDARD PARAMETERS

- Design: RD 1826/2009
- IP protection: IP20
- Range: 0 to 50°C / 25 to 95% HR
- Accuracy: ±0.5°C / ±3% (from 20 to 80%) ±5% rest of the range
- Resolution: 3 digits / 2 digits
- Digit height: 100mm
- Vision angle: 120°
- Reading distance: 40m
- Connection: Power supply 230VAC (2m wire with plug)
- Consumption: 6.5W
- Weight: 3Kg

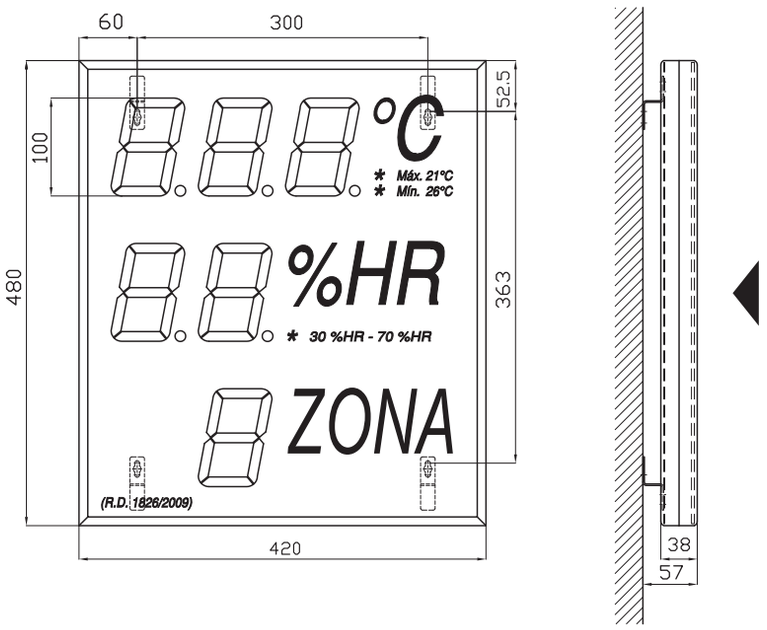
MATERIALS

- Frame: Anodized aluminum
- Display: Polymethyl methacrylate 5mm thick

Application:

·Airports
·Malls
·Waiting rooms
·Stores

DIMENSIONS (mm)



OPTIONS

TS-STH2
Probe for interior. Wall box with LCD screen and 4.5m of RS485 cable

Range	-30+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications interface	RS485
Communications protocol	TCP/ IP

TS-STH6
Probe with IP54 wall box and 5m RS485 wire

Range	-35+70°C / 20-95%
Accuracy	±0.4°C / ±3%
Communications Interface	RS485
Communications protocol	TCP / IP

How to order

1. Probe type

TS-TH6
TS-TH2

2.Calibration certificate traceable to ENAC

3 points
4 points
5 points
6 points
7 points

IN-3DP- [1] [2]

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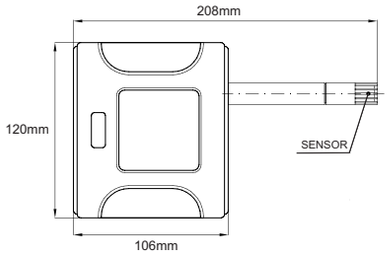
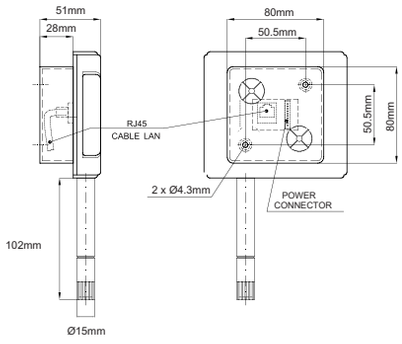
Probe with backlit display

Ref: TS-STH2

TS digital indicators have a removable probe. This represents a saving in case of needing a replacement both of digital screen and sensor.

Temperature range	**-30 to 70°C**
Humidity Range	**5 to 95% RH**
Accuracy	**±0.4°C / ±3%**
Communications interface	**RS485**
Communications protocol	**MODBUS RTU**
Supply voltage	**9 ~ 24 VDC**
Probe wire	**4.5 metes**



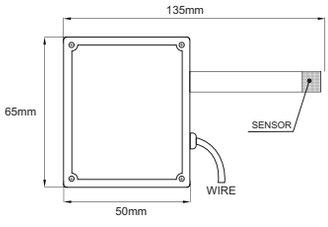


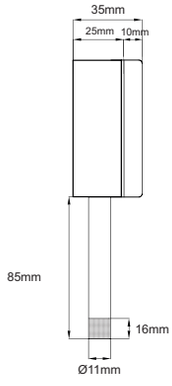
Probe with IP54 wall box and 5m RS485 wire

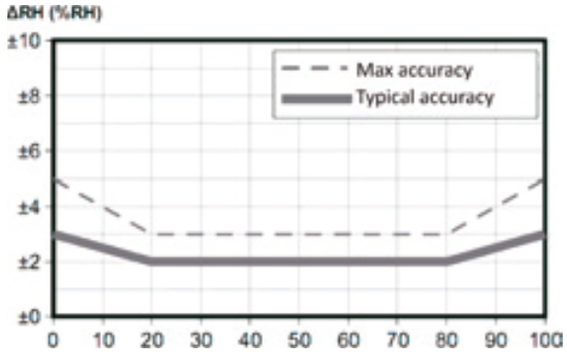
Ref: TS-STH6

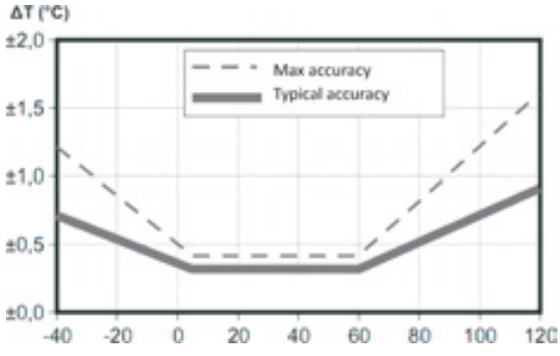
TS digital indicators have a removable probe. This represents a saving in case of needing a replacement both of digital screen and sensor.

Temperature range	**-35 to 70°C**
Humidity Range	**1 to 99% RH**
Accuracy	**See graphs below**
Communications interface	**RS485**
Communications protocol	**TCP / IP**
Supply voltage	**9 ~ 24 VDC**
Probe wire	**5 meters**









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Therma-hygrometer

Digital

Max / Min Therma-Hygrometer

Therma-hygrometer with dual LCD screen that simultaneously displays temperature and humidity readings displayed and recorded maximum and minimum. A rear folding stand and slot allow placement in both flat surfaces and walls.

Reference: 810-145

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): Thermistor / Capacitor
Measuring range (Temp. / Hum.): 0 to 50°C / 10 to 99%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x1.5 volts AAA
Battery life: 10.000 hours
Dimensions: 20x100x110mm
Weight: 135g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Greenhouse
- Domestic use

MAX MIN

*Temperature only calibration

Max / Min Therma-Hygrometer with external probe

Therma-hygrometer with dual LCD screen that simultaneously displays temperature and humidity readings displayed and recorded maximum and minimum. It also includes an external 3m cable probe. A rear folding stand and slot allow placement in both flat surfaces and walls

Reference: 810-140

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): Thermistor / Capacitor
Measuring range internal sensor: 0 to 50°C
Measuring range external probe (Temp. / Hum.): -20 to 70°C / 10 to 99%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x1.5 volts AAA
Battery life: 10.000 hours
Dimensions: 20x100x110mm
Weight: 170g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Cold chambers
- Greenhouse
- Domestic use

MAX MIN 3m

*Temperature only calibration

Therma-Hygrometer with Max / Min & alarm functions

Therma-hygrometer with dual LCD displays the current indoor temperature and humidity. It records minimum and maximum that can activate the audible alarm. It also incorporates a foldable stand for flat surfaces and a slot for hanging on the wall. The alarm is activated when the external probe temperature goes under 0°C, this feature is ideal to warn of freeze danger in sectors such as horticulture and the like. Each unit is supplied with a probe with a 3-meter PVC wire that can be mounted onto any wall using the suction pad

Reference: 810-155

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): Thermistor / Capacitor
Measuring range internal sensor: 0 to 49.9°C
Measuring range external probe (Temp. / Hum.): -49.9 to 69.9°C / 20 to 99%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x1.5 volts AAA
Battery life: 10.000 hours
Dimensions: 20x65x97mm
Weight: 78g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Cold chambers
- Greenhouse
- Domestic use

MAX MIN 1m

*Temperature only calibration

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Digital

Therma-hygrometer

Max / Min Therma-Hygrometer for panel mounting

Therma-hygrometer with dual LCD display ideal for OEMs for installing into equipment, i.e. vivariums, egg hatcheries and similar. The instrument can be panel mounted via a minimum Ø33mm cutout, it incorporates a screw clamp with a maximum panel thickness of 7 mm.

Reference: 810-180

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): / Capacitor
Measuring range (Temp. / Hum.): 0 to 49.9°C / 20 to 99%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x 3 volts CR2032 lithium coin cell
Battery life: 5.000 hours
Dimensions: Ø50x41mm
Weight: 42g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Greenhouse
- Vivarium
- Egg hatcheries

MAX MIN

*Temperature only calibration

Pen-shaped pocket therma-hygrometer

Easy to use pocket digital therma-hygrometer with dual LCD display that shows temperature and humidity readings simultaneously.
It also records minimum and maximum temperautures.
The instrument incorporates a clip on the back to hold it in any position.

Reference: 810-190

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): Silicone bandgap / Capacitor
Measuring range (Temp. / Hum.): 0 to 49.9°C / 20 to 95%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x1.5 volts AAA
Battery life: 6.000 hours
Dimensions: 20x23x138mm
Weight: 35g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Greenhouse

MAX MIN

*Temperature only calibration

Therma-Hygrometer with Max / Min & alarm functions

Digital therma-hygrometer with dual LCD screen that simultaneously displays temperature and humidity readings. It records and displays maximum and minimum temperatures. It also includes an external probe with a 3 meter cable. The alarm is activated when the external probe temperature goes under 0°C, this feature is ideal to warn of freeze danger in sectors such as horticulture and the like.
A rear folding stand allows for placement on flat surfaces.

Reference: 810-195

STANDARD PARAMETERS
Sensor element (Temperature / Humidity): Silicone bandgap / Capacitor
Measuring range internal sensor: 0 to 49.9 °C
Measuring range external probe (Temp. / Hum.): -49.9 to 69.9°C / 20 to 98%rh
Scale (Temp. / Hum.): Celsius-Fahrenheit (°C/F) / Relative humidity
Resolution (Temp. / Hum.): 0.1°C / 1%
Accuracy (Temp. / Hum.): ±1°C / ±5%
Battery: 1x1.5 volts AAA
Battery life: 10.000 hours
Dimensions: 18x41x76mm
Weight: 85g

MATERIALS	
Housing: ABS plastic	Display: LCD Dual

Application:
- Control
- Storage
- Greenhouse

MAX MIN

*Temperature only calibration

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Termómetros infrarrojos
Thermomètres Infrarouges
Infrared Thermometers

Infrared Thermometers

Infrared thermometer up to 380°C

Easy-to-use trigger thermometer, for temperature measurements in hazardous or inaccessible areas such as motors, electrical connections, kitchen surfaces and many other applications.

Reference: IT-380C

Application:
- Laboratories
- Industrial

STANDARD PARAMETERS	
Measuring range: -50 to 380°C	Scale: Celsius-Fahrenheit (°C/F)
Emissivity: 0.95	Field of view: 12:1
Resolution: 0.1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 1x 9 volts PP3 alkaline	Battery life: 2 years
Dimensions: 153x100x43mm	Weight: 148g
Accuracy: ±1.5°C (0 to 380°C) ±3°C (-50 to 0°C)	

MATERIALS	
Housing: Plastic	Display: LCD 9mm

ENAC · Hold · Auto OFF

Infrared thermometer up to 550°C

Easy-to-use trigger thermometer, for temperature measurements in hazardous or inaccessible areas such as motors, electrical connections, kitchen surfaces and many other applications.

Reference: IT-550C

Application:
- Laboratories
- Industrial furnaces
- Foundry

STANDARD PARAMETERS	
Measuring range: -50 to 500°C	Scale: Celsius-Fahrenheit (°C/F)
Emissivity: 0.95	Field of view: 12:1
Resolution: 0.1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 1x 9 volts PP3 alkaline	Battery life: 2 years
Dimensions: 153x100x43mm	Weight: 148g
Accuracy: ±1.5°C (0 to 500°C) ±3°C (-50 to 0°C)	

MATERIALS	
Housing: Plastic	Display: LCD 9mm

ENAC · Hold · Auto OFF

Infrared thermometer up to 900°C

High range easy-to-use trigger thermometer, for temperature measurements in hazardous or inaccessible areas such as motors, electrical connections, kitchen surfaces and many other applications.

Reference: IT-900C

Application:
- Laboratories
- Industrial furnaces
- Foundry

STANDARD PARAMETERS	
Measuring range: -50 to 900°C	Scale: Celsius-Fahrenheit (°C/F)
Emissivity: 0.95	Field of view: 12:1
Resolution: 0.1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 1x 9 volts PP3 alkaline	Battery life: 2 years
Dimensions: 175x100x49mm	Weight: 220g
Accuracy: ±1.5°C (0 to 900°C) ±3°C (-50 to 0°C)	

MATERIALS	
Housing: Plastic	Display: LCD 9mm

MAX MIN · ENAC · Hold · Auto OFF

Infrared thermometer up to 2200°C

High range easy-to-use trigger thermometer, for temperature measurements in hazardous or inaccessible areas such as motors, electrical connections. It includes power cord for long-term measurements. Wire connection to computer and software also included.

Reference: IT-2200C

Application:
- Laboratories
- Industrial furnaces
- Foundry

STANDARD PARAMETERS	
Measuring range: 200 to 2200°C	Scale: Celsius-Fahrenheit (°C/F)
Emissivity: Adjustable from 0.1 to 1	Field of view: 80:1
Resolution: 0.1°C	Working conditions: 0 to 40°C/ 10 to 80% HR
Battery: 1x 9 volts PP3 alkaline	Battery life: 3 years
Dimensions: 220x134x60mm	Weight: 480g
Accuracy: ±2°C (200 to 450°C) ±3°C (450 to 1100°C) ±4°C other	

MATERIALS	
Housing: Plastic	Display: LCD 9mm

MAX MIN · ENAC · Hold · Auto OFF

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Infrared Thermometers

Raytemp 3 Infrared thermometer

Compact, lightweight and easy to use. Ideal for measuring temperatures while avoiding the need for contact. The backlit display shows the maximum temperature, it turns off after 15 seconds, maximizing battery life.

Application:
- Laboratories
- Industrial
- Catering

Reference: 814-040

STANDARD PARAMETERS	
Measuring range: -60 to 500°C	Scale: Celsius-Fahrenheit (°C/F)
Emissivity: 0.97	Field of view: 12:1
Resolution: 0.1°C (-9.9 to 199.9°C) or 1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 2x 1.5 volts AAA	Battery life: 140 hours (continuous use)
Dimensions: 40x66x155mm	Weight: 180g
Accuracy: ±1°C (0 to 65°C) other ±2% or ±2°C highest value	

MATERIALS	
Housing: ABS plastic	Display: LCD 9mm

Auto OFF

Raytemp 8 Infrared thermometer

Compact, lightweight and easy to use. Includes plug for type K thermocouple probes. It calculates the difference between minimum and maximum temperature and also the average. The backlit display turns off after 60 seconds, maximizing battery life.

Application:
- Laboratories
- Industrial
- Catering

Reference: 814-045

STANDARD PARAMETERS	
Measuring range infrared: -60 to 500°C	Scale: Celsius-Fahrenheit (°C/F)
Measuring range probe: -64 to 1370°C (probe not included)	
Accuracy IR: ±2°C or ±2% highest value	Accuracy probe: ±1°C or ±1% highest value
Emissivity: Adjustable from 0.1 to 1	Field of view: 12:1
Resolution: 0.1°C (-9.9 to 199.9°C) or 1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 2x 1.5 volts AAA	Battery life: 180 hours (continuous use)
Dimensions: 40x66x155mm	Weight: 185g

MATERIALS	
Housing: ABS plastic	Display: LCD 9mm

MED · Dif. · MAX MIN · Auto OFF

Raytemp 38 Infrared thermometer

Professional instrument to measure small areas at large distances. With dual laser pointer for increased accuracy. The audible alarm can use programmable temperature monitorings. The backlit display shows maximum and minimum temperatures, difference between the two and average temperature; it turns off after 60 seconds, maximizing battery life.

Application:
- Laboratories
- Industrial
- Catering

Reference: 814-038

STANDARD PARAMETERS	
Measuring range: -59.9 to 999.9°C	Scale: Celsius-Fahrenheit (°C/F)
Measuring range probe: -64 to 1370°C (probe not included)	
Accuracy IR: ±2°C or ±2% highest value	Accuracy probe: ±1°C or ±1% highest value
Emissivity: Adjustable from 0.1 to 1	Field of view: 50:1
Resolution: 0.1°C	Working conditions: 0 to 40°C/ 10 to 95% HR
Battery: 2x 1.5 volts AAA	Battery life: 180 hours (continuous use)
Dimensions: 47x170x240mm	Weight: 395g

MATERIALS	
Housing: ABS plastic	Display: LCD 9mm

MED · Dif. · MAX MIN · Auto OFF

Magnetic bracket for Raytemp 38

The magnetic support allows fastening instrument in any position on metal surfaces.

Reference: 814-050

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

MEDIDORES DIGITALES
COMPTEURS DIGITAUX
DIGITAL INSTRUMENTS

Termómetros digitales
Thermomètres numériques
Digital thermometers

Digital

Max / Min Thermometers

Max / Min Thermometer

Thermometer digital room with large screen that simultaneously displays current temperature, maximum and minimum. Its design makes it ideal to place on all surfaces and in extreme environmental conditions.

Reference: 810-100

STANDARD PARAMETERS
Sensor element: Thermistor
Measuring range: -49.9 to 69.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1°C
Accuracy: ±1°C
Battery: 1x 1.5 volts AAA
Battery life: 4.000 hours
Dimensions: 30x50x180mm
Weight: 92g

MATERIALS
Housing: ABS plastic
Display: LCD

Application:
- Cold chambers
- Storage
- Greenhouse
- Domestic use

MAX MIN

Alarm Max / Min Thermometer with external probe

The thermometer features a large LCD display, max/min memory function to record the highest and lowest temperatures and an audible alarm. The unit incorporates two temperature sensors, a remote water resistant probe with one metre PVC lead for the appliance temperature and an internal sensor for the room temperature. The remote probe can be mounted onto the fridge internal wall using the suction pad or mounting bracket supplied.

Reference: 810-225

STANDARD PARAMETERS
Sensor element: Thermistor
Measuring range: -49.9 to 69.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1°C
Accuracy: ±1°C
Battery: 1x 3 volts CR2032 lithium coin cell
Battery life: 3.000 hours
Dimensions: 16x50x82mm
Weight: 50g

MATERIALS
Housing: ABS plastic
Display: LCD

Application:
- Cold chambers
- Fridges
- Freezers

MAX MIN · 1m

Alarm Max / Min Thermometer with external probe

The thermometer features a large LCD display, max/min memory function to record the highest and lowest temperatures and an audible alarm. The unit incorporates two temperature sensors, a remote water resistant probe with one metre PVC lead for the appliance temperature and an internal sensor for the room temperature. The remote probe can be mounted onto the fridge internal wall using the suction pad or mounting bracket supplied.

Reference: 810-210

STANDARD PARAMETERS
Sensor element: Thermistor
Measuring range: -49.9 to 69.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1°C
Accuracy: ±1°C
Battery: 1x 1.5 volts AAA
Battery life: 5.000 hours
Dimensions: 15x52x73mm
Weight: 48g

MATERIALS
Housing: ABS plastic
Display: LCD

Application:
- Cold chambers
- Fridges
- Freezers

MAX MIN · 1m

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Alarm thermometers

Oven thermometer with timer and clock

This combined thermometer, clock, countdown timer displays both the actual and the alarm temperature over the range of 0 to 300°C and simultaneously the countdown or the actual time. It features magnetic pads at the rear to place it on any metallic surface. Each unit is supplied with a redduced tip stainless steel penetration probe with a 1-meter stainless steel braided lead.

Reference: 810-060

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: 0 to 300°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: ±1°C(0 to 130°C)/±3°C (131 to 300°C)	
Accuracy: ±1°C(0 to 130°C)/±3°C (131 to 300°C)	
Battery: 1x 1.5 volts AAA	
Battery life: 5.000 hours	
Dimensions: 18x73x125mm	Probe dimension: Ø4x150mm
Weight: 128g	

MATERIALS	
Housing: ABS plastic	Display: triple LCD

Application:
- Oven

Indoor/Outdoor Alarm Thermometer with Max/Min function

This max/min alarm thermometer simultaneously displays the actual temperature whilst displaying the maximum and minimum temperatures.
This thermometer features a programmable hi/low temperature alarm that will sound when the pre-set limits have been exceeded, making this instrument ideal for monitoring growing cabinets.
Each unit is supplied with a probe with a 3-meter PVC wire and a useful foldaway stand and a keyhole slot for hanging on a wall.

Reference: 810-090

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -49.9 to 69.9°C (probe) / 0 to 49.9°C (internal sensor)	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C	
Accuracy: ±1°C	
Battery: 1x 1.5 volts AAA	
Battery life: 10.000 hours	
Dimensions: 20x65x97mm	
Weight: 88g	

MATERIALS	
Housing: ABS plastic	Display: LCD

Application:
- Storage
- Cold chambers
- Domestic use
- Nutrient tanks
- Growing cabinets

Multi-function alarm catering thermometer

This multi-function digital thermometer is compact, easy to use and shows both the actual temperature and set alarm temperatures.
Each unit is supplied with a stainless steel penetration probe for food with a 1-meter PVC wire.

Reference: 810-961

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -49.9 to 149.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C	
Accuracy: ±1°C (-19.9 to 149.9°C)	
Battery: 1x 1.5 volts AAA	
Battery life: 5.000 hours	
Dimensions: 32x86x116mm	Probe dimension: Ø3.5x125mm
Weight: 98g	

MATERIALS	
Housing: ABS plastic	Display: LCD

Application:
- Storage
- Cold chambers
- Domestic use
- Catering

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Foldable probe catering thermometers

Digital

SuperFast Thermapen® 3

The SuperFast Thermapen 3 thermometer incorporates a large digital display with a precise read-out of temperature. The resolution can be switched to 1 °C, if required, via a switch in the battery compartment. The thermometer will power off automatically after ten minutes, maximising battery life. This feature can be disabled if not required. The SuperFast Thermapen® 3 thermometer incorporates a reduced tip, stainless steel, food penetration probe that conveniently folds back through 180 degrees into the side of the instrument when not in use.
The response time of any thermometer is dependant on many factors; the mass of the sensing tip, heat transfer and, most importantly, the state of the substance being measured. Tests show that the response time of this instrument is just 3 seconds.

Application:
· Catering

STANDARD PARAMETERS	
Sensor element: K type thermocouple	
Measuring range: -49.9 to 299.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1 or 1°C (programmable)	
Accuracy: ±0.4°C (-49.9 y 199.9) other ±1°	
Battery: 2 x 3 volts CR2032 lithium coin cell	
Battery life: 1.500 hours	
Dimensions: 19x47x153mm	Probe dimension: Ø3.3x115mm
Weight: 97g	

MATERIALS
Housing: Plastic with Biomaster
Display: 14.3mm LCD

Reference:
- 231-217
- 231-227
- 231-237
- 231-247
- 231-257

Biomaster protection · Auto OFF · HACCP · ENAC

SuperFast Thermapen® 4

The patented 360° self-rotating display can be used in any position, in either hand and is truly ambidextrous. The Thermapen 4 incorporates an intelligent backlit display sensing light levels, automatically turning the backlight on/off in varying light conditions. The motion-sensing sleep mode automatically turns the Thermapen 4 on/off when set down or picked up, maximising battery life. Measuring temperature over the range of -49.9 to 299.9 °C and used by hundreds of thousands of discerning cooks worldwide, it offers a combination of speed, accuracy and convenience of use.
The response time of any thermometer is dependant on many factors; the mass of the sensing tip, heat transfer and, most importantly, the state of the substance being measured. Tests show that the response time of this instrument is just 3 seconds.

Application:
· Catering

STANDARD PARAMETERS	
Sensor element: K type thermocouple	
Measuring range: -49.9 to 299.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1 or 1°C (programmable)	
Accuracy: ±0.4°C (-49.9 y 199.9) other ±1°	
Battery: 1x 1.5volts AAA	
Battery life: 3.000 hours	
Dimensions: 19x50x157mm	Probe dimension: Ø3.3x115mm
Weight: 120g	

MATERIALS
Housing: Plastic with Biomaster
Display: 15mm LCD horizontal / 11mm LCD vertical

Reference:
- 234-417
- 231-427
- 234-437
- 234-447
- 234-457
- 234-407
- 234-477
- 234-487
- 234-497
- 234-507

IP66/67 · 360 · Biomaster protection · Auto OFF · HACCP · ENAC

Thermometers with foldable probe

Thermapen® 3 with air, surface or penetration probe

Three probe models for different applications.

Reference:

231-210
Penetration: Ø3.3x108mm

231-212
Surface: Ø8x95mm

231-214
Air: Ø3.3x95mm

STANDARD PARAMETERS
Sensor element: K type thermocouple
Measuring range: -49.9 to 299.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1 or 1°C (programmable)
Accuracy: ±0.4°C (-49.9 to 199.9°C) or ±1°
Battery: 2 x 3 volts CR2032 lithium coin cell
Battery life: 1.500 hours
Dimensions: 19x47x153mm
Weight: 97g

MATERIALS
Housing: Plastic with Biomaster
Display: 14.3mm LCD

Application:
- Air
- Surfaces
- Food

Biomaster protection · Auto OFF · HACCP · ENAC

Thermapen® 3 PRO-SURFACE for surfaces

Specially designed to measure the temperature on surfaces such as grills, cooktops and stoves.

Reference: 231-279

STANDARD PARAMETERS
Sensor element: K type thermocouple
Measuring range: -49.9 to 299.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1 or 1°C (programmable)
Accuracy: ±0.4°C (-49.9 to 199.9°C) other ±1°
Battery: 2 x 3 volts CR2032 lithium coin cell
Battery life: 1.500 hours
Dimensions: 19x47x153mm
Weight: 100g

MATERIALS
Housing: Plastic with Biomaster
Display: 14.3mm LCD

Application:
- Surfaces
- Grills
- Cooktops

Biomaster protection · Auto OFF · HACCP · ENAC

Thermapen® 3 SOUS VIDE for vacuum

Specially designed for vacuum cooking (sous vide), incorporates a small needle probe tip for precision measurement.

Reference: 231-011

STANDARD PARAMETERS
Sensor element: K type thermocouple
Measuring range: -49.9 to 299.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1 or 1°C (programmable)
Accuracy: ±0.4°C (-49.9 y 199.9) other ±1°
Battery: 2 x 3 volts CR2032 lithium coin cell
Battery life: 1.500 hours
nsiones: 19x50x157mm Probe dimension: Ø1.1x60mm
Weight: 97g

MATERIALS
Housing: Plastic with Biomaster
Display: 14.3mm LCD

Application:
- Vacuum

Biomaster protection · Auto OFF · HACCP · ENAC

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Portable thermometers with penetration probe

Reference: Digital 9.3

Pocket thermometer with Hold function

Portable thermometer with penetration stainless steel probe with dimensions Ø3.5x120mm. The instrument has a "Hold" button to keep a fixed temperature in display. Each unit includes a protective sheath with a pocket clip.

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -49.9 to 299.9°C	Sampling: 1s
Scale: Celsius (°C)	
Resolution: 0.1°C	
Accuracy: ±1°C (-19.9 y 119.9) other ±2°C	
Battery: 1x button cell 1.5 volts LR44	
Battery life: 6.000 hours	
Dimensions: Ø20x200mm	Probe dimensions: Ø3.5x120mm
Weight: thermometer - 16.5g / sheath - 5.1g	

MATERIALS
Housing: ABS plastic
Display: LCD 6mm

Application:
- General

Hold

Reference: 810-270

Waterproof pocket thermometer

This thermometer is a handy pocket-sized thermometer. Include a reduced tip stainless steel probe that enables a quick reading of the temperature. It registers maximum and minimum temperatures. Each unit includes a protective sheath with a pocket clip.

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -49.9 to 199.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C/F	
Accuracy: ±0.5°C (-9.9 y 99.9°C) other ±1°	
Battery: 1x 3 volts CR2032 lithium coin cell	
Battery life: 5.000 hours	
Dimensions: Ø41x17x175mm	Probe dimension: Ø2.5x125mm
Weight: 22g	

MATERIALS
Housing: ABS plastic
Display: LCD 8.5mm

Application:
- Catering

IP65 · MAX MIN

Reference: 810-275

Dishwasher thermometer

It can be placed inside a dishwasher to ensure that maximum cycle temperature is correct. It can be used as a conventional food thermometer. The portable compact thermometer features a pointed stainless steel probe. Each unit includes a protective silicone boot and sheath with a pocket clip and a wall-mounting keyhole slot.

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -49.9 to 199.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C/F	
Accuracy: ±0.5°C (-9.9 y 99.9°C) other ±1.5°	
Battery: 1x 3 volts CR2032 lithium coin cell	
Battery life: 5.000 hours	
Dimensions: 20x26x200mm	Probe dimension: Ø2.5x122mm
Weight: 25g	

MATERIALS
Housing: ABS plastic
Display: LCD 8mm

Application:
- Dishwasher
- Catering

IP66/67 · MAX MIN

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Portable thermometers with penetration probe

Pocket thermometer THERMALITE 1

This instrument will turn off automatically after 10 minutes, maximizing battery. The THERMALITE is equipped with a protective plastic cover that includes Biomaster, an additive that reduces bacterial growth. It is ideal for daily routine, food and catering applications. (HACCP compliant)

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -39.9 to 149.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C	
Accuracy: ±0.5°C (-39.9 y 124.9) other ±1°	
Battery: 1x button cell 3 volts CR2032	
Battery life: 5.000 hours	
Dimensions: Ø29x196mm including probe	Probe dimensions: Ø3.3x80mm
Weight: 45g	

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 10mm

Application:
·Catering

IP65 · Biomaster protection · Auto OFF · HACCP · ENAC

Reference:
- 226-101
- 226-111
- 226-121
- 226-131
- 226-141
- 226-151

Pocket thermometer with Cal Check function THERMALITE 2

This instrument will turn off automatically after 10 minutes, maximizing battery. The THERMALITE is equipped with a protective plastic cover that includes Biomaster, an additive that reduces bacterial growth. It is ideal for daily routine, food and catering applications.

(HACCP compliant). It also has a “Hold” button to keep a fixed temperature in display.

STANDARD PARAMETERS	
Sensor element: Thermistor	
Measuring range: -39.9 to 149.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C	
Accuracy: ±0.5°C (-39.9 y 124.9) other ±1°	
Battery: 1x button cell 3 volts CR2032	
Battery life: 5.000 hours	
Dimensions: Ø29x196mm including probe	Probe dimensions: Ø3.3x80mm
Weight: 45g	

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 10mm

Application:
·Catering

CAL check · IP65 · Biomaster protection · Hold · Auto OFF · HACCP · ENAC

Reference:
- 226-102
- 226-112
- 226-122
- 226-132
- 226-142
- 226-152

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Catering thermometers with fixed probes

Food thermometer CATERTEMP

Thermometer designed especially for professional chefs looking for a simple tool that allows them to meet the standards for food handling, it also has the "Hold" function that keeps any reading on-screen. It includes a stainless steel probe with a 1m polyurethane wire.

STANDARD PARAMETERS		
Sensor element: K type thermocouple		
Measuring range: -49.9 to 299.9°C		
Scale: Celsius (°C)		
Resolution: 0.1°C		
Accuracy: ±0.4°C (-50 y 199°C) other ±1°		
Battery: 3x 1.5 volts AAA		
Battery life: 10.000 hours		
Dimensions: 25x56x128mm	Probe dimension: Ø3.3x130mm	Wire: 1m coiled
Weight: 130g		

MATERIALS	
Housing: ABS plastic with Biomaster	Wire: Polyurethane
Display: LCD 12mm	

Application:
·Catering

1m · Biomaster protection · Hold · Auto OFF · HACCP · ENAC

Reference: 221-046

Food thermometer THERMAMITE

Thermometer designed especially for professional chefs looking for a simple, accurate and inexpensive tool that allows them to meet the standard for food handling. It includes a stainless steel probe with a 500mm PVC wire.

STANDARD PARAMETERS		
Sensor element: K type thermocouple		
Measuring range: -50 to 300°C		
Scale: Celsius (°C)		
Resolution: 1°C		
Accuracy: ±1°C ±1%		
Battery: 3x 1.5 volts AAA		
Battery life: 10.000 hours		
Dimensions: 25x56x128mm	Probe dimension: Ø3.3x100mm	Wire: 0.5m
Weight: 130g		

MATERIALS	
Housing: ABS plastic with Biomaster	Wire: PVC
Display: LCD 12mm	

Application:
·Catering

0.5m · Biomaster protection · Hold · Auto OFF · HACCP · ENAC

Reference:
- ○ 261-010
- 261-020
- 261-030
- 261-040
- 261-050

Catering thermometer FOODCHECK

Thermometer designed especially for professional chefs looking for a simple, accurate and inexpensive tool that allows them to meet the standard for food handling. It includes a stainless steel probe with a 500mm PVC wire.

STANDARD PARAMETERS		
Sensor element: K type thermocouple		
Measuring range: -49.9 to 299.9°C		
Scale: Celsius (°C)		
Resolution: 0.1°C		
Accuracy: ±0.4°C (-50 to 199°C) other ±1°		
Battery: 3x 1.5 volts AAA		
Battery life: 10.000 hours		
Dimensions: 25x56x128mm	Probe dimension: Ø3.3x130mm	Wire: 0.5m
Weight: 130g		

MATERIALS	
Housing: ABS plastic with Biomaster	Wire: PVC
Display: LCD 12mm	

Application:
·Catering

0.5m · Biomaster protection · Hold · Auto OFF · HACCP · ENAC

Reference:
- ○ 221-018
- 221-028
- 221-038
- 221-048
- 221-058

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Industrial thermometers with replaceable probe

Industrial thermometer THERMA 1

Reference: 221-041

Durable and easy to use instrument with a large LCD screen for easy reading. It can be combined with a wide variety thermocouple probe type K making it a versatile tool suitable for use in many industrial applications.

STANDARD PARAMETERS	
Sensor element: K type thermocouple	
Measuring range: -99.9 to 1372°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C (-99.9 to 299.9°C) / 1°C (300 to 1372°C)	
Accuracy: ±0.4°C ±0.1%	
Battery: 3x 1.5 volts AAA	
Battery life: 10.000 hours	
Dimensions: 25x56x128mm	Probe dimension: Probe not included
Weight: 130g	

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 12mm

Application:
·Industrial

Hold · Auto OFF · HACCP · ENAC · Biomaster protection

Industrial thermometer THERMA 3

Reference: 221-043

Durable and easy to use instrument with a large LCD screen for easy reading. It can be combined with a wide variety thermocouple probe type K making it a versatile tool suitable for use in many industrial applications.

STANDARD PARAMETERS	
Sensor element: K type thermocouple	
Measuring range: -100 to 1372°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 1°C	
Accuracy: ±1°C ±0.1%	
Battery: 3x 1.5 volts AAA	
Battery life: 10.000 hours	
Dimensions: 25x56x128mm	Probe dimension: Probe not included
Weight: 130g	

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 12mm

Application:
·Industrial

Hold · Auto OFF · HACCP · ENAC · Biomaster protection

Industrial thermometer THERMA ELITE

Reference: 221-061

This instrument incorporates all the features of Therma 1 and 3 along with backlit display, max/min memory function and a mode switch button for selecting resolution (0.1-1) or scale (°C/°F).

The thermometer also incorporates a calibration adjustment function (± 2°C), which allows users to compensate for thermocouple probe errors.

STANDARD PARAMETERS	
Sensor element: K type thermocouple	
Measuring range: -99.9 to 1372°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C (-99.9 to 299.9°C) / 1°C (300 to 1372°C)	
Accuracy: ±0.4°C ±0.1%	
Battery: 3x 1.5 volts AAA	
Battery life: 10.000 hours	
Dimensions: 25x56x128mm	Probe dimension: Probe not included
Weight: 130g	

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 12mm

Application:
·Industrial

MAX MIN · Hold · Auto OFF · HACCP · ENAC · Biomaster protection

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Food thermometers with replaceable lumberg connector probes

Digital

High accuracy food thermometer THERMA 20 Series

Thermometer designed with the the catering industry in mind, indicated for its use in processes requiring guarantees in safety and health. It can be used at low temperatures. The instrument can be combined with Lumberg connector NTC probes.

Therma 20

STANDARD PARAMETERS
Sensor element: Thermistor
Measuring range: -39.9 to 149.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1°C
Accuracy: ±0.4°(-10 to 70°C)
Battery: 3x 1.5 volts AAA
Battery life: 20.000 hours
Dimensions: 25x56x128mm
Probe dimension: Probe not included
Weight: 130g

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 12mm

HACCP · Auto OFF · Biomaster protection · ENAC

Reference: 226-040

Application
- Food
- Catering

Therma 20 plus

STANDARD PARAMETERS
Sensor element: Thermistor
Measuring range: -39.9 to 149.9°C
Scale: Celsius-Fahrenheit (°C/F)
Resolution: 0.1°C
Accuracy: ±0.4°(-10 to 70°C)
Battery: 3x 1.5 volts AAA
Battery life: 10.000 hours
Dimensions: 32x71x141mm
Probe dimension: Probe not included
Weight: 220g

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 15mm

HACCP · Hold · IP66/67 · ENAC · Auto OFF · Biomaster protection · MAX MIN

Reference: 232-040

Application
- Food
- Catering

High accuracy food thermometer THERMA 22 Series

Thermometer designed for the catering industry, this versatile instrument supports Lumberg connector NTC thermistor probes and T type thermocouples.

Therma 22

STANDARD PARAMETERS
Sensor: Thermistor / type T thermocouple
Thermistor range: -39.9 to 149.9°C
Type T t/c range: -199.9 to 400°C
Scale: Celsius(°C)
Resolution: 0.1°C to 300°C thereafter 1°C
Accuracy
Instrument only: ±0.2°C
T thermocouple: ±0.5°(-50 to 150°C)
Thermistor: ±0.4°(-10 to 70°C)
Battery: 3x 1.5 volts AAA
Battery life T thermocouple: 10.000 hours
Battery life Thermistor: 20.000 hours
Dimensions: 25x56x128mm
Probe dimension: Probe not included
Weight: 130g

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 12mm

HACCP · Auto OFF · Biomaster protection · ENAC

Reference: 227-022

Application
- Food
- Catering

Therma 22 plus

STANDARD PARAMETERS
Sensor: Thermistor / type T thermocouple
Thermistor range: -39.9 to 149.9°C
Type T t/c range: -199.9 to 400°C
Scale: Celsius (°C)
Resolution: 0.1°C (hasta 300°C) other 1°C
Accuracy
Instrument only: ±0.2°C
T thermocouple: ±0.5°(-50 to 150°C)
Thermistor: ±0.4°(-10 to 70°C)
Battery: 3x 1.5 volts AAA
Battery life T thermocouple: 10.000 hours
Battery life Thermistor: 20.000 hours
Dimensions: 32x71x141mm
Probe dimension: Probe not included
Weight: 220g

MATERIALS
Housing: ABS plastic with Biomaster
Display: LCD 15mm

HACCP · ENAC · IP66/67 · Auto OFF · Biomaster protection · MAX MIN · Hold

Reference: 232-041

Application
- Food
- Catering

Precision thermometers

High accuracy thermometer with fixed probe REFERENCE Thermapen 3

This version of the thermapen model is ideal for calibration of other instruments and probes. The thermometer turns off after 10 min of idleness, thus maximizing battery life (this feature can be disabled).

Reference: 222-213

STANDARD PARAMETERS	
Sensor element: PT100	
Measuring range: -69.9 to 199.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.01°C	
Accuracy: ±0.07°C (-30 to 149.9°C) other ±0.2°C	
Battery: 2x 3 volts CR2032 lithium coin cell	
Battery life: 1.000 hours	
Dimensions: 19x47x153mm	Probe dimension: Ø3.3x108mm
Weight: 97g	

MATERIALS	
Housing: ABS plastic with Biomaster	
Display: LCD 12mm	

Application:
- Calibration
- Laboratories
- Industrial

Auto OFF · Biomaster protection · ENAC

Calibration thermometer with fixed probe REFERENCE

Ideal for checks and inspections of other instruments or probes.
Its wide temperature range and precision make it suitable for a large number of applications. It is supplied with a fixed PT100 probe with great accuracy.

Reference: 222-055

STANDARD PARAMETERS		
Sensor element: PT100 1/10th DIN		
Measuring range: -199.9 to 199.9°C		
Scale: Celsius-Fahrenheit (°C/F)		
Resolution: 0.01°C		
Accuracy: ±0.05°C (-30 to 150°C) ±0.1°C (-50 to 200°C)		
Battery: 3x 1.5 volts AAA		
Battery life: 2.000 hours		
Dimensions: 25x56x128mm	Probe dimension: Ø3.3x130mm	Wire: 1m
Weight: 210g		

MATERIALS	
Housing: ABS plastic with Biomaster	Wire: PVC
Display: LCD 10mm	

Application:
- Calibration
- Laboratories
- Industrial

1m · Biomaster protection · Hold · Auto OFF · MAX MIN · ENAC

Accuracy thermometer with interchangeable probe PRECISION Series

Precision instruments with plug at the top for different probes. Given accuracy applies only to the instrument, not the probe.

Reference: 222-053

Precision

STANDARD PARAMETERS	
Sensor element: PT100	
Measuring range: -199.9 to 499.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.1°C	
Accuracy: ±0.2°	
Battery: 3x 1.5 volts AAA	
Battery life: 2.000 hours	
Dimensions: 25x56x128mm	
Probe dimension: Probe not included	
Weight: 130g	

MATERIALS	
Housing: ABS plastic with Biomaster	
Display: LCD 10mm	

Application:
- Laboratories
- Industrial

Plug · MAX MIN · Auto OFF · Hold · Biomaster protection · ENAC

Reference: 222-051

Precision Plus

STANDARD PARAMETERS	
Sensor element: PT100 1/10th DIN	
Measuring range: -199.9 to 199.9°C	
Scale: Celsius-Fahrenheit (°C/F)	
Resolution: 0.01°C	
Accuracy: ±0.05°	
Battery: 3x 1.5 volts AAA	
Battery life: 2.000 hours	
Dimensions: 25x56x128mm	
Probe dimension: Ø3.3x130mm	Wire: 1m
Weight: 130g	

MATERIALS	
Housing: ABS plastic with Biomaster	
Display: LCD 10mm	Wire: PVC

Application:
- Laboratories
- Industrial

Plug · 1m · MAX MIN · Auto OFF · Hold · Biomaster protection · ENAC

Industrial thermometers

Waterproof thermometer with replaceable probe THERMA PLUS

The thermometer is housed in a robust extruded aluminium waterproof case with a white anti-bacterial/salt resistant powder coated finish. The Therma Plus incorporates the latest microprocessor technology with improved durability, designed for reliability and ease of use in routine food processing and industrial applications.

Application:
- Laboratories
- Industrial

STANDARD PARAMETERS		
Sensor element: K type thermocouple		
Measuring range: -99.9 to 1372°C		
Scale: Celsius (°C)		
Resolution: 0.1 / 1°C auto-ranging @ 299.9°C		
Accuracy: ±0.4°C ±0.1% of reading		
Battery: 1x 9 volts PP3 alkaline		
Battery life: 5.000 hours		
Dimensions: 35x60x115mm	Probe dimension: Probe not included	
Weight: 194g		

MATERIALS	
Housing: Extruded aluminum	
Display: LCD	

IP66/67 · Hold · Auto OFF · HACCP · ENAC

Reference:
- 221-071
- 221-271
- 221-371
- 221-471
- 221-571

Waterproof thermometer with fixed probe CATERTEMP PLUS

The thermometer is housed in a robust extruded aluminium waterproof case with a white anti-bacterial/salt resistant powder coated finish. The Catertemp Plus incorporates the latest microprocessor technology with improved durability, designed for reliability and ease of use in routine food processing and industrial applications.

Application:
- Laboratories
- Industrial

STANDARD PARAMETERS		
Sensor element: K type thermocouple		
Measuring range: -49.9 to 299.9°C		
Scale: Celsius (°C)		
Resolution: 0.1°C		
Accuracy: ±0.4°C ±1 digit		
Battery: 1x 9 volts PP3 alkaline		
Battery life: 5.000 hours		
Dimensions: 35x60x115mm	Probe dimension: Ø3.3x130mm	Wire: 1m coiled
Weight: 244g		

MATERIALS	
Housing: Extruded aluminum	Wire: Polyurethane
Display: LCD	

IP66/67 · 1m · Hold · Auto OFF · MAX MIN · ENAC

Reference:
- 221-056
- 221-256
- 221-356
- 221-456
- 221-556

Catering thermometer with fixed probe THERMACHECK

Designed specifically for use in food processing industries and catering. Meets food handling standards and a high system. It includes a fixed stainless steel probe and a 1m polyurethane cable.

Application:
- Catering

STANDARD PARAMETERS		
Sensor element: Thermistor		
Measuring range: -39.9 to 149.9°C		
Scale: Celsius (°C)		
Resolution: 0.1°C		
Accuracy: ±0.4°C (-20 to 70°C)		
Battery: 3x 1.5 volts AAA		
Battery life: 20.000 hours		
Dimensions: 25x56x128mm	Probe dimension: Ø3.3x130mm	Wire: 1m coiled
Weight: 220g		

MATERIALS	
Housing: ABS plastic with Biomaster	Wire: Polyurethane
Display: LCD 12mm	

HACCP · 1m · Biomaster protection · Hold · Auto OFF · MAX MIN · ENAC

Reference: 226-042

Gesa Termómetros S.L. · C/ Barrikako Bidea Pol. Ind. Igeltzera Pabellón D3 · 48610 Urduliz (Bizkaia) SPAIN

Metrology Laboratory| Calibration certificates

The calibration certificate is a document that shows the differences in measurement between the instrument to be calibrated (measurand) and the standard against which it is contrasted. This document must include the uncertainty of the measurand at each calibrated point.

In the Calibration Laboratory of Gesa Termómetros, S. L. we calibrate both our instruments and those manufactured in other companies.

These are factory certificates that include the following information:

- Points to be calibrated (usually chosen by the client)
- Differences between the measurements shown by the instrument to be calibrated (measurand) and the Gesa standards against which they are contrasted.
- Uncertainties of measurement of each contrasted point.

A) Calibrated instruments:

The list of calibrated instruments in Gesa is very broad. Before sending your equipment or instrument to calibrate our facilities, please contact us to make sure that your instrument can be calibrated. The limitations may be due to:

Equipment resolutions or precisions superior to those that the Gesa patterns can face. As a rule, the patterns must be an order of magnitude superior in precision and resolution to those of the instruments to be calibrated. (see section e) "Equipment used in the calibrations and patterns of Gesa" to check the characteristics of the Gesa standards)

Physical dimensions or construction of the instrument.
State of the instrument. It may be necessary to repair the instrument before recalibrating it. For this it will be necessary to make a previous economic budget. We perform calibrations in the following areas:

Metrology Laboratory| Calibration certificates

Temperature and Humidity

- Platinum resistance thermometers
- Direct reading thermometers with thermometric resistance sensor
- Direct reading thermometers with thermocouple sensor
- Dataloggers
- Direct reading thermometers with other sensors (bi-metal strip or gas expansion)
- Temperature transmitters
- Thermocouples made of noble metal and common metals
- Thermometers of total, partial or complete immersion in liquid
- Direct reading thermometers (air temperatures)
- Thermometers of infrared radiation.
- Meters of environmental conditions of temperature and humidity in air: Psychrometers, hygrometers and loggers of relative humidity.

Pressure and Vacuum

- Pressure gauges, pressure transmitters and vacuum gauges

B) Reasons for calibration:

- Expiration of the validity period
- Exhaustion of a certain volume of use (hours of work)
- Impacts or strong vibrations that decalibrate the instrument
- Temperature changes
- As long as the observations obtained are questionable
- To comply with the regulations in force

Metrology Laboratory| Calibration certificates

C) Internal calibration procedures

For each quantity (temperature, pressure, humidity) and each type of instrument, we have defined a calibration procedure.
All of them are carried out within the scope of our ISO 9001 Quality Certification: Laboratory Organization, document control, staff training, customer service ...
As a guide to our procedures, we use the documents published by the Spanish Metrology Center (CEM). Among others:

- TH-001 Procedure for the calibration of digital thermometers
- TH-002 Procedure for the calibration of infrared radiation thermometers
- TH-003 Procedure for calibration by comparison of thermocouples
- TH-004 Procedure for calibration by comparison of liquid column thermometers
- TH-005 Procedure for the calibration by comparison of platinum thermometric resistances
- TH-007 Procedure for the calibration of meters of environmental conditions of temperature and humidity in air
- ME-001 Calibration of Vacuum Gauges
- ME-003e Calibration of pressure gauges
- ME-010 Calibration of pressure gauges calibrators
- ME-017 Procedure for the calibration of pressure transducers with electrical output

The fundamental objective of the calibration is the estimation of the measurement uncertainty. According to the International Metrology Vocabulary (1) the measurement uncertainty is "a non-negative parameter that characterizes the dispersion of the values attributed to a measurand".

In order to calculate the uncertainty, we applied the "Guide for the expression of the Incerdancy in the measurement" (2) and the document EA-4/02 M:2013 "Evaluation of the measurement Uncertainty in the calibrations".
Calibration procedures include, among other tests, hysteresis, uniformity and
repeatability All of them contribute to the uncertainty of measurement:

The corresponding contributions to the calibration system:

- ME-010 Calibration of pressure gauges calibrators
- ME-017 Procedure for the calibration

The corresponding contributions to the measurand:

- Reading uncertainty (resolution)
- Repeatability, hysteresis and/or uniformity.
- Other magnitudes of influence

Metrology Laboratory| Calibration certificates

D) Equipment used in calibrations and standards

The calibration certificates must be traceable, ie must be able to identify all steps in the chain of calibrations to an internationally recognized entity. In our case, all the standards are traceable and are periodically calibrated by entities accredited by ENAC (National Accreditation Entity) or UKAS (United Kingdom Accreditation Service).

1. Temperature control

   - We have calibration equipment that guarantees a high stability of the setpoint temperature over time (± 0.05 K) as well as a great uniformity of temperature at any point of the equipment. The better the equipment, the less uncertainty the calibration laboratory brings to the measurement uncertainty.

   - For temperature, the calibratable range is -80°C to + 600°C. The uncertainty of our standards is less than 0.02°C.

2. Pressure and vacuum control.

   - For the calibration of pressure and vacuum instruments we have equipment capable of generating pressures with resolutions of up to 10 Pa (0.1 mbar). The high quality of its components (shut-off valves, quick connectors, etc.) allows stable pressures to be maintained during calibration.

   - As working fluids we use air, water or hydraulic oils depending on the pressure range of the instrument to be calibrated

   - For pressure, the calibratable range is -95 KPa to 60 MPa (-0.95 to 600 bar) (gauge pressure). The uncertainties of our standards is less than 80 Pa (0.8 mbar).

1. Relative humidity

   - For the calibration of hygrometers we have climatic chambers with temperature and relative humidity control.

   - For relative humidity, the calibrated points are 50% RH, 60% RH and 70% RH all measured at 20°C or 25°C. The uncertainty of the standards is 1.2% RH.

E) Periodicity of calibrations

The owner of the instrument is the one who decides the validity of the certificate issued. Normal terms are usually between six months and two years depending on the conditions of use in which the instrument works.

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