 and non-Ex versions

- ◆ Measuring insert variants with ceramic and steel protective tubes, including mounting and installation fixtures
- ◆ Special variants with noble-metal protective tube for glass melts
- ◆ Installation lengths from 160 to 2000 mm, temperature range: -200 to 1800 °C
- ◆ Optionally with integrated 2-wire measuring transducer
- ◆ Available as standard or Ex version

Applications

GMCtherm thermocouples are used in practically all industry sectors. They also offer diverse options for use in motors, transformers, turbines, robots, piping systems, tanks, ovens and hardening baths.

Thermocouple Characteristic Values

Type	Sketch	Variant	Thermocouple ¹⁾	Dimensions [mm]	Protective tube material	Operating temperature [°C] ²⁾	Process interface
240		Standard Ex ³⁾	L J K	L = 100 ... 500	1.4571	to +800	None, 15 mm stop flange or adjustable fitting
244		Standard	L J K S	L = 500 ... 2000	1.4749 1.4762	to +1000	None, 22 mm stop flange or adjustable fitting
248		Standard Ex ³⁾	L J K	L ₁ = 100 ... 1110 L ₂ = 140	1.4571	to +800	Sleeve nut (or threaded union) M20x1.5, G½ M18x1.5, M27x2, G¾
254		Standard Ex ³⁾	L J K	L ₁ = 160 ... 400 L ₂ = 140	1.4571	to +800	Fixed fitting M20x1.5, G½A M27x2, G¾A
256		Standard	L J K	L ₁ = 100...1000 d = 3...14	1.4571	-200...+600	Fixed fitting M20x1.5, G½A
257		Standard Ex ³⁾	L J K	Dimensions L ₁ : L ₃ , d ₁ and d ₂ per DIN 43 772 (weld-on protective tubes, type 4) e.g. type D4 L ₁ = 200, L ₃ = 65 d ₁ = 24, d ₂ = 12.5 L ₂ = 140	1.4571 1.7335	to +800	Weld-in
260		Standard	L J K	L = 100 ... 2000	1.4571	to +800	For laboratory use or installation into protective fixtures
261		Standard Ex ³⁾	L J K	L = 100 ... 2000	1.4571	to +800	For laboratory use

Other dimensions and materials upon request

- 1) Standard values for L per DIN 43 710, for J, K and S per DIN EN 60 584
- 2) Operating temperature depends upon thermocouple and protective tube material.
- 3) BUZ type terminal housing for Ex version



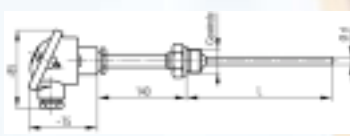
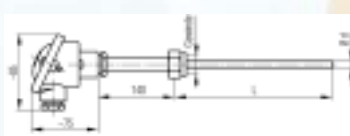


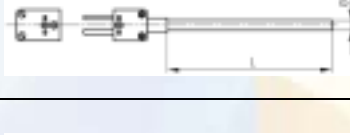
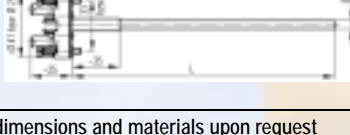
- ◆ Also available as measuring insert, and with protective tube and mounting fixture
- ◆ Diameters: 0.5 to 6 mm
- ◆ Temperature range: – 200 to + 1200 °C (types K and J)
- ◆ Optionally with integrated 2-wire measuring transducer
- ◆ Available as standard or Ex version

Applications

Flexible temperature sensors for use at difficult to access measuring points, and where high mechanical stressing occurs.

 and non-Ex versions

Sheathed Thermocouple Characteristic Values

Type	Sketch	Variant	Thermocouple ¹⁾	Dimensions [mm]	Protective tube material	Operating temperature [°C] ²⁾	Process interface			
270		Standard Ex ³⁾	L J K	Ø1.5: L max. 30000 Ø2.0: L max. 40000 Ø3.0: L max. 40000 Ø4.5: L max. 18000 Ø6.0: L max. 10000	1.4541 1.4571 1.4841 2.4816	–200 to +1000	Fixed fitting M20x1.5, G½A			
271		Standard Ex ³⁾					Sleeve nut M20x1.5, G½A			
272		Standard Ex ³⁾					Dimensions L ₁ , L ₂ , d ₁ and d ₂ per DIN 43 772 (weld-in protective tubes, type 4) e.g. type D4 L ₁ = 200, L ₃ = 65 d ₁ = 24, d ₂ = 12.5 L ₂ = 140	1.4571 1.7335	–200 to +800	Weld-in protective tube
273		Standard Ex ³⁾					None, solderable or adjustable fitting			
282		Standard					Ø1.5: L max. 30000 Ø2.0: L max. 40000 Ø3.0: L max. 40000 Ø4.5: L max. 18000 Ø6.0: L max. 10000	1.4541 1.4571 1.4841 2.4816	–200 to +1000	None, solderable or adjustable fitting Push-in connector upon request
285		Standard								None (for laboratory use or installation into protective fixtures), solderable or adjustable fitting

Other dimensions and materials upon request

- 1) Standard values for L per DIN 43 710, for J, K and S per DIN EN 60 584
 - 2) Operating temperature depends upon thermocouple and protective tube material.
 - 3) BUZ type terminal housing for Ex version
- Other variants upon request



- ◆ Measuring inserts and complete thermometers in standard fixtures, and special variants with custom tolerances
- ◆ Diameters: 3 to 24 mm
- ◆ Temperature range: – 200 to + 600 °C
- ◆ Optionally with integrated 2-wire measuring transducer
- ◆ Available as standard or Ex version

Applications

Temperature measurement systems for liquids and gases in tanks, piping systems and other apparatus.

Temperature measurements at surfaces, encapsulated miniature sensors with and without connector cable, variants for various climatic categories

and non-Ex versions

Resistance Thermometer Characteristic Values

Type	Sketch	Variant	Sensor ¹⁾	Dimensions [mm]	Protective tube material	Operating temperature [°C] ²⁾	Process interface
340		Standard Ex ³⁾	Pt100, Pt500, Pt1000 or as requested, single or double, accuracy class A, B or as requested, 2, 3 or 4-wire connection, various temperature ranges	L = 500 ... 2000	1.4571	–200...+600	None, 15 mm stop flange or adjustable fitting
348		Standard Ex ³⁾		L ₁ = 100 ... 1150 L ₂ = 140			Sleeve nut (or threaded union) M20x1.5, G½ M18x1.5, M27x2, G¾
354		Standard Ex ³⁾		L ₁ = 160 ... 400 L ₂ = 140			Fixed fitting M20x1.5, G½A, M27x2, G¾A
357		Standard Ex ³⁾		Dimensions L ₁ , L ₃ , d ₁ and d ₂ per DIN 43 772 (weld-in protective tubes, type 4) e.g. type D4 L ₁ = 200, L ₃ = 65 d ₁ = 24, d ₂ = 12.5 L ₂ = 140			Weld-in
360		Standard		L = 100 ... 2000			For laboratory use or installation into protective fixtures
361		Standard Ex ³⁾		L = 100 ... 2000			For laboratory use
372		Standard Ex ³⁾		L ₁ = 100 ... 1000 d = 3 ... 14			Fixed fitting M20x1.5, G½A
373		Standard		L ₁ = 100 ... 1000 d = 3 ... 14			Fixed fitting M20x1.5, G½A

Other dimensions and materials upon request

1) Standard values for L per DIN 43 710, for J, K and S per DIN EN 60 584

2) Operating temperature depends upon thermocouple and protective tube material

3) BUZ type terminal housing for Ex version