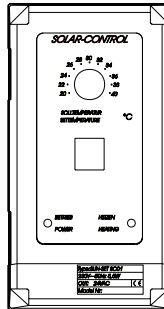
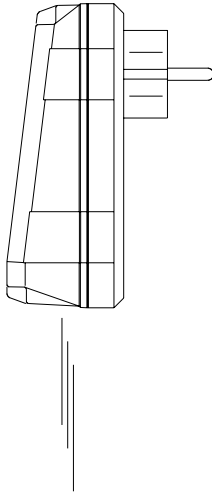


# Operating instruction SOLAR SET SC 01



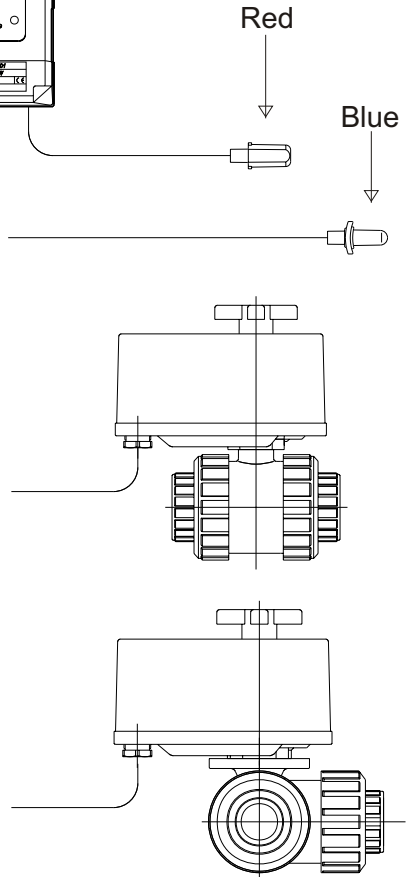
Series **EVOLUTION**

Sketch 1:



Red

Blue



## Contents:

### Page

1. Safety instructions
2. Installation
3. General / Start up
4. Dimensions
5. Technical data
6. Trouble shooting guide

The product warranty will be void if the installation and operation not performed as per our installation manual. Please read the enclosed manuals carefully before operating the units.

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# Operating instruction

## SOLAR SET SC 01



### I. Safety instructions:

- This unit was designed and built to national and international safety regulations and was shipped as per such regulations.
- In order to comply with such safety regulations it is necessary to follow the outlined safety regulations in our product manuals.
- All installations should only be undertaken by licensed trade personal.
- All electrical work has to comply to local codes and regulations.
- The power supply should be protected by a **GFCI** (**G**round **F**ault **C**ircuit **I**nterrupter).
- Install the unit only in dry environment where there are no explosive gases or fumes present.
- Do not operate valve after if has been taken from a cold room into a warm room as condensation may build up inside the controler and create circuit problems.
- The unit can not be considered safe for operation once it shows noticable damages, or does not function properly or has been stored in inadequate concitions for longer periods.
- Service or trouble shooting on electrical components shall only be done by trained service technicians. Always disconnect power before servicing electrical components.
- **CAUTION:** Capacitors can still be charged once power has been disconnected.
- Depressurise piping system before servicing valves.
- Always verify direction of flow on valves.

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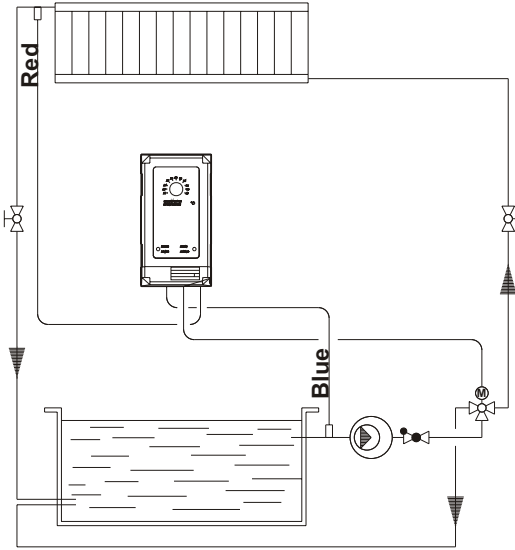
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# Operating instruction SOLAR SET SC 01



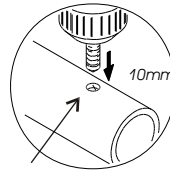
serie **EVOLUTION**

Sketch 2:

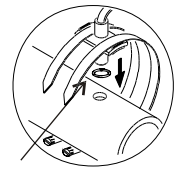


## 2. Installation:

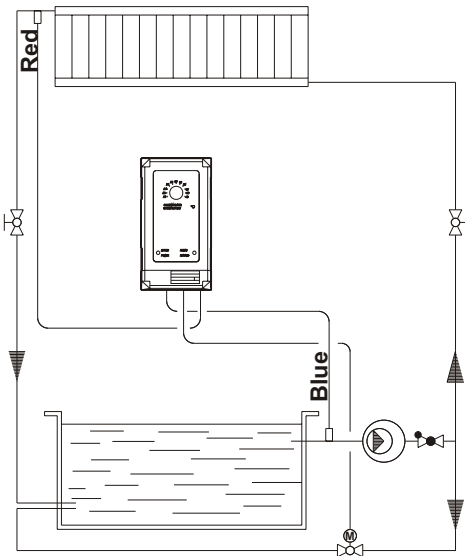
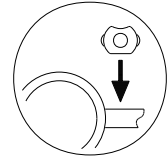
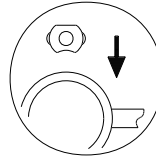
We recommend to run electrical cables in conduit pipe. Always use proper electrical connections when extending cables (max. 50 meters). Depressurise and drain system before installing sensors into pipe.



Boring



O-ring



Install pool water sensor (blue) as close as possible to pool and solar sensor (red) as close as possible to solar panel (see sketch).

The solar sensor (red) should be exposed to maximum sunlight, and not be covered by shade from trees or buildings (this verifies max. solar energy capacity through sunlight). Install ball valves as per enclosed draining.

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# Operating instruction

## SOLAR SET SC 01



### 3. General:

*PRAHER SOLAR CONTROLS are highly technical products, which are precision made with the latest manufacturing techniques.*

*This SOLAR SET SC 01 controller will direct the water flow through the solar panels until the preset pool water temperature.*

### Start up:

*Green POWER LED lights up once power is supplied to controller.  
Ready for operation*

*2-way ball valve opens  
3-way ball valve drive into position 2*

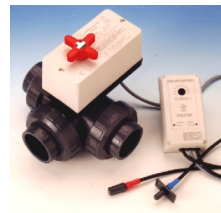
*The controller will switch to "HEATING" (Red LED ON!), as soon as the pool water temperature is 1,5°C below the set temperature value and the solar panel temperature is 4°C above the pool water temperature.*

*2-way ball valve closes  
3-way ball valve drive into position 1*

*Reverse wires Terminal 6 Terminal 2 if opposite ball valve functions are required.*



Symbol Foto



Symbol Foto

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# Operating instruction

## SOLAR SET SC 01

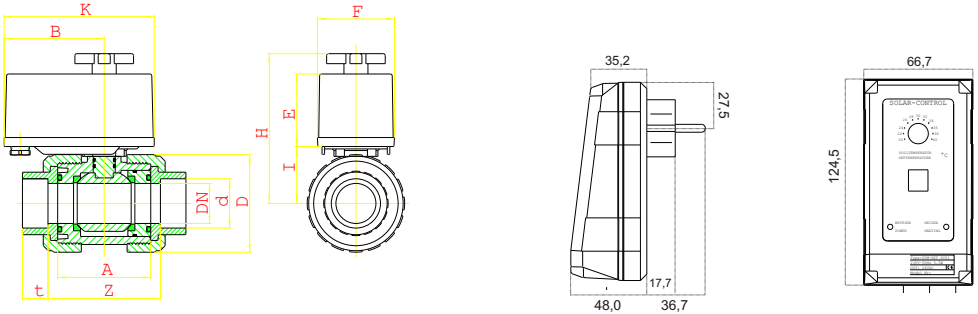


Praher

Series EVOLUTION

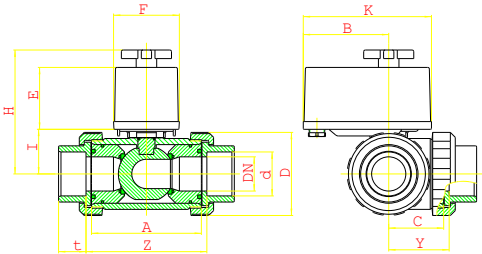
### 4. Dimensions for 2-way ball valve S5 (Dimensions in mm)

d	DN	A	B	D	E	F	I	H	K	Z	t
50,0	40,0	71,0	102,0	98,0	77,5	77,0	56,5	148,5	151,0	81,0	31,5
63,0	50,0	84,0	102,0	112,5	77,5	77,0	63,0	155,0	151,0	96,0	38,5



### Dimensions for 3-way ball valve S5 (Dimensions in mm)

d	DN	A	B	C	D	E	F	G	H	K	Y	Z	t
50,0	40,0	127,5	102,0	64,0	98,0	77,5	77,0	52,5	144,5	151,0	69,0	137,5	31,5



		2-way ball valve	
		Position 1	Position 2
Ball valve position			
Terminal	Common	3	
	Supply	6	2
	Remote indication	5	4
Travel time	ca. 31 sec.	ca. 31 sec.	

		3-way ball 2-Position (Solar)	
		Position 1	Position 2
Ball valve position			
Terminal	Common	3	
	Supply	6	2
	Remote indication	5	4
Travel time	ca. 62 sec.	ca. 62 sec.	

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# Operating instruction

## SOLAR SET SC 01



### 5. Technical data:

Controler (SC01):    Ball valve (Typ S5 with electr. actuator):

Voltage	: 230 VAC	24 VAC
Frequency	: 50 Hz	50 Hz
Power	: 5,5 Watt	4 Watt
Enclosure	: IP 40	IP 54
Duty cycle	: 100%	60%

The product will be produced to the following guide lines:

- + Electromagnetic compatibility 89/336/EWG
- + Low voltage guide lines 73/23/EWG

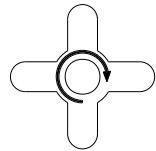
Temperature difference Pool - Solar    T 4°C.

Heating cut in after temperature of pool water drops at least 1,5°C below set-point.

### Ball valve:

#### **NOTE:**

The 3 way solar ball valve is equipped with an internal patented pressure compensation system which will not dead head the pump during ball rotation. The valve can be rotated with the manual override in case of power failure.



#### **ATTENTION:**

Rotate manual override clockwise only (see arrow on handle)

**Always test function of override before operating valve (esp. after OFF season - winter - )!**

Please care us with the valves serial Nr. and the type of actuator if you have operational problems. We reserve the right to technical modifications without notification to our customers.

### 6. Trouble shooting guide:

#### **POWER LED not lid:**

**Controller does not switch to "HEATING":**

- Test voltage
  - Pump is switched OFF
  - Sensor are not in ideal position!
- Controller does not switch heating OFF:**
- Sensor are not in ideal position!

Valve- and Service Number:

**A:** Tel.: ++43 / (0)7262 / 61178-0\* Fax:++43 / (0)7262 / 61203

Email: [austria@praher.com](mailto:austria@praher.com)

**D:** Tel.: ++49 / (0)9171 / 9677-0\* Fax: ++49 / (0)9171 / 9677-88

Email: [germany@praher.com](mailto:germany@praher.com)

*Home-Page: [www.praher.com](http://www.praher.com)*

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