



USER MANUAL

# 8241

Grass Temperature Sensor



## Warranty

**Please note the loss of warranty and non-liability by unauthorized manipulation of the system. You need a written permission of the LAMBRECHT meteo GmbH for changes of system components. These activities must be operated by a qualified technician.**

The warranty does not cover:

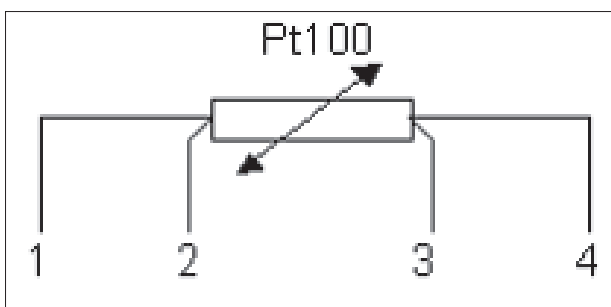
1. Mechanical damages caused by external impacts (e.g. icefall, rockfall, vandalism).
2. Impacts or damages caused by over-voltages or electromagnetic fields which are beyond the standards and specifications in the technical data.
3. Damages caused by improper handling, e.g. by wrong tools, incorrect installation, incorrect electrical installation (e.g. false polarity) etc.
4. Damages which are caused by using the device beyond the specified operation conditions.

## Function

The sensor 8241 is used for grass temperature measurements at a height of 50 mm above ground level. It contains an encapsulated platinum-resistor (type Pt100) which is connected to a fix-mounted cable, using 4-wire-technology. The entire assembly is rainproof and shielded against thermal influences by a protective roof.

## Cable type

We recommend a 4xAWG 20 C UL sw cable.



Ader Core	AWG C UL				Electric Wiring
	AWG-Farbcode		Colour code		
1	schwarz	sw	black	blk	J+
2	braun	br	brown	brn	U+
3	rot	rt	red	red	U-
4	orange	or	orang	ora	J-

## Remarks for operation

### MOUNTING

The sensor has to be mounted at a height of 50 mm. It has to be connected, using its connection-part, to a vertical tube with a maximum diameter of 15 mm.

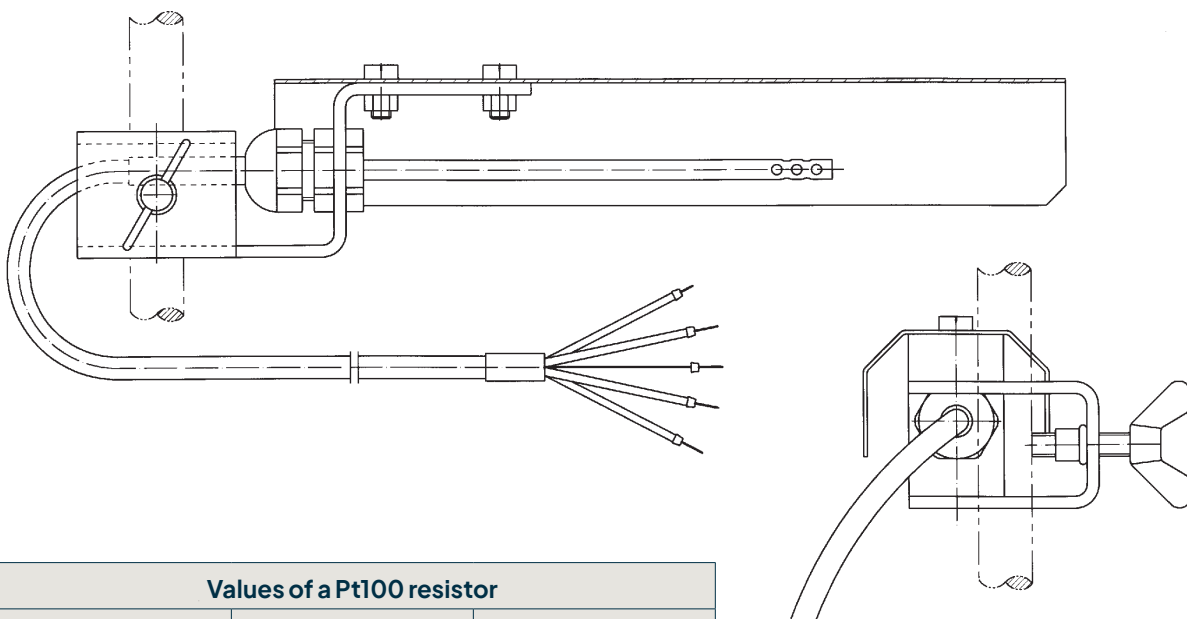
### MAINTENANCE

The sensor itself is maintenance-free. For best results, make sure that no vegetation is growing up and inside the sensor-system.

### FUNCTIONAL TEST

As a functional check, it is sufficient to verify the temperature value displayed on the measurement acquisition system. The value must be plausible and can be compared with a reference thermometer if necessary.

## Dimensional drawing



Values of a Pt100 resistor		
Temperature [°C]	Resistance [Ohm]	max. Deviation [°C]
-30	88.17	0.13
-20	92.13	0.12
-10	96.07	0.12
0	100.00	0.10
10	103.90	0.10
20	107.80	0.12
30	111.68	0.12
40	115.54	0.12

## Technical data

8241 GRASS TEMPERATURE SENSOR	
Id-No.	00.08241.000000
Accuracy	0.1 °C at 0 °C; according to DIN / ICE 751 (1/3 DIN)
Operating temperature range	-30...+70 °C
Sensor dimensions	length 120 mm; 5 mm Ø
Mounting device dimensions	250 x 60 x 45 mm (L x B x H)
Output	Pt100 resistor; 100 Ohm at 0 °C
Cable length	approx. 7.5 m
Weight	approx. 1 kg (incl. protection and mounting equipment)

## Disposal

LAMBRECHT meteo GmbH is listed and registered at the Stiftung Elektro-Altgeräte Register ear under:

**WEEE-Reg.-Nr. DE 45445814**

In the category of monitoring and control instruments, device type: "Monitoring and control instruments for exclusively commercial use".

### Within the EU



The device has to be disposed according to the European Directives 2002/96/EC and 2003/108/EC (Waste Electrical and Electronic Equipment). Do not dispose the old device in the household waste! For an environmentally friendly recycling and disposal of your old device, contact a certified disposal company for electronic waste.

### Outside the EU

Please follow the regulations in your country regarding the appropriate disposal of waste electronic equipment.