

Product Information

Clamp-on temperature sensor GTL737



- Simple mounting via clamp-on adapter
- Process connection without media contact
- High accuracy even without thermal compound
- Fast response time
- Replacing/cleaning of the sensor without process interruption
- Pt100 sensor with integrated transmitter
- Transmitter programmable via GTL Configuration tool or buttons
- LCD on-site display, background illumination
- Output 4..20 mA, 2-wire connection

Characteristics

Clamp-on temperature sensor GTL737 is specified to measure temperatures without media contact. The measuring tip is directly located at the pipe wall and will be fixed by the clamp-on adapter on the pipe. This measuring process provides a high accuracy and a fast response time, which is often better than a measuring principle with media contact.

Technical data

Temperature sensor : Pt100, class A acc. to DIN EN 60751
 Measuring range : -20..+160 °C, programmable, minimal measuring span 50 °C
 Working temperature : -20..+60 °C
 Protection class : IP67
 (in connection with mounted M12 plug)
 Display : LCD, 3 ½ -digit, background illuminated

Electrical connection

Round plug : 4-pole, M12x1
 Supply voltage : 10..30 V DC, 2-wire connection
 Error indication : programmable
 -break of sensor : I > 22 mA (default setting)
 -short circuit : I < 3.7 mA

Response time/accuracy ¹⁾

Data without thermal compound, medium temperature 120 °C

Response time T₉₀ : approx. 10 s
 Accuracy : up to 2.5 % f.s. without pipe wall adjustment
 : up to 0.6 % f.s. with pipe wall adjustment

Data with thermal compound, medium temperature 120 °C

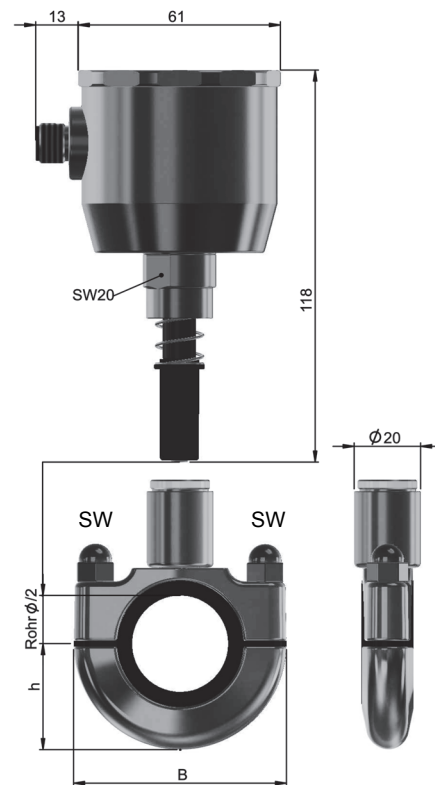
Response time T₉₀ : ca. 3 s
 Accuracy : up to 1 % f.s. without pipe wall adjustment
 : up to 0.3 % f.s. with pipe wall adjustment

Temperature coefficient : 0.02 %/°C

¹⁾ Measurement results depending on the mounting situation. The data are valid for horizontally assembled pipes.

- Output** : 4..20 mA
- Material**
- Sensor**
- Spring : 1.4310
 Sensor usage : PEEK
 Sensor tip : 935er silver
 Lid : 1.4305
 M12 plug : PA/gold plated contacts
 Weight : 500 g
- Clamp-on adapter**
- Adapter : 1.4405
 Housing : 1.4305
 Adapter insertion : silicone HTV/PTFE
- Weight**
- Frame size 1 : not available
 Frame size 2 : 170 g
 Frame size 3 : 395 g
 Frame size 4 : 955 g

Dimensions

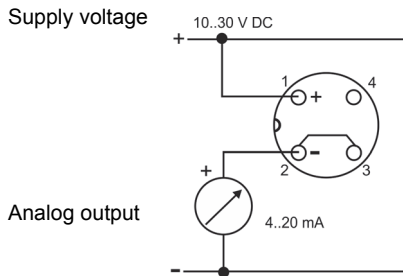


Frame size (Bg)	Pipe Ø [mm]	B [mm]	h [mm]	A/F [mm]
1		not available		
2	20.0..33.9	64	32	11
3	34.0..53.0	92	46	14
4a	60.3..75.9	133	68	14
4b	76.0..88.9	133	68	14

continued on next page

Product Information

Connection diagram



Clamp-on adapter

1. 2.
 RLA -

1.	Pipe diameter	
120*)	12,0 mm: DN10	DIN 11850 Reihe 1
130*)	13,0 mm: DN10	DIN 11850 Reihe 2
	12,7 mm: ½"	DIN 11866 Reihe C / ASME-BPE
135*)	13,5 mm: DN8	DIN 11866 Reihe B (ISO 1127)
172*)	17,2 mm: DN10	DIN 11866 Reihe B (ISO 1127)
180*)	18,0 mm: DN15	DIN 11850 Reihe 1
190*)	19,0 mm: DN15	DIN 11850 Reihe 2
	19,0 mm: ¾"	DIN 11866 Reihe C / ASME-BPE
213	21,3 mm: DN15	DIN11866 Reihe B
230	23,0 mm: DN20	DIN11850 Reihe 2
254	25,4 mm: 1 "	DIN11866 Reihe C / ASME-BPE
269	26,9 mm: DN20	DIN11866 Reihe B
280	28,0 mm: DN25	DIN11850 Reihe 1
290	29,0 mm: DN25	DIN11850 Reihe 2
337	33,7 mm: DN25	DIN11866 Reihe B
	34,0 mm: DN32	DIN11850 Reihe 1
350	35,0 mm: DN32	DIN11850 Reihe 2
381	38,1 mm: 1 ½ "	DIN11866 Reihe C / ASME-BPE
400	40,0 mm: DN40	DIN11850 Reihe 1
410	41,0 mm: DN40	DIN11850 Reihe 2
424	42,4 mm: DN32	DIN11866 Reihe B
483	48,3 mm: DN40	DIN11866 Reihe B
508	50,8 mm: 2 "	DIN11866 Reihe C / ASME-BPE
520	52,0 mm: DN50	DIN11850 Reihe 1
530	53,0 mm: DN50	DIN11850 Reihe 2
603	60,3 mm: DN50	DIN11866 Reihe B
635	63,5 mm: 2 ½"	DIN11866 Reihe C / ASME-BPE
700	70,0 mm: DN65	DIN11850 Reihe 2
761	76,1 mm: DN65	DIN11866 Reihe B
	76,2 mm: 3"	DIN11866 Reihe C / ASME-BPE
850	85,0 mm: DN80	DIN11850 Reihe 2
889	88,9 mm: DN80	DIN11866 Reihe B
999	customized diameter on request	
2. Options		
	00	without option

*RLA120-190 nur für GTL720 und GTL723

Ordering code

Note:
 In place order please specify the clamp-on sensor and the clamp-on adapter.

Order example:
 Transmitter, **GTL** measuring range 0..100 °C
 with clamp-on adapter **RLA** for DN32
 GTL737-2-M3-00 + RLA424-00

Clamp-on temperature sensor

GTL 1. - 2. - 3. - 4. - 5. - 6.

1. Design / input	
737	Pt100 with transmitter and display
2. Electric connection	
2	2-wire, 4..20 mA, M12 plug
3. Transmitter GTL737, default ranges (programming possible with GTL – Configuration tool via PC)	
M1	measuring range -10..+40 °C
M2	measuring range 0..50 °C
M3	measuring range 0..100 °C
M4	measuring range 0..150 °C
MB	transmitter with special measuring range in °C (state special measuring range separately e.g.: 20..130 °C)
4. Pipe wall adjustment for SS-type pipes (only GTL737)	
0	not active
1	without thermal compound
2	with thermal compound
5. Options	
00	without option
6. Certificate DIN EN 10204 (indicate only when required, multiple responses possible)	
WZ2.2	factory certification 2.2
APZ3P	acceptance test certificate 3.1 with 3 measuring points (0°C, 70°C + 1 test point freely selectable)

Accessories:

Thermal compound

Type

WLP10S, containing silicone,

- high thermal conductivity of 10.0 W/mK
- not drying out, silicone parts not flaking
- storage time up to 12 months at normal ambient conditions, from production date
- syringe containing 3 ml + pipette
- color: silver-gray

Type:

GTL – Configuration tool

- programming the GTL7xx via PC

Calibration certificate: on request

The temperature curves can be seen next page.

Product Information

Response time at different conditions

Note: measured with SS-type pipe Ø 29 mm, 1.5 mm pipe wall

