

## DATA SHEET

### CSE2 SOL W SRS1 T-E HDO Solar Pump Station



#### Main Features

<p>Application</p>	<p>This twin-line solar pump station contains all components necessary for current and efficient operation. It is designed for operation with one solar consumer (e.g. hot water tank). An auxiliary electric heating element of 2 to 3 kW output can be connected to the heat pump. For its connection, the pump station is equipped with a special socket. The heating element is powered by a separate cable that is part of the pump station. This cable connects to the power input of the switched Ripple control. The Ripple control contactor, which blocks this input in times of high tariff, must be sized so that it safely exceeds the power of the installed heating element. The switching on and off of the heating element is controlled by the controller. Neither the Ripple control contactor, nor the heating element, nor its safety temperature limiter are included in supply.</p>
<p>Description</p>	<p>The pump station includes:</p> <ul style="list-style-type: none"> <li>– Para ST 25/7-50/iPWM2 circulation pump,</li> <li>– SRS1 T controller,</li> <li>– special socket to connect a heating element of max. 3 kW/230 V output,</li> <li>– check valve,</li> <li>– safety valve with G 3/4" F outlet,</li> <li>– ball valves on both flow and return lines,</li> <li>– air eliminator with manual air vent valve,</li> <li>– pressure gauge,</li> <li>– thermometers on both flow and return lines,</li> <li>– two G 3/4" M valves for filling, draining and topping up the solar thermal system,</li> <li>– G 3/4" M outlet for connecting an expansion vessel,</li> <li>– 2 already connected temperature sensors of a solar consumer (4 m long),</li> <li>– already connected cable w. silicone insulation to connect a solar sensor (1 m long),</li> <li>– solar temperature sensor (2 m long cable),</li> <li>– cable of power input switched by Ripple control (3 m long, 3 x 1.5 mm<sup>2</sup> cross section),</li> <li>– already connected 230 V power cord with plug (3 m long, 3 x 1.5 mm<sup>2</sup> cross section),</li> <li>– mounting kit for installation on a wall or tank,</li> <li>– insulation.</li> </ul>
<p>Flow rate measurement</p>	<p>The pump sends the momentary flow rate value as data to controller where it is displayed.</p>
<p>Installation</p>	<p>On a tank or wall using.</p>
<p>Working fluid</p>	<p>Water-glycol mixture (max. 1:1).</p>
<p>Codes corresponding</p>	<p><b>20526</b> – Connections G 3/4" M <b>20551</b> – Connections G 1" M</p>

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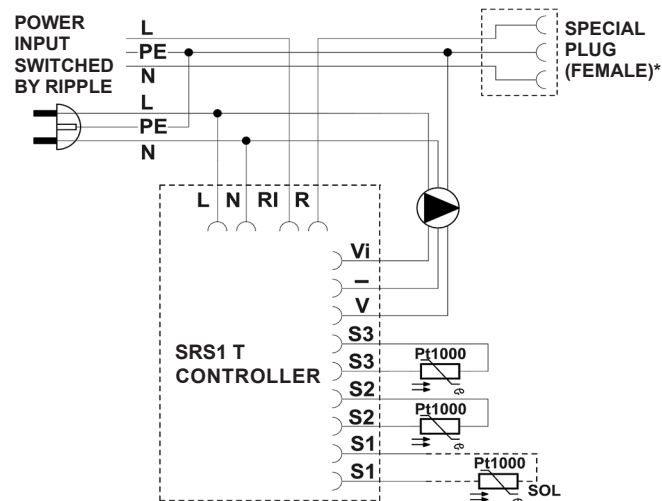
#### Pump Station Data

Max. fluid working temperature	110 °C
Max. working pressure	6 bar
Min. system pressure	1.3 bar with the pump stopped
Flow rate measurement range	2–20 l/min
Ambient temperature	5 to 40 °C
Max. relative humidity	85% at 25 °C
Power supply	230 V, 50 Hz
Max. switched current	13 A/230 V
Insulation material	EPP RG 60 g/l
IP rating	IP20
Overall dimensions (w x h x d)	405 x 420 x 155 mm
Total weight	6.5 kg

#### Accessories

Code 16942	ETT-N heating element, 2 kW
Code 16943	ETT-N heating element, 3 kW

#### Pump Station Internal Wiring



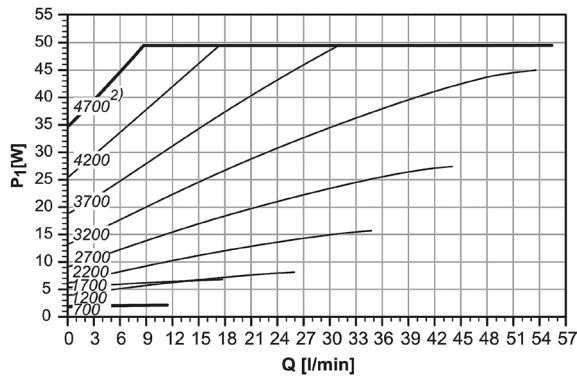
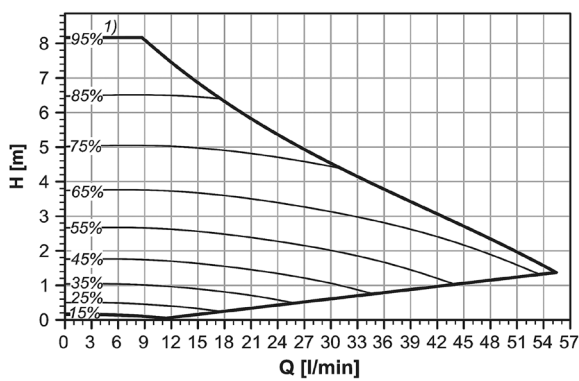
**L** live  
**N** neutral  
**RI, R** potential-free switching contact  
**Vi** iPWM signal input  
**-** GND PWM  
**V** PWM signal output  
**S2** sensor 2 (solar consumer)  
**S1** sensor 1 (collector)

\* In pump station to connect a heating element, 3 kW max. output.

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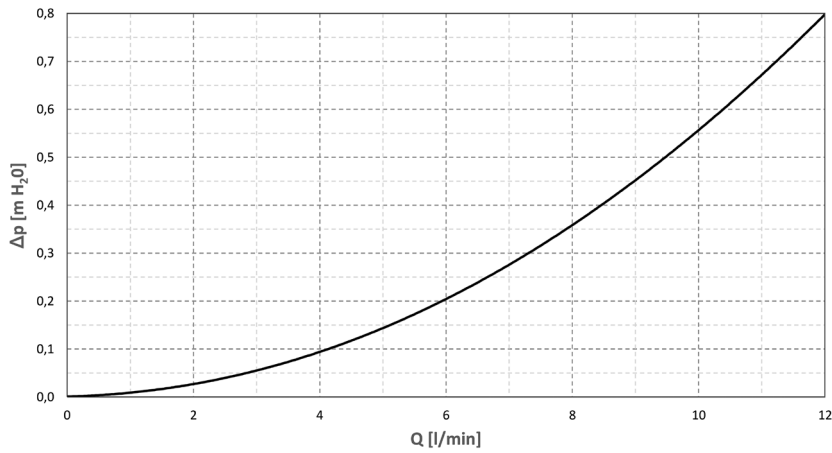
### Pump Performance curves



NOTE:  
 1) PWM signal value in %,  
 2) speed in rpm

### Pressure Drop Graph

Connections G 3/4" M – code 20526



Connections G 1" M – code 20551

