

Acond Modbus TCP INTERFACE DESCRIPTION

communication protocol ModbusTCP

Date: 01.12.2022

Port 502

Version: 2.35

data encoding Big Endian

communication mode HP - Slave, user - Master

Address (ID) slave 1 Attention - ID=2 occupied for the implementation of the heat pump cascade

Contact your service technician to activate ModbusTCP communication.

After the communication is activated, a link to the page with the received and sent data appears on the main page between the buttons for selecting the regulation type and mode. To start the communication, check the box in the dark blue bar next to ModbusTCP. A communication status of "ModbusTCP false" indicates that no data was received or sent at the time of MaxCommDataRefresh. In this case, the old received data is overwritten by the values from the sensors installed in the Acond heat pump. When communication is restored, the values from the sensors are overwritten by the current values received from the master system (if sent).

The communication error is evaluated after each data exchange and is displayed only until the next successful exchange (then it is overwritten with the text "No error").

The heat pump behaves as a Slave, i.e. it is passive and expects queries from the Master. Modbus functions 6, 16 for writing and 3, 4 for reading are supported. Only one master system (Master) can access the heat pump at a time.

Input registers - Read data, heat pump sends data

Modbus Address	Data Type	signal modification	Tag	Units	Type	Min	Max	Description	Comment
30001	Int	x10	T_set_indoor1	°C	R	100	300	Desired room temperature in circuit 1	
30002	Int	x10	T_act_indoor1	°C	R	0	500	Current room temperature, circuit 1 - sensor	
30003	Int	x10	T_set_indoor2	°C	R	100	300	Desired room temperature in circuit 2	
30004	Int	x10	T_act_indoor2	°C	R	0	500	Current room temperature, circuit 2 - sensor	
30005	Int	x10	T_set_TUV	°C	R	100	460	Desired DHW temperature	

30006	Int	x10	T_act_TUV	°C	R	0	900	Current DHW temperature - sensor	
30007	Word		TC_status	-	R	-	-	heat pump status	Bit 0 - heat pump switched on
									Bit 1 - heat pump running
									Bit 2 - alarm
									Bit 3 - DHW is heated
									Bit 4 - Circul. pump in heating circuit 1 is running
									Bit 5 - Circul. pump in heating circuit 1 is running
									Bit 6 - circul. Pump in solar sytem is running
									Bit 7 - the swimming pool circulation pump is running
									Bit 8 - defrosting
									Bit 9 - auxiliary heater operation
									Bit 10 - Summer operation
									Bit 11 - reserved
									Bit 12 - cooling operation
									Bit 13 - 15 reserved
30008	Int	x10	T_set_water_back	°C	R	200	600	Desired return temperature	
30009	Int	x10	T_act_water_back	°C	R	-100	900	Current return temperature - sensor	
30010	Int	x10	T_act_air	°C	R	-500	500	Actual outdoor temperature - sensor	
30011	Int	x10	T_act_solar	°C	R	-500	3000	Solar panel temperature - sensor	
30012	Int	x10	T_act_pool	°C	R	0	500	Swimming pool temperature - sensor	
30013	Int	x10	T_set_pool	°C	R	-	-	Desired swimming pool temperature	
30014	Int		rezim_pan	-	R	-	-	heating mode	0 - automatic mode
									1 - heat pump only
									2 - Not used
									3 - only auxiliary heating
									4 - off mode

									5 - manual mode
									6 - cooling mode
30015	Int		typ_reg_pan	-	R	-	-	type of regulation (method of return water temperature calculation)	0 - AcondTherm
									1 - Equiterm
									2 - manually
30016	Int	x10	T_solanka	°C	R	-300	500	Brine temperature at the collector outlet - sensor	
30017	Int		HeartBeat	-	R	0	255	Communication verification - counter	
30018	Int	x10	T_act_water_outlet	°C	R	-100	900	Current outlet water temperature - sensor	
30019	Int	x10	T_set_water_outlet	°C	R	10	25	Desired outlet water temperature - cooling	
30020	Int		Comp_rpm_max	rpm	R	0	7000	Maximum possible compressor speed*	
	Int		Comp_capacity_max	W	R	2000	20000	Maximum possible output of the heat pump *	
30021	Int		err_number	-	R	0	62	Basic fault codebook	
30022	Int		err_number_SECMono	-	R	0	42	SECMono fault codebook	
30023	Int		err_number_driver	-	R	0	39	Driver fault codebook	
30024	Int		comp_rpm_actual	rpm	R	0	7000	Actual speed of the heat pump*	
	Int		comp_capacity_actual	W	R	0	20000	Current heat pump capacity (heating/cooling) *	

*Note - the PRO series shows power, other heat pump series shows compressor speed

Holding registers - Write data, heat pump reads data

Modbus Address	Data Type		Tag	Units	Type	Min	Max	Description	Comment
40001	Int	x10	T_set_indoor1	°C	R/W	100	300	Desired room temperature in circuit 1	
40002	Int	x10	T_act_indoor1	°C	R/W	0	500	Current room temperature in circuit 1 - sensor	if a value is sent out of range, the value from the Acond sensor is used
40003	Int	x10	T_set_indoor2	°C	R/W	100	300	Desired room temperature in circuit 2	
40004	Int	x10	T_act_indoor2	°C	R/W	0	500	Current room temperature in circuit 2 - sensor	if a value is sent out of range, the value from the Acond sensor is used
40005	Int	x10	T_set_TUV	°C	R/W	100	460	Desired DHW temperature	
40006	Word		TC_set	-	R/W	0	65535	HP settings (mode, confirmation)	Bit 0 - automatic mode
									Bit 1 - heat pump mode
									Bit 2 - auxiliary heating mode
									Bit 3 - off mode
									Bit 4 - cooling mode
									Bit 5 - fault confirmation
									Bit 6 - solar on
									Bit 7 - swimming pool on
									Bit 8 -summer/winter switchover
40007	Int		TC_set_reg	-	R/W	0	2	regulation settings	0 - AcondTherm
									1 - Equitherm
									2 - manually
40008	Int	x10	T_set_water_back	°C	R/W	100	650	Desired return temperature in manual mode	

40009	Int	x10	T_air	°C	R/W	-500	500	Outdoor temperature - sensor	if a value is sent out of range, the value from the Acond sensor is used
40010	Int	x10	T_act_solar	°C	R/W	-500	3000	Current solar system temperature - sensor	if a value is sent out of range, the value from the Acond sensor is used
40011	Int	x10	T_act_pool	°C	R/W	0	500	Current swimming pool temperature - sensor	if a value is sent out of range, the value from the Acond sensor is used
40012	Int	x10	T_set_pool	°C	R/W	100	500	Desired swimming pool temperature	If the value is out of range, it is ignored
40013	Int	x10	T_set_water_cool	°C	R/W	150	300	Desired temperature at the outlet of the heat pump during cooling	If the value is out of range, it is ignored
40014	Int		Comp_rpm_max*	rpm	R/W	1800	6000	Max. possible compressor speed	If the value is out of range, it is ignored
	Int		Comp_capacity_max*	W	R/W	2000	20000	Desired maximum possible capacity of the heat pump	If the value is out of range, it is ignored

*Note - the PRO series allows you to specify the max. power, the other series allows you to specify the max. compressor speed