

Temperature sensor

▶ GEL 2161

Platinum resistance thermometer

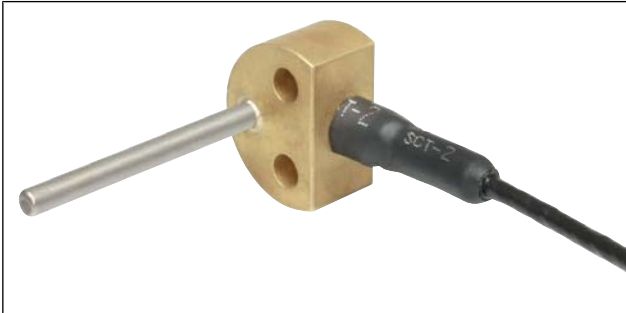
Pt100 / Pt1000

SENSORLINE

LENORD+BAUER

Technical information

Version 05.09



Description

- ▶ Compact and robust sensor can be used in harsh applications
- ▶ Cable finishing in combination with a speed sensor possible
- ▶ Simple flange mounting

Features

- ▶ Measuring temperature -40°C to +250°C
- ▶ Fire behaviour according to DIN 5510 and NF F16-101
- ▶ Protection class IP 68
- ▶ Type testing according to EN 50155

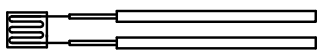

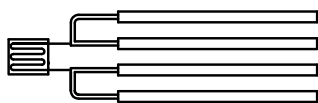
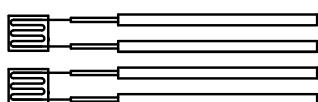
Fields of application

- ▶ Rail vehicle industry
- ▶ Automation

Technical data

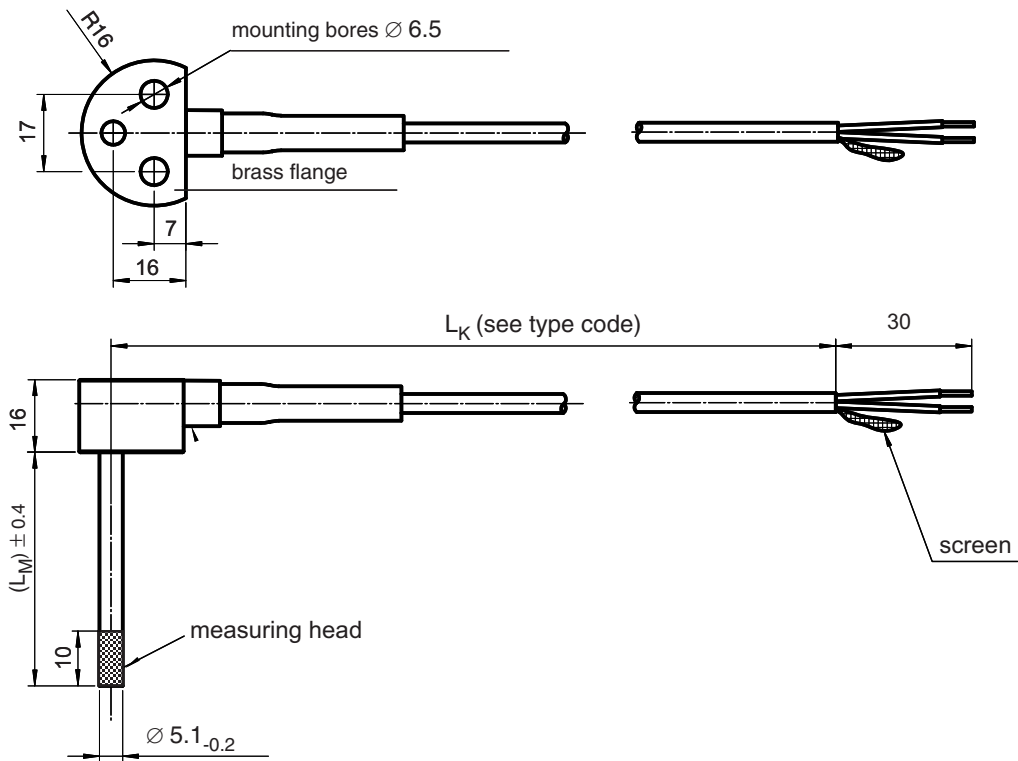
Cable type	A	B	C
Electrical data			
Measuring element	Pt100 / Pt1000 (DIN EN 60751 class B)		
Tolerance	Tolerance class B		
Messuring current	0.3 to 1 mA ⁽¹⁾		
Electromagnetic compatibility	Rail vehicles: EN 50121-3-2		
Insulation (EN 60439-1)	500 V AC		
Mechanical data			
Measuring temperature measuring head	-40°C to +250°C		
Operating temperature (housing / cable)	-40°C to +150°C	-40°C to +120°C	
Storage temperature	-40°C to +120°C		
Protection class	IP 68		
Vibration resistance (EN 61373 cat. 3)	300 m/s ²		
Shock resistance (EN 61373 cat. 3)	1000 m/s ²		
Type testing (EN 50155)	yes		
Material flange	brass		
Material measuring tube	stainless steel		
Diameter measuring tube	5 mm (6 mm on request)		
Active length measuring head	10 mm		
Weight sensor (incl. 2 m cable)	approx. 100 g		
Cable			
Electrical connection	cable screened (specification on request), cable outlet straight		
Cable length	≤ 100 m		
Cable diameter	3.8 mm	4.8 mm	5.4 mm
Cable cross section	4 x 0.14 mm ²		4 x 0.34 mm ²
Cable type	LK1112	LK1087	LK1088
Bending radius static / dynamic	10 x cable diameter		
Fire behaviour	-	DIN 5510 and NF F16-101	

Wiring diagram

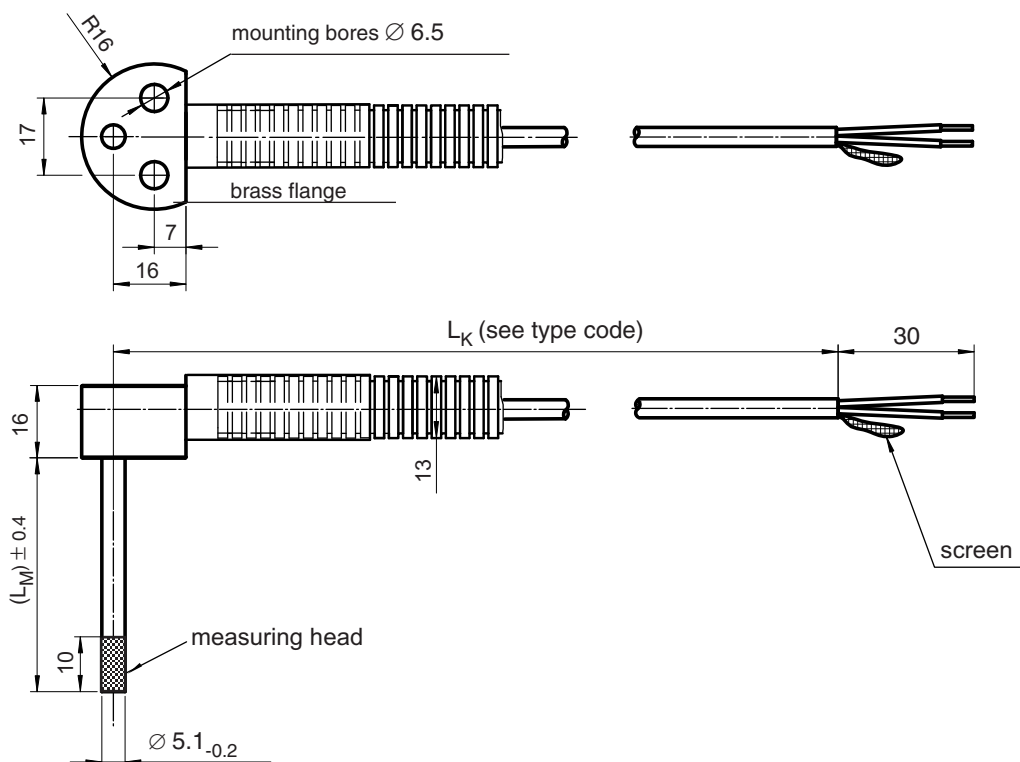
Wiring (Type code)	Illustration	Wire number (cable B/C)	Wire colour (cable A)
12		1 2	white red
13		1 2 3	white red blue/red
14		1 2 3 4	white blue/white red blue/red
22		1 2 3 4	white blue/white red blue/red

⁽¹⁾ A higher measuring current may lead to inaccuracies in measurement due to internal heat dissipation, up to 3 mA for Pt1000 and 10 mA for Pt100 is possible.

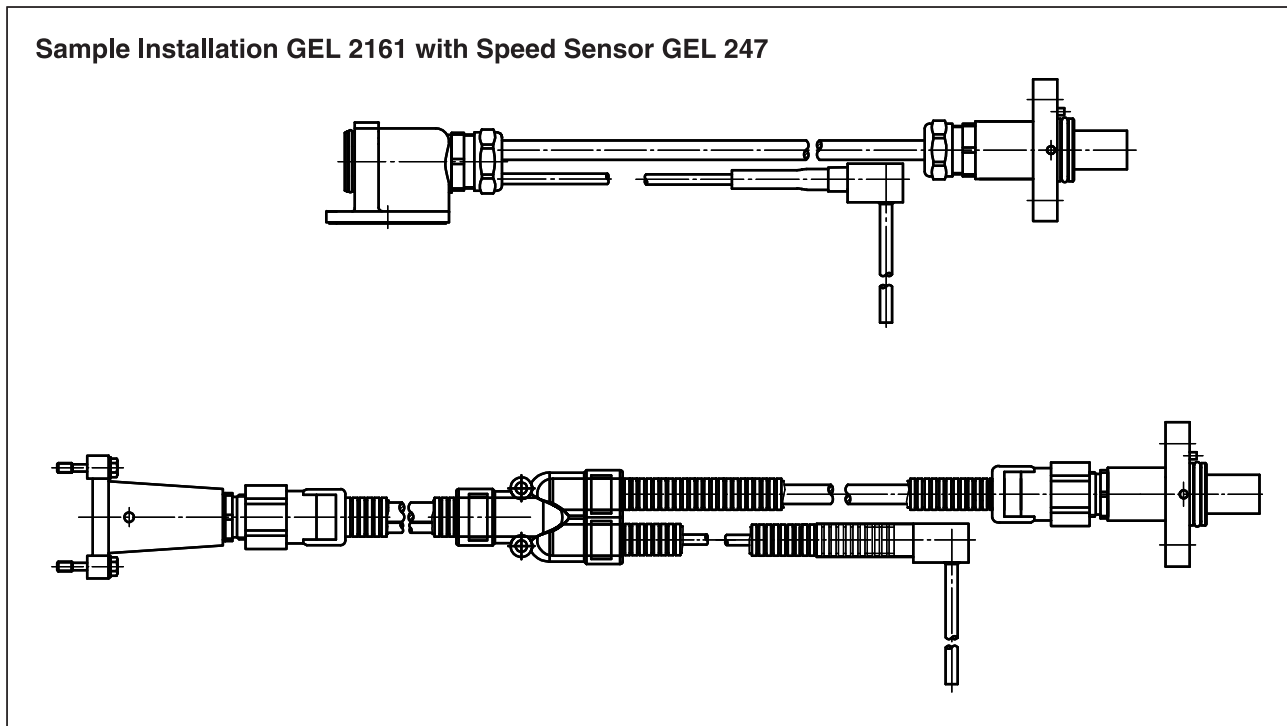
Dimensions GEL 2161 (Cable connection)



Dimensions GEL 2161 (Flexible conduit fitting)



Sample installation, type code



Type code

2161	Measuring element		
	C	Pt100	
	M	Pt1000	
	Connection		
	12	1 Pt100 / Pt1000 in 2-wire	
	13	1 Pt100 / Pt1000 in 3-wire	
	14	1 Pt100 / Pt1000 in 4-wire	
22	2 Pt100 / Pt1000 in 2-wire		
Cable screen			
L	connected to sensor housing		
P	not connected to sensor housing		
Measuring tube length (L_M)			
000	Length in mm		
Cable type (see Technical Data)			
A	PTFE cable, 4 x 0,14 mm ²		
B	non-halogen cable, 4 x 0,14 mm ²		
C	non-halogen cable, 4 x 0,34 mm ²		
Cable outlet			
K	cable		
W	flexible conduit DN 10		
Cable length (L_K)			
000	Cable length in cm		

Notes: For a special customized version a Y-No. will be created. A special version 2161Yxxx is manufactured according to a drawing or application description and could differ from the technical standard specification.

Subject to technical modifications and typographical errors.
For the latest version please visit our web site : www.lenord.de .