

Technical specification

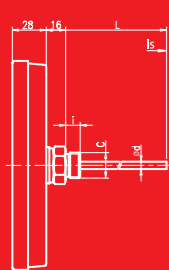
Characteristics	Units	Value	Characteristics	Value
Range lower limit	°C	≥ - 70	Calibration error, tolerance For measuring range ≤ 400°C according to EN 13190	Cl. 1
higher limit	°C	≤ + 600		
Full scale (EE) Δ T min.	°C	60	For measuring range > 400°C According to EN 13190	Cl. 2
	max.	°C		
Overload for range ≤ 400°C	%FS	20	Head environment	
	for range > 400°C	%FS		
- Max. instantaneous temperature	°C	550	Permissible T _{amb} *)	min. - 50°C max. + 100°C
			Degree of protection	IP65, IP67, on request
- Max. continuous temperature	°C	520	Humidity	0...100% h.r.
			Use in explosive atmospheres with safety glass	
Repeatability	%MR	≤ ± 0,2	EN 13463-1	EX II 2G/D c T4...6
Hysteresis	%MR	≤ ± 0,5	EN 13463-5	EX II 2G/D c T4...6
Reference T _{amb} = 23°C ± 2°C, according to EN 13190				
*) for thermometers without liquid filled			FS = Full scale MR = measuring range = 100% MR or acc. to EN 13190	
On request, these thermometers may be supplied in executions resistant to vibrations. According to the application (e.g. with liquid filling) to be specified when ordering.				

Continuous admissible pressure on the stem

AISI 304 (1.4301) / AISI 316L (1.4404)

d/temperature	0°C	100°C	200°C	300°C	400°C
d = 6 mm	110 bar	100 bar	80 bar	70 bar	60 bar
d = 8 mm	350 bar	310 bar	250 bar	210 bar	190 bar
d = 9 mm	425 bar	380 bar	300 bar	260 bar	230 bar

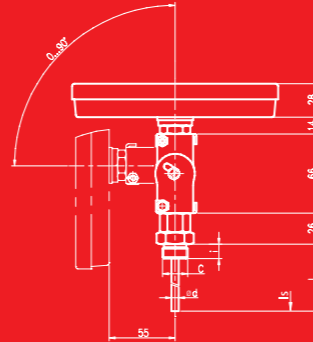
Use only with thread U, S, T
These values are valid for welded or non-welded and drawn tubes.
These values are not applicable when using AMX or AMU.



TMH100/130/160S



TMV100/130/160S



TMI100/130/160S

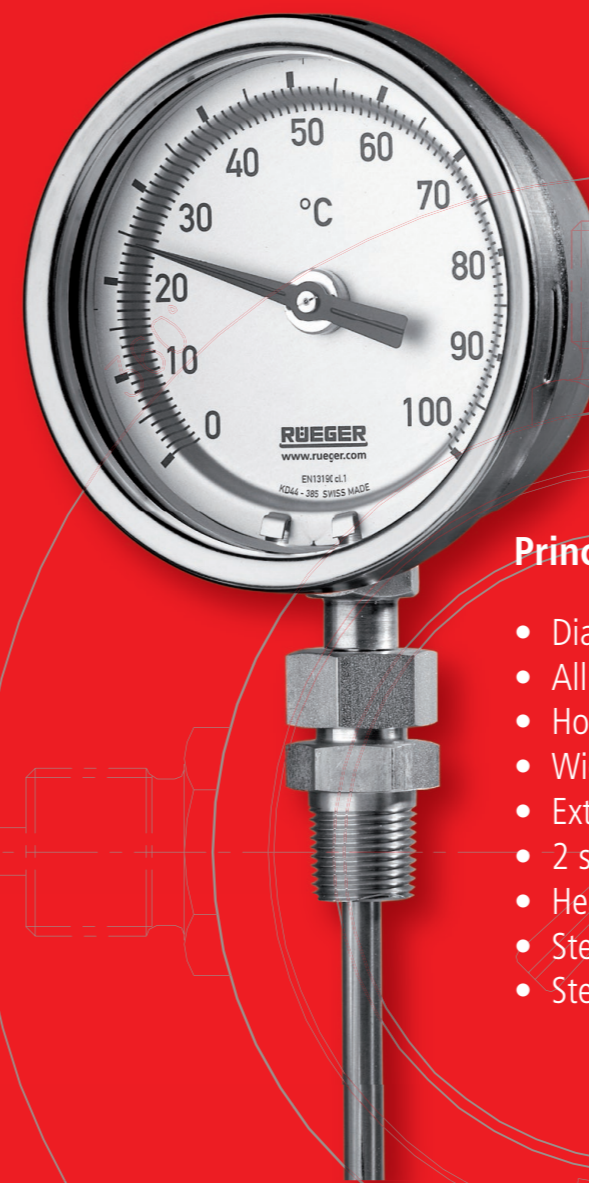
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Manufacturer of sensors and gauges for temperature & pressure
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Thermo-Modul TM

Modular range of bimetallic thermometers for industry



Principal characteristics

- Dial rotating 360°, with anti-parallax indication
- All in stainless steel
- Horizontal, vertical and every angle executions
- Wide selection of temperature range
- External and internal adjustment of 0°C in option
- 2 setting possibilities
- Head diameters: 100 (4"), 130 (5"), 160 (6") mm
- Stem lengths: 60 to 2000 mm
- Stem diameters: 6, 8, 9 mm

Applications

- Oil & Gas
- Chemical
- Petrochemical engineering
- Offshore
- Food processing
- Conventional and nuclear power generation, etc.
- Heavy duty service

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Modular range of bimetallic thermometers for industry

Head and bezel in stainless steel AISI 304/1.4301

Mineral glass (thickness: 4 mm)

Waterproof bezel with bayonet lock

● = Standard model, without extra price

○ = Standard model, with extra price

□ = Optional, with extra price



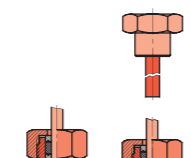


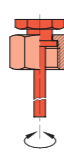
Horizontal types(H)
(back connected)



Vertical types (V)
(bottom connected)



Every angle types (I)
(rotating model)

With unthreaded shoulder A ø 15 x 10 mm in stainless steel AISI 303/1.4305	Head (ø nominal) 100 130 160 mm	TMH100A TMH130A TMH160A	TMV100A TMV130A TMV160A	TMI100A TMI130A TMI160A
		●	●	●
+swiveling and sliding threaded connection AMX a) + swiveling and sliding cap connection AMU b) - in stainless steel AISI 303/1.4305 AMU + AMX : minimum stem diameter 8 or 9 or integrated tube for reinforcement ø 9 x 40 mm for AMX or ø 9 x 70 mm for AMU		TMH...A + AM.	TMV...A + AM.	TMI...A + AM.
		□	□	□
With fixed threaded connection S - in stainless steel AISI 303/1.4305 - in stainless steel AISI 316/1.4401 (other threads on request, with extra cost)		TMH...S ● ○ ○ ● ○ ○ ○	TMV...S ● ○ ○ ● ○ ○ ○	TMI...S ● ○ ○ ● ○ ○ ○
With swiveling threaded connection T - in stainless steel AISI 303/1.4305		TMH...T ○ ○ ○	TMV...T ○ ○ ○	TMI...T ○ ○ ○
With swiveling cap connection U - in stainless steel AISI 303/1.4305		TMH...U ○ ○ ○ ○	TMV...U ○ ○ ○ ○	TMI...U ○ ○ ○ ○
Other connection types see data sheet TA 1				

Options

Unbreakable acrylic glass
Hardened glass
Safety glass
External setting device mounted on glass (ø 100 & 130 only)
Head and bezel in stainless steel AISI 316/1.4401 (ø 100 & 130 only)
Bimetallic measuring system with silicone grease for vibrations "C2", for working temperature between - 30°C and + 200°C
Liquid filling (-70°C + 250°C) (ø 100 & 130 only)
With index pointer mounted on glass (for control of the minimum or maximum temperature reached) (ø 100 & 130 only)
RÜEGER Calibration Certificate
ATEX execution possible with safety glass
With electrical and pneumatic contacts, see data sheet TK
With reinforced tube ø 9 mm if stem ø 6 mm (only for TMI+AMX / AMU)

Connection type

T M V 1 0 0 A

Connection types
 A = unthreaded shoulder
 S = fixed threaded connection
 T = swivelling threaded connection
 U = swivelling cap connection

Ø Nominal head diameters (100, 130, 160 mm)

H = horizontal
 V = Vertical
 I = Every angle

Modular range of bimetallic thermometers
 THERMO-Modul

Additional information

- Connection thread, material
- Stem diameter, length and material
- Temperature range
- Max length =
 Ø6 mm = 650 mm
 Ø8 et 9 mm = 2000 mm