

SEPA[®] CPU-COOLER

HF504B50C12, HF504B50C12A



COOLING of HIGH-CLASS CPUs

• FEATURES

Small and light. The ball-bearing fan on the heat sink is highly effective despite its height of only 34mm! This renders it highly suitable for high speed CPU's.

• VERY LOW POWER CONSUMPTION

An NdFe₂O₃ magnet ensures a high torque of the ball bearing fan motor and maximum conductance of heat and simultaneous low current consumption.

• HIGHEST RELIABILITY AND LIFE EXPECTANCY

The brushless motor is electronically commutated. A special IC is responsible for the electrical control. High reliability is achieved by 100% burn-in.

• SILENT

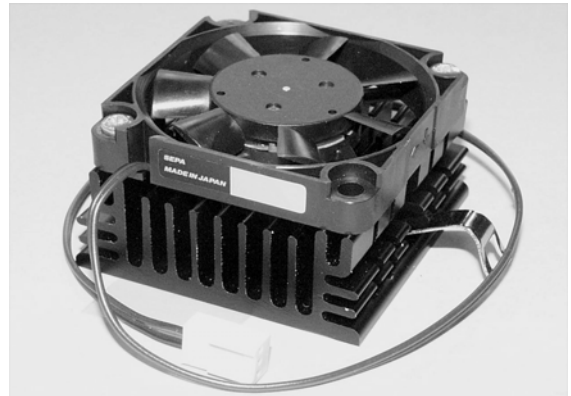
The air flow performance is increased and the noise reduced by computer-aided optimisation of the impeller and cooling surfaces.

• ATTACHMENT

Fixation with a metal-clamping bracket for PGA-Socket Nr. 5, Nr. 7 or A (to be supplied).

• ALARM-OUTPUT

An optional speed impulse output enables simple monitoring of the fan speed.



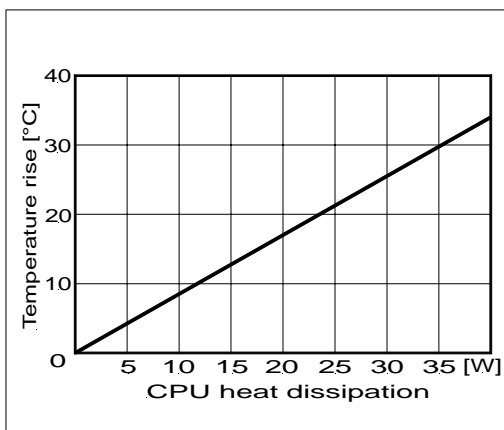
PERFORMANCE

Typ	Operating Voltage [VDC]	Operating Current [mA]	Therm. Res. [K/W] *)	Noise [dB(A)] **)	Op. Temperature (heat sink) °C	Life Expectancy L ₁₀ / MTBF [h @ 60°C]
HF504B50C12	10.2...12...13.8	140/100	1.25/0.99	29	-10 ... +80	75000 / 210000
HF504B50C12A	10.2...12...13.8	140/100	1.25/0.99	29	-10 ... +80	75000 / 210000

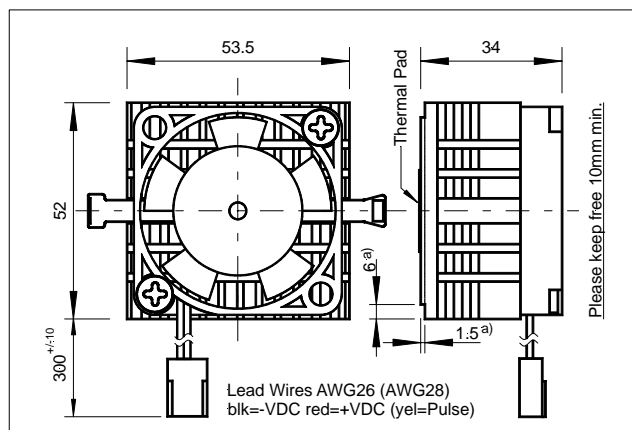
*) Value measured with / without thermal conductive pad

**) Measured at 1m from the side of the fan

COOLING PERFORMANCE



DIMENSION

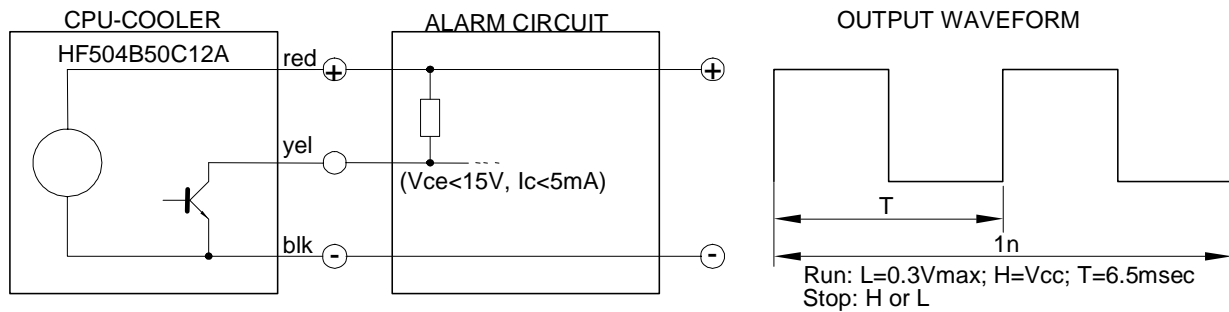


• **ALARM SIGNAL (Option ...A)**

The **SEPA**® HF504B50C12A includes a speed impulse output, which enables monitoring the correct function of the fan. An alarm-board is available on request.

The pulse is like a rectangular wave. The pulse frequency correlates to 2 x rotor speed, OC-output, a pull-up-resistor is needed. At blocked rotor the output signal could be L ($\leq 0.3V$) or H ($V_{cc} - 1.5V$).

IMPORTANT: The pulse output is *not* protected against short circuit and must not connect to GND or Vcc without series-resistor. Do not connect not used pulse output to GND or Vcc (insolate).



• **ACCESSORIES:**

ALG01 **SEPA** ALARM, monitor-circuit, generates an acoustic signal in case of missing pulses.
 VARP01 Speed control via temperature

• **ATTACHMENT:**

The HF504B50C12(A) will be fixed with an included metal-clamping bracket for PGA-Socket Nr. 5, Nr. 7 or A. A thermal conductive pad or (better) a little thermal conductive grease between CPU und CPU-Cooler is needed to get best cooling performance.

IMPORTANT: Do not touch the rotor!

• **ELECTRICAL PROTECTION:**

The HF504B50C12(A) is permanent protected against false pole of power supply and blocking rotor.

• **ORDER INFORMATION:**

HF504B50C12	SEPA CPU-Cooler 650, Ball Bearing, Mounting Clip, CE	215432001
HF504B50C12A	SEPA CPU-Cooler 650, Ball Bearing, Mounting Clip, Pulse, CE	215432011

SEPA® is the brand name for fans and CPU-Coolers, made by Nippon Keiki Works LTD., Tokyo