Hydraulic layouts for

Oventrop
REGTRONIC PX

Important!

Please read the instructions carefully before installing and operating the unit!

Failure to do this can void product warranty!
Please keep the instructions in a safe place!

This unit described has been manufactured and inspected according to CE regulations.

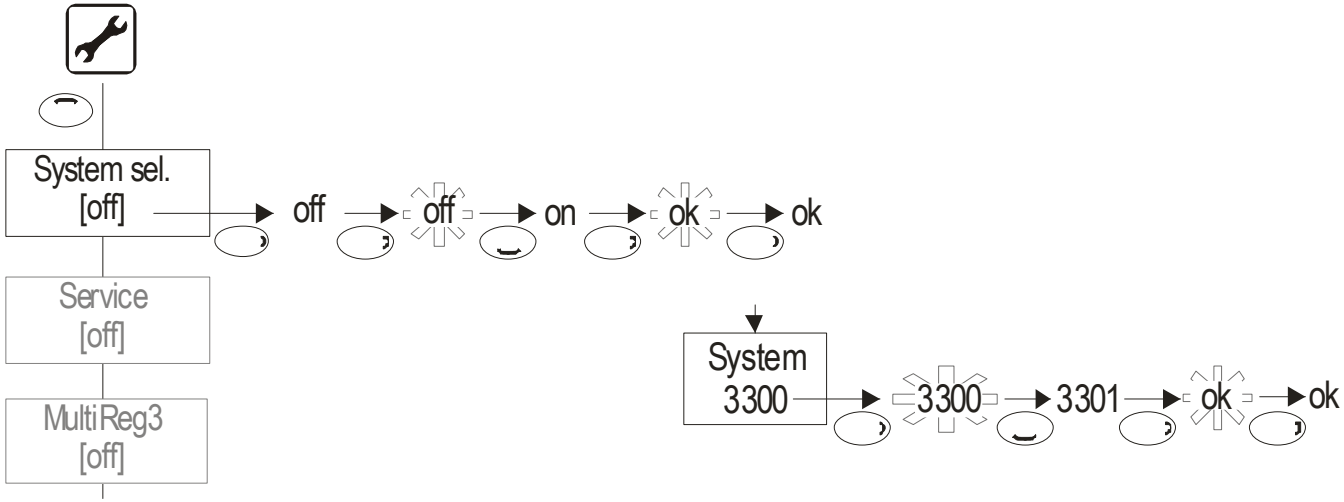
Correct procedure for entering or changing system settings

During initial start-up of the equipment, proceed as follows:

1. Select the hydraulic layout (e.g. X1010)
2. Enter the corresponding system number (3301) in the "System Settings" menu (see example below).

Finally, configure any selected supplementary features such as multi-function regulators, etc.
Note: 3300 is the initial software set!

Example: Change from 3300 initial software set to 3301

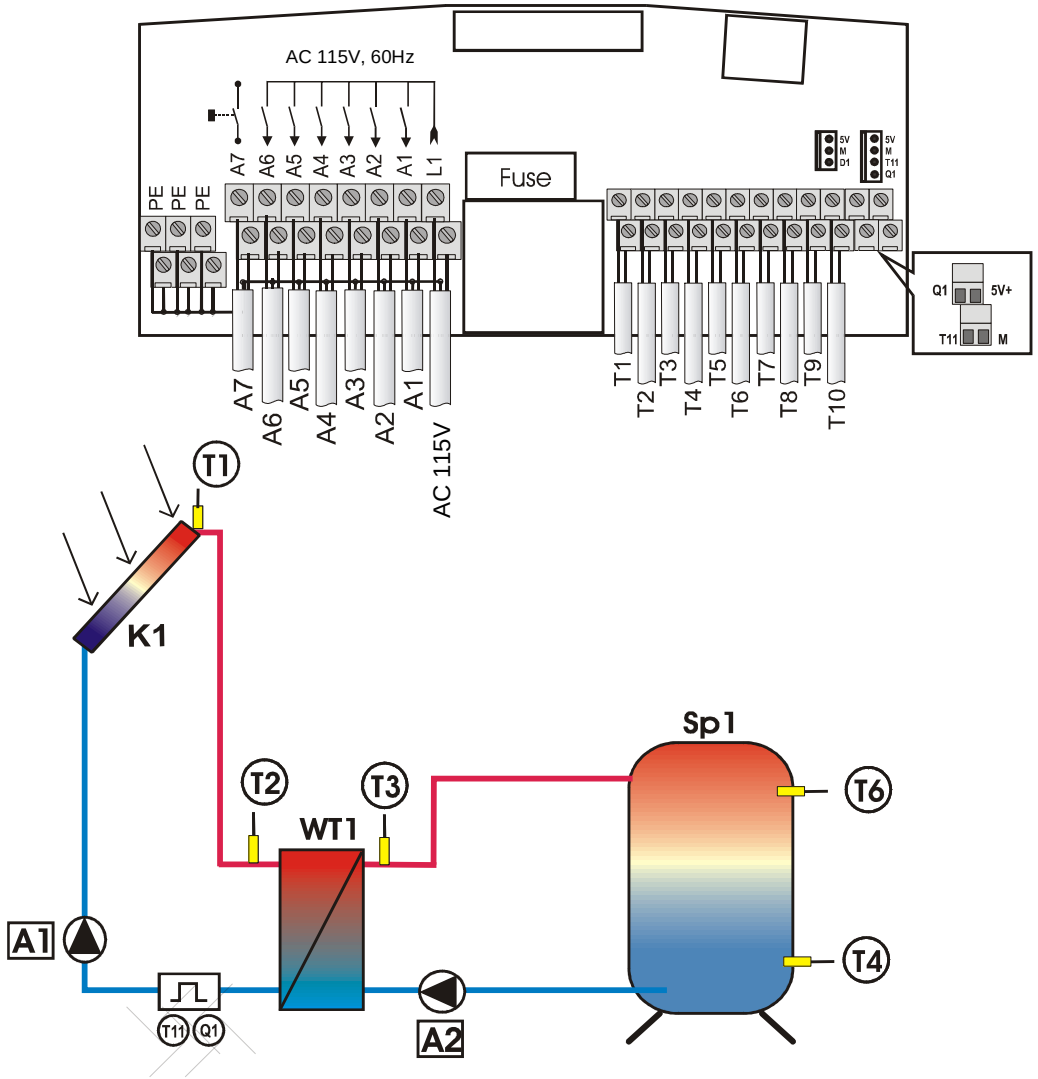


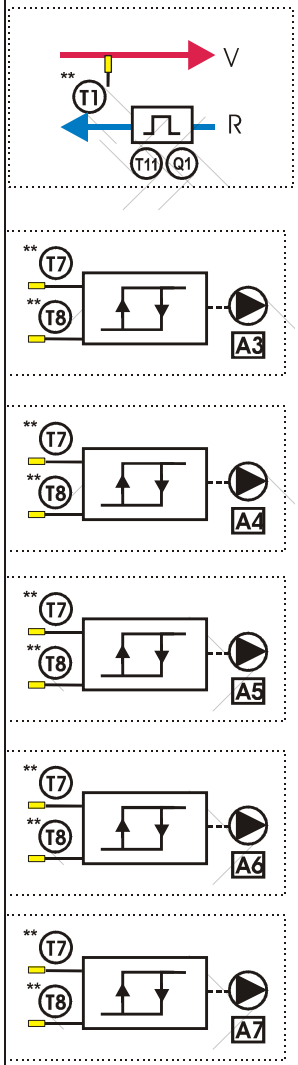
Overview of individual layouts for Regtronic PX

System	Layout	Solar circuit	Ancillary features
3301	**X1010**	1 collector, 1 storage tank, 2 pumps	5 multi-function regulators
3302	**X1020**	1 collector, 1 storage tank, 2 pumps, 1 changeover valve	3 multi-function regulators
3303	**X1030**	1 collector, 2 storage tanks, 2 pumps, 1 changeover valve	3 multi-function regulators
3304	**X2010**	2 collectors, 1 storage tank, 2 pumps	4 multi-function regulators
3305	**X2020**	2 collectors, 1 storage tank, 2 pumps, 1 changeover valve	2 multi-function regulators
3306	**X2030**	2 collectors, 2 storage tanks, 2 pumps, 1 changeover valve	2 multi-function regulators

Note: The following layout schematics do not represent complete hydraulic system diagrams.

Layout REGUSOL X1010, system no.: 3301





Ancillary features for multi-function regulators

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

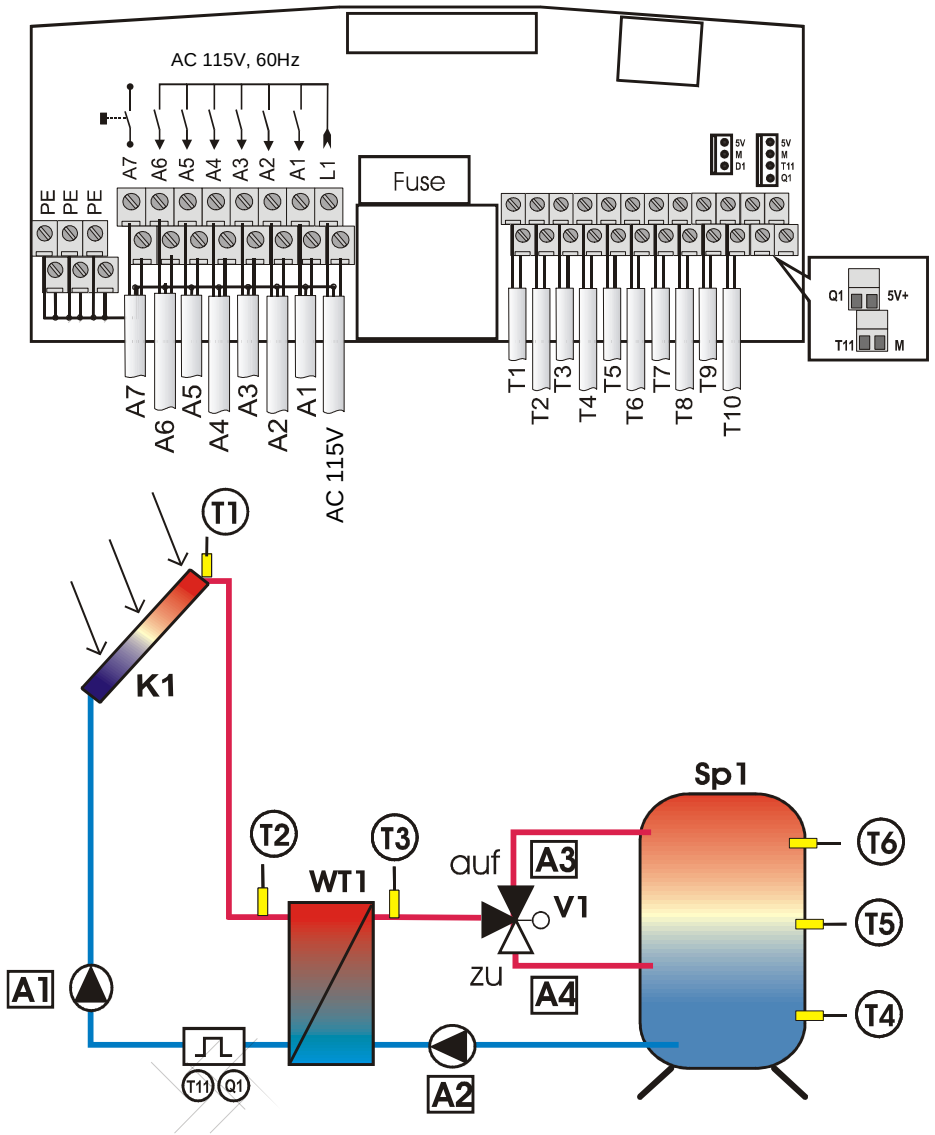
Sensor connections for X1010 layout:

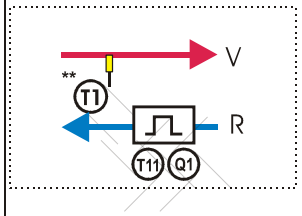
	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for measuring the collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for measuring the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for measuring the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	E4	T4	Required for measuring the lower storage tank temperature
Temperature sensor	E5	T5	Select as required. Not used here.
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage tank temperature
Multi-function regulator temperature sensor	E7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

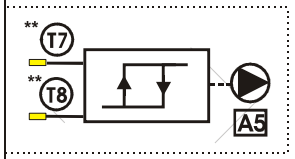
115 V connections for X1010 layout:

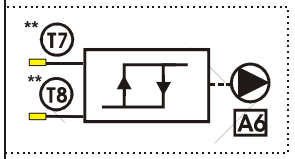
	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for multi-function regulator	A3	A3	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A4	A4	115 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A5	A5	115 V connection for pump or valve if "MFR3" activated
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR4" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR5" activated

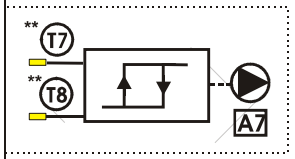
Layout REGUSOL X1020, system no: 3302











Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

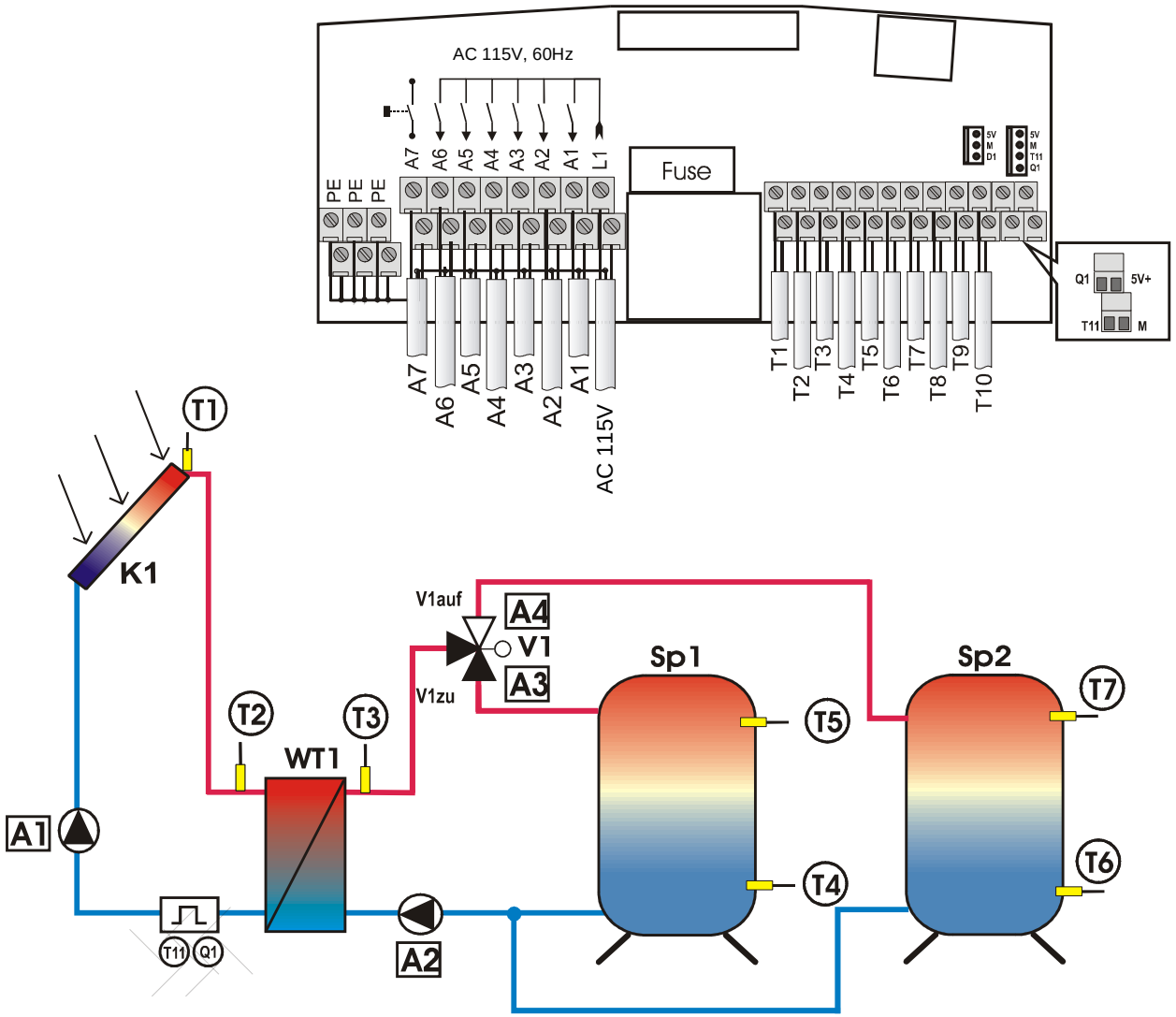
Sensor connections for X1020 layout:

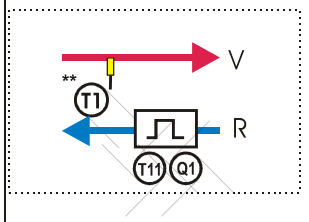
	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for measuring the collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for measuring the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for measuring the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	E4	T4	Required for measuring the lower storage tank temperature
Storage tank 1 (centre) temperature sensor	E5	T5	Required for measuring the centre storage tank temperature
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage tank temperature
Multi-function regulator temperature sensor	E7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

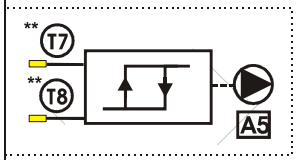
115 V connections for X1020 layout:

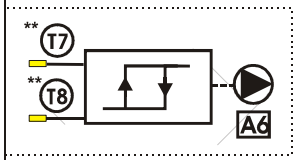
	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
Switched output for 3-way valve	A4	V1 closed	Switched output for 3-way valve: CLOSED
Switched output for multi-function regulator	A5	A5	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR3" activated

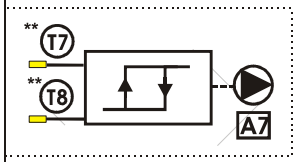
Layout REGUSOL X1030, system no: 3303











<u>Ancillary features for multi-function regulator</u>

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Charging plans:

- Serial charging:
- Synchronous charging
(see control unit guide)

Tx** - Select as required

Regtronic PX

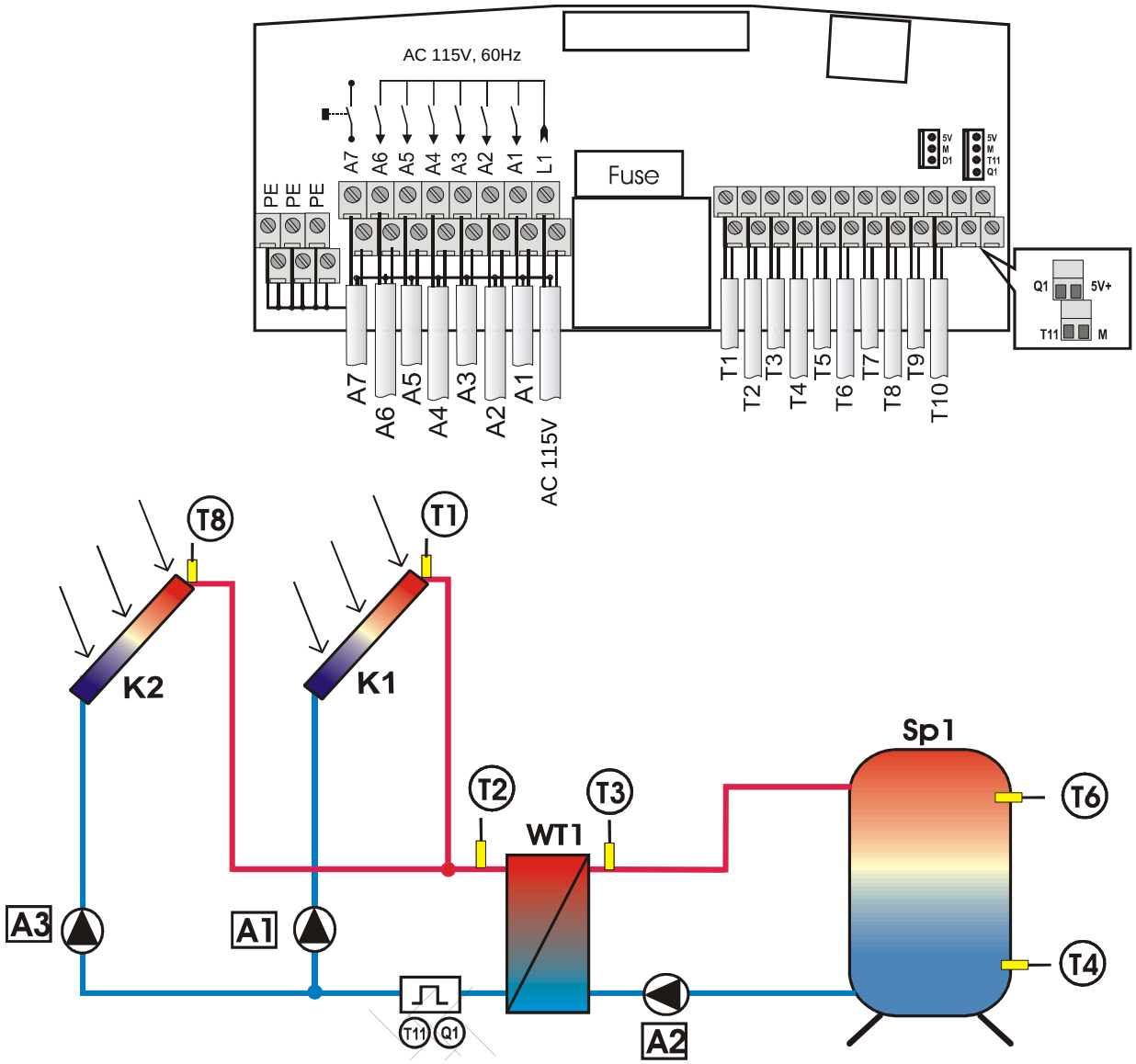
Sensor connections for X1030 layout:

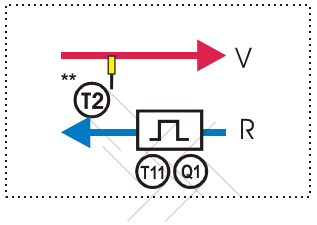
	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	E4	T4	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	E5	T5	Required for measuring the upper storage temperature of storage tank 1
Storage tank 2 (lower) temperature sensor	E6	T6	Required for measuring the lower storage temperature of storage tank 2
Storage tank 2 (upper) temperature sensor	E7	T7	Required for measuring the upper storage temperature of storage tank 2
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

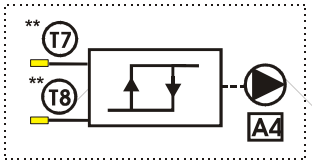
115 V connections for X1030 layout:

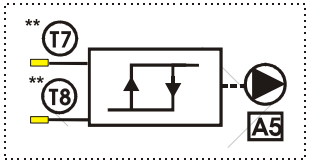
	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
Switched output for 3-way valve	A4	V1 closed	Switched output for 3-way valve: CLOSED
Switched output for multi-function regulator	A5	A5	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR3" activated

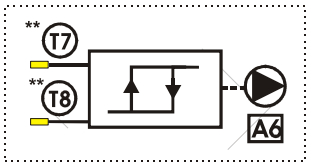
Layout REGUSOL X2010, system no: 3304

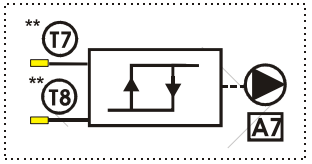












Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

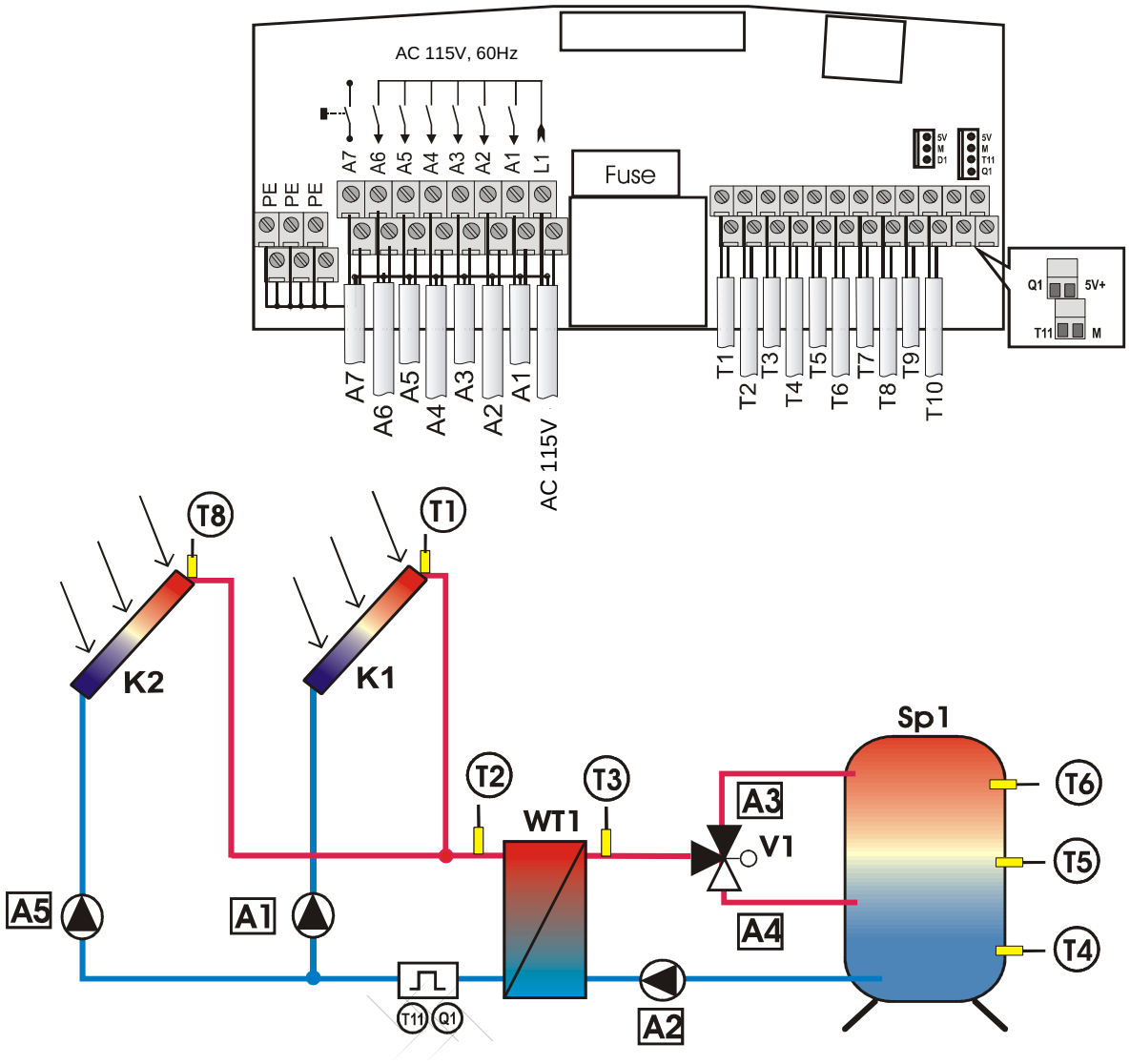
Sensor connections for X2010 layout:

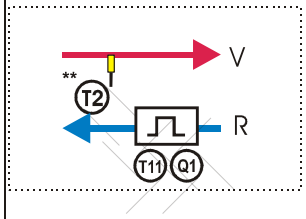
	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit
Temperature sensor	E4	T4	Can be assigned as needed. Not used here.
Storage tank 1 (lower) temperature sensor	E5	T5	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage temperature of storage tank 2
Collector 2 temperature sensor	E7	T7	Required for collector temperature
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

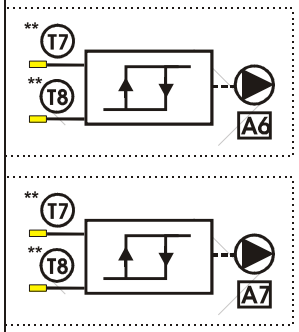
115 V connections for X2010 layout:

	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump – collector circuit 1	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for solar circuit pump – collector circuit 2	A3	A3	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for multi-function regulator	A4	A4	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A5	A5	115 V connection for pump or valve if "MFR2" activated
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR3" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR4" activated

Layout REGUSOL X2020, system no: 3305







Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Tx** - Select as required

Regtronic PX

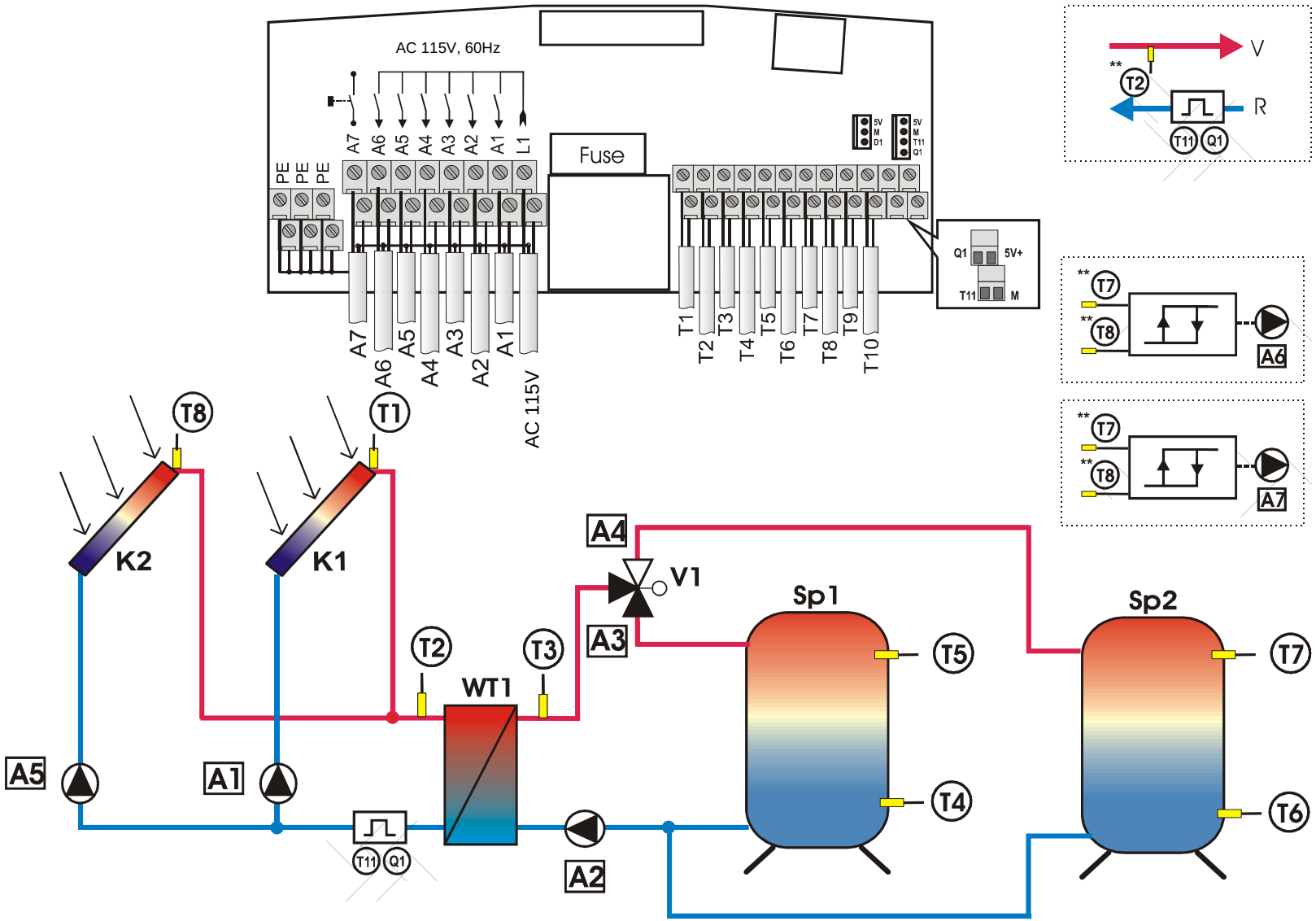
Sensor connections for X2020 layout:

	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 1 (lower) temperature sensor	E4	T4	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (centre) temperature sensor	E5	T5	Required for measuring the centre storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage temperature of storage tank 1
Collector 2 temperature sensor	E7	T7	Required for collector temperature
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

115 V connections for X2020 layout:

	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
Switched output for 3-way valve	A4	V1 closed	Switched output for 3-way valve: CLOSED
Switched output for solar circuit pump – collector circuit 2	A5	A3	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR2" activated

Layout REGUSOL X2030, system no: 3306



Ancillary features for multi-function regulator

Heating, cooling, threshold switch, increased return flow, wood boiler feature, difference regulator, circulation function, alarm and timer

All sensors can be used for switching and control functions (included those already in use)
Only the output assignments are fixed.

Charging plans:

- Serial charging:
- Synchronous charging
(see control unit guide)

Tx** - Select as required

Regtronic PX

Sensor connections for X2030 layout:

	Reference		
Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit
Storage tank 2 (lower) temperature sensor	E4	T4	Required for measuring the lower storage temperature of storage tank 2
Storage tank 1 (lower) temperature sensor	E5	T5	Required for measuring the lower storage temperature of storage tank 1
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage temperature of storage tank 1
Collector 2 temperature sensor	E7	T7	Required for collector temperature
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.

115 V connections for X2030 layout:

	Reference		
Description	Connection terminal	Plan no.	Comment
Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Switched output for solar circuit pump	A1	A1	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for charging circuit pump	A2	A2	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
Switched output for 3-way valve	A4	V1 closed	Switched output for 3-way valve: CLOSED
Switched output for solar circuit pump – collector circuit 2	A5	A3	115 V connection for pump *RPM controlled* if RPM min programmed < 100%
Switched output for multi-function regulator	A6	A6	115 V connection for pump or valve if "MFR1" activated
Switched output for multi-function regulator	A7	A7	115 V connection for pump or valve if "MFR2" activated