

Ventilated radiation shield

Instruction for use

Application

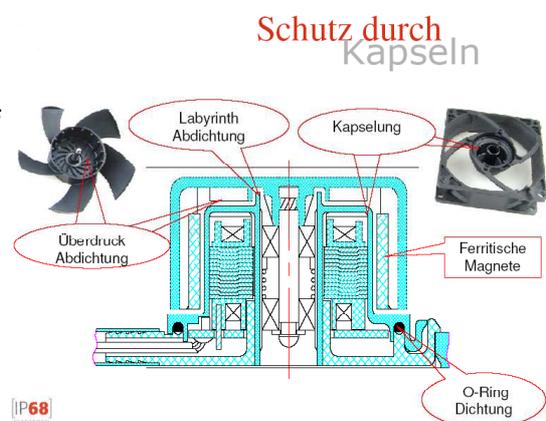


for the protection of an electronic thermometer and / or hygrometer against the influences of weather and radiation. The shield consists of white painted Aluminium. This design ensures a high reflectance and low thermal capacity and thus a very small influence of direct and indirect radiation on the measurement.

Construction and mode of operation

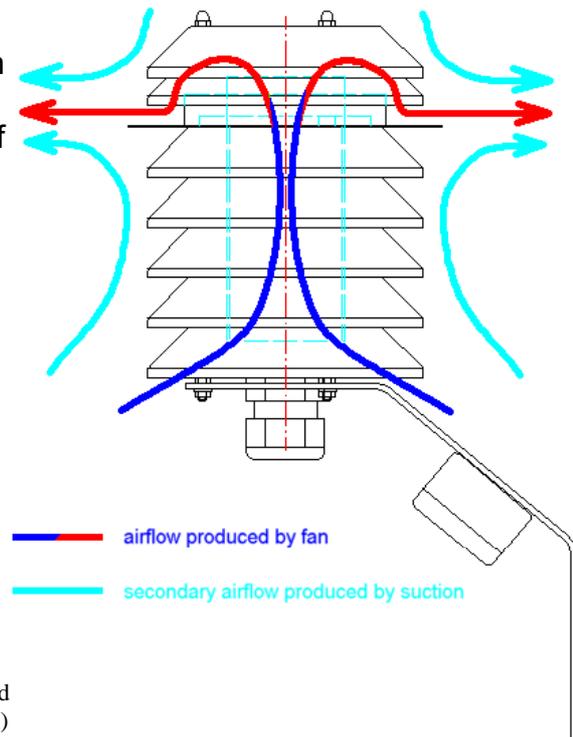
The artificial ventilation of the radiation shield consists of a brushless DC fan and a white-coated Aluminium tube with a diameter of 60 mm. The air velocity inside the tube is at least 1.5 m / s. This ensures an accurate measurement even with calm winds and low sun position.

The dust-and waterproof fan is due to its novel construction of a protection degree of IP68 and is therefore ideal suitable for outdoor use.



Due to the construction of the radiation shield a continuous airflow is achieved within as well as outside of the shield. The air is then blown out horizontally. A recirculation of the air will be avoided also at worst wind conditions.

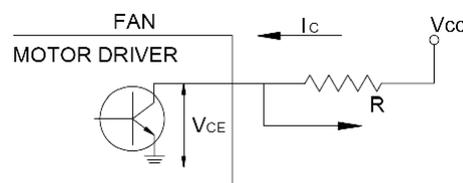
To monitor the fan speed, a frequency output proportional to the fan speed is available.



— air flow produced by fan
— secondary airflow produced by suction

Technical Data

supply voltage	: 10...30VDC, reverse polarity protected
power consumption	: < 3W (typ: 0,17A @12V)
noise	: 37dB(A)
type of bearing	: two ball bearings
live expectancy	: 70000h @ 40°C , 15...65%r.h.
air velocity	: >1.5 m/s within radiation shield
digital output	: 2Hz /revolution (nominal 140Hz @4200U) open collector, VCCmax 15V, I _c max 5mA, VCE(sat) max 1V, R> VCC/IC



suitable for	: series 4314xx and 4312xx
clamping diameter	: 9...14mm, (other clamping diameters optional available)
size of the ventilated space	: diameter 58 x 100mm
Mounting	: universal mast adapter for diameter 40 ... 80 mm, for mounting on vertical or horizontal masts
operation temperature	: -20 ... 70 °C
protection grade fan	: IP68
protection grade terminal housing	: IP55
material	: Aluminium, white coloured, stainless steel, terminal housing ABS
dimensions	: shield: diameter 160mm x height 180mm, total 160 x 225 x 380mm depth: 160mm
weight	: 1,6 kg

Connection

Position	Connection
-	supply ground
+	supply 10...30 VDC
GND	frequency output ground
6	frequency output VCC

The Fischer company reserves the right, to make changes/improvements to their products and specifications at any time without prior notice.

