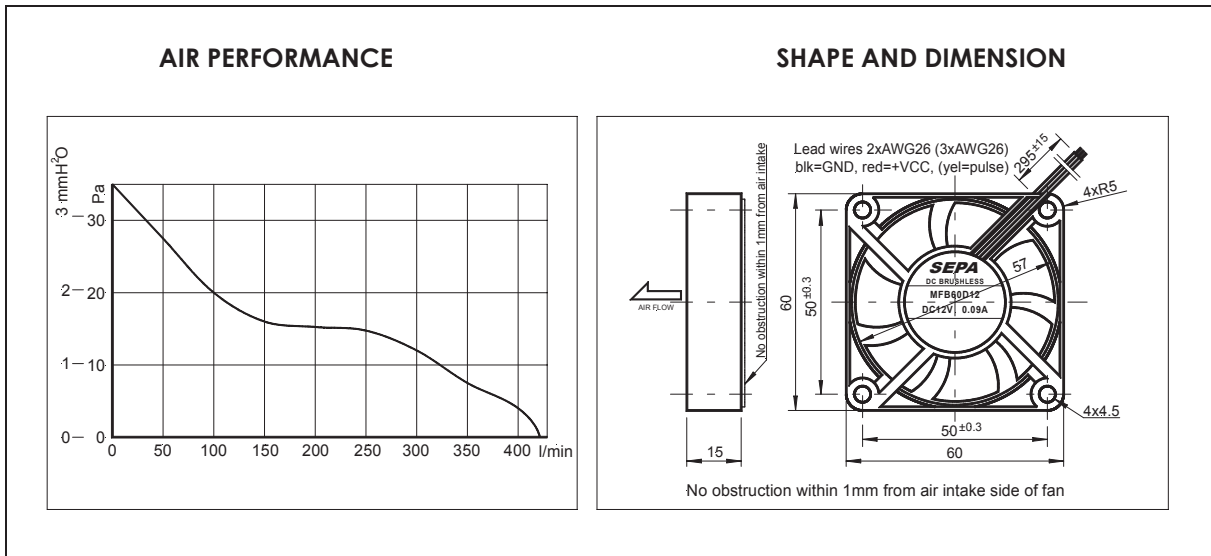


**MFB60D05, MFB60D12, MFB60D24**

**BRUSHLESS, HIGH RELIABILITY FAN**

AUTOMOTIVE FAN



## PERFORMANCE

CE	MFB60D05(A)	MFB60D12(A)	MFB60D24(A)
Operating Voltage [VDC]	4.5 ... 5.0 ... 5.5	10.2 ... 12 ... 13.8	20.4 ... 24 ... 27.6
Operating Current [mA]	180	90	50
Start Current [mA]	500	200	110
Max. Air Flow [l/min - m <sup>3</sup> /h]	420 - 25.2	420 - 25.2	420 - 25.2
Max. Air Pressure [mmH <sub>2</sub> O - Pa]	3.6 - 35	3.6 - 35	3.6 - 35
Typ. Noise @ 1m [dB(A)]	26	26	26
Operating Temp. (1h max, not blocked) [°C]	-40...+80 (85)		
Rotor Speed [RPM]	3800	3800	3800
Life Expectancy L <sub>10</sub> /MTBF @ 20° [h]	95000/280000		
Bearing System	2 ball bearings ZZ in metal flange		
Weight [g]	38		
Pulse Output (MFB60DxxA only)	2 pulse / rev.		
Packing Quantity [PCs]	50 - 100 - 250		

This **SEPA**<sup>®</sup> high-tech miniature fans are suitable for industrial use and has a remarkable air flow performance despite its small dimensions and low power consumption. Due to a nearly linear air performance characteristic, the fans are applicable for different uses. They are permanently electrically protected against blocking and thermal overloading. Due to the low rotor weight and precision balancing, it is virtually vibration-free. It is also insensitive to shock.

Further features of these fans are its 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.

Technical changes without notice • 07/09

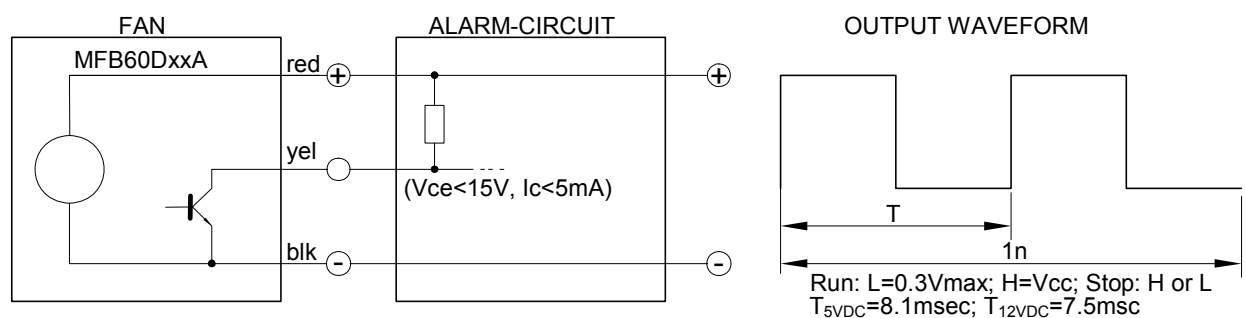
#### • Alarm Signal (Optional)

The **SEPA**® MFB60DxxA include 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 frequency correlates to 2 x rotor speed. At blocked rotor the output signal could be L ( $\leq 0.3V$ ) or H ( $V_{cc}$ ).

**IMPORTANT:** The pulse output is *not* protected against short circuit and must not connect to GND or  $V_{cc}$  without series-resistor. A pull-up-resistor is needed.

Do not connect pulse output wire to GND or  $V_{cc}$  (insolate)  
 In case of reverse connection the fan could be destroyed!  
 The MFB60Dxx(A) have tinned lead wire ends (without connector).



**IMPORTANT:** Do not touch the impeller!

#### • Accessories:

CONNECTOR: on request

#### • Order information:

MFB60D05	<b>SEPA</b> fan, 60x60x15mm, 5VDC, ball bearing, <b>CE</b>	516041000
MFB60D05A	<b>SEPA</b> fan, 60x60x15mm, 5VDC, pulse, ball bearing, <b>CE</b>	516041010
MFB60D12	<b>SEPA</b> fan, 60x60x15mm, 12VDC, ball bearing, <b>CE</b>	516042000
MFB60D12A	<b>SEPA</b> fan, 60x60x15mm, 12VDC, pulse, ball bearing, <b>CE</b>	516042010
MFB60D24	<b>SEPA</b> fan, 60x60x15mm, 12VDC, ball bearing, <b>CE</b>	516043000
MFB60D24A	<b>SEPA</b> fan, 60x60x15mm, 12VDC, pulse, ball bearing, <b>CE</b>	516043010