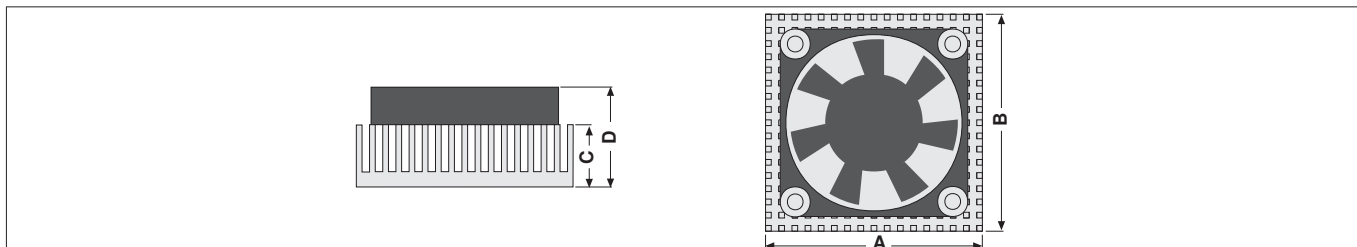




– easy assembly on ZIF socket by fixing clamp



art. no.	R _{th} [K/W]	suitable for processor type	dim. [mm]				
			A	B	C	D	
LA ICK PEN 8 F 05	2.50	AMD® K6-III/ IDT W2A/ Cyrix MII and similar/ MMX/ IDT C6/ Intel® Pentium®/ AMD® K6-2	50.8	50.8	8.00	9.00	
LA ICK PEN 8 F 12							
LA ICK PEN 8 W 05							
LA ICK PEN 8 W 12							
LA ICK PEN 16 W 12	1.20					16.51	26.51
LA ICK PEN 16 W 12 A							
LA ICK PEN 18 W 12						8.00	18.00
LA ICK PEN 38 W 12	1.60						
LA ICK PEN 38 W 12	1.10		49.5	49.5	38.00	48.00	
LA ICK PRO 25 F 12	0.97	Intel® Pentium® PRO	63.5	67.5	25.00	35.00	

used fans: 5 Volt = **Sepa MFB 50 E 05**; 12 Volt = **Sepa MFB 50 E 12/ Sepa MFB 50 E 12 A**;
LA ICK PEN 8: 5 Volt = **Sepa HFB 44 X 05 A**; 12 Volt = **Sepa HFB 44 B 12 A**

F = with double-sided thermally conductive adhesive foil

W = for thermally conductive adhesive (please order separately) **WLK ...** → E 72


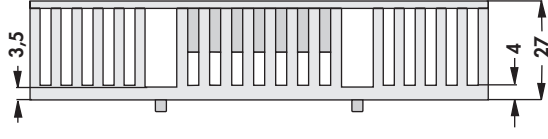
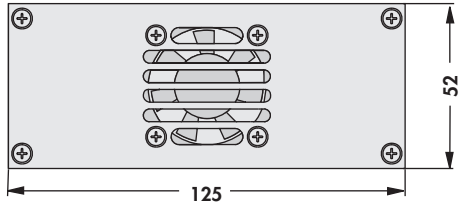
A = alarm exit

A

Active heatsinks for processors

– incl. one-sided adherent thermal foil


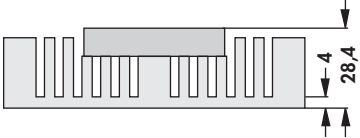
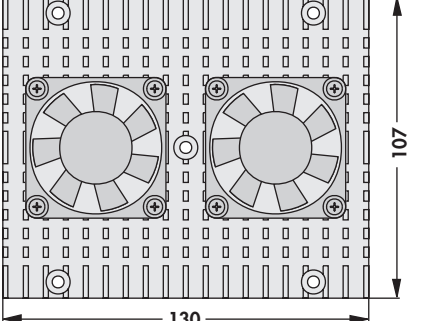
B

		
art. no.	R_{th} [K/W]	suitable for processor type
LA ICK PEN 2 K 12 ...	1.2	Intel® Pentium® II/ AMD® Athlon®
please indicate: ... accessories (optional) SM = molex connection plug		

utilized fans: 12 Volt = Sepa MFB 40 H 12

E

F

		
art. no.	R_{th} [K/W]	suitable for processor type
LA ICK PEN 3 XE ...	0.8	Intel® Pentium® III-Xeon™
please indicate: ... accessories (optional) A = alarm exit SM = molex connection plug		

fixing method: SB = screw fixing


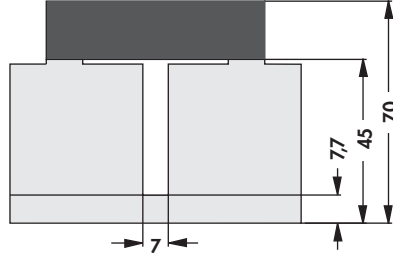
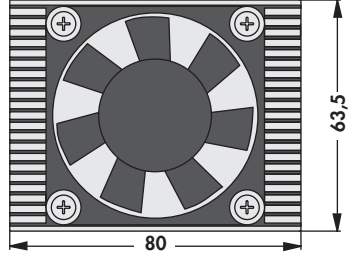
utilized fans: 12 Volt = Sepa MFB 50 E 12

– with copper base plate

– customer specific designs and modifications on request

I

K

		
art. no.	R_{th} [K/W]	suitable for processor type
LA ICK PEN 4 1 K ...	0.6	Intel® Pentium® IV
please indicate: ... accessories (optional) SM = molex connection plug		

fixing method: K = with fixing clamp

operating voltage of the fan motor: 12 Volt (Papst 612 NHH-118)

L

M



N



molex crimp case series: 2695; molex crimp terminals: 2759

– Sepa-fan 24 h BURN-IN tested

5 Volt Lüfter

	Sepa MFB 25 F 05 L	Sepa MFB 40 H 05	Sepa MFB 40 H 05 A	Sepa MFB 50 E 05	Sepa HFB 44 X 05 A	ebmpapst 405 F
circuit voltage	4.5...5.5 V DC	4.5...5.5 V DC	4.5...5.5 V DC	4.5...5.5 V DC	4.5...5.5 V DC	4.5...5.5 V DC
bearing type	double ball bearing	double ball bearing	double ball bearing	double ball bearing	ball bearing	double slide bearing
fan dimensions	25x25x10 mm	40x40x10 mm	40x40x10 mm	50x50x10 mm	44x44x6.2 mm	40x40x10 mm
cur. consumpt.	90 mA	90 mA	90 mA	50 mA	90 mA	140 mA
max. iuitial current	170 mA	250 mA	250 mA	120 mA	160 mA	
max. volume flow	46 l/min 2.8 m ³ /h	184 l/min 11 m ³ /h	184 l/min 11 m ³ /h	169 l/min 10.1 m ³ /h	50 l/min 3 m ³ /h	132 l/min 8 m ³ /h
max. static pressure	2.2 mmH ₂ O 22 Pa	3.1mm H ₂ O 30.5 Pa	3.1 mm H ₂ O 30.5 Pa	1.6mm H ₂ O 15.6 Pa	2.6mm H ₂ O 25.5 Pa	3.06mm H ₂ O 30 Pa
noise level	18 dB(A), 1 m lateral	24 dB(A), 1 m lateral	24 dB(A), 1 m lateral	17 dB(A), 1 m lateral	28 dB(A), 1 m lateral	22.1 dB(A), 1 m lateral
temperature range	-10°C ... +85°C	-40°C... +80°C	-40°C... +80°C	-10°C... +70°C	-40°C... +80°C	-20°C... +70°C
failure rate (L₁₀)	95,000 h	95,000 h	95,000 h	95,000 h	95,000 h	45,000 h (20°C)
MTBF	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	
weight	8 g	13 g	13 g	19 g	7 g	17 g
cases	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E38324)

12 Volt Lüfter

	Sepa MFB 25 F 12	Sepa MFB 40 H 12	Sepa MFB 40 H 12 A	Sepa MFB 50 E 12	Sepa HFB 44 B 12 A	ebmpapst 412 F
circuit voltage	10.2...13.8 V DC	10.2...13.8 V DC	10.2...13.8 V DC	10.2...13.8 V DC	10.2...13.8 V DC	10-14 V DC
bearing type	double ball bearing	double ball bearing	double ball bearing	ball bearing	ball bearing	double slide bearing
fan dimensions	25x25x10 mm	40x40x10 mm	40x40x10 mm	50x50x10 mm	44x44x6.2 mm	40x40x10 mm
cur. consumpt.	70 mA	50 mA	50 mA	50 mA	40 mA	60 mA
max. iuitial current	150 mA	130 mA	130 mA	140 mA	70 mA	
max. volume flow	70 l/min 4.1 m ³ /h	173 l/min 10.3 m ³ /h	173 l/min 10.3 m ³ /h	238 l/min 14.3 m ³ /h	50 l/min 3 m ³ /h	132 l/min 8 m ³ /h
max. static pressure	2.24mm H ₂ O 41.5 Pa	2.9 mmH ₂ O 28.5 Pa	2.9 mmH ₂ O 28.5 Pa	2.7mm H ₂ O 26.9 Pa	2.6mm H ₂ O 25.5 Pa	3.06mm H ₂ O 30 Pa
noise level	23 dB(A), 1 m lateral	24 dB(A), 1 m lateral	21 dB(A), 1 m lateral	22 dB(A), 1 m lateral	28 dB(A), 1 m lateral	22.1 dB(A), 1 m lateral
temperature range	-40°C... +80°C	-40°C... +80°C	-40°C... +80°C	-10°C... +70°C	-40°C... +80°C	-20°C... +70°C
failure rate (L₁₀)	95,000 h	95,000 h	95,000 h	95,000 h	95,000 h	45,000 h (20°C)
MTBF	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	280,000 h (20°C)	
weight	8 g	13 g	13 g	19 g	20 g	17 g
cases	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E54695)	plastic PBT (UL E54695)	steel/aluminium (UL E54695)	plastic PBT (UL E38324)

Fans with pulse output - Technical data of fans with pulse output:

- pulse output for activation of the alarm control
- pulse similar to a square pulse with three times the frequency of the rotor speed
- when the rotor is blocked, the output signal may be L (≤ 0.8 V) or H ($V_{cc}-1$ V)
- the pulse output must not be connected to GND or Vcc withoutb protective resistor (> 10 K)
- in order to avoid short circuits, the pulse output not being used must be insulated