### 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

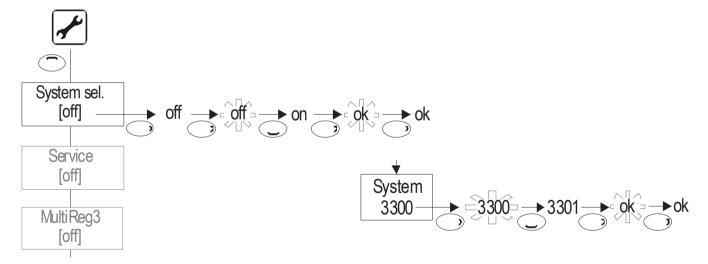
During initial start-up of the equipment, proceed as follows:

- 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

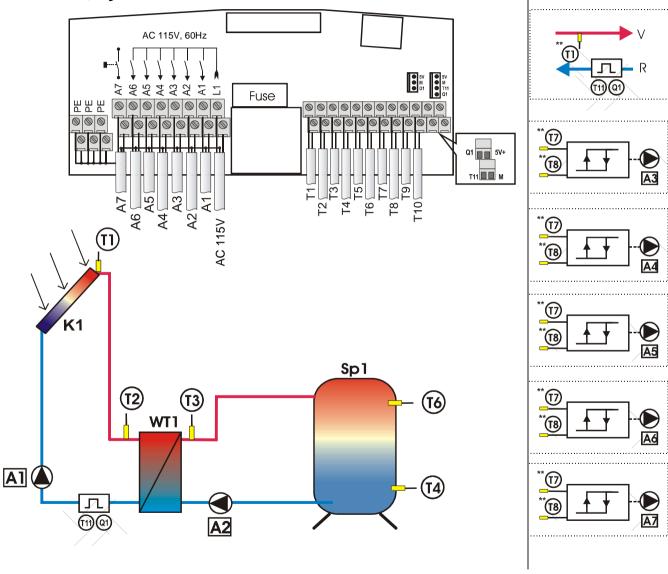


#### Overview of individual layouts for Regtronic PX

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

Heating, cooling,

threshold switch,

alarm and timer

Only the output

in use)

All sensors can be

used for switching and control functions

(included those already

assignments are fixed.

Tx\*\* - Select as required

increased return flow, wood boiler feature.

difference regulator, circulation function,

regulators

#### Regtronic PX

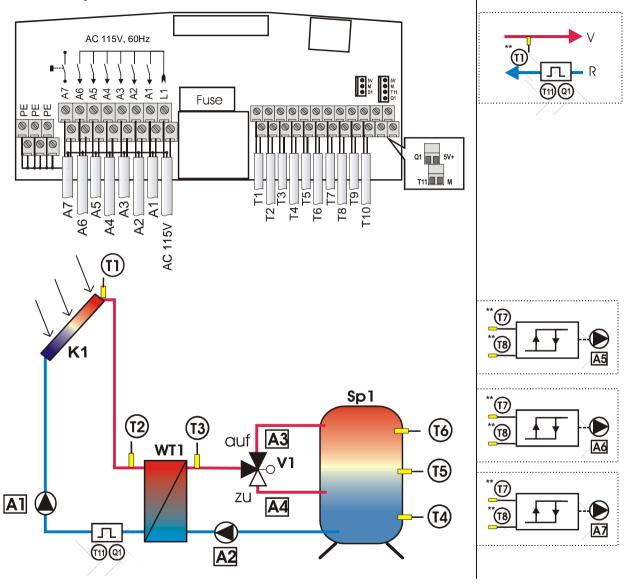
#### Sensor connections for X1010 layout:

#### 115 V connections for X1010 layout:

	Referer	nce	
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	Т9	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.

	Referenc	е				
Description	Connection Plan terminal 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:

#### 115 V 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	Т9	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.

	Reference	е	
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 Ancillary features for multi-function AC 115V, 60Hz regulator Heating, cooling, 5V 5V 5V M T11 threshold switch. Fuse increased return flow, wood boiler feature. difference regulator, circulation function, Т11 🔲 М alarm and timer T5 45 A3 All sensors can be used for switching and control functions (included those already in use) Only the output K1 assignments are fixed. V1auf Sp1 Sp2 Charging plans: **(17)** - Serial charging: **T2 (T5) (T3)** - Synchronous WT1 charging (see control unit guide) A1 **(16) T4**) <u>@@</u> **A2** Tx\*\* - Select as required

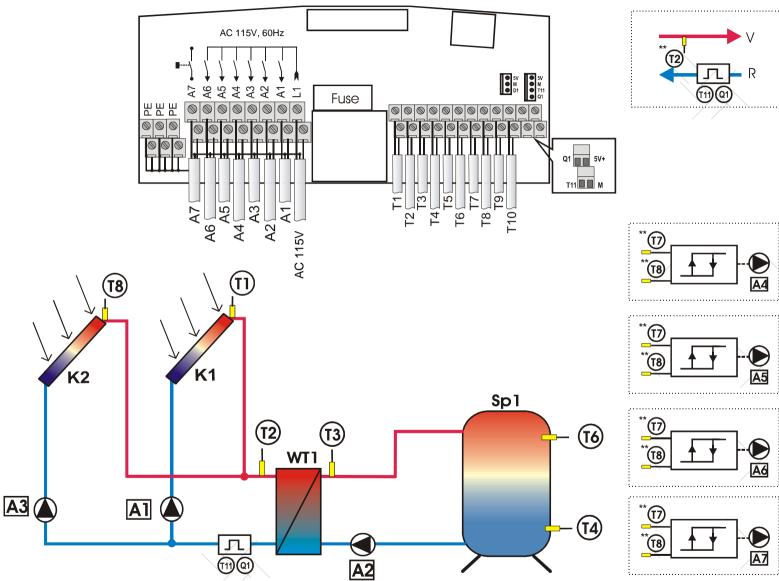
#### Regtronic PX

#### Sensor connections for X1030 layout:

#### 115 V connections for X1030 layout:

	Refere	nce	1		Referenc	е	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit	Switched output for solar circuit pump	A1	A1	115 V connection for pump RPM controlled if
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit	orroan parrip			RPM min programmed < 100%
Storage tank 1 (lower) temperature sensor	E4	T4	Required for measuring the lower storage temperature of storage tank 1	Switched output for charging circuit pump	A2	A2	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
Storage tank 1 (upper) temperature sensor	E5	T5	Required for measuring the upper storage temperature of storage tank 1	Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
Storage tank 2 (lower) temperature sensor	E6	T6	Required for measuring the lower storage temperature of storage tank 2	Switched output for 3-way	A4	V1	Switched output for 3-way valve: CLOSED
Storage tank 2 (upper) temperature sensor	E7	T7	Required for measuring the upper storage temperature of storage tank 2	valve		closed	Switched output for 3-way valve. CLOSED
Multi-function regulator temperature sensor	E8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other	Switched output for multi- function regulator	A5	A5	115 V connection for pump or valve if "MFR1" activated
Temperature sensor	E9	T9	sensor may also be used.  Can be assigned as needed. Not used here.	Switched output for multi- function regulator	A6	A6	115 V connection for pump or valve if "MFR2" activated
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.	Switched output for multi-	A7	A7	115 V connection for pump or valve if "MFR3" activated
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.	function regulator			II IVIFING 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:

#### 115 V connections for X2010 layout:

Reference		nce	]		Referenc	е	]
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit	Switched output for solar circuit pump – collector	A1	A1	115 V connection for pump  RPM controlled if
Temperature sensor – secondary heat exchanger	E3	T3	Required for the heat exchanger temperature in the secondary circuit	circuit 1			RPM min programmed < 100%
Temperature sensor	E4	T4	Can be assigned as needed. Not used here.	Switched output for charging circuit pump	A2	A2	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
Storage tank 1 (lower) temperature sensor	E5	T5	Required for measuring the lower storage temperature of storage tank 1	Switched output for solar	A3	A3	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
Storage tank 1 (upper) temperature sensor	E6	T6	Required for measuring the upper storage temperature of storage tank 2	circuit pump – collector circuit 2			
Collector 2 temperature sensor	E7	T7	Required for collector temperature	Switched output for multi- function regulator	A4	A4	115 V connection for pump or valve if "MFR1" activated
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.	Switched output for multi- function regulator	A5	A5	115 V connection for pump or valve if "MFR2" activated
Temperature sensor	E9	T9	Can be assigned as needed. Not used here.	Switched output for multi-	A6	A6	115 V connection for pump or valve
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.	function regulator	7.0	7.0	if "MFR3" activated
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.	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 AC 115V, 60Hz regulator Heating, cooling, 5V 5V 5V M M T111 threshold switch. Fuse increased return flow, wood boiler feature. difference regulator, Q1 5V+ circulation function, T11 M alarm and timer A5 All sensors can be used for switching and AC 115V control functions (included those already in use) Only the output assignments are fixed. K2 Sp1 **T2 T3 (16) A3** WT1 **T5** A5 ( **A1 A4 T4**) Tx\*\* - Select as required

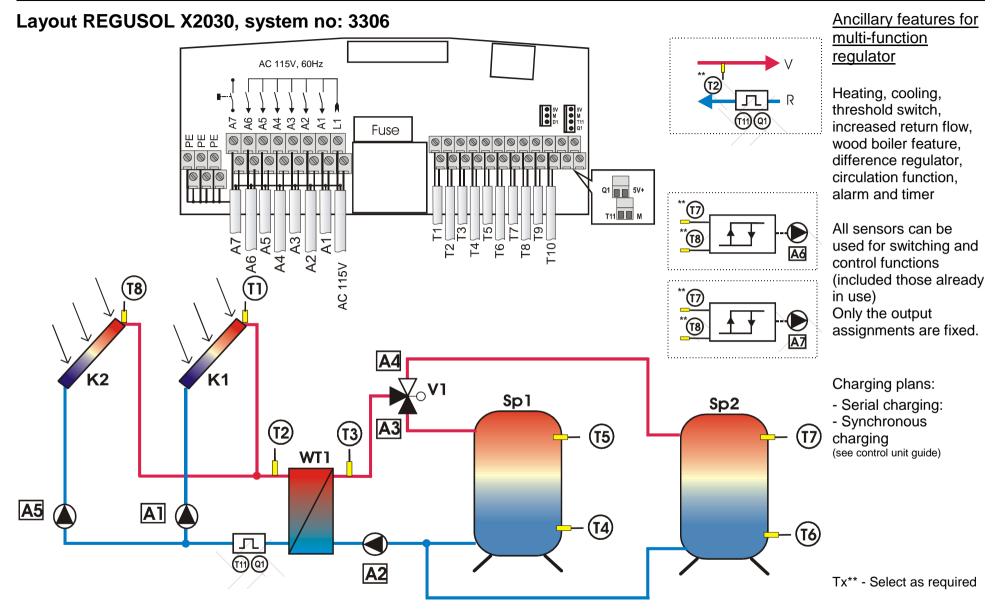
#### Regtronic PX

#### Sensor connections for X2020 layout:

#### 115 V connections for X2020 layout:

	Refer	ence	
Description	Connectio n 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	Т9	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.

	Reference					
Description	Connection Plan terminal 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			



#### Regtronic PX

#### Sensor connections for X2030 layout:

#### 115 V connections for X2030 layout:

	Refere	nce			Reference		
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	E1	T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Temperature sensor – primary heat exchanger	E2	T2	Required for the heat exchanger temperature in the primary circuit	Switched output for solar	A1	A1	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
Temperature sensor – secondary heat	E3	T3	Required for the heat exchanger temperature in the secondary circuit	circuit pump			
exchanger Storage tank 2 (lower) temperature sensor Storage tank 1 (lower)	E4	T4	Required for measuring the lower storage temperature of storage tank 2  Required for measuring the lower	Switched output for charging circuit pump	A2	A2	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
temperature sensor Storage tank 1 (upper)	E6	T6	storage temperature of storage tank 1  Required for measuring the upper	Switched output for 3-way valve	A3	V1 open	Switched output for 3-way valve: OPEN
temperature sensor			storage temperature of storage tank 1				
Collector 2 temperature sensor	E/	T7	Required for collector temperature	Switched output for 3-way valve	A4	V1 closed	Switched output for 3-way valve: CLOSED
Multi-function regulator temperature sensor	E8	Т8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.	Switched output for solar circuit pump – collector circuit 2	A5	A3	115 V connection for pump  RPM controlled if  RPM min programmed < 100%
Temperature sensor	E9	Т9	Can be assigned as needed. Not used here.	Switched output for multi-	A6	A6	115 V connection for pump or valve
Temperature sensor	E10	T10	Can be assigned as needed. Not used here.	function regulator	Au	AU	if "MFR1" activated
VFS Grundfos sensor	VFS (T11 5 V)	VFS	Energy yield measurement with Grundfos sensor. Necessary if "output measurement" selected.	Switched output for multi- function regulator	A7	A7	115 V connection for pump or valve if "MFR2" activated