

## 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.

### Features

- 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

PN 10: Maximum 1.0 MPa (10 bar).

#### Inlet pressure

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

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

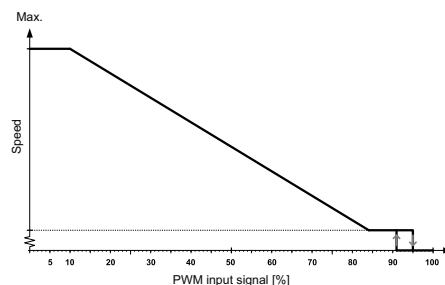
#### Electrical data

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 air humidity	Maximum 95 %
Insulation class	F
Specific EEI	≤ 0.20

#### PWM input signal profile A (heating)

The pump runs on constant-speed curves depending on the PWM input signal.

At high PWM signal percentages (duty cycles), a hysteresis prevents the pump from starting and stopping if the input signal fluctuates around the shifting point. At low PWM signal percentages, the pump speed is high for safety reasons. If no PWM signal is available, you can set ALPHA1 L to radiator heating mode, underfloor heating mode or constant speed by the operating panel.

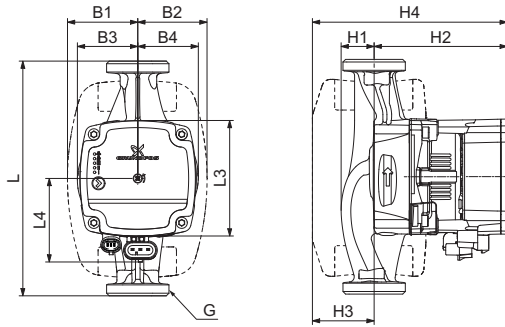
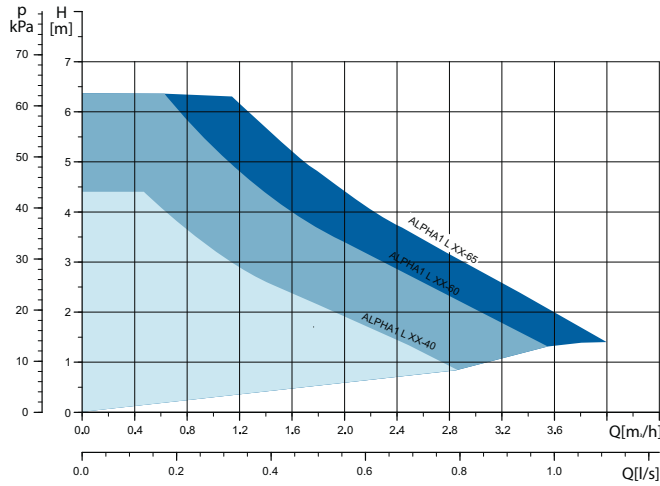


TM06 9136 1817

Fig. 1 PWM input profile A (heating)

be think innovate

## ALPHA1 L performance range



TM07 1242 1218

### Type key

<b>Example</b>	<b>ALPHA1 L 25 - 40 180</b>
Pump range	25 - 40
Nominal diameter (DN) of inlet and outlet ports [mm]	180
Maximum head [dm]	25
[ ]: Cast-iron pump housing	
N: Stainless-steel pump housing	
Port-to-port length [mm]	180

Pump type	Dimensions [mm]											
	L1	L3	L4	B1	B2	B3	B4	H1	H2	H3	H4	G
ALPHA1 L 15-40	130	88	64	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 15-60	130	88	64	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 15-65	130	88	64	54	54	46	47	25	102	47	149	G 1
ALPHA1 L 20-40	130	88	64	54	54	46	47	25	102	47	149	G 1 1/4
ALPHA1 L 20-40 N	150	90	64	54	54	49	49	27	102	47	149	G 1 1/4
ALPHA1 L 20-60	130	88	64	54	54	46	47	25	102	47	149	G 1 1/4
ALPHA1 L 20-60 N	150	90	64	54	54	49	49	27	102	47	149	G 1 1/4
ALPHA1 L 25-40	130	88	64	54	54	46	47	25	102	47	149	G 1 1/2
ALPHA1 L 25-40 N	180	88	64	54	54	46	46	25	102	47	149	G 1 1/2
ALPHA1 L 25-40 N	180	90	64	54	54	49	49	27	102	47	149	G 1 1/2
ALPHA1 L 25-60	130	88	64	54	54	46	47	25	102	47	149	G 1 1/2
ALPHA1 L 25-60 N	180	88	64	54	54	46	46	25	102	47	149	G 1 1/2
ALPHA1 L 25-60 N	180	90	64	54	54	49	49	27	102	47	149	G 1 1/2
ALPHA1 L 25-65	130	89	45	54	54	72	47	25	102	47	149	G 1 1/2
ALPHA1 L 32-40	180	88	64	54	54	46	48	26	102	47	149	G 2
ALPHA1 L 32-60	180	88	64	54	54	46	48	26	102	47	149	G 2

For further product documentation and product numbers, see <http://net.grundfos.com/qr/i/99169580>.

99169582 0219

ECM: 1253340

GRUNDFOS A/S . DK-8850 Bjerringbro . Denmark  
 Telephone: +45 87 50 14 00  
[www.grundfos.com](http://www.grundfos.com)

**GRUNDFOS**

TM07 1306 1218

© Copyright Grundfos Holding A/S

The name Grundfos, the Grundfos logo, and be think innovate are registered trademarks owned by Grundfos Holding A/S or Grundfos A/S, Denmark. All rights reserved worldwide.