

Alphacool Core DC-LT 3 PWM 3800rpm

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Quick Info

The Alphacool Core DC-LT 3 PWM pump is a compact and powerful circulation pump designed for PC water-cooling systems, data center systems, and industrial applications. Its 4-pin PWM connector allows the pump speed to be monitored and controlled via a PWM signal. This enables the pump performance to be adjusted flexibly to the requirements of the respective system while ensuring a reliable coolant supply.

- Robust ceramic shaft
- Compact design
- Control via PWM
- DC-LT Form factor

Scope of delivery

1x Alphacool Core DC-LT 3 PWM 3800rpm
1x Mounting Ring
2x Mounting screw

Technical Data

Product type	Circulation pump for computer cooling and datacenter applications
Compatibility	DC-LT
Areas of application	Server cooling, PC systems
Dimensions (L × W × H) (mm)	52 × 39,5 × 20,5
Cable length (mm)	400
Weight (g)	43
Connections	4-Pin PWM
Power (W)	3.6 (Max.4.32)
Rated Voltage (V)	12
Operating Voltage (V)	8 - 13.5
Input Current (A)	0.40 (Max.0.48)
Speed (RPM)	1800 - 3800
Max . flow rate (L/h)	126
Max . Water Head (m)	1.4
Material pump housing	PA 66
Material axle	Ceramic
Maximum noise level at 1m measurement distance (dB(A))	25 (Max. 30)
Life expectancy (h)	50000
Color	Black
Max. Operating Temperature (°C)	70

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Manual	13343_Alphacool_Core_DC-LT_3_PWM_3800rpm_Manual.pdf
Product pictures	13343_Alphacool_Core_DC-LT_3_PWM_3800rpm_pics.zip
EU-DoC / CE / RoHS	Alphacool_EuDoc_CE_RoHS_13343.pdf

Packaging dimensions per unit

L x W x H	106 x 70 x 32 mm
Weight	66 g

Other data

Certificates	CE, FC, RoHS
EAN	4250197133432
Customs code	84137035890

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Features

The Core DC-LT 3 is the further development of the proven DC-LT 2 pump and offers increased performance while retaining its compact dimensions. Inside, a robust ceramic shaft ensures reliable and long-lasting operation.

Thanks to its compact design and low weight, the pump is particularly well suited for systems with limited space. Both the pump housing and pump cover are made of durable plastic. This makes the Core DC-LT 3 especially suitable for server, data center, and industrial applications where reliability and long operating times are essential.

Performance

The Core DC-LT 3 offers high pumping performance and flow rate, ensuring reliable coolant circulation within the watercooling loop. The pump speed can be flexibly adjusted across a wide control range to suit the specific requirements of the system.

Despite its compact design, the pump is optimized for quiet and smooth operation.

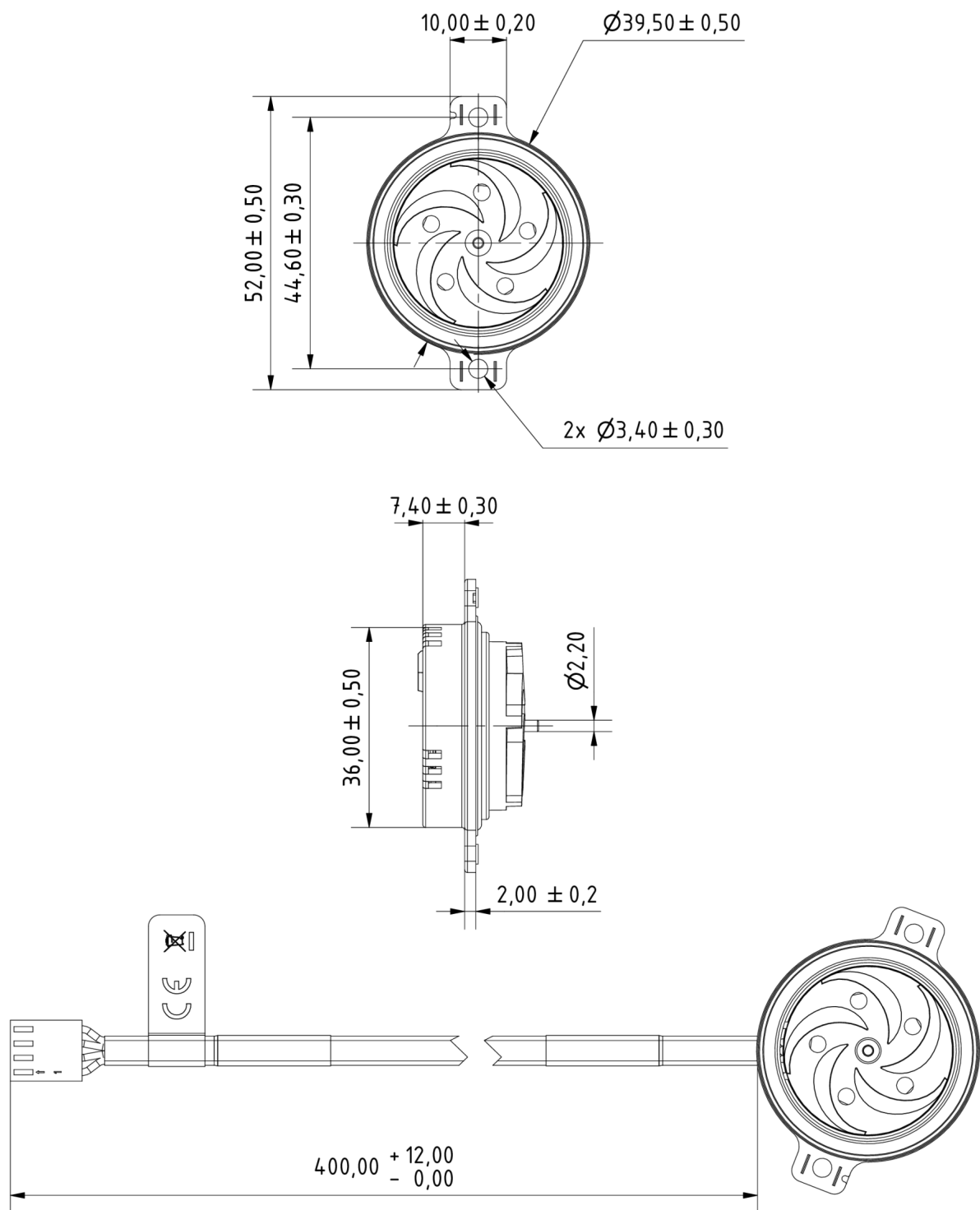
Power Supply and Control

The Alphacool Core DC-LT 3 PWM pump is connected to the motherboard or a suitable controller via a 4-pin PWM connector. This connection provides both power and PWM control for the pump. In addition, the pump speed signal can be read and monitored.

Compatibility

The Alphacool Core DC-LT 3 PWM pump is compatible with pump tops and reservoirs that feature a suitable mounting interface for DC-LT pumps.

Figure (1)



FAN/Pump
Connection



GND
VCC 12V DC
Tacho
PWM

General tolerance: $\pm 0,25\text{mm}$
Dimension in millimeter

Figure [2]

Technical specifications			
Item	Specification	Unit	Comment
Rated Voltage	12V	V - DC	
Operating Voltage	8 - 13.5	V - DC	
Input Current	0.30(Max.0.36)	A	Filled with water
Input Current	0.06(Max.0.10)	A	No water
Input Current	0.40(Max.0.48)	A	When measuring the flow rate
Power	3.6(Max.4.32)	W	Filled with water
Speed (At Zero Water Head)	3800±10%	RPM	Filled with water / no water
Max . Flow Capacity (At Zero Water Head)	2100±10%	ml/Min	Filled with water
Max . Water Head (At Zero Flow Capacity)	1.4±10%	m - Water	Filled with water
Acoustical Noise	25(Max.30)	dB(A)	Filled with water

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Alphacool Core DCLT 3 PWM 3800rpm			
Spare parts list			
Number	Quantity	Description	Material
1	1	4 pin fan connector	PA 66
2	1	CE Label	PVC
3	2	Washer	POM-C 4520
4.1.1	1	Rotor	-
4.1.2	1	Axle	Ceramic
4.2	1	Bearing	Ceramic
4.3	1	ORing 33 x 2	NBR Shore 70
4.4.1	1	Body	PA 66
4.4.2	1	Lid	PA 66
4.5	1	Stator	-
4.6	1	KiCad electronic assembly	-
5	1	Label	PVC
6.1	1	Wire 4P	-
6.2	2	Wire heat shrink tube	PE-X
6.3	1	Wire sleeve	PET Textile

