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CSE OTS G

Installation and Operation Manual | EN

CSE OTS G PUMP STATION

CSE OTS G

1. Introduction

CSE OTS G pump station is designed to be installed in unmixed hydraulic circuits in heating systems where a non return valve is not required. The pump station provides circulation through the concerned heating circuit.

2. Description of the pump station

The pump station consists of a UPM3 FLEX AS pump including power and control cables, two fittings with a shut-off ball valve, thermometer and insulation.

Main features	
Application	unmixed hydraulic circuits in heating systems
Description	consists of a UPM3 FLEX AS pump, two fittings with a shut-off ball valve, thermometer and insulation
Working fluid	water, water-glycol mixture (max. 1:1) or water-glycerine mixture (max. 2:1)
Installation	on a pipe in the circuit concerned, the min. distance of the pipe axis from a wall is 100 mm
Code	**15 325**

Technical data of CSE OTS G pump station	
Fluid working temperature	2 - 110 °C
Max. working pressure	10 bar
Max. ambient temperature	70 °C
Max. rel. humidity	95 % non condensing
Power supply	230 V, 50 Hz
Insulation material	EPP RG 60 g/l
Overall dimensions	325 x 140 x 150 mm
Total weight	3.0 kg
Connections	2x G 1" F

3. Flow direction

4. UPM3 FLEX AS 25-70 Pump

Design

Wet-running circulation pump with G 6/4“ M connection.

Electrical data	
Power supply	230 V, 50 Hz
Power input (min./max.)	2/52 W
Current (min./max.)	0.04/0.5 A
IP rating	IP44
Max. speed	5766 rpm
Weighted average power	≤ 23 W
Energy Efficiency Index	≤ 0,20 by EN 16 297/3
Motor protection	not needed

Minimum pressure at the suction port	
Min. pressure at the suction port to avoid cavitation	0.05 bar at 75 °C
	0.50 bar at 95 °C
	1.08 bar at 110 °C

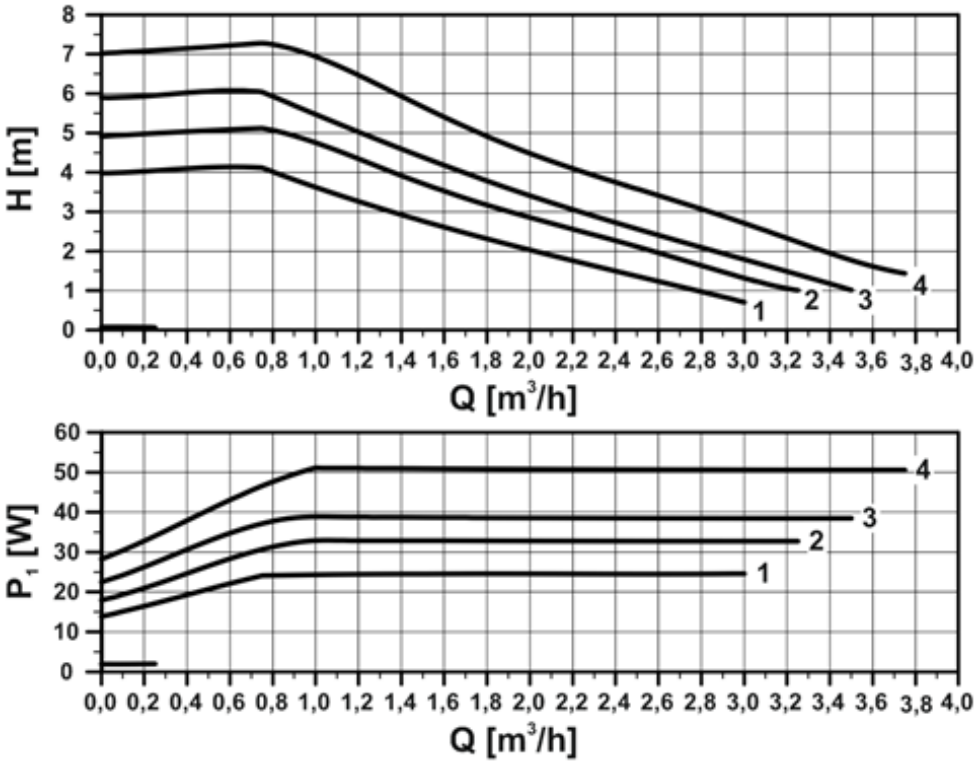
Operation data	
Fluid working temp.	2 to 110 °C
working pressure	10 bar
Max. ambient temp.	70 °C
Max. rel. humidity	95 % non condensing

Pump control

The circulation pump can be controlled by an external PWM signal (profile for use in heating systems) or without a PWM signal by selecting a pump performance curve.

A maximum curve of a pump working range can be defined.
- with PWM signal the pump speed changes with the signal value up to the maximum of the selected curve
- without PWM signal the pump runs at the max. speed according to the selected curve

Performance curves



Curve	Max. H (upper graph)	Max. P_1 (lower graph)
1	4 m	25 W
2	5 m	33 W
3	6 m	39 W
4	7 m	52 W

Performance display

DISPLAY	STATE	PERFORMANCE in % of P_1max
1 flashing red LED	STAND-BY MODE (EXTERNAL CONTROL ONLY)	0
1 red + 1 yellow LEDs	LOW PERFORMANCE	0-25
1 red + 2 yellow LEDs	MEDIUM-LOW PERFORMANCE	25-50
1 red + 3 yellow LEDs	MEDIUM-HIGH PERFORMANCE	50-75
1 red + 4 yellow LEDs	HIGH PERFORMANCE	75-100

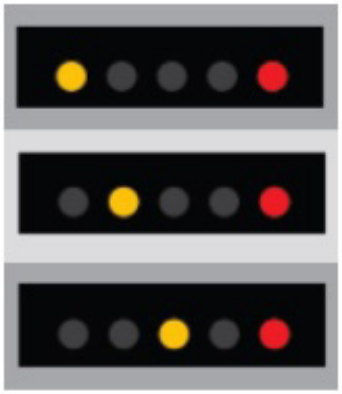
When switched on, the pump runs at factory settings or the last setting. The display shows the momentary pump performance.

Settings display

WARNING: LEDs may be turned by 180°, depending on the specific pump type.
By pressing the button the display switches to "performance view" and the current settings will be shown by LEDs for 2 seconds (see figures below).

4 m **5 m** **6 m** **7 m**

Error display



seized pump

too low power supply voltage

electric fault

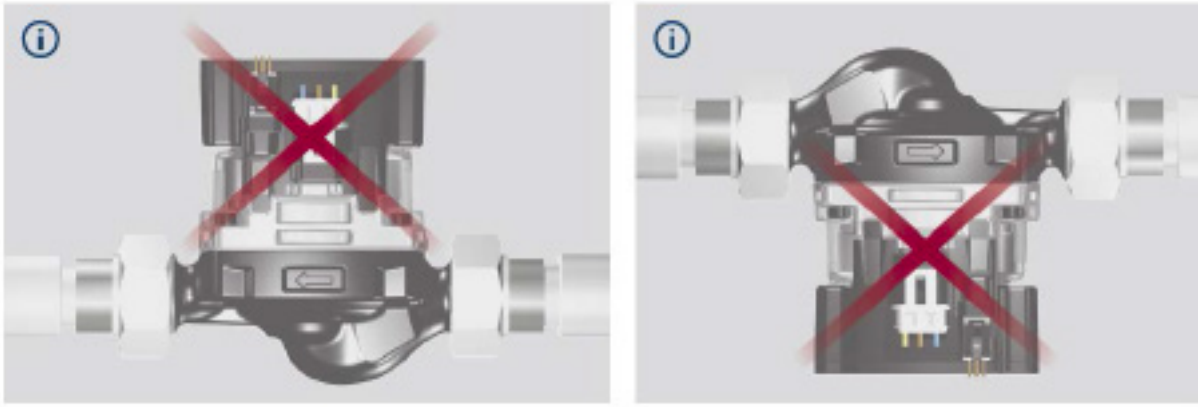
Setting selection for UPM3

1. Press the pushbutton until the LEDs start flashing, the pump will switch to adjustment selection mode.
2. To select your desired setting, press the button repeatedly until you find the setting you need (see the figures below). If you pass the desired setting, you have to go one more round until it appears again – there is no way back in the loop.

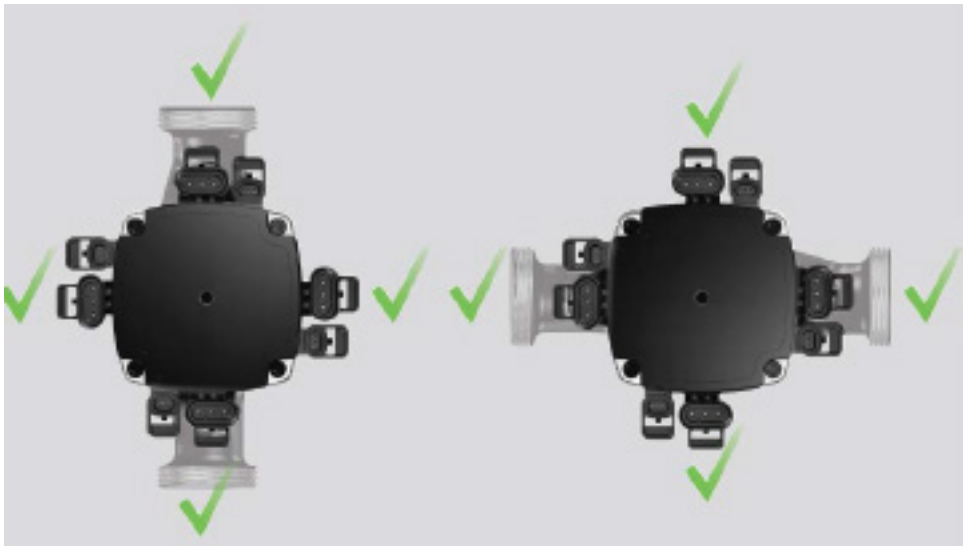
4 m **5 m** **6 m** **7 m**

3. Release the button for more than 10 s and the LEDs will return to „performance view", while the last setting is saved.

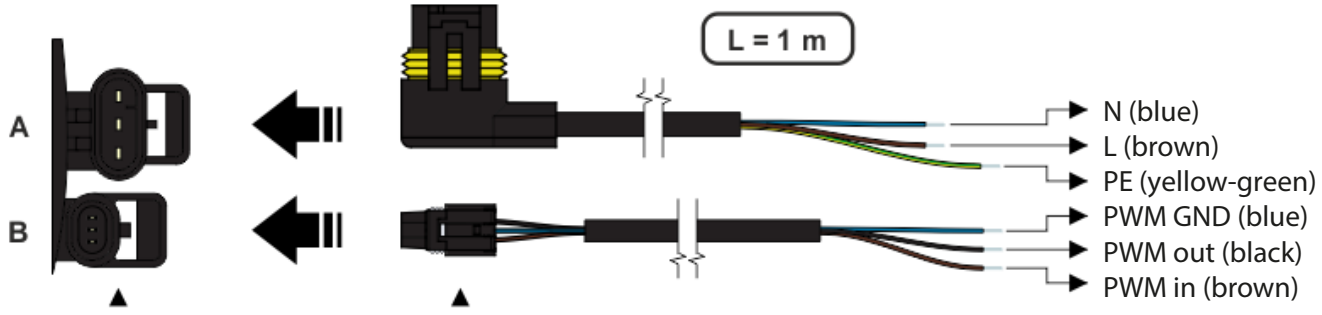
Forbidden pump positions



Permissible pump (actuator) positions



Pump wiring



socket for power supply (A)
and signal transmission (B)

power supply (A)
and signal (B) terminals

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