

Temperature Gauges / Switches

Series: GTG / GTS

Srl.	Items	Models
1	Temperature Gauge (Bimetal-Rigid Stem)	GTG-BR
2	Temperature Gauge (Liquid Filled-Rigid Stem)	GTG-LR
3	Temperature Gauge (Liquid Filled-Capillary)	GTG-LC
4	Temperature Gauge (Gas Filled-Rigid Stem)	GTG-GR
5	Temperature Gauge (Gas Filled-Capillary)	GTG-GC
6	Temperature Indicating Switch (Bimetal-Rigid Stem-Weatherproof)	GTS-BR
7	Temperature Indicating Switch Liquid Filled-Rigid Stem-Weatherproof)	GTS-LR
8	Temperature Indicating Switch (Liquid Filled-Capillary-Weatherproof)	GTS-LC
9	Temperature Indicating Switch (Gas Filled-Rigid Stem-Weatherproof)	GTS-GR
10	Temperature Indicating Switch (Gas Filled-Capillary-Weatherproof)	GTS-GC
11	Temperature Indicating Switch (Gas Filled-Capillary-Flameproof)	GTS-GCF
12	Temperature Switch (Blind), Weatherproof/Flameproof/Rigid stem/Capillary	GTS-B

Note: Part of our development programs, product specifications, photos, drawings, dimensions and other information provided in catalogue/website may change without any notice.

A) Temperature Gauge general specifications

Series: GTG

1) Temperature Gauge (Bimetal-Rigid Stem) specifications.

Model	: GTG-BR
Dial Size	: 63mm(2.5") / 100mm(4") / 125mm(5") / 150mm (6") / 250mm(10")
Window	: Shatterproof / Toughened glass
Case Material	: SS304 / SS316 / Die cast Aluminium (LM6)
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry / Bottom entry / Every angle.
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2") / 5/8"
Stem Length	: 100mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" /3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Range	: -50°C to +600°C
Accuracy	: ±1%FSD (±2%FSD for 63mm dia)
Span	: Minimum 50°C
Over Range	: 125%FSD (110%FSD for ≥ 500°C)
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet for SS / Screwed for Aluminium
System	: Bimetal strip in helix form works on thermal expansion
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

2) Temperature Gauge (Liquid Filled-Rigid Stem) specifications.

Model	: GTG-LR
Dial Size	: 100mm(4") 150mm(6")
Window	: Shatterproof / Toughened glass
Case Material	: SS304 / SS316 / Die Cast Aluminium(LM6)
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry / Bottom entry / Every angle.
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2") / 5/8"
Stem Length	: 30mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" /3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Range	: -30°C to +250°C
Accuracy	: ±1%FSD
Span	: Minimum 50°C
Over Range	: 125%FSD
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet for SS / Screwed for Aluminium
System	: Liquid filled, case compensated, accordance with SAMA Cl. IB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

3) Temperature Gauge (Liquid Filled-Capillary) specifications.

Model	: GTG-LC
Dial Size	: 100mm(4") 150mm(6")
Window	: Shatterproof / Toughened glass
Case Material	: SS304 / SS316 / Die Cast Aluminium(LM6)
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Bottom entry-surface mounting / Bottom entry-2" pipe mounting / Back Entry-panel mounting
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2") / 5/8"
Stem Length	: 30mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" /3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Capillary	: SS304 tube / SS316 tube / SS304 tube SS304 armoured / SS316 Tube SS316 armoured / SS304 tube SS304 armoured & PVC covered / SS316 tube SS316 armoured & PVC covered
Capillary Length	: 1 to 5 Mtrs.
Remote Connection	: MS surface mounting bolts / SS surface mounting bolts / MS panel mounting bracket / SS panel mounting bracket MS 2" pipe mounting items / SS 2" pipe mounting items
Range	: -30°C to +250°C
Accuracy	: ±1%FSD
Span	: Minimum 50°C
Over Range	: 125%FSD
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet for SS / Screwed for Aluminium

System : Liquid filled, case compensated, accordance with SAMA CI. IB
 Reference Standards : ASME B40.3, EN13190 & IS/IEC60947/IEC60529

4) Temperature Gauge (Gas Filled-Rigid Stem) specifications

Model : **GTG-GR**
 Dial Size : 100mm(4") / 125mm(5") / 150mm(6") / 250mm(10")
 Window : Shatterproof / Toughened glass
 Case Material : SS304 / SS316
 Case Rating : Weatherproof to IP65 / IP66 / IP67 / IP68
 Entry : Back entry / Bottom entry / Every angle.
 Stem Material : SS304 / SS316 / SS310
 Stem Dia : 6mm / 8mm / 10mm / 12mm / 1/4" / 3/8" / 1/2" / 5/8"
 Stem Length : 100mm to 4000mm below connection
 Process Connection : Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
 Range : -200°C to +800°C
 Accuracy : ±1%FSD
 Span : Minimum 80°C
 Over Range : 125%FSD ≤600°C / 110%FSD >600°C
 Dial Material : Aluminium, white background with black markings.
 Pointer : Aluminium, black with micrometer adjustment
 Reset : Micrometer pointer
 Bezel : Bayonet
 System : Gas(N₂) filled, case compensated accordance with SAMA CI. IIIB
 Reference Standards : ASME B40.3, EN13190 & IS/IEC60947/IEC60529

5) Temperature Gauge (Gas Filled-Capillary) specifications.

Model : **GTG-GC**
 Dial Size : 100mm(4") / 125mm(5") / 150mm(6") / 250mm(10")
 Window : Shatterproof / Toughened glass
 Case Material : SS304 / SS316
 Case Rating : Weatherproof to IP65 / IP66 / IP67 / IP68
 Entry : Bottom entry-surface mounting / Bottom entry-2" pipe mounting / Back Entry-panel mounting
 Stem Material : SS304 / SS316 / SS310
 Stem Dia : 6mm / 8mm / 10mm / 12mm / 1/4" / 3/8" / 1/2" / 5/8"
 Stem Length : 100mm to 4000mm below connection
 Process Connection : Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
 Capillary : SS304 tube / SS316 tube / SS304 tube SS304 armoured / SS316 tube SS316 armoured / SS304 tube SS304 armoured & PVC covered / SS316 tube SS316 armoured & PVC covered
 Capillary Length : 1 to 30 Mtrs.
 Remote Connection : MS surface mounting bolts / SS surface mounting bolts / MS panel mounting bracket / SS panel mounting bracket / MS 2" pipe mounting items / SS 2" pipe mounting items
 Range : -200°C to +800°C
 Accuracy : ±1%FSD
 Span : Minimum 80°C
 Over Range : 125%FSD ≤600°C / 110%FSD >600°C
 Dial Material : Aluminium, white background with black markings.

Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet
System	: Gas (N ₂) filled, case compensated accordance with SAMA Cl. IIIB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

B) Temperature Indicating Switch general specifications

Series: GTS

6) Temperature Indicating Switch (Bimetal-Rigid Stem-Weatherproof) specifications.

Model	: GTS-BR-
Dial Size	: 100mm(4")
Window	: Acrylics
Case Material	: SS304 / SS316
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2") / 5/8"
Stem Length	: 100mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)

Electrical Contact : 1SPST, 30VA@230VAC rated, adjustable over the entire range, normally open, closed on temperature rise or vice versa (specify action required)

Range	: -50°C to +600°C
Accuracy	: ±1%FSD (±2%FSD for 63mm dia)
Span	: Minimum 50°C
Over Range	: 125%FSD (110%FSD for ≥ 500°C)
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet
System	: Bimetal strip in helix form works on thermal expansion
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

7) Temperature Indicating Switch (Liquid Filled-Rigid Stem-Weatherproof) specifications.

Model	: GTS-LR
Dial Size	: 100mm(4")
Window	: Acrylic
Case Material	: SS304 / SS316
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2") / 5/8"
Stem Length	: 30mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)

Electrical Contact : 1SPST, 30VA@230VAC rated, adjustable over the entire range, normally open, closed on temperature rise or vice versa (specify action required)

Range	: -30°C to +250°C
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Accuracy	: $\pm 1\%$ FSD
Span	: Minimum 50°C
Over Range	: 125%FSD
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet
System	: Liquid filled, case compensated, accordance with SAMA Cl. IB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

8) Temperature Indicating Switch (Liquid Filled-Capillary-Weatherproof) specifications.

Model	: GTS-LC
Dial Size	: 100mm(4")
Window	: Acrylic
Case Material	: SS304 / SS316
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry
Stem Material	: SS304 / SS316
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 14mm / 1/4" / 3/8" / 1/2" / 5/8"
Stem Length	: 30mm to 1200mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Capillary	: SS304 tube / SS316 tube / SS304 tube SS304 armoured / SS316 tube SS316 armoured / SS304 tube SS304 armoured & PVC covered / SS316 tube SS316 armoured & PVC covered
Capillary Length	: 1 to 5 Mtrs.
Remote Connection	: MS surface mounting bolts / SS surface mounting bolts / MS panel mounting bracket / SS panel mounting bracket / MS 2" pipe mounting items / SS 2" pipe mounting items
Electrical Contact	: 1SPST, 30VA@230VAC rated, adjustable over the entire range, normally open, closed on temperature rise or vice versa (specify action required)
Range	: -30°C to +250°C
Accuracy	: $\pm 1\%$ FSD
Span	: Minimum 50°C
Over Range	: 125%FSD
Dial Material	: Aluminium, white background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bayonet
System	: Liquid filled, case compensated, accordance with SAMA Cl. IB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

9) Temperature Indicating Switch (Gas Filled-Rigid Stem-Weatherproof) specifications.

Model	: GTS-GR
Dial Size	: 100mm(4") / 150mm(6")
Window	: Acrylic
Case Material	: SS304 / SS316 / Die cast Aluminium(LM6)
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Back entry / Bottom entry / Every angle.
Stem Material	: SS304 / SS316 / SS310
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 1/4" / 3/8" / 1/2" / 5/8"
Stem Length	: 100mm to 4000mm below connection

Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Electrical Contact	: 1SPST, normally open, closed on temperature rise or vice versa / 2SPST, independently adjustable, one normally open other normally closed or both normally open or both normally closed / 1SPDT, single Micro-Switch / 2SPDT, double Micro-Switch
Range	: -200°C to +800°C
Accuracy	: ±1%FSD (indication) & ± 2% FSD (switching)
Span	: Minimum 80°C
Over Range	: 125%FSD standard (130% FSD on request upto 500°C)
Dial Material	: Aluminium, white anodized background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Screwed for Aluminium / Bayonet for SS.
System	: Gas(N ₂) filled, case compensated, accordance with SAMA Cl. VB/IIIB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

10) Temperature Indicating Switch (Gas Filled-Capillary-Weatherproof) specifications.

Model	: GTS-GC
Dial Size	: 100mm(4") / 150mm(6")
Window	: Acrylic
Case Material	: SS304 / SS316 / Die cast Aluminium(LM6)
Case Rating	: Weatherproof to IP65 / IP66 / IP67 / IP68
Entry	: Bottom entry-surface mounting / Bottom entry-2" pipe mounting
Stem Material	: SS304 / SS316 / SS310
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 1/4" / 3/8" / 1/2" / 5/8"
Stem Length	: 100mm to 4000mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Capillary	: SS304 tube / SS316 tube / SS304 tube SS304 armoured / SS316 tube SS316 armoured / SS304 tube SS304 armoured & PVC covered / SS316 tube SS316 armoured & PVC covered
Capillary Length	: 1 to 30 Mtrs.
Remote Connection	: MS surface mounting bolts / SS surface mounting bolts / MS panel mounting bracket / SS panel mounting bracket MS 2" pipe mounting items / SS 2" pipe mounting items
Electrical Contact	: 1SPST, normally open, closed on temperature rise or vice versa / 2SPST, independently adjustable, one normally open other normally closed or both normally open or both normally closed / 1SPDT, single Micro-Switch / 2SPDT, double Micro-Switch
Range	: -200°C to +800°C
Accuracy	: ±1%FSD (indication) & ± 2% FSD (switching)
Span	: Minimum 80°C
Over Range	: 125%FSD standard (130% FSD on request up to 500°C)
Dial Material	: Aluminium, white anodized background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Screwed for Aluminium / Bayonet for SS.
System	: Gas(N ₂) filled, case compensated, accordance with SAMA Cl. VB/IIIB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

11) Temperature Indicating Switch (Gas Filled-Capillary-Flameproof) specifications.

Model	: GTS-GCF
Dial Size	: 100mm(4") within 230mm x 255mm case
Window	: Toughened glass
Case Material	: Die cast Aluminium (LM6)
Case Rating	: Flameproof (IIA,IIB) & Weatherproof IP65 / IP66 / IP67 / IP68 Flameproof (IIA,IIB,IIC) & Weatherproof IP65 / IP66 / IP67 / IP68
Entry	: Bottom entry-surface mounting / Bottom entry-2" pipe mounting
Stem Material	: SS304 / SS316 / SS310
Stem Dia	: 6mm / 8mm / 10mm / 12mm / 1/4" / 3/8" / 1/2" / 5/8"
Stem Length	: 100mm to 4000mm below connection
Process Connection	: Material:-SS304 / SS316, Size:-1/4" / 3/8" / 1/2" / 3/4" / 1" / M18x1.5 / M20x1.5, Type:-NPT / NPSM / BSP / BSPP / BSPT / G / R / Rp, Shape:-Male (Adjustable) / Male (Fixed) / Female (Adjustable) / Female (Fixed)
Capillary	: SS304 tube / SS316 tube / SS304 tube SS304 armoured / SS316 tube SS316 armoured / SS304 tube SS304 armoured & PVC covered / SS316 tube SS316 armoured & PVC covered
Capillary Length	: 1 to 30 Mtrs.
Remote Connection	: MS surface mounting bolts / SS surface mounting bolts / MS 2" pipe mounting items / SS 2" pipe mounting items
Electrical Contact	: 1SPDT (single) Micro-Switch / 2SPDT (double) Micro-Switch
Range	: -200°C to +600°C
Accuracy	: ±1%FSD (indication) & ± 2% FSD (switching)
Span	: Minimum 80°C
Over Range	: 125%FSD standard (130% FSD on request up to 500°C)
Dial Material	: Aluminium, white anodized background with black markings.
Pointer	: Aluminium, black with micrometer adjustment
Reset	: Micrometer pointer
Bezel	: Bolted cover
System	: Gas(N ₂) filled, case compensated, accordance with SAMA Cl. VB/IIIB
Reference Standards	: ASME B40.3, EN13190 & IS/IEC60947/IEC60529

Note:- Specifications other than above offered on request. Refer "optional items list" or "accessories catalogue" for more details, if required

Testing & Calibration (on request):

1. Load test,
2. Cyclic test,
3. Friction test,
4. Altitude test,
5. Accuracy test,
6. Hysteresis test,
7. Insulation test,
8. Over range test,
9. Helium leak test,
10. Repeatability test,
11. Response time test,
12. Thermal stability test,
13. Mounting position test,
14. Vibration (rattling) test,
15. Case compensation test,
16. Dial printing stability test,
17. Capillary compensation test,
18. Hose down (water spray) test,

19. Ambient temp. Compensation test,
20. Bimetal gauge end nipple test,
21. Bimetal gauge hermetical sealing test,
22. High voltage test for contact Models,
23. Contact resistance test for contact Models,
24. Switching accuracy test for contact Models,
25. Life test for SPDT movement/contact Models

Optional (on request):

(1) Dual scale dials, (2) Color band dials, (3) Compound Range, (4) 130% over range, (5) $\pm 0.5\%$ FSD accuracy (6) Range in °F, (7) External reset, (8) Silicon filled case, (9) Glycerin filled case, (10) Over range & under range pointer stopper, (11) Wired Tag plate (12) Oil- and grease-free, (13) U-clamp, (14) 2" pipe mounting bracket, (15) Front panel, (16) Surface plate, (17) Adjustable connection sliding on capillary, (18) Relay to suit 5amp @230VAC (19) Spring loaded Connector (20) Spring loaded Nipple Union Nipple, (21) Stub with Clamp & Bracket for Skin/Surface temp temperature measurement, (22) Thermowell.

Note:

- 1) Specified is our standard specifications, others on request.
- 2) Calibration certificate (3 points) provided along with material.
- 3) Length depends on stem diameter & range, contact us to know the minimum stem immersion length essential for better sensing.
- 4) Liquid filled case recommended up to 400°C & not available with Switch assembly
- 5) Micro-Switch (SPDT) advantages are (a) Adjustable over entire range - rated 5amp @230VAC (3A@28VDC) (b) Relay not required with it (c) Imported assembly ie combination of movement & switch (d) It is compact & gives better switching accuracy.
- 6) SPST rated 30VA @230VAC offered in Aluminium Case
- 7) SPDT contacts offered in SS case & 2SPDT offered in 150mm dial
- 8) Relay for the contact assembly to suit 5amp @230VAC mounted separately
- 9) Blind temperature Switch (Weatherproof or Flameproof) on request
- 10) Recommend environment friendly Liquid or Gas filled Gauges instead of Mercury filled.
- 11) All specifications are indicative and are subject to change without any notice.



Bottom Entry



Back Entry



Every Angle



Bottom entry-surface mounting



Back entry-panel mounting



Switch-Flameproof/Bottom Entry-surface mounting/Capillary



Switch-Weatherproof/Bottom Entry-surface mounting/Capillary