smart Sol

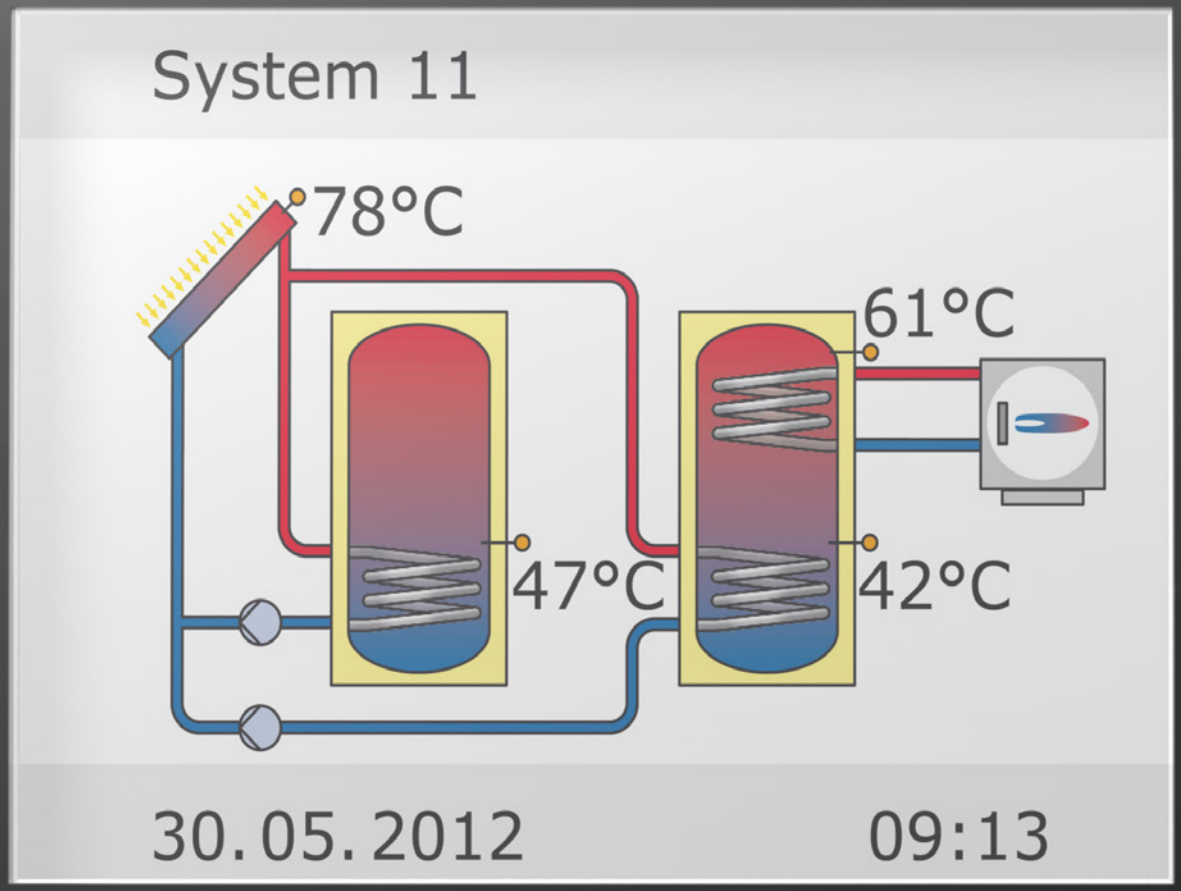
for more efficiency.

emz
smart solutions

Differential Temperature Controller for Solar Thermal Plants

for drinking water heating and heating support

smart Sol



smart Sol - family

smart Sol *nano*

smart Sol

smart Sol *plus*

› convenient operation
› easy installation
› puristic design
› 15 % higher plant efficiency

for more efficiency.

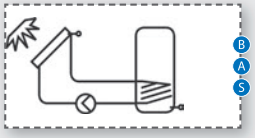
smart Sol nano

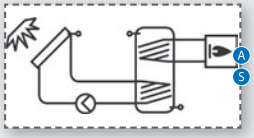
Differential temperature controller for simple solar thermal plants
for drinking water heating and heating support

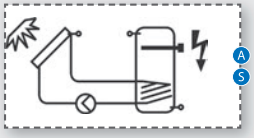
Control of simple solar thermal plants with 1 collector array and 1 tank

CUSTOMER BENEFIT

- Full graphic display for clear and logical visualization
- Innovative operation concept for easy handling
- Smart and time-saving wiring concept
- Installation wizard for safe commissioning
- Service wizard for targeted and quick customer service
- Numerous operation, protective as well as monitoring and service functions
- Attractive, elegant and puristic design
- Various equipment levels for different applications



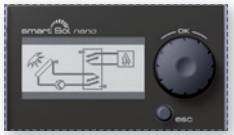




B Basic
A Advanced
S Special

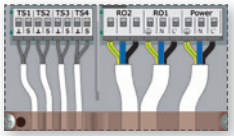
HYDRAULIC SYSTEMS

- Full graphic monochrome display



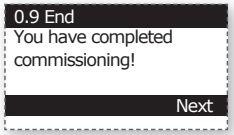
OPERATION AND VISUALIZATION

- Full graphic FSTN monochrome display with backlight
- Rotary encoder with Push, ESC button
- Different operation levels for OEM , heating installer and end user
- Self-explanatory menu and user guidance
- Combination of plain text displays and symbols
- Different national languages



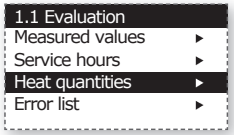
WIRING

- Easily removable terminal cover for access to the terminal compartment
- Laser engraved connection diagram on the rear side of the terminal cover
- Generously dimensioned terminal compartment
- Variable wiring and connection possibilities
- Proven spring-type terminals
- Convenient, intersection-free wiring
- Strain relief device



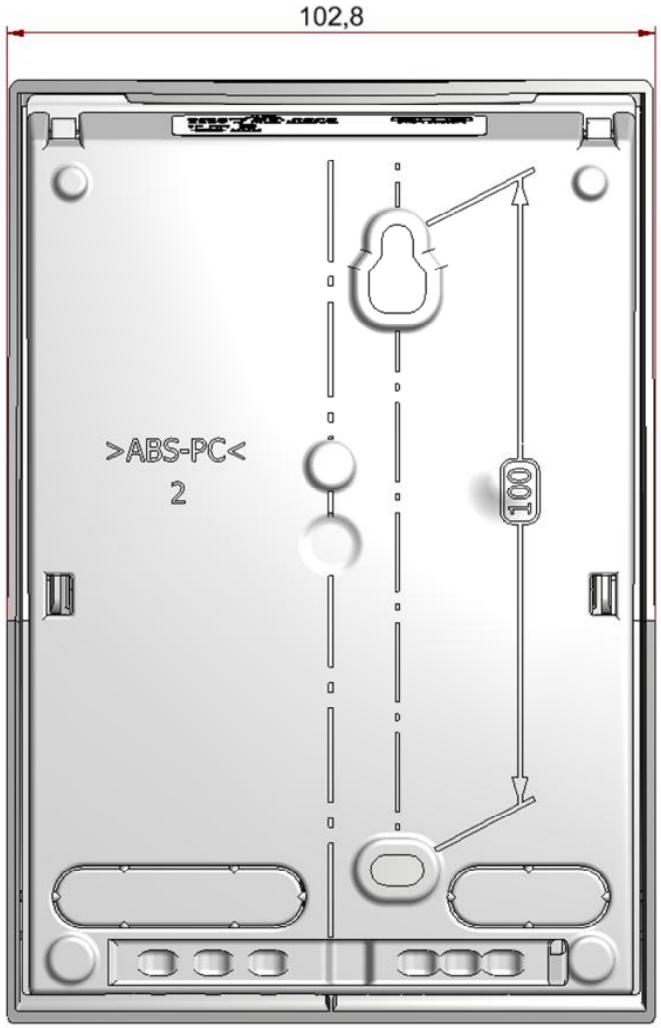
INSTALLATION AND SERVICE WIZARD

- Developed in cooperation with Regensburg University and heating trade
- Solar thermal plant is ready to operate with just a few settings
- By selecting the plant systems all procedures and functions are preset
- Optical indications of malfunctions and errors
- Possibility of a preliminary diagnosis by the enduser in case of error messages
- Recommendations for the installer to eliminate malfunction or to perform maintenance work



PLANT VISUALIZATION

- Indication of measured values for inputs and outputs
- Service hour counter for outputs
- Error list
- Solar yield measurement with data display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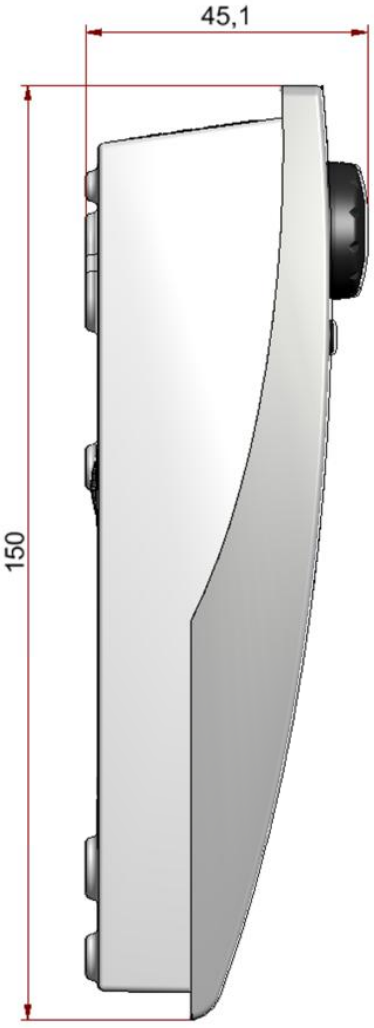
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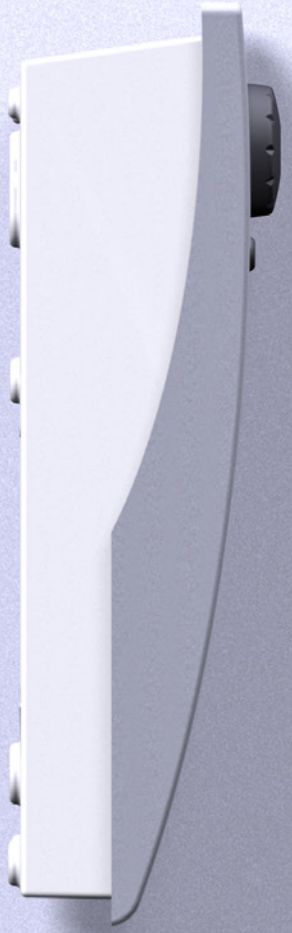
smart Sol nano
OK
esc
emz
smart solutions



smart Sol nano - equipment overview

Solar controller - equipment levels	Basic	Advance	Special
Hardware			
Number inputs for temperature sensors PT1000	3	3	3
thereof switchable (analog outputs 0...10V or PWM outputs or temperature inputs)	-	-	-
thereof usable as input for pulse encoder/impeller	-	-	-
thereof usable as input for global radiation sensor	-	-	-
Number inputs (male connectors) for analog vortex flow sensors	-	-	-
Number triac outputs, max. 1A, for pumps and valves	1	1	1
Number relay outputs - change-over contact, pot.-free, max. 1A - for pumps, valves, boiler	-	-	-
Number high current relay outputs - make contact, pot.-free, max. 15A - for immersion heater, boiler	-	-	1
Number relays outputs - make contact, 230V output, not pot.-free, max. 1A - for boiler	-	1	-
Number fixed analog outputs 0…10V or PWM outputs for high-efficiency pumps	1	1	1
Additional supply terminals, 2 x 85V-265V for valves, 5V and 24V for sensors	-	-	-
SD card slot for data logging	-	-	-
USB port for access to SD card or PC	-	-	-
Acoustic alarm in case of error messages	-	-	-
Power reserve for real-time clock (min. 8 h)	√	√	√
Energy-saving switch power supply with a wide-range input, 85 … 265VAC, 50/60Hz	-	-	-
Transformer power supply, 230 VAC +/-10%, 50Hz	√	√	√
Full graphic TFT colour display with backlight, dimmable	-	-	-
Full graphic FSTN monochrome display with backlight	√	√	√
System			
Multi-piece plastic housing	√	√	√
Operation via rotary encoder and ESC button	√	√	√
Micro fuse incl. spare fuse, type 5x20mm, time-lag	2A	2A	2A
Laser engraved connection diagram on the rear side of the terminal cover	√	√	√
Wall mounting, installation in pump group or tank	√	√	√
Protection class IP20	√	√	√
Ambient temperature 0 … 40°C	√	√	√
Active display area, width x height in mm	45x23	45x23	45x23
Maximum number national languages	10	10	10
Maximum number collector arrays	1	1	1
Maximum number tanks	1	1	1
Number hydraulic systems currently	1	3	3
Installation wizard	√	√	√
Service wizard	√	√	√
Solar heating support	√	√	√
Operation and efficiency functions			
Differential temperature control (Delta-T-control)	√	√	√
Fixed temperature control (Fixed-T-control)	√	√	√

Solar controller - equipment levels	Basic	Advance	Special
Disable the tank recharge	-	-	-
Efficient tank charge	-	-	-
Priority charging	-	-	-
Low-flow-function for low-flow-plants	-	-	-
Tube collector function	√	√	√
Thermostat function	-	√	√
Maximum number of freely selectable control functions	-	1	1
Speed control and speed limitation of the pumps	√	√	√
Collector defrosting	-	-	-
Holiday function	-	-	-
Automatic summer/winter time changeover	-	-	-
Collector minimum temperature	√	√	√
Overtravel time for outputs	√	√	√
Quick charging	-	-	-
Signal processing global radiation sensor	-	-	-
Anti-legionella function in conjunction with back-up heating	-	√	√
Back-up heating via different heat sources	-	√	√
Direct back-up heating via electric immersion heater	-	-	√
Heating return increase	-	-	-
Charge zone control	-	-	-
Bypass in the solar circuit	-	-	-
Protective functions			
Collector emergency OFF	√	√	√
Collector cooling	√	√	√
Antifreeze	√	√	√
Tank maximum temperature limitation	√	√	√
Tank temperature limit cut-out	√	√	√
Anti-blocking protection	√	√	√
Soft charge	-	-	-
Tank cooling	√	√	√
Monitoring and Service functions			
Sensor monitoring	√	√	√
Monitoring the output parameters	√	√	√
Plausibility checks	√	√	√
Sensor balancing	√	√	√
Display free tank sensor top	-	-	-
Service hour counter for outputs	√	√	√
Data logging on SD card	-	-	-
Indication of measured values on the display	√	√	√
Error list	√	√	√
Manual Mode	√	√	√

Solar controller - equipment levels	Basic	Advance	Special
Reset of complete or parameter related factory settings	√	√	√
Solar yield measurement via pump activation with data display	√	√	√
Solar yield measurement via vortex and/or impeller with data display	-	-	-
Graphical representation of the solar yield on the display (from SD card or RAM)	-	-	-
Number of heat meters for solar yield measurement	1	1	1
Display of CO_2-savings	-	-	-
Optional accessory and customized adaptions on request			
Assembly/operating instructions on CD, safety instructions as a leaflet	√	√	√
Assembly/operating instructions incl. safety instructions as a booklet	√	√	√
Collector sensor PT1000, grey Silicon, operation temperature range -40 … +180°C, length 2.500mm, with ferrules	√	√	√
Tank sensor PT1000, black PVC, operation temperature range -5 … +90°C, length 2.500mm, with ferrules	√	√	√
Power cable, black 230V, 3poles, H05VV-F 3G0,75mm, length 1.500mm, with ferrules	√	√	√
SD card, 2GB	-	-	-
Global radiation sensor	-	-	-
Vortex flow sensors, Grundfos types VFS	-	-	-
Resistors for disable tank recharge or sensor switching, boiler sensor PT100 = 130 Ω / PT500 = 620 Ω / PT1000 = 1,3 kΩ	-	-	-
Module for integration of a water softening system, type AQA solar - BWT, Schriesheim	-	-	-
smart Box for remote access via internet and intranet: graphical visualization of the log-data, parameterization, software update, online operation	-	-	-
Local PC software "smart Sol analyzer" for direct connection: graphical visualization of the log-data, parameterization, software update, online operation	-	-	-
OEM personalization	√	√	√

smart Sol

Differential temperature controller for middle range solar thermal plants for drinking water heating and heating support

Control of middle range solar thermal plants with up to 2 collector arrays or 3 tanks

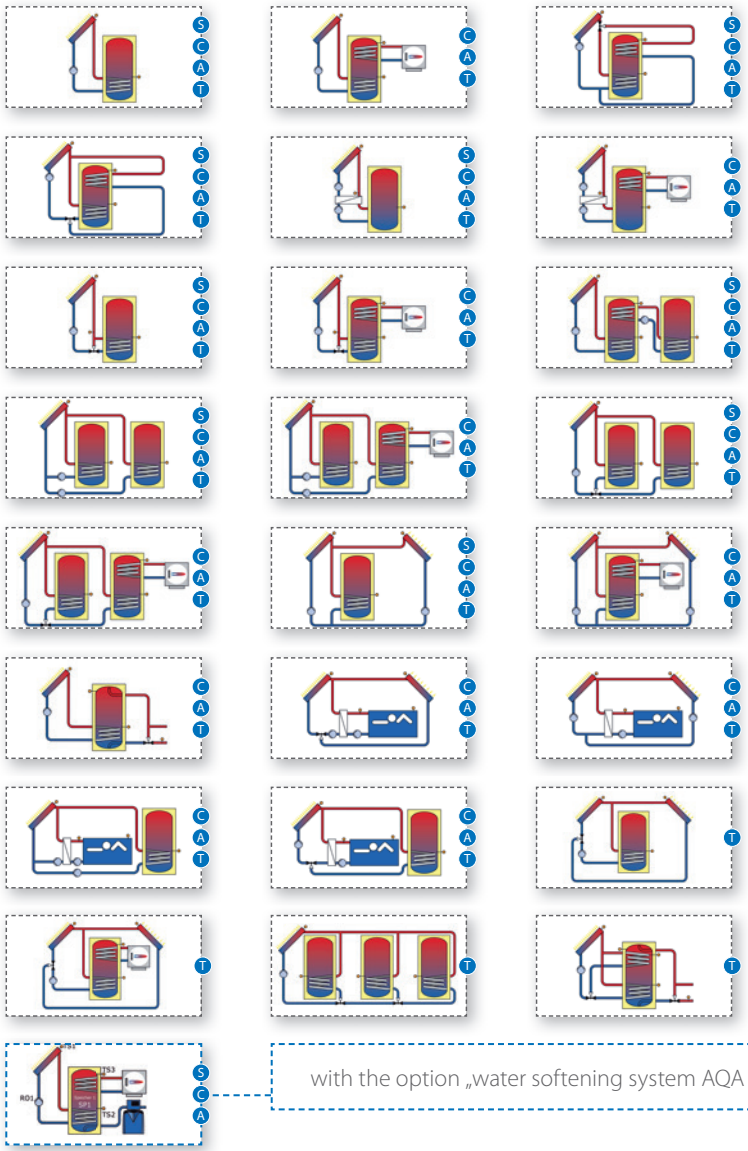
CUSTOMER BENEFIT

- 15 % higher performance of the plant by
  - · forecast of sun radiation (saving primary energy)
  - · efficient tank charge (saving pump current)
- Full graphic colour display for clear and logical visualization
- Innovative operation concept for easy handling
- Smart and time-saving wiring concept
- Installation wizard for safe commissioning
- Service wizard for targeted and quick customer service
- Comprehensive operation, protective as well as monitoring and service functions
- Data logging for analysis and systematic plant optimization
- Attractive, elegant and puristic design
- Various equipment levels for different applications

HYDRAULIC SYSTEMS

› Full graphic colour display

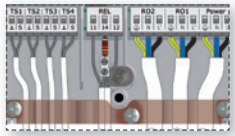
- S Standard
- C Comfort
- A Access
- T Top



with the option „water softening system AQA solar“

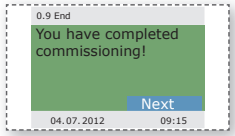
OPERATION AND VISUALIZATION

› Full graphic TFT colour display with backlight
› Rotary encoder with Push, ESC button
› Different operation levels for OEM, heating installer and end user
› Self-explanatory menu and user guidance
› Combination of plain text displays and symbols
› Different national languages



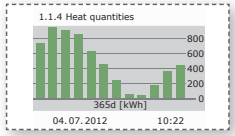
WIRING

› Easily removable terminal cover for access to the terminal compartment
› Laser engraved connection diagram on the rear side of the terminal cover
› Generously dimensioned terminal compartment
› Variable wiring and connection possibilities
› Proven spring-type terminals
› Convenient, intersection-free wiring
› Strain relief device



INSTALLATION AND SERVICE WIZARD

› Developed in cooperation with Regensburg University and heating trade
› Solar thermal plant is ready to operate with just a few settings
› After free assignment of inputs and outputs the matching plant system will be suggested
› Optical and/or acustical indications of malfunctions and errors
› Possibility of a preliminary diagnosis by the enduser in case of error messages
› Recommendations for the installer to eliminate malfunction or to perform maintenance work



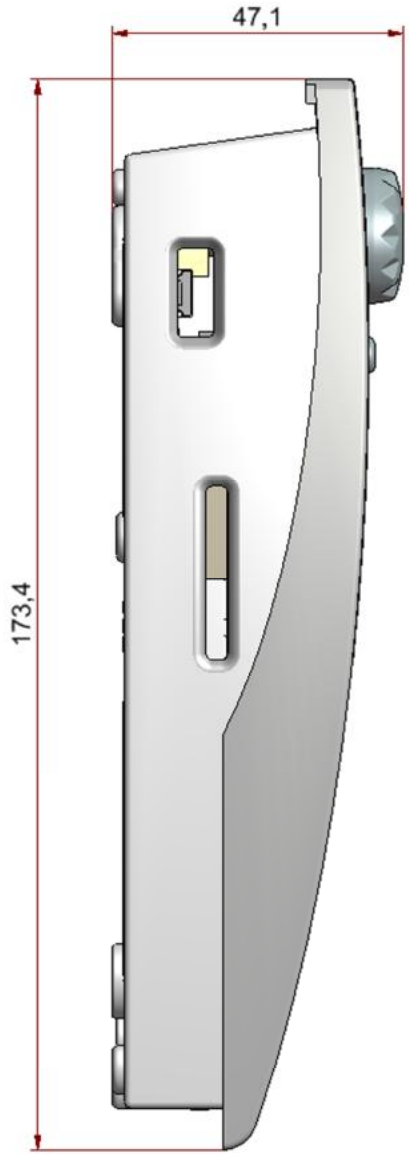
PLANT VISUALIZATION

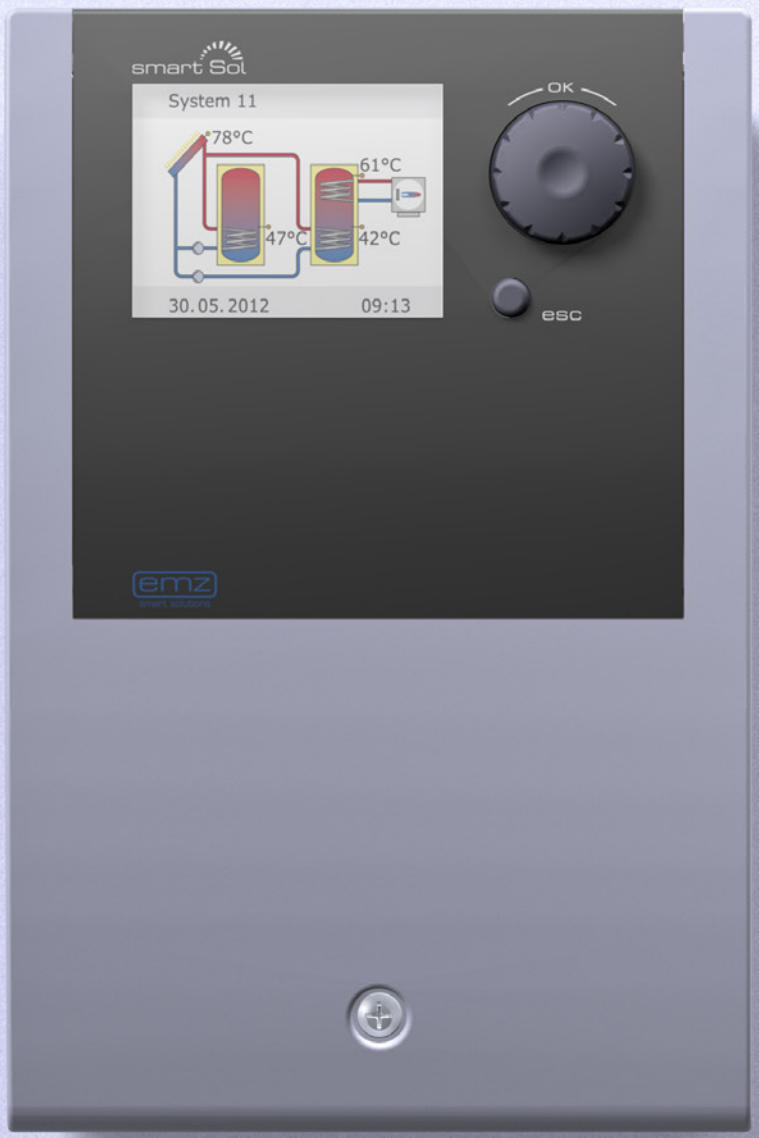
› Indication of measured values for inputs and outputs
› Service hour counter for outputs
› Display CO_2-savings
› Error list
› Solar yield measurement with data display and graphical representation
› Remote access plus software packages for plant monitoring and optimization

DATA INTERFACES

› Data interfaces such as SD card for data logging and USB for PC connection

smart Sol - measurements




smart Sol
System 11
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61°C
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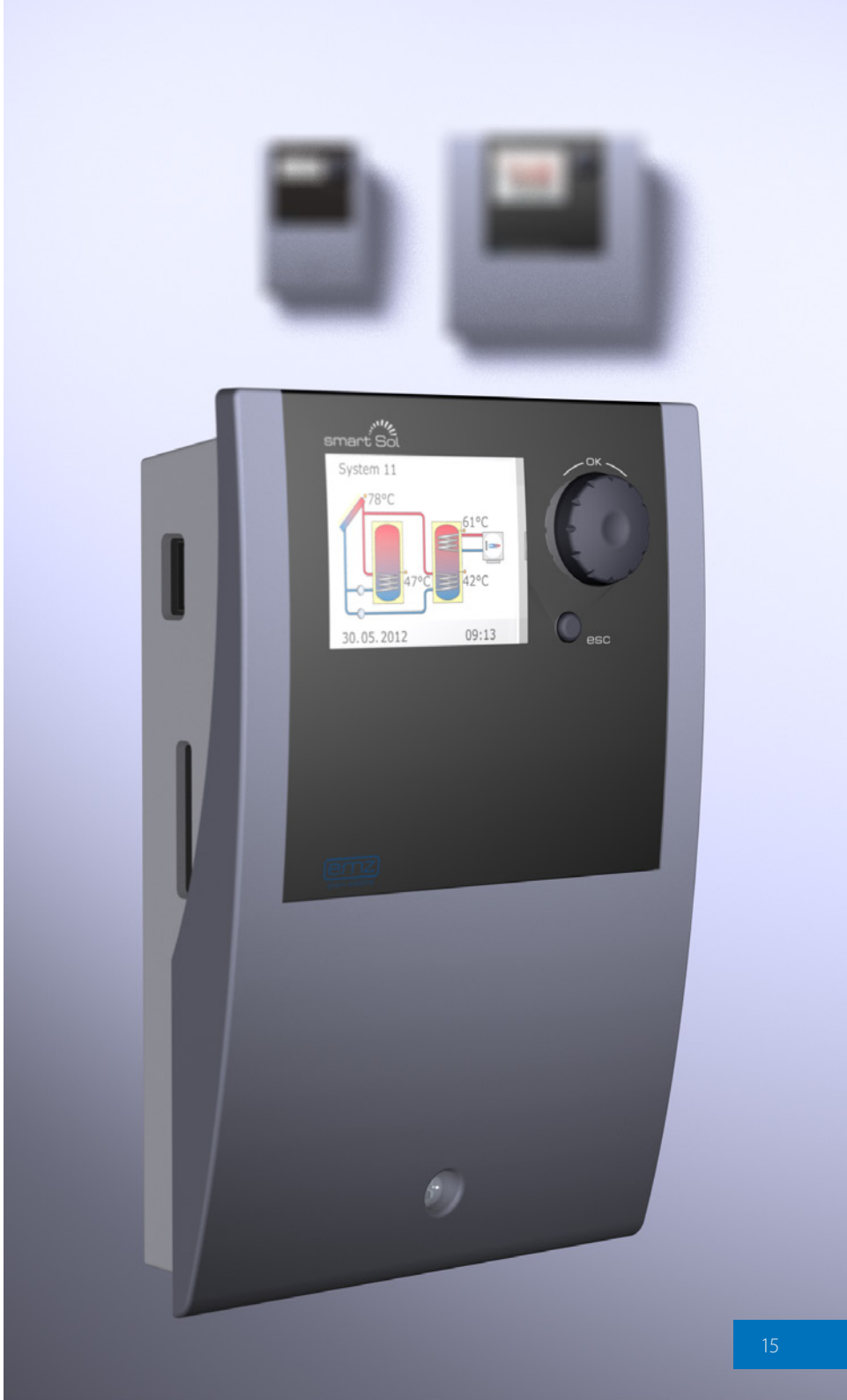
42°C
30.05.2012
09:13
OK
esc
emz

smart Sol - equipment overview

Solar controller - equipment levels	Standard	Comfort	Access	Top
Hardware				
Number inputs for temperature sensors PT1000	4	4	4	6
thereof switchable (analog outputs 0...10V or PWM outputs or temperature inputs)	-	1	1	1
thereof usable as input for pulse encoder/impeller	2	2	2	2
thereof usable as input for global radiation sensor	-	-	-	-
Number inputs (male connectors) for analog vortex flow sensors	-	-	1	1
Number triac outputs, max. 1A, for pumps and valves	2	2	2	2
Number relay outputs - change-over contact, pot.-free, max. 1A - for pumps, valves, boiler	-	1	1	1
Number high current relay outputs - make contact, pot.-free, max. 15A - for immersion heater, boiler	-	-	-	-
Number relays outputs - make contact, 230V output, not pot.-free, max. 1A - for boiler	-	-	-	-
Number fixed analog outputs 0…10V or PWM outputs for high-efficiency pumps	-	-	-	2
Additional supply terminals, 2 x 85V-265V for valves, 5V and 24V for sensors	-	-	-	-
SD card slot for data logging	-	-	√	√
USB port for access to SD card or PC	-	-	√	√
Acoustic alarm in case of error messages	-	√	√	√
Power reserve for real-time clock (min. 8 h)	√	√	√	√
Energy-saving switch power supply with a wide-range input, 85 … 265VAC, 50/60Hz	-	-	-	-
Transformer power supply, 230 VAC +/-10%, 50Hz	√	√	√	√
Full graphic TFT colour display with backlight, dimmable	√	√	√	√
Full graphic FSTN monochrome display with backlight	-	-	-	-
System				
Multi-piece plastic housing	√	√	√	√
Operation via rotary encoder and ESC button	√	√	√	√
Micro fuse incl. spare fuse, type 5x20mm, time-lag	2A	2A	2A	2A
Laser engraved connection diagram on the rear side of the terminal cover	√	√	√	√
Wall mounting, installation in pump group or tank	√	√	√	√
Protection class IP20	√	√	√	√
Ambient temperature 0 … 40°C	√	√	√	√
Active display area, width x height in mm	47x35	47x35	47x35	47x35
Maximum number national languages	15	15	15	15
Maximum number collector arrays	2	2	2	2
Maximum number tanks	2	2	2	3
Number hydraulic systems currently	9	20	20	24
Installation wizard	√	√	√	√
Service wizard	√	√	√	√
Solar heating support	√	√	√	√
Operation and efficiency functions				
Differential temperature control (Delta-T-control)	√	√	√	√
Fixed temperature control (Fixed-T-control)	√	√	√	√

Solar controller - equipment levels	Standard	Comfort	Access	Top
Disable the tank recharge	-	√	√	√
Efficient tank charge	√	√	√	√
Priority charging	√	√	√	√
Low-flow-function for low-flow-plants	√	√	√	√
Tube collector function	√	√	√	√
Thermostat function	√	√	√	√
Maximum number of freely selectable control functions	1	2	2	2
Speed control and speed limitation of the pumps	√	√	√	√
Collector defrosting	√	√	√	√
Holiday function	√	√	√	√
Automatic summer/winter time changeover	√	√	√	√
Collector minimum temperature	√	√	√	√
Overtravel time for outputs	√	√	√	√
Quick charging	√	√	√	√
Signal processing global radiation sensor	-	-	-	-
Anti-legionella function in conjunction with back-up heating	-	√	√	√
Back-up heating via different heat sources	-	√	√	√
Direct back-up heating via electric immersion heater	-	-	-	-
Heating return increase	-	√	√	√
Charge zone control	√	√	√	√
Bypass in the solar circuit	√	√	√	√
Protective functions				
Collector emergency OFF	√	√	√	√
Collector cooling	√	√	√	√
Antifreeze	√	√	√	√
Tank maximum temperature limitation	√	√	√	√
Tank temperature limit cut-out	√	√	√	√
Anti-blocking protection	√	√	√	√
Soft charge	√	√	√	√
Tank cooling	√	√	√	√
Monitoring and Service functions				
Sensor monitoring	√	√	√	√
Monitoring the output parameters	√	√	√	√
Plausibility checks	√	√	√	√
Sensor balancing	√	√	√	√
Display free tank sensor top	√	√	√	√
Service hour counter for outputs	√	√	√	√
Data logging on SD card	-	-	√	√
Indication of measured values on the display	√	√	√	√
Error list	√	√	√	√
Manual Mode	√	√	√	√

Solar controller - equipment levels	Standard	Comfort	Access	Top
Reset of complete or parameter related factory settings	√	√	√	√
Solar yield measurement via pump activation with data display	√	√	√	√
Solar yield measurement via vortex and/or impeller with data display	√	√	√	√
Graphical representation of the solar yield on the display (from SD card or RAM)	√	√	√	√
Number of heat meters for solar yield measurement	2	2	2	2
Display of CO_2-savings	√	√	√	√
Optional accessory and customized adaptions on request				
Assembly/operating instructions on CD, safety instructions as a leaflet	√	√	√	√
Assembly/operating instructions incl. safety instructions as a booklet	√	√	√	√
Collector sensor PT1000, grey Silicon, operation temperature range -40 … +180°C, length 2.500mm, with ferrules	√	√	√	√
Tank sensor PT1000, black PVC, operation temperature range -5 … +90°C, length 2.500mm, with ferrules	√	√	√	√
Power cable, black 230V, 3poles, H05VV-F 3G0,75mm, length 1.500mm, with ferrules	√	√	√	√
SD card, 2GB	-	-	√	√
Global radiation sensor	-	-	-	-
Vortex flow sensors, Grundfos types VFS	-	-	√	√
Resistors for disable tank recharge or sensor switching, boiler sensor PT100 = 130 Ω / PT500 = 620 Ω / PT1000 = 1,3 kΩ	-	√	√	√
Module for integration of a water softening system, type AQA solar - BWT, Schriesheim	√	√	√	-
smart Box for remote access via internet and intranet: graphical visualization of the log-data, parameterization, software update, online operation	-	-	√	√
Local PC software "smart Sol analyzer" for direct connection: graphical visualization of the log-data, parameterization, software update, online operation	-	-	√	√
OEM personalization	√	√	√	√



smart Sol plus

Differential temperature controller for complex solar thermal plants for drinking water heating and heating support

Control of complex solar thermal plants with up to 2 collector arrays or 4 tanks

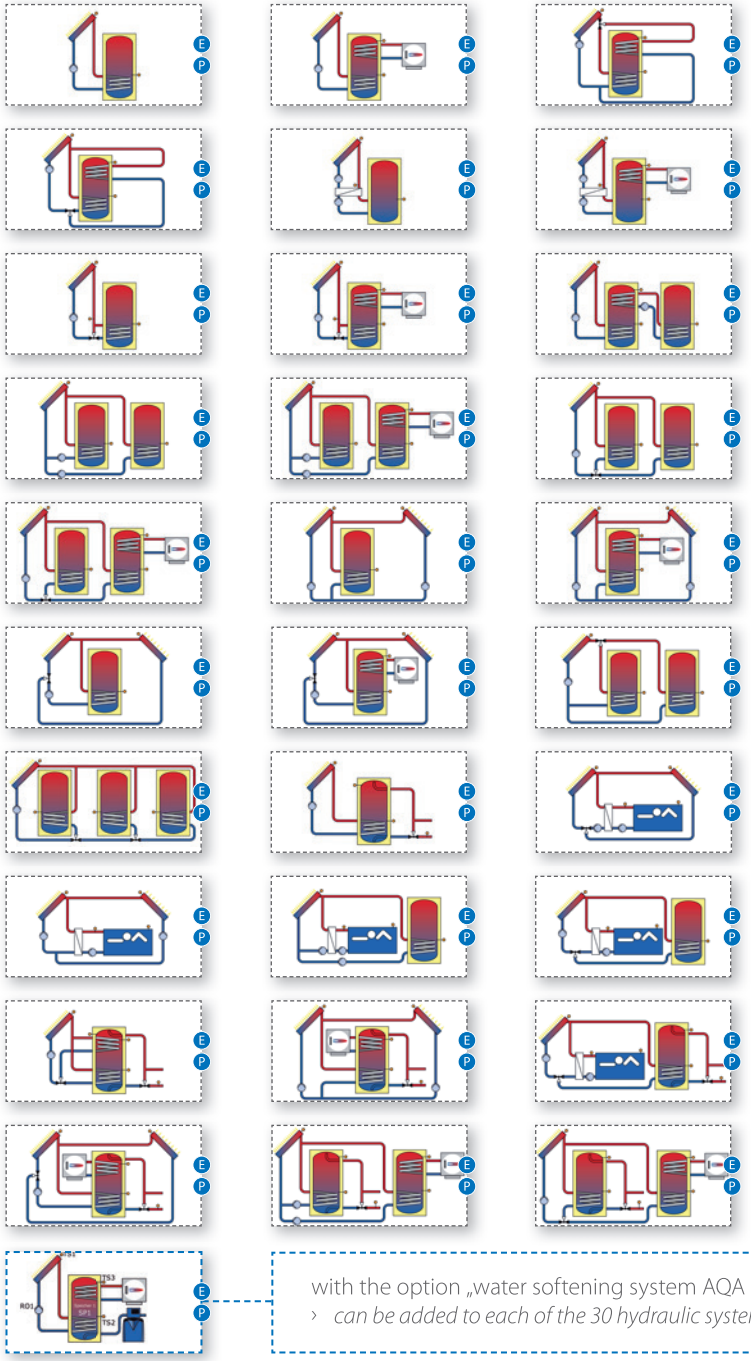
CUSTOMER BENEFIT

- 15 % higher performance of the plant by
  - · forecast of sun radiation (saving primary energy)
  - · efficient tank charge (saving pump current)
- Full graphic colour display for clear and logical visualization
- Innovative operation concept for easy handling
- Smart and time-saving wiring concept
- Installation wizard for safe commissioning
- Service wizard for targeted and quick customer service
- Comprehensive operation, protective as well as monitoring and service functions
- Data logging for analysis and systematic plant optimization
- Attractive, elegant and puristic design
- Various equipment levels for different applications

HYDRAULIC SYSTEMS

› Full graphic colour display

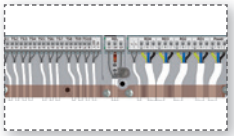
E Excellence
P Premium



with the option „water softening system AQA solar“
› *can be added to each of the 30 hydraulic systems*

OPERATION AND VISUALIZATION

› Full graphic TFT colour display with backlight
› Rotary encoder with Push, ESC button
› Different operation levels for OEM, heating installer and end user
› Self-explanatory menu and user guidance
› Combination of plain text displays and symbols
› Different national languages

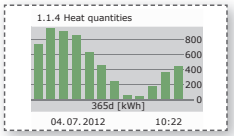


WIRING

› Easily removable terminal cover for access to the terminal compartment
› Laser engraved connection diagram on the rear side of the terminal cover
› Generously dimensioned terminal compartment
› Variable wiring and connection possibilities
› Proven spring-type terminals
› Convenient, intersection-free wiring
› Strain relief device

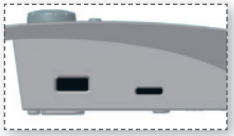
INSTALLATION AND SERVICE WIZARD

› Developed in common with Regensburg University and heating trade
› Solar thermal plant is ready to operate with just a few settings
› After free assignment of inputs and outputs the matching plant system is suggested
› Optical and/or acustical indications of malfunctions and errors
› Possibility of a preliminary diagnosis by the enduser in case of error messages
› Recommendations for the installer to eliminate malfunction or to perform maintenance work



PLANT VISUALIZATION

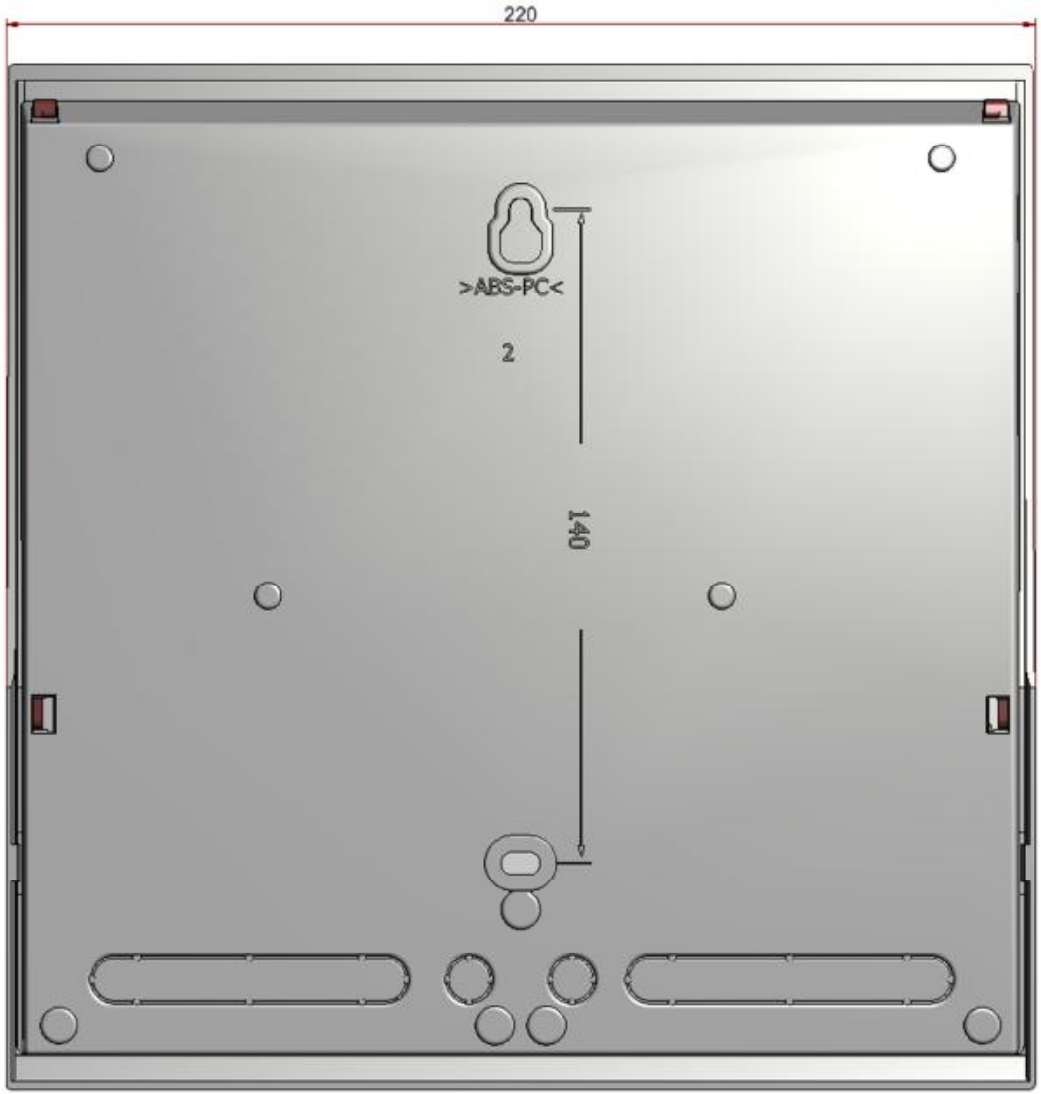
› Indication of measured values for inputs and outputs
› Service hour counter for outputs
› Display CO_2-savings
› Error list
› Solar yield measurement with data display and graphical representation
› Remote access plus software packages for plant monitoring and optimization

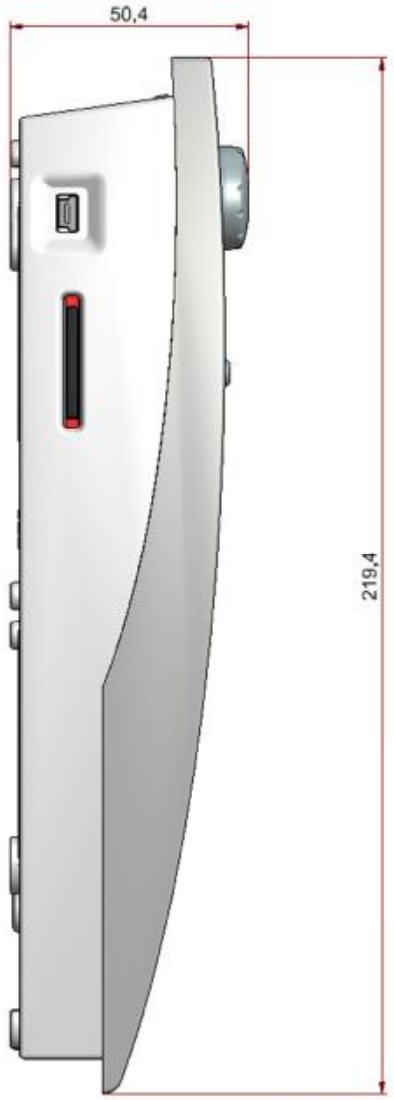


DATA INTERFACES

› Data interfaces such as SD card for data logging and USB for PC connection

smart Sol plus - measurements






smart Sol plus
System 29
55°C
32°C
45°C
46°C
35°C
34°C
40°C
30.05.2012
09:17
OK
esc
emz

smart Sol plus - equipment overview

Solar controller - equipment levels	Excellence	Premium
Hardware		
Number inputs for temperature sensors PT1000	8	10
thereof switchable (analog outputs 0...10V or PWM outputs or temperature inputs)	2	4
thereof usable as input for pulse encoder/impeller	3	4
thereof usable as input for global radiation sensor	1	1
Number inputs (male connectors) for analog vortex flow sensors	1	2
Number triac outputs, max. 1A, for pumps and valves	4	4
Number relay outputs - change-over contact, pot.-free, max. 1A - for pumps, valves, boiler	1	1
Number high current relay outputs - make contact, pot.-free, max. 15A - for immersion heater, boiler	-	-
Number relays outputs - make contact, 230V output, not pot.-free, max. 1A - for boiler	-	-
Number fixed analog outputs 0…10V or PWM outputs for high-efficiency pumps	2	-
Additional supply terminals, 2 x 85V-265V for valves, 5V and 24V for sensors	√	√
SD card slot for data logging	√	√
USB port for access to SD card or PC	√	√
Acoustic alarm in case of error messages	√	√
Power reserve for real-time clock (min. 8 h)	√	√
Energy-saving switch power supply with a wide-range input, 85 … 265VAC, 50/60Hz	√	√
Transformer power supply, 230 VAC +/-10%, 50Hz	-	-
Full graphic TFT colour display with backlight, dimmable	√	√
Full graphic FSTN monochrome display with backlight	-	-
System		
Multi-piece plastic housing	√	√
Operation via rotary encoder and ESC button	√	√
Micro fuse incl. spare fuse, type 5x20mm, time-lag	4A	4A
Laser engraved connection diagram on the rear side of the terminal cover	√	√
Wall mounting, installation in pump group or tank	√	√
Protection class IP20	√	√
Ambient temperature 0 … 40°C	√	√
Active display area, width x height in mm	70x53	70x53
Maximum number national languages	15	15
Maximum number collector arrays	2	2
Maximum number tanks	4	4
Number hydraulic systems currently	30	30
Installation wizard	√	√
Service wizard	√	√
Solar heating support	√	√
Operation and efficiency functions		
Differential temperature control (Delta-T-control)	√	√
Fixed temperature control (Fixed-T-control)	√	√
Disable the tank recharge	√	√

Solar controller - equipment levels	Excellence	Premium
Efficient tank charge	√	√
Priority charging	√	√
Low-flow-function for low-flow-plants	√	√
Tube collector function	√	√
Thermostat function	√	√
Maximum number of freely selectable control functions	4	4
Speed control and speed limitation of the pumps	√	√
Collector defrosting	√	√
Holiday function	√	√
Automatic summer/winter time changeover	√	√
Collector minimum temperature	√	√
Overtravel time for outputs	√	√
Quick charging	√	√
Signal processing global radiation sensor	√	√
Anti-legionella function in conjunction with back-up heating	√	√
Back-up heating via different heat sources	√	√
Direct back-up heating via electric immersion heater	-	-
Heating return increase	√	√
Charge zone control	√	√
Bypass in the solar circuit	√	√
Protective functions		
Collector emergency OFF	√	√
Collector cooling	√	√
Antifreeze	√	√
Tank maximum temperature limitation	√	√
Tank temperature limit cut-out	√	√
Anti-blocking protection	√	√
Soft charge	√	√
Tank cooling	√	√
Monitoring and Service functions		
Sensor monitoring	√	√
Monitoring the output parameters	√	√
Plausibility checks	√	√
Sensor balancing	√	√
Display free tank sensor top	√	√
Service hour counter for outputs	√	√
Data logging on SD card	√	√
Indication of measured values on the display	√	√
Error list	√	√
Manual Mode	√	√
Reset of complete or parameter related factory settings	√	√

Solar controller - equipment levels	Excellence	Premium
Solar yield measurement via pump activation with data display	√	√
Solar yield measurement via vortex and/or impeller with data display	√	√
Graphical representation of the solar yield on the display (from SD card or RAM)	√	√
Number of heat meters for solar yield measurement	4	4
Display of CO_2-savings	√	√
Optional accessory and customized adaptions on request		
Assembly/operating instructions on CD, safety instructions as a leaflet	√	√
Assembly/operating instructions incl. safety instructions as a booklet	√	√
Collector sensor PT1000, grey Silicon, operation temperature range -40 … +180°C, length 2.500mm, with ferrules	√	√
Tank sensor PT1000, black PVC, operation temperature range -5 … +90°C, length 2.500mm, with ferrules	√	√
Power cable, black 230V, 3poles, H05VV-F 3G0,75mm, length 1.500mm, with ferrules	√	√
SD card, 2GB	√	√
Global radiation sensor	√	√
Vortex flow sensors, Grundfos types VFS	√	√
Resistors for disable tank recharge or sensor switching, boiler sensor PT100 = 130 Ω / PT500 = 620 Ω / PT1000 = 1,3 kΩ	√	√
Module for integration of a water softening system, type AQA solar - BWT, Schriesheim	√	√
smart Box for remote access via internet and intranet: graphical visualization of the log-data, para-meterization, software update, online operation	√	√
Local PC software "smart Sol analyzer" for direct connection: graphical visualization of the log-data, parameterization, software update, online operation	√	√
OEM personalization	√	√

smart Box

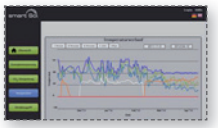
Comfortable remote access to smart Sol and smart Sol plus

CUSTOMER BENEFIT

- No travel costs because of remote maintenance
- Professional plant monitoring and plant optimization
- No additional costs for apps

FUNCTIONS

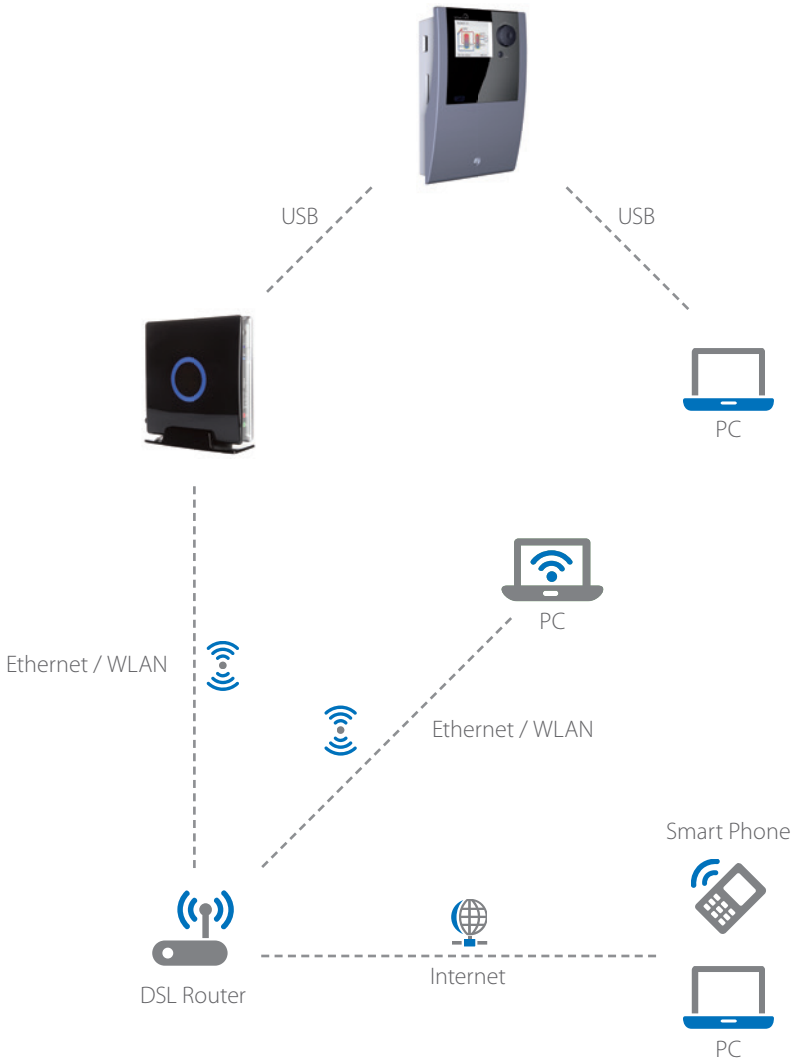
- Display of the current hydraulic plant system
- Evaluation and graphical visualization of the log data
- (solar yields, CO_2 savings, temperatures, volume flows, behaviour of actuators)
- Quick and comfortable parameterization
- Online-operation of the controller
- Remote-controlled update of the smart Sol control software and the smart Box function software
- All functions on the smart Box are also available as local PC software „smart Sol analyzer", therefore direct USB connection of the terminal device, e.g. notebook with the control



FEATURES

- Remote access to smart Sol „ACCESS“ and „TOP“ and smart Sol plus by smart Box via internet and intranet
- Access both with LAN and WLAN
- Access with different terminal devices, e.g. PCs, Tablet PCs, smart phones, netbooks …
- Use of terminal devices is independent from its operating system
- One smart Box can address 1 control
- Function software and operating system preinstalled on smart Box
- Integrated online help

Technical Data	
Mains voltage	100 … 240VAC, 50/60Hz
Working memory	1 GB DDR3
Storage	min. 8 GB SD
Network	Ethernet 10/100/1000 Mbps WiFi 802.11 n/g/b (300 Mbps)
Relevant ports	6 x USB 2.0 1 x VGA
Power consumption typical	16W
Dimensions, width x height x depth	188 x 188 x 44 mm
Conditions	smart Sol und smart Sol plus with USB port, SD card slot and SD card incl. data Router, configured for operation of smart Box
Scope of delivery	smart Box, preinstalled with operating system (Ubuntu-Linux) and function software Different national languages available AC adapter Stand Wall bracket Quick Start Guide on CD and online



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