

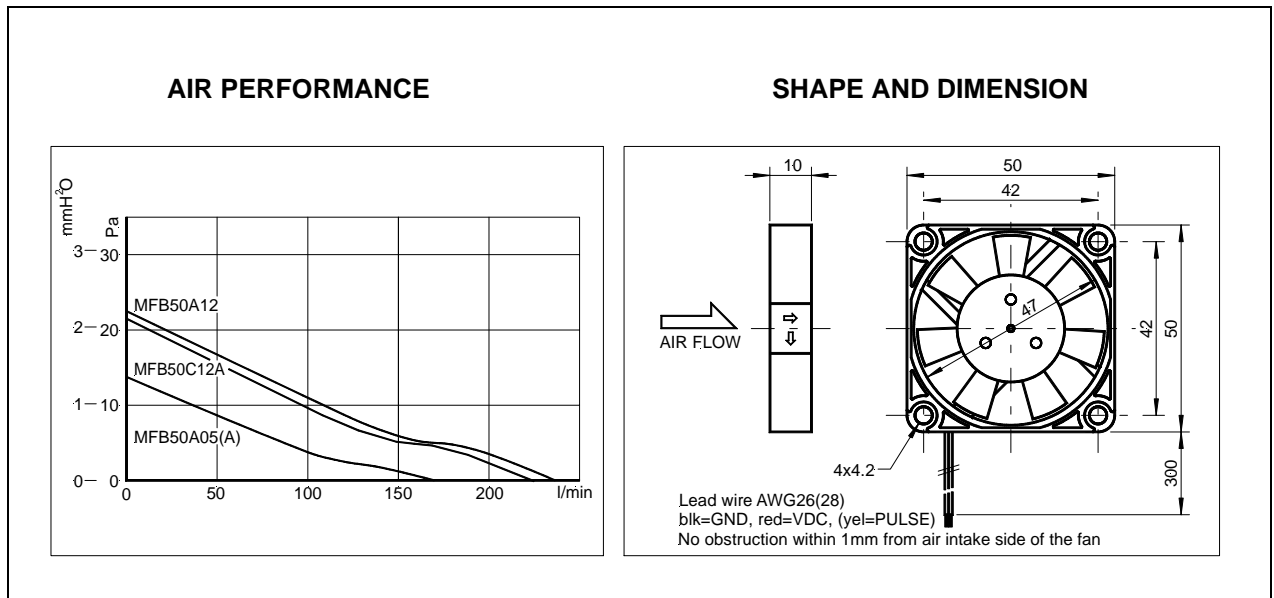
SEPA[®] BRUSHLESS FAN

MFB50A05(A), MFB50A12, MFB50C12A



HIGH RELIABILITY FAN

AUTOMOTIVE FAN



PERFORMANCE

CE	MFB50A05(A)	MFB50A12	MFB50C12A
Operating Voltage [V]	4,5...5,0...5,5	10,2...12,0...13,8	
Operating Current [mA]	150	90	100
Max. Start Current [mA]	210	140	140
Max. Air Flow [l/min - m ³ /h]	170 - 10,2	230 - 13,8	230 - 13,8
Max. Air Pressure [mmH ₂ O - Pa]	1,4 - 13,7	2,3 - 22,6	2,3 - 22,6
Typ. Noise @ 1m [dB(A)]	15	23	23
Operating Temperature [°C]	-40...+80 (+85 for 2h max.)		
Rotor Speed [RPM]	3400	4300	4150
Life Expectancy L ₁₀ /MTBF @20°C [h]	95000/280000		
Bearing System	ball bearing ZZ		
Weight [g]	30		
Pulse Output (MFB50xxxA only)	3 Pulses / Rev.	-	2 Pulses / Rev.
Packing Quantity [PCs]	50 - 100 - 500		

These **SEPA**[®] high-tech miniature fans are suitable for industrial or automotive use and have a remarkable air flow performance despite its small dimensions. Due to a nearly linear air performance characteristic, the fans are applicable for different uses. They are permanently protected electrically against reverse polarity, blocking and thermal overloading. Due to the low rotor weight and precision balancing, they are virtually vibration-free. They are also insensitive to shock.

Further features of these fans are their extremely robust and torsionally rigid plastic housing of PBT (UL E54695), ball bearings with narrow tolerances, of special steel, polyester-based PCB (UL E44247) and absolute reliability due to 100% burn-in.

• **ALARM SIGNAL (Optional)**

The **SEPA**® MFB50xxx(A) include a pulse output, which allows monitoring the correct function of the fan. An alarm-board is available on request.

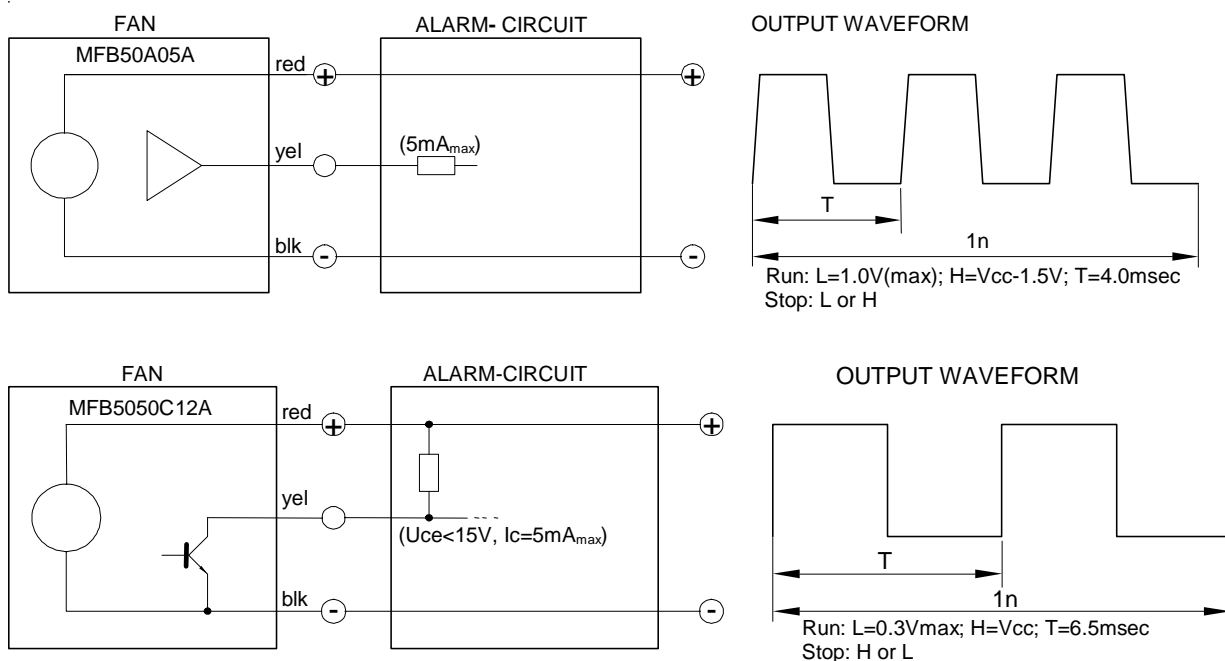
MFB50A05A: The pulse is like a rectangular wave, the frequency correlates to 3 x rotor speed. At blocked rotor the output signal could be L ($\leq 1.0V$) or H (4.0V). A pull-up-resistor is not needed (push-pull).

MFB50C12A: The pulse is like a rectangular wave, the frequency correlates to 2 x rotor speed. At blocked rotor the output signal could be L ($\leq 0.3V$) or H (12V). A pull-up-resistor is needed.

IMPORTANT: The pulse output is *not* protected against short circuit and must not connect to GND or Vcc without pre-resistor.

Do not connect not used pulse output (insolate).
Do not touch the rotor!

The MFB50xxx(A) have tinned lead wire ends (without connector).



• **ACCESSORIES:**

ALG01 **SEPA** ALARM, monitor-circuit, generates an acoustic signal in case of missing pulses.
CONNECTOR on request

• **ORDER INFORMATION:**

MFB50A05	SEPA fan 50x50x10mm, 5VDC, ball bearing, CE	515011000
MFB50A05A	SEPA fan 50x50x10mm, 5VDC, pulse, ball bearing, CE	515011010
MFB50A12	SEPA fan 50x50x10mm, 12VDC, ball bearing, CE	515012000
MFB50A12MOL	SEPA fan 50x50x10mm, 12VDC, ball bearing, CE with connector MOLEX 1051-03 or equiv.	515012001
MFB50C12A	SEPA fan 50x50x10mm, 12VDC, pulse, ball bearing, CE	515032010
MFB50C12AMOL	SEPA fan 50x50x10mm, 12VDC, pulse, ball bearing, CE with connector MOLEX 1051-03 or equiv.	515032011

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