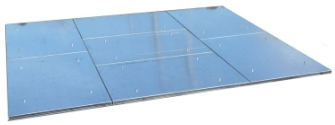

Snow Scale Roof SSR-2

Snow load measurement on flat or slightly inclined roofs

The snow scale SSR-2 is a measuring device for automatic and continuous measuring of snow load on flat roofs and roofs with an inclination of max. 5°. It is used for security issues of buildings and helps the facility manager and owner to reliably decide if there is an over-load for the roof statics with the current snow load.

Security on the roof

Extreme snow situations in winter and related roof collapses with personal injury show that the snow load measurement of flat roofs is a very important matter. Big amounts of snowfall followed by warm weather conditions with rain can be very critical for the statics of a roof. However, when exactly is the point reached, where the statics of the roof do collapse? How much snow is there on the roof already? Should there be done a clearing of the snow from the roof, which is very dangerous and cost intense, or is it still capable of carrying even more weight? Many very important questions, which can be easily solved by the installation of a SOMMER snow scale SSR-2.

Features and advantages

- Automatic, continuous roof load measurement
- Individual alarm possibilities
- Increased building security
- Easy installation and operation
- No structural work at the roof needed
- No water reservoirs through perforated plates
- Minimum self-weight
- Minimum effort for maintenance needed

Measuring principle and installation

The working principle of the SSR-2 is based on the measuring principle of load cells. The sensor consists of seven perforated panels. The measurement is carried out on the centre plate, the surrounding plates serve as a stabilizing zone. This guarantees very accurate measuring data also with high snow loads. Despite the wide area of the SSR-2 it has a very low self-weight, to not further stress the roofing. The snow scale SSR-2 is very easily installed. First, a protection mat is put on the roof above it the frame and plates of the SSR-2 are spread. After installing a fitting panel this can be fixed with weights. It is recomended that the installtion is done by a professional roofer. The snow scales can now be integrated into the buildings system and limit values for the alarm can be set.

Technical details

- **Measuring range** 1,000 / 2,000 mm SWE
- **Resolution** 0.1 kg/m² ? 0,1 mm SWE
- **Accuracy** 0.3 % (FS)
- **Measuring surface** 6.72 m²
- **Total weight** 130 kg
- **Dimensions** 2800 x 2400 x 103 (L x W x H mm)
- **Protection** IP 68
- **Power supply** 10 ... 30 VDC
- **Power input** max. 70 mA
- **Operating temperature** - 40 ... +80 °C
- **Maximal inclination** 5°
- **Output** SDI-12, RS-485 (ASCII and MODBUS), 4 ... 20 mA
- **Others** improved lightening protection
- **Total weight** 130 kg (16.37 kg/m²)
- **Others** cable, fitting panel, alarm system, data logging

Installation variations

Following variations for snow pressure and snow load measurement are possible:

- Snow scale is integrated into housing technology (4 - 20 mA signal is integrated)
- Snow scale with display
- Snow scale with display, alarm settings and information via relay contact to integrate into the housing technology
- Snow scale with data collection and measuring result logging (perpetuation of evidence), alarm settings and information via relay contact
- Snow scale with data collection and measuring result logging (perpetuation of evidence), alarm settings and information via relay contact as well as SMS or phone call
- Snow scale with data collection and measuring result logging (perpetuation of evidence), alarm settings and individual information send-out and data retrieval via modem
- Snow scale with data collection and measuring result logging (perpetuation of evidence), alarm settings and individual information and fully automated data retrieval via modem / network