

- Indicates the intensity of precipitation (mm/min)
- Precipitation quantity can be calculated

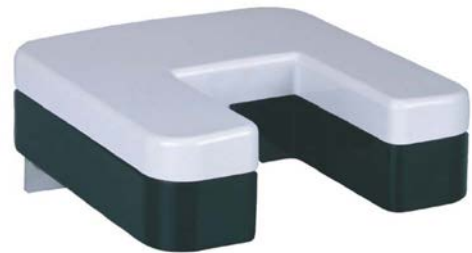
Description

The Thies Precipitation Intensity Sensor serves as measuring instrument for determination of the instantaneous precipitation intensities (mm precipitation / min). By integration of the precipitation intensities, the precipitation quantity can be calculated, as well. Control and warning signals can be derived from the precipitation intensity.

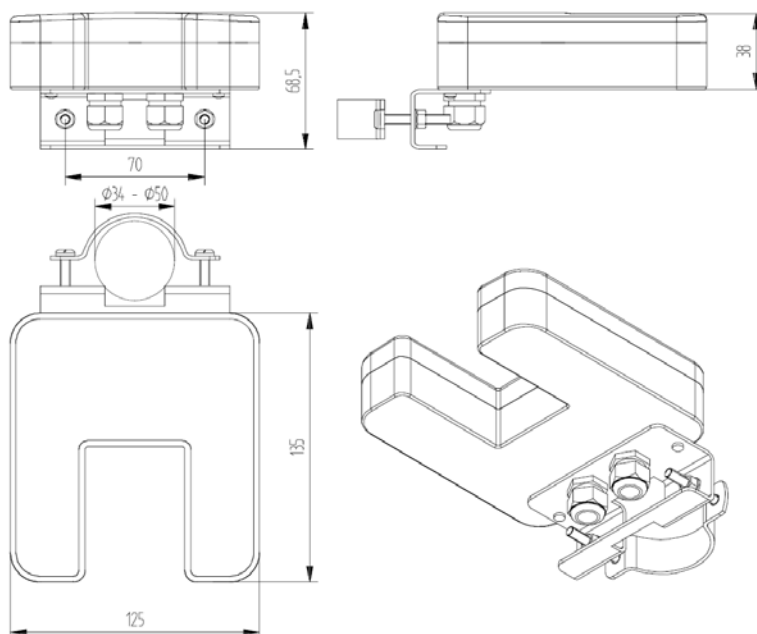
The measurement signal is output as intensity-dependent analog output value. The dimension of the measurement value output is divided into 4 linear characteristic segments, which show a tenth of the slope of the more sensitive segment. Thus, it is possible to represent an intensity range from approx. 0.001 mm/min (light drizzle) up to 10 mm/min (extremely heavy rain) with reasonable resolution (quasi-logarithmic output).

Precipitation in form of drizzle, rain, snow, or hail falls through a light band, induced by light diodes, and lead to shadowing effects on the receiving side. The sent light is pulse-modulated so that outside light effects cannot falsify the measurement result. From the extent of shading along with the duration of falling through a factor is calculated that gives the information if there is precipitation incident or not.

The instrument is equipped with a heating system for extreme weather conditions. Hence, ice and snow forming on the housing is prevented. In addition, the surface retains a temperature of $>0^{\circ}\text{C}$ by means of a regulated heating.



Dimensional drawing

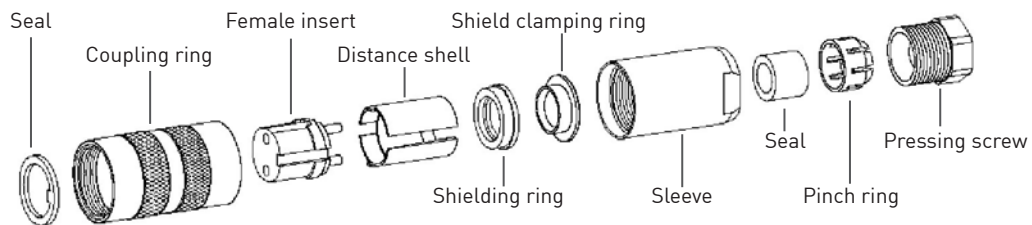


Specifications

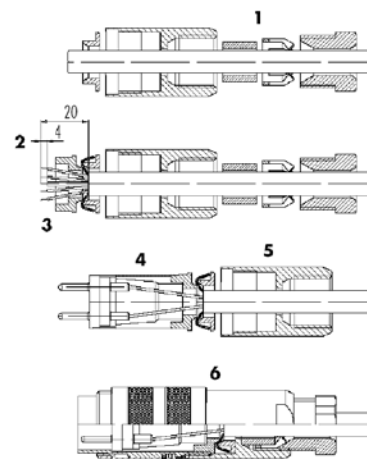
| Charateristic | Description / Value |
|------------------------|--|
| Measuring value | Intensity of precipitation |
| Measuring range | 0 ... 0.01 mm/min → 1.4 ... 8.0 mA 0.01 ... 0.1 mm/min → 8.0 ... 12.0 mA 0.1 ... 1.0 mm/min → 12.0 ... 16.0 mA 1.0 ... 10.0 mm/min → 16.0 ... 20.0 mA |
| Drop size | ≥ 0.2 mm |
| Operating range | |
| Ambient temperature | -30 ... 60°C |
| Electrical data | |
| Electrical supply | 24 V AC/DC ±15% @ approx. 90 mA (Heating current: max. 1A) |
| General | |
| Connection | 7-pole plug-connection or via clamp |
| Mounting | mounting on mast tube Ø 34 ... 50 mm |
| Dimension / Weight | 38 x 125 x 136 mm (Height x Width x Length) / 0.4kg |
| Protection | IP 65 |
| Manufacturer | Thies |

Plug and cable assembly

Coupling socket, Type: Binder



1. Stringing parts.
2. Stringing and widening of shield.
3. Assembling shield clamping ring
4. Soldering wire, tripping distance bush
5. Cutting off projecting shield
6. Assembling remaining parts according to plan



Sensor connection to Ammonit Meteo-40 data logger

| Sensor | Pin No. | Ammonit Cable Wire Colour | Meteo-40 Analog Current | Supply Sensor |
|-------------------------|---------|---------------------------|-------------------------|---------------|
| Precipitation Intensity | 4 | red | ACx (A) | |
| Supply | 1 | orange, orange | | 9 ... 36 V* |
| Ground | 2 | violet, violet | | |
| AGND | 3 | white | ACx (B) | |

* Supply voltage for usage with Meteo-40 data loggers.

Connect the shield logger-sided to Ground (GND)

Cable type: LiYCY 7 (6) x 0.25mm²

Sensor connection diagram to Ammonit Meteo-40 data logger

Precipitation Intensity Sensor

Meteo-40 Data Logger

