

ALPHA1 L



ALPHA1_L_180

Product description

ALPHA1 L can be used as stand-alone or integrated circulator pump in existing systems as replacement or in new systems with either variable or constant flow rate. The pump automatically controls the differential pressure by adjusting the pump performance to the actual heating demand without the use of external components, thus avoiding:

- too high energy consumption
- irregular control of the system
- noise in thermostatic valves and similar fittings.

The speed can be controlled by a low-voltage PWM (Pulse Width Modulation) signal.

High-efficiency ECM (Electronically Commutated Motor) pumps, such as ALPHA1 L, must not be speed-controlled by an external speed controller varying or pulsing the supply voltage.

Features and benefits

- three constant-curves/constant-speed curves.
- radiator heating mode.
- underfloor heating mode.
- speed control via a low-voltage PWM (Pulse Width Modulation) signal profile A (heating). The PWM signal is a method for generating an analog signal using a digital source.
- low EEI (Energy Efficiency Index).
- deblocking device.
- maintenance-free.
- low noise level.
- very simple installation.

Technical data

Temperatures

Ambient temperature: 0-55 °C.

Liquid temperature: 2-95 °C.

To avoid condensation in the stator, the liquid temperature must always be higher than the ambient temperature.

System pressure

Maximum system pressure (PN 10): 1.0 MPa (10 bar/145 psi).

Inlet pressure

To avoid cavitation noise and damage to the pump bearings, the following minimum pressures are required at the pump inlet port.

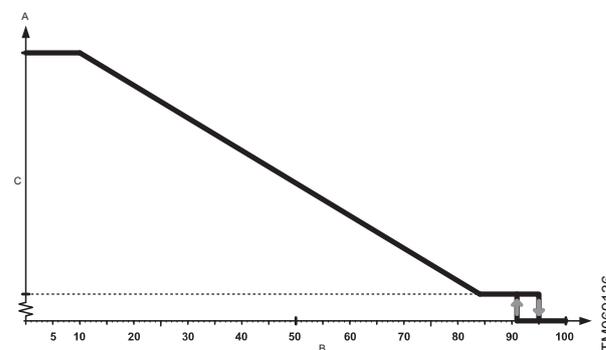
Liquid temperature	75 °C	95 °C
Pressure	0.005 MPa 0.05 bar	0.05 MPa 0.5 bar

Electrical data

Supply voltage	1 x 230 V - 15 % / + 10 %, 50/60 Hz, PE
Motor protection	The pump requires no external motor protection.
Enclosure class	IPX4D
Relative humidity	Maximum 95 %, non-condensing environment
Insulation class	F (EN 60335-1)
EEI values	≤ 0.20
Sound pressure level	The sound pressure level of the pump is lower than 32 dB(A).

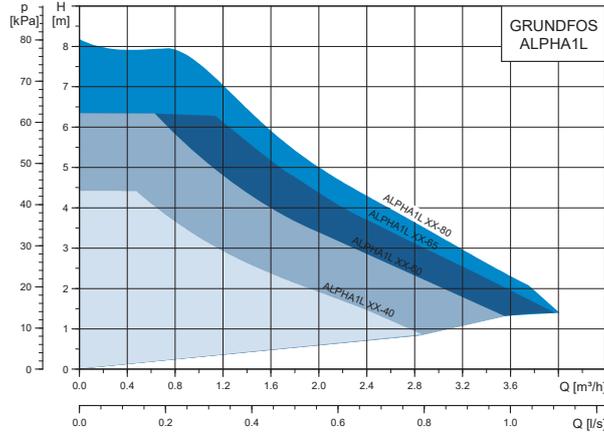
PWM input signal profile A (heating)

The pump runs on constant-speed curves depending on the PWM input signal. The speed decreases when the PWM value increases. If the PWM signal equals zero (0 VDC), the pump will switch to the control mode selected before connecting to a PWM signal.

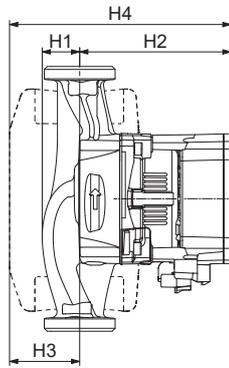
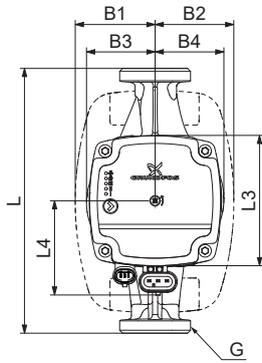


PWM input signal profile A (heating)

ALPHA1 L performance range



TM071306



Type key:

Example: ALPHA1 L 25 - 40 180

Code	Explanation
ALPHA1 L	Pump type
25	Nominal diameter (DN) of inlet and outlet ports [mm]
-40	Maximum head [dm] []: Cast-iron pump housing
180	Port-to-port length [mm]

Pump type	Dimensions [mm]											
	L	L3	L4	B1	B2	B3	B4	H1	H2	H3	H4	G
ALPHA1 L 15-40	130	88	72	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 15-60	130	88	72	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 15-65	130	88	72	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 20-40	130	88	72	54	54	46	47	25	102	47	149	G 1 1/4
ALPHA1 L 20-60	130	88	72	54	54	46	47	25	102	47	149	G 1 1/4
ALPHA1 L 25-40	130	88	72	54	54	46	47	25	102	47	149	G 1 1/2
ALPHA1 L 25-40	180	88	72	54	54	46	46	25	102	47	149	G 1 1/2
ALPHA1 L 25-60	130	88	72	54	54	46	47	25	102	47	149	G 1 1/2
ALPHA1 L 25-60	180	88	72	54	54	46	46	25	102	47	149	G 1 1/2
ALPHA1 L 25-80	180	88	72	54	54	46	46	25	102	47	149	G 1 1/2
ALPHA1 L 32-40	180	88	72	54	54	46	48	26	102	47	149	G 2
ALPHA1 L 32-60	180	88	72	54	54	46	48	26	102	47	149	G 2
ALPHA1 L 32-80	180	88	72	54	54	46	48	26	102	47	149	G 2

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