E650C-R

Moisture and temperature sensor for roof and gutter de-icing

PRODUCT OVERVIEW

Rod-shaped sensor E650C-R for combined measurement of temperature and moisture in gutters and adjacent areas, such as flat roofs and downpipes to be used with Elexant 650c-Modbus. Robust sensor made of brass, fully encapsulated. Extremely compact design with axial cable outlet and threaded bolt for fixing in position.

Mounting bracket for sensor E650C-R can be used with sensor height adjustment above the mounting surface. The mounting bracket can be matched to the mounting location by bending and then attached by gluing or soldering.

Two material versions of the bracket are available for compatible material combinations in gutter and flat roof applications.

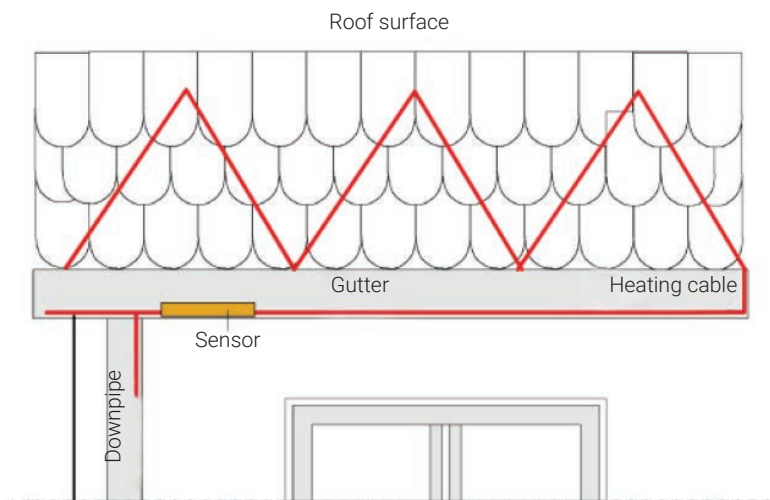### PRODUCT SPECIFICATIONS

Dimensions (in mm)
E650C-R: Ø 12 mm (without support rings), L 105 mm, M6 thread (including plastic nut and plain washers)
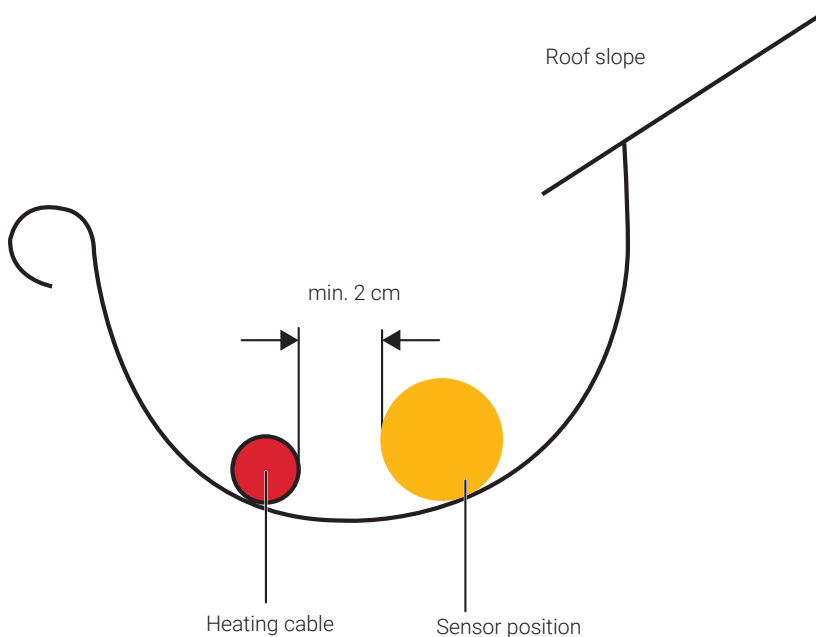**E650C-R-BRACKET-ZN (Zinc) / E650C-R-BRACKET-CU (Copper): W 80 mm, L 132 mm**

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Cable connection	Axial
Connection cable	4 x 0.5 mm² length 6 m
Temperature range	−30°C to 80°C
Temperature range for moisture measurement	−20°C to 30°C

Sensor installation

The sensor must be installed in such a way that melting water runs off across the sensor. It should be located as close as possible to the downpipe of the gutter (see figure 1 and 2 below). A mounting bracket is available as an accessory for the sensor in two material variants (can be used in gutters or on flat roofs). The mounting bracket enables better fixing and positioning of the sensor. Note for material compatibility: If the mounting bracket is to be used in a copper gutter, the variant made of copper is available for this case. Only with gutters made of plastic there are no material compatibility restrictions. When using the mounting bracket, the following must be observed: The metal of the sensor should not have any contact with the mounting bracket (use plastic washers accordingly). The mounting bracket can be fixed in gutters with the help of special mounting adhesives from the roofing supplies.
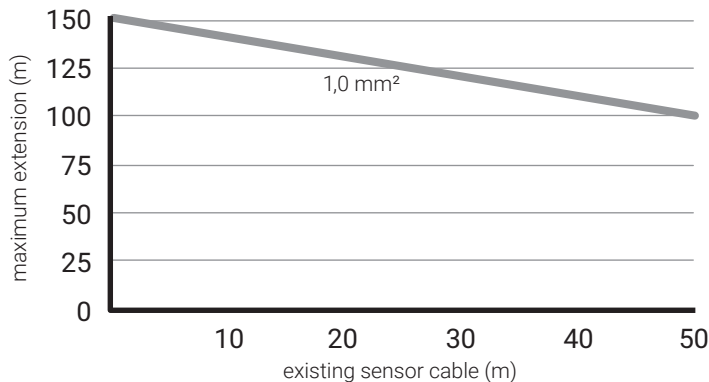
Sensor installation (side view).

Sensor installation (gutter view).

Sensor extension

If necessary, the sensor cable may be extended. Longer lengths require cables with a higher conductor cross-section. This can be determined with the help of the following diagram in three steps:

1. On the horizontal axis, search for the length of the cable that is already connected to the sensor.

2. From there, go up to the curve of the intended cable type.

3. Go left and read the maximum permissible length of the extension cable on the vertical axis.

E650C-R

ORDERING INFORMATION

Product Name	Product description	Reference Number	EAN
E650C-R	Moisture and temperature sensor for roof and gutter de-icing, 6 m, with zinc mounting bracket	1244-022795	5414506024678
E650C-R-BRACKET-ZN	Spare mounting bracket for roof and gutter de-icing sensor, zinc	1244-022798	5414506024708
E650C-R-BRACKET-CU	Spare mounting bracket for roof and gutter de-icing sensor, copper	1244-022799	5414506024715
Elexant 650c-Modbus	Controller for surface snow melting and roof and gutter applications with Modbus	1244-022835	5414506025002
SM-TF130-DI	External module for panel alarm digital input	1244-022836	5414506025019
GM-SEAL-02	Adhesive for roof and gutter brackets, polyurethane glue, 300 ml bottle	1244-012310	5414506014440

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