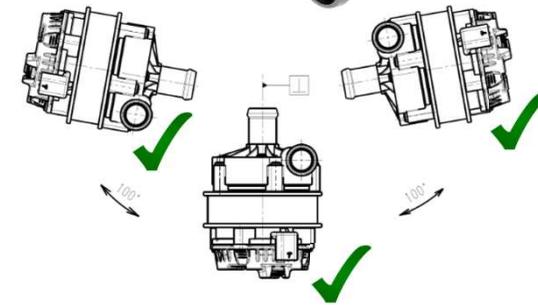


Bosch PCE-XL Water Pump (Part Number G4-0032-01)



If more information is needed, Bosch tech support can be contacted via this web address:
<https://www.bosch-ibusiness.com/>



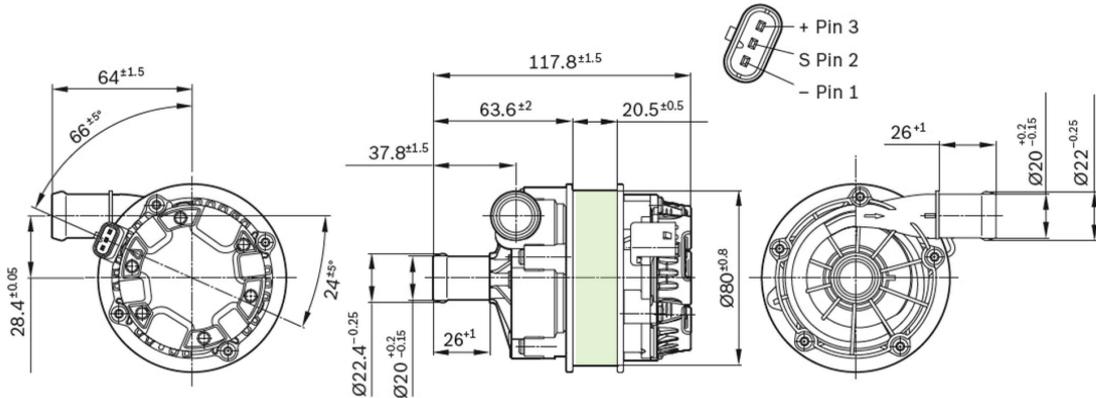
Quick Start Guide

- Designed for use with 50% water / 50% glycol.
- Operate pump only after system has been filled with fluid. Avoid air ingestion and cavitation.
- Ensure a mounting position that assures that the pump will never be starved of fluid. Consider hills and vehicle angles.
- Maximum system pressure of 250kPa. (not to be confused with pump delta-P)
- The mating connector is for use with 16-18AWG wire and the connection pinout is shown below. There are two options for purchase:
 - Individual Components: Mouser P/N's: 571-1488991-2 (qty:1), 571-1418850-3 (qty:3), 571-964972-1 (qty:3)
 - **Cascadia Motion Connector Kit Part Number: G1-0040-01**
- The nominal diameter of the mounting surface is 79.2mm. Use a stable bracket that will avoid resonant vibration.
- Pump can be run without the signal (S) pin connected. This will operate the pump at maximum speed.
 - Please note, there is a 2 second startup delay if the pump is to be operated without the signal (S) pin connected.
- Do not drive the +/- terminals with a PWM waveform. If terminal S is not used, the pump is used as an 'on or off' device (not dithered).
- Permissible voltage range on the + terminal is 8 to 16V. The performance chart to the right is given at 12V.
- Ambient condition range is -40 to 140°C. Maximum fluid temperature of 85°C.
- If the pump detects that it is being run dry, it will turn itself off, try again, but will quit if unsuccessful >20 times.
- A power reset (+12V key cycle) will allow more re-tries.
- The pump will self-protect itself against over-temperature. First a de-rate to 60% speed will occur and then it will stop if temperature reaches a critical level.

If PWM Speed Control *is* Used

- Terminal "S" driven with: +12V (nominal) PWM controlled, 9 to 110Hz. (nominal = 100Hz)
- If there is no PWM signal within 2 seconds of power-on, the default mode of full speed operation will be used.
- If there is a valid PWM signal, a speed-proportional response to a commanded 12-93% duty cycle will be delivered. **See below:**

Dimensional Information and Connector Pinout



PWM Signal Control, If Used

f _{in} / Hz	DC _{in} / % ¹⁾	Pump-function	
		ID	Description
0	0	1	Pump OFF (PWM pin has GND-level)
f _{in_min}	DC _{in} ≤ 7	2	Max. rotation speed n _{Max}
	7 < DC _{in} ≤ 12	3	Pump OFF
-	12 < DC _{in} ≤ 17	4	Min. rotation speed
f _{in_max}	17 < DC _{in} ≤ 93	5	Rotation speed according to speed control chart
	93 < DC _{in}	6	Max. rotation speed n _{Max}
0	100	7	Pump ON with n _{Max} (PWM pin has U _{Pump} level). The high-signal must remain longer than t _{POR_Limp_Home_delay} on the PWM line.
Function in the invalid frequency range		8	Pump ON with n _{Max}

Performance @ 12V

