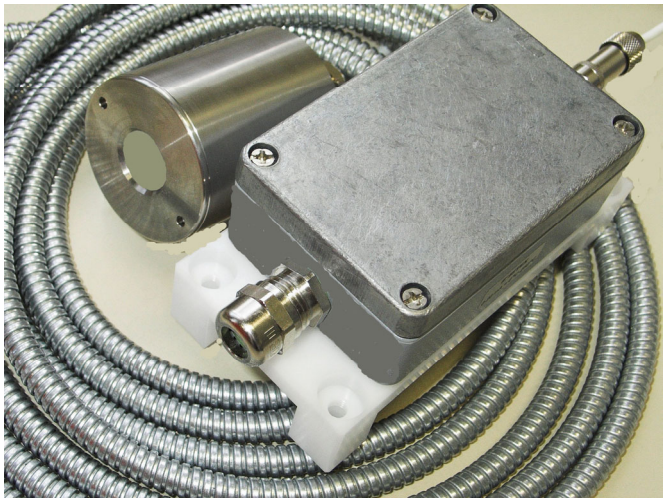
BARTEC

Thermophil® INFRA, R271

- **Contactless temperature measurement at high ambient temperatures.**
- **Robust and tight stainless steel casing IP65.**
- **Two-conductor-technology 4 - 20 mA**
- **Measuring head is pluggable**



Description

The stationary pyrometer of the type R271 is suitable for the contactless temperature measurement at high ambient temperatures.

This technology is very favourable as the sensor can be mounted near the measured object. No cooling of the sensor is required.
In the system technology no openings and cross-flow blowers are required. This results in a significant cost reduction.
The contact-free measuring principle makes especially sense if the measured object either has a low heat conductivity or is in movement or if a quick measurement is required.

This results in a variety of applications such as:
continuous furnaces for lacquer drying, textile and paper drying etc.

The quite small design of the measuring head permits the mounting even under extremely narrow space conditions

A silicon window tightly seals the optical system against the environment.

The connection cable of the sensor is also suitable for high ambient temperatures and is protected against damages by means of a corrugated pipe.

Communication takes place via HART® protocol.

Properties

- **Measurement range: 0 ... 250 °C**
- **Maximal ambient temperature: 250 °C at the measuring head**
- **Supply voltage: DC 12 - 30 V**
- **Interface: 4 - 20 mA with HART® protocol**
- **No influence of water vapour or CO_2**
- **Vibration-proof, no mechanically moved parts**
- **Evaluation electronics can be configured**

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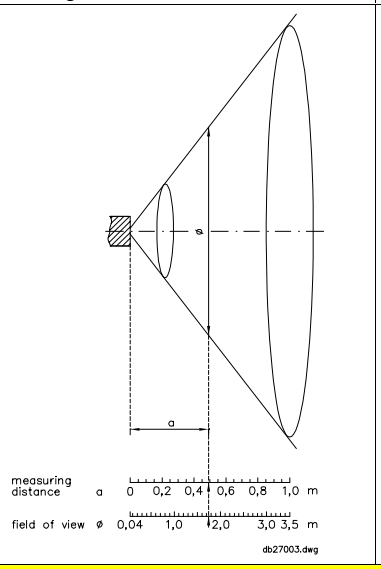
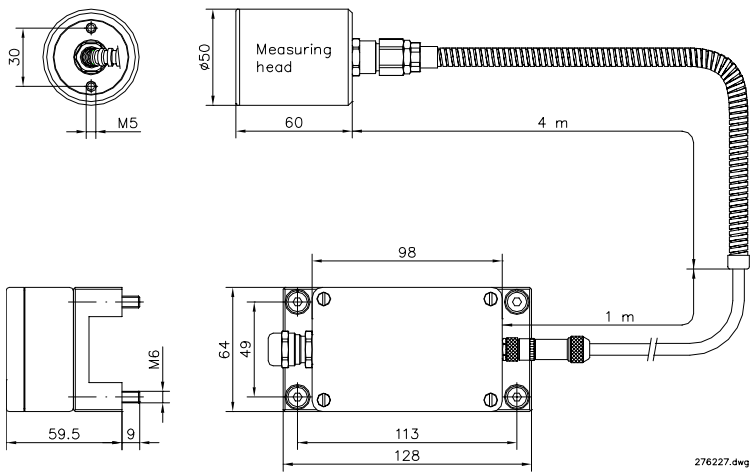
Technical data of evaluation electronics		
Input	Measuring head pluggable	
Interface	HART®protocol (FSK BELL 202, 1,2 kb/s)	
Functions (can be configured via HART® interface)		
Dimension	°C or °F	
Minimum and maximum value of measurement range	0...250 °C (32...482 °F)	
Emission factor	0,1...1	
Transmission factor	0,1…1	
Ambient conditions	20...250 (default 250 °C) (68...482 °F)	
Damping	0...999,9 s	
Maximum mode	0...999,9 s	
Minimum mode	0...999,9 s	
Fault current	3,9...21,5 mA	
Fieldbus address	0...15 (0 = point to point, 1…15 multidrop)	
Analog output		
Output signal	4...20 mA, linear	
Permissible load	≤ 500 Ω for standard version/U_H = 24 V	
Precision		
Measuring accuracy	≤ 2 % of measurement range	
Response time	$t_{0,9}$ = 6 s (without damping)	
Auxiliary energy		
U_H = DC 12...30 V , max. 23 mA, residual ripple ≤ 150 mV eff.		
Connection		
2 screw clamps 1,5 mm², I+, I-		

Ambient conditions	**Evaluation electronics**	**Measuring head with cable**
Permissible working temperature	0 ... + 70 °C	0 ... +250 °C
Permissible storage temperature	-10 ... +70 °C	-25 ... +250 °C
Climatic class	KWS in accordance with DIN 40040	
Mechanical data		
Casing material	Aluminium diecast	Stainless steel
Weight	350 g	1200 g
Protection type	IP 65	
Cable length	5 m	
Measuring field characteristics	**Dimensions**	





Ordering details

Designation	Ordering no.
Thermophil® INFRA R271	276227