Hydraulic layouts for

Oventrop REGTRONIC PM

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

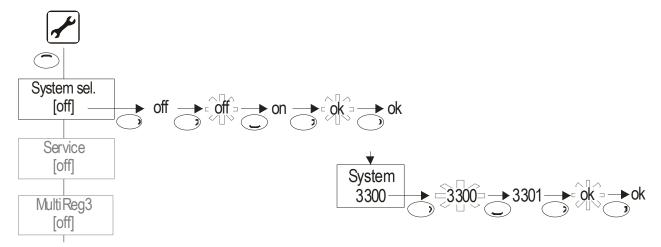
During initial start-up of the equipment, proceed as follows:

- 1. Select the hydraulic layout (e.g. M1013)
- 2. Enter the corresponding system number (3310) in the "System Settings" menu (see example below).

Finally, configure any selected ancillary features such as multi-function regulators, etc.

Note: 3300 is the initial software set!

Example: Change from 3300 initial software set to 3310



Overview of individual layouts for Regtronic PM

System	Layout	Solar circuit	Ancillary features		
3310	M1013	1 collector, 1 storage tank, 3 pumps, 1 changeover valve	2 multi-function regulators		
3311	M1016	1 collector, 2 storage tanks, 3 pumps, 2 changeover valves	1 multi-function regulator		
3312	M1020	1 collector, 1 storage tank, 1 pump	6 multi-function regulators		
3313	M1021	1 collector, 1 storage tank, 1 pump, 1 changeover valve	5 multi-function regulators		
3314	M1022	2 collectors, 1 storage tank, 1 pump, 1 changeover valve	5 multi-function regulators		
3315	M1023	2 collectors, 1 storage tank, 2 pumps	5 multi-function regulators		
3316	M1024	1 collector, 2 storage tanks, 1 pump, 2 changeover valves	4 multi-function regulators		
3317	M1026	1 collector, 2 storage tanks, 2 pumps	5 multi-function regulators		
3318	M1027	1 collector, 2 storage tanks, 1 pump, 1 changeover valve	5 multi-function regulators		
3319	M1028	2 collectors, 2 storage tanks, 2 pumps, 2 changeover valves	3 multi-function regulators		
3320	M1032	7 multi-function regulators			
3301	X1010	1 collectors, 1 storage tank, 2 pumps	3 multi-function regulators		
3302	X1020	1 collector, 1 storage tank, 2 pumps, 1 changeover valve	2 multi-function regulators		
3303	X1030	1 collector, 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 M1013, system no: 3310 Ancillary features for multi-function regulator Heating, cooling, 230V-AC/50Hz threshold switch. increased return flow. wood boiler feature, 5V 5V M M T1' difference regulator, Fuse circulation function, alarm and timer All sensors can be used Q1 5V+ for switching and control T11 M functions (included those already in use) Only the output assignments are fixed. **(11) (T8) (19**) Interior T exterior **K1** Sp1 **(T5)** A4/A5 **A1** (T2) Autom. boiler Tx** - Select as required **A2**

Regtronic PM

Sensor connections for M1013 layout:

230 V connections for M1013 layout:

	Referer		
Description	Connection terminal	Plan no.	Comment
Collector temperature sensor	1	T1	Required for measuring the collector temperature. Optional: Can also be used for yield measurement flow temperature and antifreeze protection
Storage tank (lower) temperature sensor	2	T2	Required for measuring the lower storage tank temperature
Storage tank (centre) temperature sensor	3	Т3	Required for measuring the centre storage tank temperature
Temperature sensor storage tank (upper)	4	T4	Required for measuring the upper storage tank temperature
Temperature sensor Temp. heating flow	5	T5	Required for measuring the heating flow temperature
Temperature sensor	6	T6	Optional: can be used instead of T11 for return flow yield measurement, if "Yield Measurement" function selected
Multi-function regulator temperature sensor	7	Т7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.
Multi-function regulator temperature sensor	8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used. Optional: Interior sensor.
Temperature sensor	9	Т9	Exterior temperature sensor
Temperature sensor	10	T10	Can be assigned as needed. Not used here.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.

		Refere	nce	
	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	230 V connection for pump RPM controlled if RPM min programmed < 100%
	Switched output for heating circuit pump	A2	A2	230 V connection for pump RPM controlled if RPM min programmed < 100%
	Switched output for boiler	A3	A3	230 V connection for pump
=	Switched output for 3-way valve	A4	A4	Switched output for 3-way valve: OPEN
_	Switched output for 3-way valve	A5	A5	Switched output for 3-way valve: CLOSE
	Switched output for multi- function regulator	A6	A6	230 V connection for pump or valve If "MFR1" activated
	Switched output for multi- function regulator	A7	A7	Potential-free N/O contact If "MFR2" activated

Layout REGUSOL M1016, system no: 3311 Multi-function regulator Heating, cooling, 230V-AC/50Hz threshold switch. increased return flow. 5V 5V 5V M M T1: wood boiler feature, difference regulator, Fuse circulation function, alarm and timer Q1 5V+ All sensors can be used T11 M for switching and control 14 T6 T7 functions (included those already in use) Only the output assignments are fixed. (19) T exterior [′]K1 Sp1 Sp2 **(16)** T4) A4/A5 **T2** Autom. Tx** - Select as required

Ancillary features for

Regtronic PM

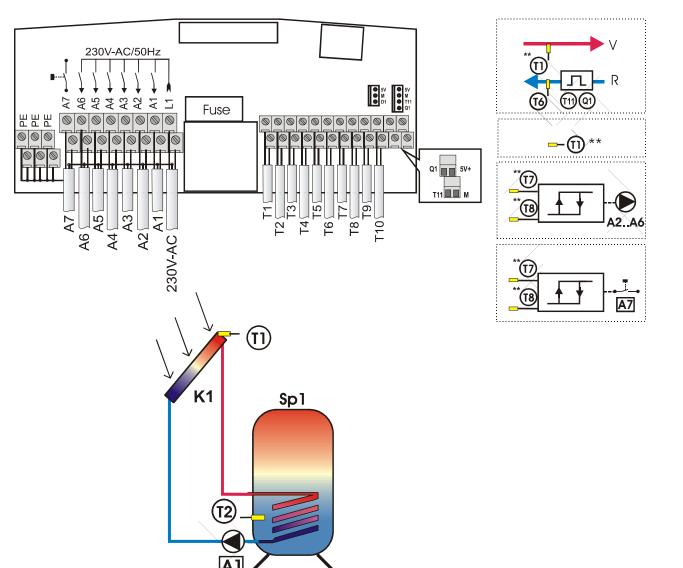
Sensor connections for M1016 layout:

230 V connections for M1016 layout:

	Refere	nce					
Description	Connection terminal	Plan no.	Comment				
Collector temperature sensor	1	T1	Required for measuring the collector temperature. Optional: Can also be used for yield measurement flow temperature and antifreeze protection				
Storage tank 1 (lower) temperature sensor	2	T2	Required for measuring the lower storage tank temperature				
Storage tank 1 (centre) temperature sensor	3	T3	Required for measuring the centre storage tank temperature				
Storage tank 1 (upper) temperature sensor	4	T4	Required for measuring the upper storage tank temperature				
Storage tank 2 (lower) temperature sensor	5	T5	Required for measuring the lower storage tank temperature				
Temperature sensor Temp. heating flow	6	T6	Required for measuring the heating flow temperature Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected				
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used.				
Multi-function regulator temperature sensor	8	Т8	Sensor available for the multi-function regulator. T8 is a preset: any other sensor may also be used.				
Temperature sensor	9	T9	Exterior temperature sensor				
Temperature sensor	10	T10	Can be assigned as needed. Not used here.				
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

	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	230 V connection for pump RPM controlled if RPM min programmed < 100%
Switched output for heating circuit pump	A2	A2	230 V connection for pump RPM controlled if RPM min programmed < 100%
Switched output for boiler	A3	A3	230 V connection for pump
Switched output for 3-way valve	A4	A4	Switched output for 3-way valve: OPEN
Switched output for 3-way valve	A5	A5	Switched output for 3-way valve: CLOSE
Switched output for multi- function regulator	A6	A6	230 V connection for pump or valve If "MFR1" activated
Switched output for 3-way valve	A7	A7	Switched output for 3-way valve

Layout REGUSOL M1020, system no: 3312



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.

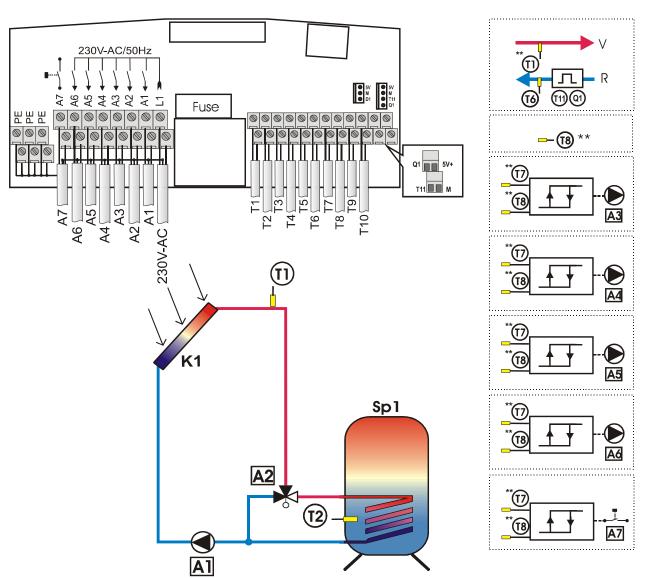
Regtronic PM

Sensor connections for M1020 layout:

230 V connections for M1020 layout:

	Refere	nce			Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	1	T1	Optional: Can also be used for yield	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
			anti-freeze protection	circuit pump	A1	A1	230 V connector for pump RPM controlled if
Storage tank (lower) temperature sensor	2	T2	Required for storage tank temperature.				RPM min programmed < 100%
Temperature sensor	3	Т3	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A2	A2	230 V connection for pump or valve if "MFR1" activated.
Temperature sensor	4	T4	Can be assigned as needed. Not used here.	Switched output for	A3	A3	230 V connection for pump or valve
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	multi-function regulator	7.0	7.0	if "MFR2" activated.
Yield measurement return temperature sensor	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR3" activated.
Multi-function regulator temperature sensor	7	T7	Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR4" activated
Multi-function regulator	8	T8	Sensor 2 for the multi-function				
temperature sensor.			regulator. T8 is a preset and can be modified	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR5" activated
Temperature sensor	9	Т9	Can be assigned as needed. Not used here.				
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR6" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

Layout REGUSOL M1021, system no: 3313



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.

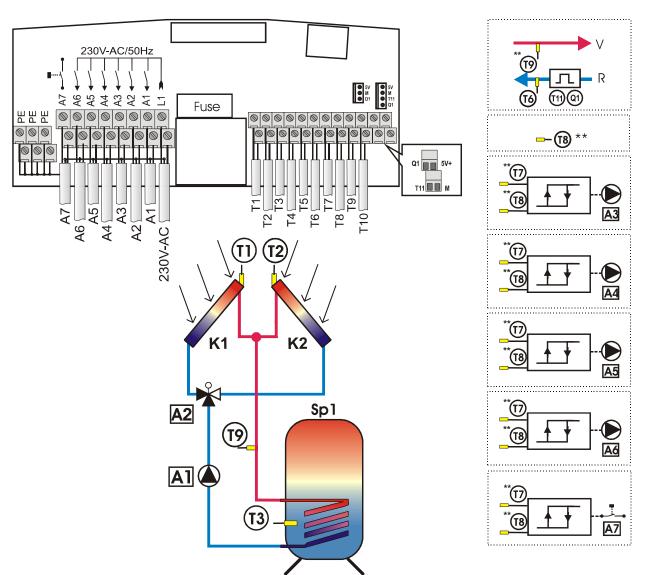
Regtronic PM

Sensor connections for M1021 layout:

230 V connections for M1021 layout:

	Refere	nce			Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector temperature sensor	1	T1	Required for collector temperature Optional: Can also be used for yield	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Storage tank (lower) temperature sensor	2	T2	measurement flow temperature Required for storage tank temperature.	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if RPM min programmed < 100%
Temperature sensor	3	T3	Can be assigned as needed. Not used here.				The William programmed < 100%
Temperature sensor	4	T4	Can be assigned as needed. Not used here.	Switched output for 3- way valve	A2	A2	Switched output for 3-way valve
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	Switched output for	A3	A3	230 V connection for pump or valve
Yield measurement return temperature	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield	multi-function regulator			if "MFR1" activated.
Multi-function regulator temperature sensor	7	T7	Measurement" function selected Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated.
Multi-function regulator temperature sensor.	8	T8	Sensor 2 for the multi-function regulator. T8 is a preset and can be modified. Optional: Frost protection	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Temperature sensor	9	Т9	Can be assigned as needed. Not used here.	Switched output for	A6	A6	230 V connection for pump or valve
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	multi-function regulator			if "MFR4" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated

Layout REGUSOL M1022, system no: 3314



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.

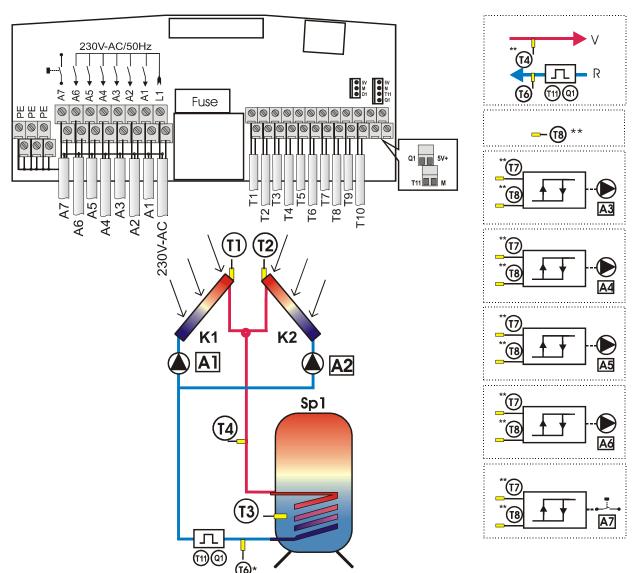
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Sensor connections for M1022 layout:

230 V connections for M1022 layout:

	Refere	nce			Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor		T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Collector 2 temperature sensor	2	T2	Required for collector temperature	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if
Storage tank (lower) temperature sensor	3	T3	Required for storage tank temperature.	l sa san pamp			RPM min programmed < 100%
Temperature sensor	4	T4	Can be assigned as needed. Not used here.	Switched output for 3-	A2	A2	Switched output for 3-way valve
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	way valve			
Yield measurement return temperature sensor	6	Т6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected	Switched output for multi-function regulator	A3	A3	230 V connection for pump or valve if "MFR1" activated.
Multi-function regulator temperature sensor	7	T7	Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated.
Multi-function regulator temperature sensor.	8	Т8	Sensor 2 for the multi-function regulator. T8 is a preset and can be modified. Optional: Frost protection	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Heating flow temperature sensor	9	Т9	Required for heating flow temperature. Can also be used for yield measurement flow temperature	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR4" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.		A 7	4.7	D. H. I. I. I. W. G. H. H.
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated

Layout REGUSOL M1023, system no: 3315



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.

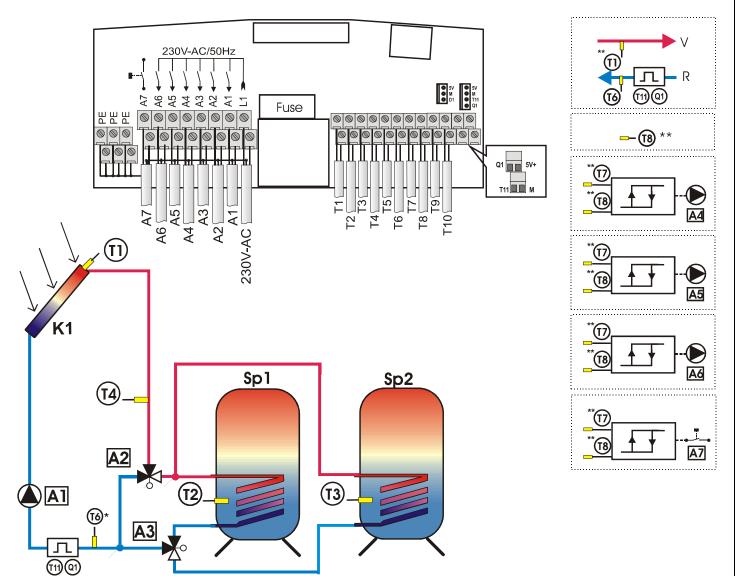
Regtronic PM

Sensor connections for M1023 layout:

230 V connections for M1023 layout:

	Reference				Refere	nce		
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment	
Collector 1 temperature sensor		T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)	
Collector 2 temperature sensor	2	T2	Required for collector temperature	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if	
Storage tank (lower) temperature sensor	3	T3	Required for storage tank temperature.				RPM min programmed < 100%	
Heating flow temperature sensor	4	T4	Required for heating flow temperature. Can also be used for yield measurement flow temperature	Switched output for solar circuit pump	A2	A2	230 V connector for pump RPM controlled if RPM min programmed < 100%	
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A3	A3	230 V connection for pump or valve if "MFR1" activated.	
Yield measurement return temperature sensor	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated.	
Multi-function regulator temperature sensor	7	T7	Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for	A5	A5	230 V connection for pump or valve	
Multi-function regulator temperature sensor.	8	T8	Sensor 2 for the multi-function regulator. T8 is a preset and can be modified.	multi-function regulator	7.0		if "MFR3" activated	
Temperature sensor	9	Т9	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR4" activated	
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated	
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.					

Layout REGUSOL M1024, system no: 3316



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.

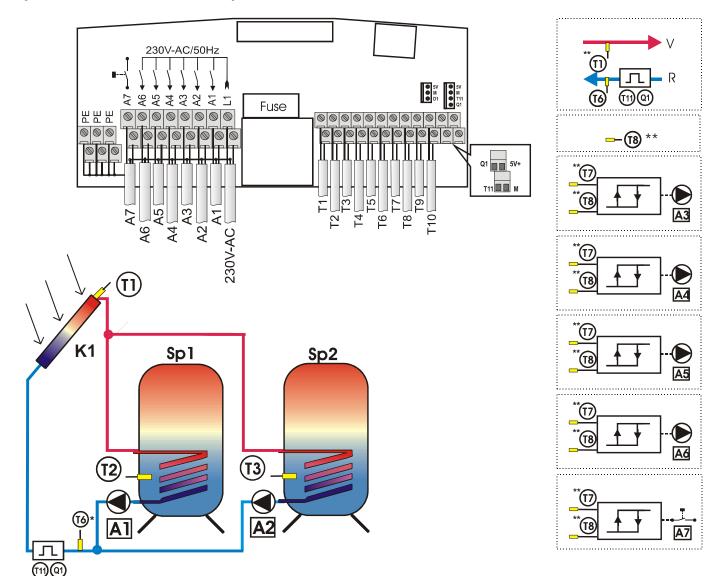
Regtronic PM

Sensor connections for M1024 layout:

230 V connections for M1024 layout:

	Refere	nce			Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector temperature sensor	1	T1	Required for collector temperature Optional: Can also be used for yield measurement flow temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Storage tank 1 (lower) temperature sensor	2	T2	Required for storage tank temperature.	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if RPM min programmed < 100%
Storage tank 2 (lower) temperature sensor	3	T3	Required for storage tank temperature.				, ,
Heating flow temperature sensor	4	T4	Required for heating flow temperature.	Switched output for 3- way valve	A2	A2	Switched output for 3-way valve
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	Switched output for 3-	A3	A3	Switched output for 3-way valve
Yield measurement return temperature	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield	way valve			
Multi-function regulator temperature sensor	7	T7	Measurement" function selected Sensor 1 for the multi-function regulator.	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR1" activated.
Multi-function regulator temperature sensor.	8	T8	T7 is a preset and can be modified Sensor 2 for the multi-function regulator. T8 is a preset and can be modified.	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR2" activated
Temperature sensor	9	Т9	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR3" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR4" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

Layout REGUSOL M1026, system no: 3317



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.

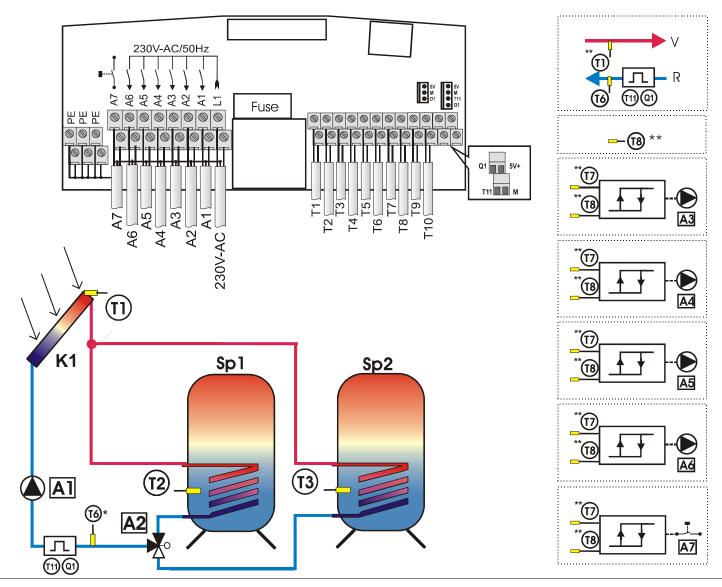
Regtronic PM

Sensor connections for M1026 layout:

230 V connections for M1026 layout:

	Reference				Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector temperature sensor	1	T1	Required for collector temperature Optional: Can also be used for yield	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Storage tank 1 (lower) temperature sensor	2	T2	measurement flow temperature Required for storage tank temperature.	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if RPM min programmed < 100%
Storage tank 2 (lower) temperature sensor	3	Т3	Required for storage tank temperature.				RPM min programmed < 100%
Temperature sensor	4	T4	Can be assigned as needed. Not used here.	Switched output for solar circuit pump	A2	A2	230 V connector for pump RPM controlled if
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A3	A3	RPM min programmed < 100% 230 V connection for pump or valve if "MFR1" activated.
Yield measurement return temperature sensor	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected				
Multi-function regulator temperature sensor	7	Т7	Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated.
Multi-function regulator temperature sensor.	8	Т8	Sensor 2 for the multi-function regulator. T8 is a preset and can be modified.	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Temperature sensor	9	Т9	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR4" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

Layout REGUSOL M1027, system no: 3318



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.

Regtronic PM

Sensor connections for M1027 layout:

230 V connections for M1027 layout:

	Refere	nce			Refere	nce]
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector temperature sensor	1	T1	Required for collector temperature Optional: Can also be used for yield	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Storage tank 1 (lower) temperature sensor	2	T2	measurement flow temperature Required for storage tank temperature.	Switched output for solar circuit pump	A1	A1	230 V connector for pump RPM controlled if RPM min programmed < 100%
Storage tank 2 (lower) temperature sensor	3	T3	Required for storage tank temperature.				
Temperature sensor	4	T4	Can be assigned as needed. Not used here.	Switched output for 3- way valve	A2	A2	Switched output for 3-way valve
Temperature sensor	5	T5	Can be assigned as needed. Not used here.	Switched output for	A3	A3	230 V connection for pump or valve
Yield measurement return temperature sensor	6	Т6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected	multi-function regulator			if "MFR1" activated.
Multi-function regulator temperature sensor	7	Т7	Sensor 1 for the multi-function regulator. T7 is a preset and can be modified	Switched output for multi-function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated.
Multi-function regulator temperature sensor.	8	T8	Sensor 2 for the multi-function regulator. T8 is a preset and can be modified.	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Temperature sensor	9	Т9	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR4" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

Layout REGUSOL M1028, system no: 3319

230V-AC/50Hz Fuse Q1 5V+ T11 M T47 [] [] **K1** K2 **(T5) A1**) A4 Sp2 Sp1 **(T4)** ∘**X A3**

Ancillary features for multi-function regulator

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

---(19) **

All sensors can be used for switching and control functions (included those already in use)

Only the output assignments are fixed.

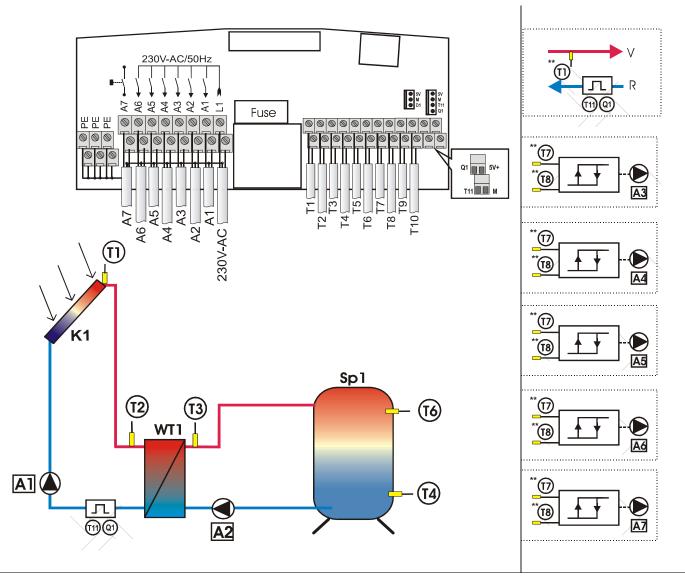
Regtronic PM

Sensor connections for M1028 layout:

230 V connections for M1028 layout:

	Reference				Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor		T1	Required for collector temperature	Mains power	Mains	Mains	Ensure it can be switched off. (by removing a plug or double-pole isolation)
Collector 2 temperature sensor	2	T2	Required for collector temperature	Switched output for solar circuit pump		A1	230 V connector for pump RPM controlled if RPM min programmed < 100%
Storage tank 1 (lower) temperature sensor	3	T3	Required for storage tank temperature.				
Storage tank 2 (lower) temperature sensor	4	T4	Required for storage tank temperature.	Switched output for changeover valve	A2	A2	Switched output for valve
Heating flow temperature sensor	5	T5	Required for heating flow temperature. Can also be used for yield measurement flow temperature	Switched output for changeover valve	A3	A3	Switched output for valve
Yield measurement return temperature	6	T6	Optional: instead of T11 for return flow yield measurement, if "Yield Measurement" function selected Sensor 1 for the multi-function regulator.	Switched output for solar	Δ4	A4	230 V connector for pump
Sensor Multi-function regulator temperature sensor	7	T7		circuit pump			RPM controlled if RPM min programmed < 100%
Multi-function regulator	8	T8	T7 is a preset and can be modified Sensor 2 for the multi-function	Switched output for multi-function regulator	A5	A5	230 V connection for pump or valve if "MFR1" activated
temperature sensor.			regulator. T8 is a preset and can be modified.	Switched output for	A6	A6	230 V connection for pump or valve
Temperature sensor	9	Т9	Can be assigned as needed. Not used here. Optional: Frost protection	multi-function regulator			if "MFR2" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR3" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				

Layout REGUSOL X1010, system no: 3301



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.

Regtronic PM

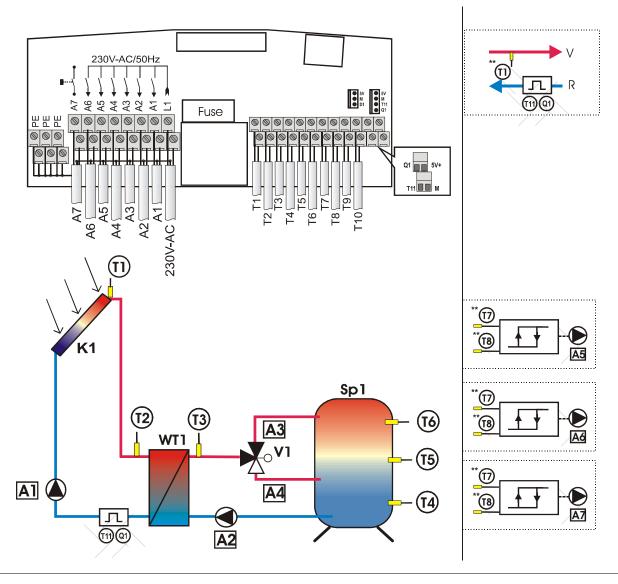
Sensor connections for X1010 layout:

activated.

230 V connections for X1010 layout:

	Reference				Refere	nce	
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	1	T1	Required for measuring the 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	2	T2	Required for measuring the heat exchanger temperature in the primary circuit	Switched output for solar circuit pump	A1	A1	230 V connection for pump RPM controlled if RPM min programmed < 100%
Temperature sensor – secondary heat exchanger	3	Т3	Required for measuring the heat exchanger temperature in the secondary circuit	Switched output for charging circuit pump	A2	A2	230 V connection for pump RPM controlled if RPM min programmed < 100%
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage tank temperature	Switched output for multi- function regulator	A3	A3	230 V connection for pump or valve if "MFR1" activated
Temperature sensor	5	T5	Select as required. Not used here.				
Storage tank 1 (upper) temperature sensor	6	T6	Required for measuring the upper storage tank temperature	Switched output for multi- function regulator	A4	A4	230 V connection for pump or valve if "MFR2" activated
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other				
temperature sensor			sensor may also be used.	Switched output for multi- function regulator	A5	A5	230 V connection for pump or valve if "MFR3" activated
Multi-function regulator temperature sensor	8	T8	Sensor available for the multi-function regulator. T8 is a preset: any other	- Turiction regulator			II WII 110 activated
temperature sensor			sensor may also be used.	Switched output for multi-	A6	A6	230 V connection for pump or valve
Temperature sensor	9	T9	Can be assigned as needed. Not used here.	function regulator			if "MFR4" activated
Temperature sensor	10	T10	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi- function regulator	A7	A7	Potential-free N/O contact if "MFR5" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement"	<u> </u>		<u> </u>	

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.

Regtronic PM

Sensor connections for X1020 layout:

230 V connections for X1020 layout:

	Reference				Reference]
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	1	T1	Required for measuring the 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	2	T2	Required for measuring the heat exchanger temperature in the primary circuit	Switched output for solar circuit pump	A1	A1	230 V connection for pump RPM controlled if RPM min programmed < 100%
Temperature sensor – secondary heat exchanger	3	Т3	Required for measuring the heat exchanger temperature in the secondary circuit	Switched output for	A2	A2	230 V connection for pump
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage tank temperature	charging circuit pump			RPM controlled if RPM min programmed < 100%
Storage tank 1 (centre) temperature sensor	5	T5	Required for measuring the centre storage tank temperature	Switched output for 3- way valve	A3	V1	Switched output for 3-way valve: charging storage tank top
Storage tank 1 (upper) temperature sensor	6	Т6	Required for measuring the upper storage tank temperature	Switched output for 3-way valve	A4	V1	Switched output for 3-way valve: charging storage tank center
Multi-function regulator temperature sensor	7	T7	Sensor available for the multi-function regulator. T7 is a preset: any other sensor may also be used. Sensor available for the multi-function regulator. T8 is a preset: any other	,	A5	A5	Ü
Multi-function regulator temperature sensor	8	T8		Switched output for multi-function regulator	AS	AS	230 V connection for pump or valve if "MFR1" activated
Temperature sensor	9	Т9	sensor may also be used. Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A6	A6	230 V connection for pump or valve if "MFR2" activated
Temperature sensor	10	T10	Optional: Frost protection Can be assigned as needed. Not used here.	Switched output for multi-function regulator	A7	A7	Potential-free N/O contact if "MFR3" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.			l]

5V 5V M M T111

Q1 5V+

Layout REGUSOL X1030, system no: 3303

230V-AC/50Hz

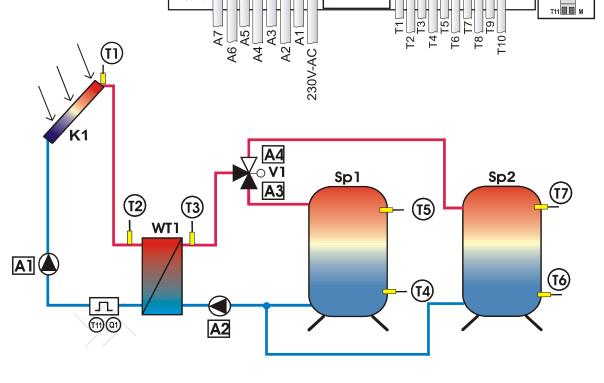
Fuse

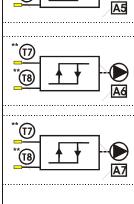
Ancillary features for multi-function regulator

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.





**(T8

Tx** - Select as required

28

Regtronic PM

Sensor connections for X1030 layout:

230 V connections for X1030 layout:

	Reference				Reference]
Description	Connection terminal	Plan no.	Comment	Description	Connection terminal	Plan no.	Comment
Collector 1 temperature sensor	1	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	2	T2	Required for the heat exchanger temperature in the primary circuit	Switched output for solar circuit pump	A1	A1	230 V connection for pump RPM controlled if
Temperature sensor – secondary heat exchanger	3	T3	Required for the heat exchanger temperature in the secondary circuit	Switched output for charging circuit pump	A2	A2	RPM min programmed < 100% 230 V connection for pump RPM controlled if RPM min programmed < 100%
Storage tank 1 (lower) temperature sensor	4	T4	Required for measuring the lower storage temperature of storage tank 1				
Storage tank 1 (upper) temperature sensor	5	T5	Required for measuring the upper storage temperature of storage tank 1	Switched output for 3-way valve	A3	V1	Switched output for 3-way valve: charging storage tank 1
Storage tank 2 (lower) temperature sensor	6	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: charging
Storage tank 2 (upper) temperature sensor	7	T7	Required for measuring the upper storage temperature of storage tank 2	valve			storage tank 2
Multi-function regulator temperature sensor	8	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	230 V connection for pump or valve if "MFR1" activated
Temperature sensor	9	Т9	Can be assigned as needed. Not used here. Optional: Frost protection	Switched output for multi- function regulator	A6	A6	230 V connection for pump or valve if "MFR2" activated
Temperature sensor	10	T10	Can be assigned as needed. Not used here.	Switched output for multi- function regulator	A7	A7	Potential-free N/O contact if "MFR3" activated
VFS Grundfos sensor	VFS 11/12/5V/M (11=Q, 12=T)	T11/Q1	Energy yield measurement with Grundfos sensor. Necessary if "Yield Measurement" activated.				