SOFTWARE-DOKUMENTATION
SOFTWARE DOCUMENTATION
DOCUMENTATION DE LOGICIEL
DOCUMENTAZIONE DEL SOFTWARE
SOFTWAREDOCUMENTATIE
DOKUMENTACE K SOFTWARU
SOFTVÉROVÁ DOKUMENTÁCIA
DOKUMENTACJA OPROGRAMOWANIA
SZOFTVERDOKUMENTÁCIÓ

Software-Erweiterung für Internet Service Gateway | Software extension for Internet Service Gateway | Extension logicielle pour passerelle de service Internet | Estensione del software per Internet Service Gateway | Software-uitbreiding voor Internet Service Gateway | Rozšíření softwaru pro bránu Internet Service Gateway | Softvérové rozšírenie pre Internet Service Gateway | Rozszerzenie oprogramowania o funkcje internetowej bramki serwisowej | Szoftverbővítés internet átjáróhoz

» Modbus TCP/IP

STIEBEL ELTRON

SOFTWARE DOCUMENTATION

1. General information

These instructions are intended for qualified contractors.

Note
Read these instructions carefully before using the appliance and retain them for future reference.
Pass on the instructions to a new user if required.

1.1 Other symbols in this documentation

Note
General information is identified by the adjacent symbol.
▶ Read these texts carefully.

Symbol	Meaning
!	Material losses (appliance damage, consequential losses and environmental pollution)

▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

1.2 Relevant appliances

- ISG web, part number 229336
- ISG plus, part number 233493

1.2.1 Brand conformity

Note
This software can only be operated in conjunction with devices and software from the same manufacturer.
▶ Never use this software in conjunction with third party software or devices.

1.3 Relevant documents

- Operating and installation instructions Internet Service Gateway ISG web
- Operating and installation instructions for the connected integral ventilation unit or the heat pump
- Conditions of use for the ISG web
- Contract conditions for the purchase of chargeable software extensions with additional functions for the ISG web

2. Safety

2.1 Intended use

Material losses
Incorrect use can result in damage to the connected integral ventilation unit or heat pump.

Observation of these instructions and of instructions for any accessories used is also part of the correct use of this appliance.

System requirements
- ISG web with the Basic service package
- Compatible device, see "Compatibility overview"
- Building management system with Modbus TCP/IP Master
- IP network connection to the ISG and to the building management system

2.2 General safety instructions

We guarantee trouble-free function and operational reliability only if the original accessories intended for the appliance are used.

2.3 Instructions, standards and regulations

Note
Observe all applicable national and regional regulations and instructions.

3. Product description

This product is a software interface for the ISG for building automation. The ISG is a gateway for controlling integral ventilation units and heat pumps. Components required for operating the

connected integral ventilation unit or the connected heat pump (e.g. sensors) cannot be replaced by Modbus components.

The following functions are available with the Modbus software:

- Selecting operating modes
- Selecting set temperatures
- Switching fan levels
- Selecting set DHW temperature
- Calling up current values and system data

4. Settings

The ISG uses the following 16-bit register:

"Read input register"

- Objects are read-only
- Calling up registers via function code 04 ("Read input registers")
  Example: To read register 30501, address 501 is brought up with function code 04.

"Read/write holding register"

- Objects are read-writable
- Calling up registers via function code 03 ("Read holding registers")
- Write via function code 06 ("Write single register") or function code 16 ("Write multiple registers")

The substitute value "32768 (0x8000H)" is issued for unavailable objects.

Some status objects are bit-coded (B0 - Bx). The respective corresponding status information is documented under "Coding" (e.g. compressor running yes/no).

A distinction is drawn here between the following types of data:

Data type	Value range	Multiplier for reading	Multiplier for writing	Signed	Step size 1	Step size 5
2	-3276.8 to 3276.7	0.1	10	Yes	0.1	0.5
6	0 to 65535	1	1	No	1	5
7	-327.68 to 327.67	0.01	100	Yes	0.01	0.05
8	0 to 255	1	1	No	1	5

- Transferred value x multiplier = data value
- Example - writing: To write a temperature of 20.3 °C, write value 203 (factor 10) to the register.
- Example - reading: The value 203 called up means 20.3 °C (203 x 0.1 = 20.3)

4.1 IP configuration

Note
Refer to the ISG operating and installation instructions.

You can perform the IP configuration in the SERVICEWELT via the "Profile" tab:

ISG: 192.168.0.126 (standard IP address)
TCP port: 502
Slave ID: 1 (permanent)

Note
The ISG retains its standard IP address when directly connected to your computer. If connected via a router, the DHCP server automatically assigns a different IP address to the ISG.

4.2 Compatibility overview

Note
In parameter configuration, first select the appliance type so that the respective corresponding parameters can be configured.

▶ Follow the operating and installation instructions for the ISG when connecting the heat pump or the integral ventilation unit to the ISG.

Note
Generally, all listed appliances are supported.

- Not every object type is available with every appliance.
- The substitute value "32768 (0x8000H)" is issued for unavailable objects.

You can find an overview of compatible heat pumps / integral ventilation units on our website.

https://www.stiebel-eltron.de/de/home/service/smart-home/kompatibilitaetslisten.html

4.3 Incompatibility

- The ISG must not be operated together with a DCo-active GSM on the same CAN bus. This can result in errors in communication with the WPM.
- The Modbus TCP/IP software interface cannot be combined with other ISG software interfaces (Exception: Read-only access is possible at the same time as using the EMI energy management software extension).

5. Troubleshooting

Checking the software version

▶ Check whether the Modbus software is installed on the ISG.

▶ When a WPM is connected, you will find the corresponding menu in the SERVICEWELT under: DIAGNOSIS → SYSTEM → ISG.

- ▶ When an integral ventilation unit is connected, you will find the corresponding menu in the SERVICEWELT under: DIAGNOSIS → BUS SUBSCRIBER → ISG.
- ▶ If the “Modbus TCP/IP” interface is not listed, you need to update to the latest ISG firmware.
- ▶ Contact STIEBEL ELTRON service department.
- ▶ Visit our homepage for more information.

Checking the data transfer:

- ▶ Using a standard data object (e.g. outside temperature), check the data transfer via Modbus. Compare the transferred value with the value shown in the controller display.

Note
ISG addresses are 1 based.
Allowance must be made for an offset of around 1, depending on the configuration.

Acknowledging faults:

- ▶ Faults in the heating system are indicated by the fault status (Modbus addresses: 2504, 2002).
- ▶ For safety reasons, faults can only be acknowledged via the SERVICEWELT user interface.

If you encounter problems with the product and cannot remedy the cause, contact an IT contractor.

6. Modbus system values for heat pumps with WPM

Note
Generally, all listed appliances are supported.
- Not every object type is available with every appliance.
- The substitute value "32768 (0x8000H)" is issued for unavailable objects.
- ISG addresses are 1 based.

Note
Values in the “Min. value” and “Max. value” columns will vary according to the connected heat pump, and may deviate from the indicated values.

Block 1: System values (Read input register)

Modbus address	Object designation	WPMsystem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
501	ACTUAL TEMPERATURE FE7	x	x	x				2	°C	r
502	SET TEMPERATURE FE7	x	x	x				2	°C	r
503	ACTUAL TEMPERATURE FEK		x	x				2	°C	r
504	SET TEMPERATURE FEK		x	x				2	°C	r
505	RELATIVE HUMIDITY		x	x				2	%	r
506	DEW POINT TEMPERATURE		x	x		-40	30	2	°C	r
507	OUTSIDE TEMPERATURE	x	x	x		-60	80	2	°C	r
508	ACTUAL TEMPERATURE HK 1	x	x	x		0	40	2	°C	r
509	SET TEMPERATURE HK 1			x		0	65	2	°C	r
510	SET TEMPERATURE HK 1	x	x			0	40	2	°C	r
511	ACTUAL TEMPERATURE HK 2	x	x	x		0	90	2	°C	r
512	SET TEMPERATURE HK 2	x	x	x		0	65	2	°C	r
513	ACTUAL FLOW TEMPERATURE WP	x	x	x	MFG, if available			2	°C	r
514	ACTUAL FLOW TEMPERATURE NHZ	x	x	x	MFG, if available			2	°C	r
515	ACTUAL FLOW TEMPERATURE	x	x	x				2	°C	r
516	ACTUAL RETURN TEMPERATURE	x	x	x		0	90	2	°C	r
517	SET FIXED TEMPERATURE	x	x	x		20	50	2	°C	r
518	ACTUAL BUFFER TEMPERATURE	x	x	x		0	90	2	°C	r
519	SET BUFFER TEMPERATURE	x	x	x				2	°C	r
520	HEATING PRESSURE	x	x	x	MFG, if available			7	bar	r
521	FLOW RATE	x	x	x	MFG, if available			2	l/min	r
522	ACTUAL TEMPERATURE	x	x	x	DHW	10	65	2	°C	r
523	SET TEMPERATURE	x	x	x	DHW	10	65	2	°C	r
524	ACTUAL TEMPERATURE FAN	x	x	x	Cooling			2	K	r
525	SET TEMPERATURE FAN	x	x	x	Cooling	7	25	2	K	r
526	ACTUAL TEMPERATURE AREA	x	x	x	Cooling			2	K	r
527	SET TEMPERATURE AREA	x	x	x	Cooling			2	K	r
528	COLLECTOR TEMPERATURE		x		Solar thermal	0	90	2	°C	r
529	CYLINDER TEMPERATURE		x		Solar thermal	0	90	2	°C	r
530	RUNTIME		x		Solar thermal			6	h	r
531	ACTUAL TEMPERATURE	x	x		External heat source	10	90	2	°C	r

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPMsys-tem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
532	SET TEMPERATURE	x	x		External heat source			2	K	r
533	APPLICATION LIMIT HZG	x	x	x	Lower heating limit	-40	40	2	°C	r
534	APPLICATION LIMIT WW	x	x	x	Lower DHW limit	-40	40	2	°C	r
535	RUNTIME	x	x		External heat source			6	h	r
536	SOURCE TEMPERATURE	x	x	x				2	°C	r
537	MIN SOURCE TEMPERATURE	x	x	x		-10	10	2	°C	r
538	SOURCE PRESSURE	x	x	x				7	bar	r
539	HOT GAS TEMPERATURE			x				2	°C	r
540	HIGH PRESSURE			x				2	bar	r
541	LOW PRESSURE			x				2	bar	r
542	RETURN TEMPERATURE	x	x		Heat pump 1			2	°C	r
543	FLOW TEMPERATURE	x	x		Heat pump 1			2	°C	r
544	HOT GAS TEMPERATURE	x	x		Heat pump 1			2	°C	r
545	LOW PRESSURE	x	x		Heat pump 1			7	bar	r
546	MEAN PRESSURE	x	x		Heat pump 1			7	bar	r
547	HIGH PRESSURE	x	x		Heat pump 1			7	bar	r
548	WP WATER FLOW RATE	x	x		Heat pump 1			2	l/min	r
549	RETURN TEMPERATURE	x	x		Heat pump 2			2	°C	r
550	FLOW TEMPERATURE	x	x		Heat pump 2			2	°C	r
551	HOT GAS TEMPERATURE	x	x		Heat pump 2			2	°C	r
552	LOW PRESSURE	x	x		Heat pump 2			7	bar	r
553	MEAN PRESSURE	x	x		Heat pump 2			7	bar	r
554	HIGH PRESSURE	x	x		Heat pump 2			7	bar	r
555	WP WATER FLOW RATE	x	x		Heat pump 2			2	l/min	r
556	RETURN TEMPERATURE	x	x		Heat pump 3			2	°C	r
557	FLOW TEMPERATURE	x	x		Heat pump 3			2	°C	r
558	HOT GAS TEMPERATURE	x	x		Heat pump 3			2	°C	r
559	LOW PRESSURE	x	x		Heat pump 3			7	bar	r
560	MEAN PRESSURE	x	x		Heat pump 3			7	bar	r
561	HIGH PRESSURE	x	x		Heat pump 3			7	bar	r
562	WP WATER FLOW RATE	x	x		Heat pump 3			2	l/min	r
563	RETURN TEMPERATURE	x	x		Heat pump 4			2	°C	r
564	FLOW TEMPERATURE	x	x		Heat pump 4			2	°C	r
565	HOT GAS TEMPERATURE	x	x		Heat pump 4			2	°C	r
566	LOW PRESSURE	x	x		Heat pump 4			7	bar	r
567	MEAN PRESSURE	x	x		Heat pump 4			7	bar	r
568	HIGH PRESSURE	x	x		Heat pump 4			7	bar	r
569	WP WATER FLOW RATE	x	x		Heat pump 4			2	l/min	r
570	RETURN TEMPERATURE	x	x		Heat pump 5			2	°C	r
571	FLOW TEMPERATURE	x	x		Heat pump 5			2	°C	r
572	HOT GAS TEMPERATURE	x	x		Heat pump 5			2	°C	r
573	LOW PRESSURE	x	x		Heat pump 5			7	bar	r
574	MEAN PRESSURE	x	x		Heat pump 5			7	bar	r
575	HIGH PRESSURE	x	x		Heat pump 5			7	bar	r
576	WP WATER FLOW RATE	x	x		Heat pump 5			2	l/min	r
577	RETURN TEMPERATURE	x	x		Heat pump 6			2	°C	r
578	FLOW TEMPERATURE	x	x		Heat pump 6			2	°C	r
579	HOT GAS TEMPERATURE	x	x		Heat pump 6			2	°C	r
580	LOW PRESSURE	x	x		Heat pump 6			7	bar	r
581	MEAN PRESSURE	x	x		Heat pump 6			7	bar	r
582	HIGH PRESSURE	x	x		Heat pump 6			7	bar	r
583	WP WATER FLOW RATE	x	x		Heat pump 6			2	l/min	r

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPMsys-tem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
584	ACTUAL TEMPERATURE	x			Room temperature, heating circuit 1			2	°C	r
585	SET TEMPERATURE	x			Room temperature, heating circuit 1			2	°C	r
586	RELATIVE HUMIDITY	x			Heating circuit 1			2	%	r
587	DEW POINT TEMPERATURE	x			Heating circuit 1			2	°C	r
588	ACTUAL TEMPERATURE	x			Room temperature, heating circuit 2			2	°C	r
589	SET TEMPERATURE	x			Room temperature, heating circuit 2			2	°C	r
590	RELATIVE HUMIDITY	x			Heating circuit 2			2	%	r
591	DEW POINT TEMPERATURE	x			Heating circuit 2			2	°C	r
592	ACTUAL TEMPERATURE	x			Room temperature, heating circuit 3			2	°C	r
593	SET TEMPERATURE	x			Room temperature, heating circuit 3			2	°C	r
594	RELATIVE HUMIDITY	x			Heating circuit 3			2	%	r
595	DEW POINT TEMPERATURE	x			Heating circuit 3			2	°C	r
596	ACTUAL TEMPERATURE	x			Room temperature, heating circuit 4			2	°C	r
597	SET TEMPERATURE	x			Room temperature, heating circuit 4			2	°C	r
598	RELATIVE HUMIDITY	x			Heating circuit 4			2	%	r
599	DEW POINT TEMPERATURE	x			Heating circuit 4			2	°C	r
600	ACTUAL TEMPERATURE	x			Room temperature, heating circuit 5			2	°C	r
601	SET TEMPERATURE	x			Room temperature, heating circuit 5			2	°C	r
602	RELATIVE HUMIDITY	x			Heating circuit 5			2	%	r
603	DEW POINT TEMPERATURE	x			Heating circuit 5			2	°C	r
604	SET TEMPERATURE	x			Room temperature, cooling circuit 1			2	°C	r
605	SET TEMPERATURE	x			Room temperature, cooling circuit 2			2	°C	r
606	SET TEMPERATURE	x			Room temperature, cooling circuit 3			2	°C	r
607	SET TEMPERATURE	x			Room temperature, cooling circuit 4			2	°C	r
608	SET TEMPERATURE	x			Room temperature, cooling circuit 5			2	°C	r

Block 2: System parameters (Read/write holding register)

Modbus address	Object designation	WPM-system	WPM 3	WPM 3i	Comments	Min. value	Max. value	Step size	Data type	Unit	Write/ read (w/r)	Coding	Op-tion
1501	OPERATING MODE	x	x	x		0	5	1	8		r/w	STANDBY MODE	1
												PROGRAMMED OPERATION	2
												COMFORT MODE	3
												ECO MODE	4
												DHW MODE	5
												EMERGENCY OPERATION	0
1502	COMFORT TEMPERATURE	x	x	x	Heating circuit 1	5	30	1	2	°C	r/w		
1503	ECO TEMPERATURE	x	x	x	Heating circuit 1	5	30	1	2	°C	r/w		
1504	HEATING CURVE RISE	x	x	x	Heating circuit 1	0	3	1	7		r/w		
1505	COMFORT TEMPERATURE	x	x	x	Heating circuit 2	5	30	1	2	°C	r/w		
1506	ECO TEMPERATURE	x	x	x	Heating circuit 2	5	30	1	2	°C	r/w		
1507	HEATING CURVE RISE	x	x	x	Heating circuit 2	0	3	1	7		r/w		

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPM-system	WPM 3	WPM 3i	Comments	Min. value	Max. value	Step size	Data type	Unit	Write/ read (w/r)	Coding	Option
1508	FIXED VALUE OPERATION	x	x	x	(*)	OFF/ 20°	70°		2	°C	r/w		
1509	DUAL MODE TEMP HZG		x	x	Observe application limits.	-40	40	5	2	°C	r/w		
1510	COMFORT TEMPERATURE	x	x	x	DHW	10	60	5	2	°C	r/w		
1511	ECO TEMPERATURE	x	x	x	DHW	10	60	5	2	°C	r/w		
1512	DHW STAGES	x	x	x	Please note: Observe number of connected heat pumps	0	6	1	8		r/w		
1513	DUAL MODE TEMP WW	x	x	x	DHW temperatures	-40	40	1	2	°C	r/w		
1514	SET FLOW TEMPERATURE	x	x	x	Area cooling	7	25	1	2	°C	r/w		
1515	FLOW TEMP HYSTERESIS		x	x	Cooling	1	5	1	2	K	r/w		
1516	SET ROOM TEMPERATURE	x	x	x	Area cooling	20	30	1	2	°C	r/w		
1517	SET FLOW TEMPERATURE	x	x	x	Fan cooling	7	25	1	2	°C	r/w		
1518	FLOW TEMP HYSTERESIS		x	x	Fan cooling	1	5	1	2	K	r/w		
1519	SET ROOM TEMPERATURE	x	x	x	Fan cooling	20	30	1	2	°C	r/w		
1520	RESET	x	x	x	Please note: Reset system is factory reset. All settings lost when performed.	1	3	1	6		r/w	FAULT LIST RESET	2
												HEAT PUMP RESET	3
												SYSTEM RESET	1
1521	RESTART ISG	x	x	x		0	2	1	6		r/w	OFF	0
												RESTART	1
												SERVICE KEY	2

* OFF via 9000Hex. Value between 20 and 70 °C activates function simultaneously. This function is available in the WPMsystem, the WPM 3 with software version 39005 or higher, and the WPM3i with software version 39106 or higher. With earlier software versions, this function can only be activated and adjusted.

Block 3: System status (Read input register)

Modbus address	Object designation	WPM-system	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Write/ read (w/r)	Coding	Option
2501	OPERATING STATUS	x	x	x	bit-coded, WPM 3i does not support silent mode			6	r	HC 1 PUMP	B0
										HC 2 PUMP	B1
										HEAT-UP PROGRAM	B2
										NHZ STAGES RUNNING	B3
										HP IN HEATING MODE	B4
										HP IN DHW MODE	B5
										COMPRESSOR RUNNING	B6
										SUMMER MODE ACTIVE	B7
										COOLING MODE ACTIVE	B8
										MIN. ONE IWS IN DEFROST MODE	B9
										SILENT MODE 1 ACTIVE	B10
										SILENT MODE 2 ACTIVE (HP OFF)	B11
2502	POWER-OFF	x	x	x	bit-coded			8	r	POWER-OFF	B0

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPM-system	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Write/ read (w/r)	Coding	Option
2503	OPERATING STATUS		x		bit-coded			6	r	COMPRESSOR-1	B0
										COMPRESSOR-2	B1
										COMPRESSOR-3	B2
										COMPRESSOR-4	B3
										COMPRESSOR-5	B4
										COMPRESSOR-6	B5
										BUFFER CHARGING PUMP-1	B6
										BUFFER CHARGING PUMP-2	B7
										BUFFER CHARGING PUMP-3	B8
										BUFFER CHARGING PUMP-4	B9
										BUFFER CHARGING PUMP-5	B10
										BUFFER CHARGING PUMP-6	B11
										NHZ-1	B12
										NHZ-2	B13
2504	FAULT STATUS	x	x	x	System fault	0	1	6	r	NO FAULT	0
					Fault acknowledgement via Servicewelt interface					FAULT	1
2505	BUS-STATUS	x	x	x		-4	0	6	r	STATUS OK	0
										STATUS ERROR	-1
										ERROR-PASSIVE	-2
										BUS-OFF	-3
										PHYSICAL-ERROR	-4
2506	DEFROST INITIATED	x	x		defrost initiated	0	1	6	r	OFF	0
										INITIATED	1
2507	active error	x	x	x	Fault number	0	65535	6	r		
2508	Message number	x			Message number	0	65535	6	r		
2509	HEATING CIRCUIT PUMP 1	x			WPM status	0	1	6	r		
2510	HEATING CIRCUIT PUMP 2	x			WPM status	0	1	6	r		
2511	HEATING CIRCUIT PUMP 3	x			WPM status	0	1	6	r		
2512	BUFFER CHARGING PUMP 1	x			WPM status	0	1	6	r		
2513	BUFFER CHARGING PUMP 2	x			WPM status	0	1	6	r		
2514	DHW CHARGING PUMP	x			WPM status	0	1	6	r		
2515	SOURCE PUMP	x			WPM status	0	1	6	r		
2516	FAULT OUTPUT	x			WPM status	0	1	6	r		
2517	DHW CIRCULATION PUMP	x			WPM status	0	1	6	r		
2518	WE 2 DHW	x			WPM status	0	1	6	r		
2519	WE 2 HEATING	x			WPM status	0	1	6	r		
2520	COOLING MODE	x			WPM status	0	1	6	r		
2521	MIXER OPEN, HTG CIRCUIT 2	x			WPM status	0	1	6	r		
2522	MIXER CLOSE, HTG CIRCUIT 2	x			WPM status	0	1	6	r		
2523	MIXER OPEN, HTG CIRCUIT 3	x			WPM status	0	1	6	r		
2524	MIXER CLOSE, HTG CIRCUIT 3	x			WPM status	0	1	6	r		
2525	NHZ 1	x			WPM status	0	1	6	r		

Modbus address	Object designation	WPM-system	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Write/ read (w/r)	Coding	Option
2526	NHZ 2	x			WPM status	0	1	6	r		
2527	NHZ 1/2	x			WPM status	0	1	6	r		
2528	HEATING CIRCUIT PUMP 4	x			WPE status	0	1	6	r		
2529	HEATING CIRCUIT PUMP 5	x			WPE status	0	1	6	r		
2530	BUFFER CHARGING PUMP 3	x			WPE status	0	1	6	r		
2531	BUFFER CHARGING PUMP 4	x			WPE status	0	1	6	r		
2532	BUFFER CHARGING PUMP 5	x			WPE status	0	1	6	r		
2533	BUFFER CHARGING PUMP 6	x			WPE status	0	1	6	r		
2534	DIFF. CONTROLLER PUMP 1	x			WPE status	0	1	6	r		
2535	DIFF. CONTROLLER PUMP 2	x			WPE status	0	1	6	r		
2536	POOL PUMP, PRIMARY	x			WPE status	0	1	6	r		
2537	POOL PUMP, SECONDARY	x			WPE status	0	1	6	r		
2538	MIXER OPEN, HTG CIRCUIT 4	x			WPE status	0	1	6	r		
2539	MIXER CLOSE, HTG CIRCUIT 4	x			WPE status	0	1	6	r		
2540	MIXER OPEN, HTG CIRCUIT 5	x			WPE status	0	1	6	r		
2541	MIXER CLOSE, HTG CIRCUIT 5	x			WPE status	0	1	6	r		
2542	COMPRESSOR 1	x			Heat pump status 1	0	1	6	r		
2543	COMPRESSOR 2	x			Heat pump status 2	0	1	6	r		
2544	COMPRESSOR 3	x			Heat pump status 3	0	1	6	r		
2545	COMPRESSOR 4	x			Heat pump status 4	0	1	6	r		
2546	COMPRESSOR 5	x			Heat pump status 5	0	1	6	r		
2547	COMPRESSOR 6	x			Heat pump status 6	0	1	6	r		

Block 4: Energy data (Read input register)

Modbus address	Object designation	WPMsystem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
3501	VD HEATING DAY	x	x	x	Amount of heat - all heat pumps	0	65535	6	kWh	r
3502	VD HEATING TOTAL	x	x	x	Amount of heat - all heat pumps	0	999	6	kWh	r
3503	VD HEATING TOTAL	x	x	x	Amount of heat - all heat pumps	0	65535	6	MWh	r
3504	VD DHW DAY	x	x	x	Amount of heat - all heat pumps	0	65535	6	kWh	r
3505	VD DHW TOTAL	x	x	x	Amount of heat - all heat pumps	0	999	6	kWh	r
3506	VD DHW TOTAL	x	x	x	Amount of heat - all heat pumps	0	65535	6	MWh	r
3507	NHZ HEATING TOTAL	x	x	x	Amount of heat - all heat pumps	0	999	6	kWh	r
3508	NHZ HEATING TOTAL	x	x	x	Amount of heat - all heat pumps	0	65535	6	MWh	r
3509	NHZ DHW TOTAL	x	x	x	Amount of heat - all heat pumps	0	999	6	kWh	r
3510	NHZ DHW TOTAL	x	x	x	Amount of heat - all heat pumps	0	65535	6	MWh	r
3511	VD HEATING DAY	x	x	x	Power consumption - all heat pumps	0	65535	6	kWh	r
3512	VD HEATING TOTAL	x	x	x	Power consumption - all heat pumps	0	999	6	kWh	r
3513	VD HEATING TOTAL	x	x	x	Power consumption - all heat pumps	0	65535	6	MWh	r
3514	VD DHW DAY	x	x	x	Power consumption - all heat pumps	0	65535	6	kWh	r
3515	VD DHW TOTAL	x	x	x	Power consumption - all heat pumps	0	999	6	kWh	r
3516	VD DHW TOTAL	x	x	x	Power consumption - all heat pumps	0	65535	6	MWh	r
3517	VD HEATING			x	Runtime	0	999	6	h	r
3518	VD DHW			x	Runtime	0	999	6	h	r
3519	VD COOLING			x	Runtime	0	999	6	h	r

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPMsys-tem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
3520	NHZ 1			x	Runtime	0	999	6	h	r
3521	NHZ 2			x	Runtime	0	999	6	h	r
3522	NHZ 1/2			x	Runtime	0	999	6	h	r
3523	VD HEATING DAY	x	x		Amount of heat HP 1	0	65535	6	kWh	r
3524	VD HEATING TOTAL	x	x		Amount of heat HP 1	0	999	6	kWh	r
3525	VD HEATING TOTAL	x	x		Amount of heat HP 1	0	65535	6	MWh	r
3526	VD DHW DAY	x	x		Amount of heat HP 1	0	65535	6	kWh	r
3527	VD DHW TOTAL	x	x		Amount of heat HP 1	0	999	6	kWh	r
3528	VD DHW TOTAL	x	x		Amount of heat HP 1	0	65535	6	MWh	r
3529	NHZ HEATING TOTAL	x	x		Amount of heat HP 1	0	999	6	kWh	r
3530	NHZ HEATING TOTAL	x	x		Amount of heat HP 1	0	65535	6	MWh	r
3531	NHZ DHW TOTAL	x	x		Amount of heat HP 1	0	999	6	kWh	r
3532	NHZ DHW TOTAL	x	x		Amount of heat HP 1	0	65535	6	MWh	r
3533	VD HEATING DAY	x	x		Power consumption HP 1	0	65535	6	kWh	r
3534	VD HEATING TOTAL	x	x		Power consumption HP 1	0	999	6	kWh	r
3535	VD HEATING TOTAL	x	x		Power consumption HP 1	0	65535	6	MWh	r
3536	VD DHW DAY	x	x		Power consumption HP 1	0	65535	6	kWh	r
3537	VD DHW TOTAL	x	x		Power consumption HP 1	0	999	6	kWh	r
3538	VD DHW TOTAL	x	x		Power consumption HP 1	0	65535	6	MWh	r
3539	VD 1 HEATING	x	x		Runtime HP 1			6	h	r
3540	VD 2 HEATING	x	x		Runtime HP 1			6	h	r
3541	VD 1/2 HEATING	x	x		Runtime HP 1			6	h	r
3542	VD 1 DHW	x	x		Runtime HP 1			6	h	r
3543	VD 2 DHW	x	x		Runtime HP 1			6	h	r
3544	VD 1/2 DHW	x	x		Runtime HP 1			6	h	r
3545	VD COOLING	x	x		Runtime HP 1			6	h	r
3546	NHZ 1	x	x		Runtime reheating stage			6	h	r
3547	NHZ 2	x	x		Runtime reheating stage			6	h	r
3548	NHZ 1/2	x	x		Runtime reheating stage			6	h	r
3549	VD HEATING DAY	x	x		Amount of heat HP 2	0	65535	6	kWh	r
3550	VD HEATING TOTAL	x	x		Amount of heat HP 2	0	999	6	kWh	r
3551	VD HEATING TOTAL	x	x		Amount of heat HP 2	0	65535	6	MWh	r
3552	VD DHW DAY	x	x		Amount of heat HP 2	0	65535	6	kWh	r
3553	VD DHW TOTAL	x	x		Amount of heat HP 2	0	999	6	kWh	r
3554	VD DHW TOTAL	x	x		Amount of heat HP 2	0	65535	6	MWh	r
3555	VD HEATING DAY	x	x		Power consumption HP 2	0	65535	6	kWh	r
3556	VD HEATING TOTAL	x	x		Power consumption HP 2	0	999	6	kWh	r
3557	VD HEATING TOTAL	x	x		Power consumption HP 2	0	65535	6	MWh	r
3558	VD DHW DAY	x	x		Power consumption HP 2	0	65535	6	kWh	r
3559	VD DHW TOTAL	x	x		Power consumption HP 2	0	999	6	kWh	r
3560	VD DHW TOTAL	x	x		Power consumption HP 2	0	65535	6	MWh	r
3561	VD 1 HEATING	x	x		Runtime HP 2			6	h	r
3562	VD 2 HEATING	x	x		Runtime HP 2			6	h	r
3563	VD 1/2 HEATING	x	x		Runtime HP 2			6	h	r
3564	VD 1 DHW	x	x		Runtime HP 2			6	h	r
3565	VD 2 DHW	x	x		Runtime HP 2			6	h	r
3566	VD 1/2 DHW	x	x		Runtime HP 2			6	h	r
3567	VD COOLING	x	x		Runtime HP 2			6	h	r
3568	VD HEATING DAY	x	x		Amount of heat HP 3	0	65535	6	kWh	r
3569	VD HEATING TOTAL	x	x		Amount of heat HP 3	0	999	6	kWh	r
3570	VD HEATING TOTAL	x	x		Amount of heat HP 3	0	65535	6	MWh	r
3571	VD DHW DAY	x	x		Amount of heat HP 3	0	65535	6	kWh	r
3572	VD DHW TOTAL	x	x		Amount of heat HP 3	0	999	6	kWh	r

Modbus system values for heat pumps with WPM

Modbus address	Object designation	WPMsys-tem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
3573	VD DHW TOTAL	x	x		Amount of heat HP 3	0	65535	6	MWh	r
3574	VD HEATING DAY	x	x		Power consumption HP 3	0	65535	6	kWh	r
3575	VD HEATING TOTAL	x	x		Power consumption HP 3	0	999	6	kWh	r
3576	VD HEATING TOTAL	x	x		Power consumption HP 3	0	65535	6	MWh	r
3577	VD DHW DAY	x	x		Power consumption HP 3	0	65535	6	kWh	r
3578	VD DHW TOTAL	x	x		Power consumption HP 3	0	999	6	kWh	r
3579	VD DHW TOTAL	x	x		Power consumption HP 3	0	65535	6	MWh	r
3580	VD 1 HEATING	x	x		Runtime HP 3			6	h	r
3581	VD 2 HEATING	x	x		Runtime HP 3			6	h	r
3582	VD 1/2 HEATING	x	x		Runtime HP 3			6	h	r
3583	VD 1 DHW	x	x		Runtime HP 3			6	h	r
3584	VD 2 DHW	x	x		Runtime HP 3			6	h	r
3585	VD 1/2 DHW	x	x		Runtime HP 3			6	h	r
3586	VD COOLING	x	x		Runtime HP 3			6	h	r
3587	VD HEATING DAY	x	x		Amount of heat HP 4	0	65535	6	kWh	r
3588	VD HEATING TOTAL	x	x		Amount of heat HP 4	0	999	6	kWh	r
3589	VD HEATING TOTAL	x	x		Amount of heat HP 4	0	65535	6	MWh	r
3590	VD DHW DAY	x	x		Amount of heat HP 4	0	65535	6	kWh	r
3591	VD DHW TOTAL	x	x		Amount of heat HP 4	0	999	6	kWh	r
3592	VD DHW TOTAL	x	x		Amount of heat HP 4	0	65535	6	MWh	r
3593	VD HEATING DAY	x	x		Power consumption HP 4	0	65535	6	kWh	r
3594	VD HEATING TOTAL	x	x		Power consumption HP 4	0	999	6	kWh	r
3595	VD HEATING TOTAL	x	x		Power consumption HP 4	0	65535	6	MWh	r
3596	VD DHW DAY	x	x		Power consumption HP 4	0	65535	6	kWh	r
3597	VD DHW TOTAL	x	x		Power consumption HP 4	0	999	6	kWh	r
3598	VD DHW TOTAL	x	x		Power consumption HP 4	0	65535	6	MWh	r
3599	VD 1 HEATING	x	x		Runtime HP 4			6	h	r
3600	VD 2 HEATING	x	x		Runtime HP 4			6	h	r
3601	VD 1/2 HEATING	x	x		Runtime HP 4			6	h	r
3602	VD 1 DHW	x	x		Runtime HP 4			6	h	r
3603	VD 2 DHW	x	x		Runtime HP 4			6	h	r
3604	VD 1/2 DHW	x	x		Runtime HP 4			6	h	r
3605	VD COOLING	x	x		Runtime HP 4			6	h	r
3606	VD HEATING DAY	x	x		Amount of heat HP 5	0	65535	6	kWh	r
3607	VD HEATING TOTAL	x	x		Amount of heat HP 5	0	999	6	kWh	r
3608	VD HEATING TOTAL	x	x		Amount of heat HP 5	0	65535	6	MWh	r
3609	VD DHW DAY	x	x		Amount of heat HP 5	0	65535	6	kWh	r
3610	VD DHW TOTAL	x	x		Amount of heat HP 5	0	999	6	kWh	r
3611	VD DHW TOTAL	x	x		Amount of heat HP 5	0	65535	6	MWh	r
3612	VD HEATING DAY	x	x		Power consumption HP 5	0	65535	6	kWh	r
3613	VD HEATING TOTAL	x	x		Power consumption HP 5	0	999	6	kWh	r
3614	VD HEATING TOTAL	x	x		Power consumption HP 5	0	65535	6	MWh	r
3615	VD DHW DAY	x	x		Power consumption HP 5	0	65535	6	kWh	r
3616	VD DHW TOTAL	x	x		Power consumption HP 5	0	999	6	kWh	r
3617	VD DHW TOTAL	x	x		Power consumption HP 5	0	65535	6	MWh	r
3618	VD 1 HEATING	x	x		Runtime HP 5			6	h	r
3619	VD 2 HEATING	x	x		Runtime HP 5			6	h	r
3620	VD 1/2 HEATING	x	x		Runtime HP 5			6	h	r
3621	VD 1 DHW	x	x		Runtime HP 5			6	h	r
3622	VD 2 DHW	x	x		Runtime HP 5			6	h	r
3623	VD 1/2 DHW	x	x		Runtime HP 5			6	h	r
3624	VD COOLING	x	x		Runtime HP 5			6	h	r
3625	VD HEATING DAY	x	x		Amount of heat HP 6	0	65535	6	kWh	r

Modbus address	Object designation	WPMsys-tem	WPM 3	WPM 3i	Comments	Min. value	Max. value	Data type	Unit	Write/ read (w/r)
3626	VD HEATING TOTAL	x	x		Amount of heat HP 6	0	999	6	kWh	r
3627	VD HEATING TOTAL	x	x		Amount of heat HP 6	0	65535	6	MWh	r
3628	VD DHW DAY	x	x		Amount of heat HP 6	0	65535	6	kWh	r
3629	VD DHW TOTAL	x	x		Amount of heat HP 6	0	999	6	kWh	r
3630	VD DHW TOTAL	x	x		Amount of heat HP 6	0	65535	6	MWh	r
3631	VD HEATING DAY	x	x		Power consumption HP 6	0	65535	6	kWh	r
3632	VD HEATING TOTAL	x	x		Power consumption HP 6	0	999	6	kWh	r
3633	VD HEATING TOTAL	x	x		Power consumption HP 6	0	65535	6	MWh	r
3634	VD DHW DAY	x	x		Power consumption HP 6	0	65535	6	kWh	r
3635	VD DHW TOTAL	x	x		Power consumption HP 6	0	999	6	kWh	r
3636	VD DHW TOTAL	x	x		Power consumption HP 6	0	65535	6	MWh	r
3637	VD 1 HEATING	x	x		Runtime HP 6			6	h	r
3638	VD 2 HEATING	x	x		Runtime HP 6			6	h	r
3639	VD 1/2 HEATING	x	x		Runtime HP 6			6	h	r
3640	VD 1 DHW	x	x		Runtime HP 6			6	h	r
3641	VD 2 DHW	x	x		Runtime HP 6			6	h	r
3642	VD 1/2 DHW	x	x		Runtime HP 6			6	h	r
3643	VD COOLING	x	x		Runtime HP 6			6	h	r
3644	VD HEATING	x			Runtime HP 1			6	h	r
3645	VD DHW	x			Runtime HP 1			6	h	r
3646	VD HEATING	x			Runtime HP 2			6	h	r
3647	VD DHW	x			Runtime HP 2			6	h	r
3648	VD HEATING	x			Runtime HP 3			6	h	r
3649	VD DHW	x			Runtime HP 3			6	h	r
3650	VD HEATING	x			Runtime HP 4			6	h	r
3651	VD DHW	x			Runtime HP 4			6	h	r
3652	VD HEATING	x			Runtime HP 5			6	h	r
3653	VD DHW	x			Runtime HP 5			6	h	r
3654	VD HEATING	x			Runtime HP 6			6	h	r
3655	VD DHW	x			Runtime HP 6			6	h	r

7. Modbus system values for integral ventilation units

Note
Generally, all listed appliances are supported.
- Not every object type is available with every appliance.
- For appliances of the LWZ series the WPM displays the substitute values „-60“ (sensor lead is missing or disconnected) and „-50“ (short circuit of the sensor lead).

Block 1: System values (Read input register)

Modbus address	Object designation	LWZ	LWA	Comments	Min. value	Max. value	Data type	Unit	Write/read (w/r)
1	ACTUAL ROOM T HC1	x	x	Remote control value	-20	60	2	°C	r
2	SET ROOM TEMPERATURE HC1	x	x		-20	60	2	°C	r
3	RELATIVE HUMIDITY HC1	x	x	Remote control value	0	100	2	%	r
4	ACTUAL ROOM T HC2	x	x	Remote control value	-20	60	2	°C	r
5	SET ROOM TEMPERATURE HC2	x	x		-20	60	2	°C	r
6	RELATIVE HUMIDITY HC2	x	x	Remote control value	0	100	2	%	r
7	OUTSIDE TEMPERATURE	x	x		-60	80	2	°C	r
8	ACTUAL VALUE HC1	x	x		0	90	2	°C	r
9	SET VALUE HC1	x	x		0	65	2	°C	r
10	ACTUAL VALUE HC2	x	x		0	90	2	°C	r

Modbus system values for integral ventilation units

Modbus address	Object designation	LWZ	LWA	Comments	Min. value	Max. value	Data type	Unit	Write/read (w/r)
11	SET VALUE HC2	x	x		0	65	2	°C	r
12	FLOW TEMPERATURE	x	x		0	90	2	°C	r
13	RETURN TEMPERATURE	x	x		0	90	2	°C	r
14	PRESSURE HTG CIRC	(x)		only for LWZ 304/404/504/Trend	0	6	2	bar	r
15	FLOW RATE	(x)		only for LWZ 304/404/504/Trend			2	l/min	r
16	ACTUAL DHW T	x	x		10	65	2	°C	r
17	DHW SET TEMPERATURE	x	x		10	65	2	°C	r
18	VENTILATION AIR ACTUAL FAN SPEED	x			0	100	6	Hz	r
19	VENTILATION AIR SET FLOW RATE	x			0	300	6	m³/h	r
20	EXTRACT AIR ACTUAL FAN SPEED	x	x		0	100	6	Hz	r
21	EXTRACT AIR SET FLOW RATE	x	x		0	300	6	m³/h	r
22	EXTRACT AIR HUMIDITY	(x)		only for LWZ 304/404/504/Trend	0	100	6	%	r
23	EXTRACT AIR TEMP.	(x)		only for LWZ 504	0	65535	2	°C	r
24	EXTRACT AIR DEW POINT	(x)		only for LWZ 504	0	65535	2	°C	r
25	DEW POINT TEMP. HC1	(x)		only for LWZ with cooling capacity	-40	30	2	°C	r
26	DEW POINT TEMP. HC2	(x)		only for LWZ with cooling capacity	-40	30	2	°C	r
27	COLLECTOR TEMPERATURE	(x)		only for LWZ with solar capability	-60	200	2	°C	r
28	HOT GAS TEMPERATURE	x	x		0	140	2	°C	r
29	HIGH PRESSURE	x	x		0	50	7	bar	r
30	LOW PRESSURE	x	x		0	25	7	bar	r
31	COMPRESSOR STARTS	x	x		0	65535	6		r
32	COMPRESSOR SPEED	(x)		only for LWZ 504	0	240	2	Hz	r
33	MIXED WATER AMOUNT	(x)		only for LWZ 504	0	65535	6	l	r

Block 2: System parameters (Read/write holding register)

Modbus address	Object designation	LWZ	LWA	Comments	Min. value	Max. value	Step size	Data type	Unit	Write/read (w/r)	Coding	Option
1001	OPERATING MODE	x	x		0	14	1	8		r/w	AUTOMATIC	11
											STANDBY	1
											DAY MODE	3
											SETBACK MODE	4
											DHW	5
											MANUAL MODE	14
											EMERGENCY OPERATION	0
1002	ROOM TEMPERATURE DAY	x	x	Set room, heating, heating circuit 1	10	30	1	2	°C	r/w		
1003	ROOM TEMP. NIGHT	x	x	Set room, heating, heating circuit 1	10	30	1	2	°C	r/w		
1004	MANUAL SET HC	x	x	Heating circuit 1	10	65	5	2	°C	r/w		
1005	ROOM TEMPERATURE DAY	x	x	Set room, heating, heating circuit 2	10	30	1	2	°C	r/w		
1006	ROOM TEMP. NIGHT	x	x	Set room, heating, heating circuit 2	10	30	1	2	°C	r/w		
1007	MANUAL SET HC	x	x	Heating circuit 2	10	65	5	2	°C	r/w		
1008	GRADIENT	x	x	Heating curve heating circuit 1	0	5	1	7		r/w		
1009	LOW END	x	x	Heating curve heating circuit 1	0	20	5	2	°C	r/w		
1010	GRADIENT	x	x	Heating curve heating circuit 2	0	5	1	7		r/w		
1011	LOW END	x	x	Heating curve heating circuit 2	0	20	5	2	°C	r/w		
1012	DHW SET DAY	x	x	DHW	10	55	5	2	°C	r/w		
1013	DHW SET NIGHT	x	x	DHW	10	55	5	2	°C	r/w		
1014	DHW SET MANUAL	x	x	DHW	10	65	5	2	°C	r/w		
1015	MWM SET DAY	(x)		only for LWZ 504	50	288	1	6	l	r/w		

1016	MWM SET NIGHT	(x)		only for LWZ 504	50	288	1	6	l	r/w		
1017	MWM SET MANUAL	(x)		only for LWZ 504	50	288	1	6	l	r/w		
1018	DAY STAGE	x	x	Ventilation	0	3	1	6		r/w		
1019	NIGHT STAGE	x	x	Ventilation	0	3	1	6		r/w		
1020	PARTY STAGE	x	x	Ventilation	0	3	1	6		r/w		
1021	MANUAL STAGE	x	x	Ventilation	0	3	1	6		r/w		
1022	ROOM TEMPERATURE DAY	(x)		HC 1 cooling, only for LWZ with cooling	10	30	1	2	°C	r/w		
1023	ROOM TEMP. NIGHT	(x)		HC 1 cooling, only for LWZ with cooling	10	30	1	2	°C	r/w		
1024	ROOM TEMPERATURE DAY	(x)		HC 2 cooling, only for LWZ with cooling	10	30	1	2	°C	r/w		
1025	ROOM TEMP. NIGHT	(x)		HC 2 cooling, only for LWZ with cooling	10	30	1	2	°C	r/w		
1026	RESET	(x)		only for LWZ 504	0	1	1	6		r/w	OFF	0
											ON	1
1027	RESTART ISG	x	x		0	2	1	6		r/w	OFF	0
											RESET	1
											MENU	2

Block 3: System status (Read input register)

Modbus address	Object designation	LWZ	LWA	Comments	Min. value	Max. value	Data type	Write/read (w/r)	Coding	Option
2001	OPERATING STATUS	x	x	bit-coded	0	65535	6	r	SWITCHING PROGRAM ENABLED	B0
									COMPRESSOR	B1
									HEATING	B2
									COOLING	B3
									DHW	B4
									ELECTRIC REHEATING	B5
									SERVICE	B6
									POWER-OFF	B7
									FILTER	B8
									VENTILATION	B9
									HEATING CIRCUIT PUMP	B10
									EVAPORATOR DEFROST	B11
									FILTER EXTRACT AIR	B12
									FILTER VENTILATION AIR	B13
									HEAT-UP PROGRAM	B14
2002	FAULT STATUS	x	x	System fault	0	1	6	r	NO FAULT	0
				Fault acknowledgement via SERVICEWELT interface					FAULT	1
2003	BUS-STATUS	x	x	CAN bus status	-4	0	6	r	STATUS OK	0
									STATUS ERROR	-1
									ERROR-PASSIVE	-2
									BUS-OFF	-3
									PHYSICAL-ERROR	-4
2004	DEFROST INITIATED	x	x	defrost signal	0	1	6	r	OFF	0
									INITIATED	1
2005	OPERATING STATUS-2	x	x	bit-coded	0	65535	6	r	SUMMER MODE ACTIVE	B0
									OVEN/FIREPLACE MODE ACTIVE	B1

Block 4: Energy data (Read input register)

Modbus address	Object designation	LWZ	LWA	Comments	Min. value	Max. value	Data type	Unit	Write/read (w/r)
3001	HEAT METER HTG DAY	x	x		0	65535	6	kWh	r
3002	HEAT METER HTG TTL	x	x		0	999	6	kWh	r
3003	HEAT METER HTG TTL	x	x		0	65535	6	MWh	r
3004	HEAT METER DHW DAY	x	x		0	65535	6	kWh	r
3005	HEAT METER DHW TTL	x	x		0	999	6	kWh	r
3006	HEAT METER DHW TTL	x	x		0	65535	6	MWh	r
3007	HEAT M BOOST HTG TTL	x	x		0	999	6	kWh	r
3008	HEAT M BOOST HTG TTL	x	x		0	65535	6	MWh	r
3009	HEAT M BOOST DHW TTL	x	x		0	999	6	kWh	r
3010	HEAT M BOOST DHW TTL	x	x		0	65535	6	MWh	r
3011	HEAT M RECOVERY DAY	x			0	65535	6	kWh	r
3012	HEAT M RECOVERY TTL	x	x		0	999	6	kWh	r
3013	HEAT M RECOVERY TTL	x			0	65535	6	MWh	r
3014	HM SOLAR HTG DAY	(x)		only for LWZ with solar capability	0	65535	6	kWh	r
3015	HM SOLAR HTG TOTAL	(x)		only for LWZ with solar capability	0	999	6	kWh	r
3016	HM SOLAR HTG TOTAL	(x)		only for LWZ with solar capability	0	65535	6	MWh	r
3017	HM SOLAR DHW DAY	(x)		only for LWZ with solar capability	0	65535	6	kWh	r
3018	HM SOLAR DWH TOTAL	(x)		only for LWZ with solar capability	0	999	6	kWh	r
3019	HM SOLAR DWH TOTAL	(x)		only for LWZ with solar capability	0	65535	6	MWh	r
3020	HM COOLING TOTAL	(x)		only for LWZ with cooling capacity	0	999	6	kWh	r
3021	HM COOLING TOTAL	(x)		only for LWZ with cooling capacity	0	65535	6	MWh	r
3022	PWR CON HTG DAY	x	x		0	65535	6	kWh	r
3023	PWR CON HTG TTL	x	x		0	999	6	kWh	r
3024	PWR CON HTG TTL	x	x		0	65535	6	MWh	r
3025	PWR CON DHW DAY	x	x		0	65535	6	kWh	r
3026	PWR CON DHW TTL	x	x		0	999	6	kWh	r
3027	PWR CON DHW TTL	x	x		0	65535	6	MWh	r
3028	COMPRESSOR HEATING	x	x		0	65535	6	h	r
3029	COMPRESSOR COOLING	(x)		only for LWZ with cooling capacity	0	65535	6	h	r
3030	COMPRESSOR DHW	x	x		0	65535	6	h	r
3031	ELEC BOOSTER HEATING	x	x		0	65535	6	h	r
3032	ELEC BOOSTER DHW	x	x		0	65535	6	h	r

8. Further registers for heat pumps with WPM and integral ventilation units

Block 5: Energy management settings (Read/write holding register)

Modbus address	Object designation	Comments	Min. value	Max. value	Step size	Data type	Write/ read (w/r)	Coding	Option
4001	SWITCH SG READY ON AND OFF	activate/	0	1	1	6	r/w	ON	0
		deactivate SG READY function						OFF	1
4002	SG READY INPUT 1		0	1	1	6	r/w	SWITCHED OFF	0
								SWITCHED ON	1
4003	SG READY INPUT 2		0	1	1	6	r/w	SWITCHED OFF	0
								SWITCHED ON	1

Block 6: Energy management system information (Read input register)

Modbus address	Object designation	Comments	Min. value	Max. value	Data type	Write/ read (w/r)	Coding	Option
5001	SG READY OPERATING STATE	1: Heating system must not start. Frost protection is assured.	1	4	6	r	OPERATING STATE 1	1
		2: Standard operation. Automatic/ programmed omode (see operating and installation instructions for the connected heat pump)					OPERATING STATE 2	2
		3: Accelerated mode with increased values for heating and DHW temperature					OPERATING STATE 3	3
		4: Immediate switch to maximum heating and DHW temperature values					OPERATING STATE 4	4
5002	CONTROLLER IDENTIFICATION						LWZ 303/403 Integral/ SOL	103
							LWA 403	103
							LWZ 304/404 Trend	103
							LWZ 304/404 FLEX	103
							LWZ Smart	103
							LWZ 604 Air	103
							LWZ 5 S Plus	103
							LWZ 5 S Trend	103
							LWZ 8 S Trend	103
							LWZ 5 S Smart	103
							LWZ 304/404 SOL	104
							LWZ 504	104
							LWZ 5/8 CS Premium	104
							VCR-I 8 CS Premium CN	104
							WPM 3	390
							WPM 3i	391
							WPMsystem	449

8.1 Operating modes and set values

Specified set values are assigned to each operating mode.

Via Modbus, operating modes and their corresponding set values can be changed independently of one another.

In order to ensure that set values are changed immediately rather than at the next change of operating mode, only one of the two parameters (operating mode OR set value) should be changed via Modbus, leaving the other parameter fixed:

- If the operating mode (e.g. comfort mode) is kept constant but the corresponding set values are changed via Modbus, the heat pump will run according to the new values as soon as the change has been made.
- Conversely, with appropriately determined set values for the relevant operating modes, the entire system with all its set values can be switched to a different temperature level through a change of operating mode.

Examples:

- When the occupants are not present, it is recommended that the operating mode be switched to ECO mode. When someone is present, the heat pump can be switched to comfort mode. During a period of prolonged absence, standby mode can also be used.
- In “Automatic / Programmed mode”, the system alternates between ECO and comfort temperature according to the corresponding program stored in the WPM (DHW program, heating program etc.). In this operating mode, a constant comfort temperature, for example, can be achieved by setting all programs to maintain the comfort temperature permanently.
- If the heat pump needs to be set to standby operation (for frost protection only), the operating mode can be changed over to standby mode.

- Where the FEK remote control is being used, it is recommended that the operating mode be fixed.
  The FEK remote control can start either comfort or ECO temperature for the heating circuit allocated to it, regardless of the main operating mode. On the FEK and on the WPM, therefore, comfort mode should be permanently activated. The appropriate set values are then altered via Modbus. This way, the altered values are started immediately.
  If standby mode is enabled centrally, the setback will also be applied to the heating circuit assigned to the FEK.

8.2 SG Ready function

"SG Ready" is a trade make of Bundesverband Wärmepumpe e. V.

It describes a feature on heat pumps with control technology that allows them to be connected to a smart grid.

8.2.1 Operating states

Depending on the switching, the appliance can execute the following operating modes:

Operating state 1

Switching (input 2/input 1): (1/0)

- Lowest temperatures, cf. standby level (see operating and installation instructions for the connected appliance)
- Frost protection is assured

Operating state 2

Switching (input 2/input 1): (0/0)

- Automatic / Programmed mode (see operating and installation instructions for the connected heat pump)

Operating state 3 (accelerated mode)

Switching (input 2/input 1): (0/1)

- Accelerated mode with increased values for heating and DHW temperature
- You can set the increased values for heating and DHW temperature mode under SETTINGS / ENERGY MANAGEMENT

Operating state 4

Switching (input 2/input 1): (1/1)

- Immediate switch to maximum heating and DHW temperature values

8.2.2 Use for photovoltaic optimisation

For photovoltaic optimisation (PV optimisation), a switching element is required that switches the Modbus-SG Ready input 1 according to the available PV output. The threshold must be selected to the most appropriate level, e.g. 2 kW.

- Operating state 3 becomes active as soon as SG Ready input 1 is switched on and input 2 is switched off.
- SG Ready input 1 is switched off if insufficient PV output is available. The switch condition then corresponds to 0:0 and thus to operating state 2.
- For PV optimisation, operating modes 2 and 3 are relevant and the system switches automatically between the two.

The economic viability of the PV system improves as on-site PV consumption increases, and falls when power is drawn from the public grid.

To increase on-site PV consumption, the runtimes of the household consumer units and heat pumps must be adjusted to the times when PV output is actually available.

The heat pump runtimes required to cover DHW demand are mainly in periods of morning and evening. These are the times when PV output is either very low or completely unavailable. Thus DHW heating should ideally take place during the time when PV output is at its best. By shifting the heat pump runtimes in this way, on-site PV consumption is increased.

DHW operation using power from the public grid can be reduced by overheating the thermal DHW cylinder.

Note
By using the SG Ready function, heating water can enter the heating circuit at a higher flow temperature.
▶ Install a high limit safety cut-out in the heating flow.

ENGLISH

9. Modbus system values for heat pumps with WPM G (WPE-I 33-87 H 400 Premium)

Note
The values in the "Factor" column indicate the conversion factor.
- 1 = No conversion factor
- 10 = Conversion factor; the transferred value is 10 times higher
- 100 = Conversion factor; the transferred value is 100 times higher

Note
Some registers can go above the maximum value of 65535. For such cases, there are two registers. The two registers together produce a 32-bit representation of the value.
- MSB = Most Significant Bit
- LSB = Least Significant Bit

Example:
The "Compressor hours run" register is divided into two registers. In the LSB register, the compressor hours run are counted hour for hour. If the value exceeds 65535, the MSB register is incremented by 1, and the counter in the LSB register is reset. To provide an overview of the total number of hours run, the two registers are combined into a 32-bit register. The MSB register represents the upper 16-bits and the LSB register the lower 16 bits.
Example calculation:
- MSB register: 2
- LSB register: 2345
- Total: 2 x 65535 (MSB) + 2345 = 133417 hours

Block 1: System values (read input register)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
36000	6000	6150	6300	6450	6600	6750	10	° C	Room temperature
36001	6001	6151	6301	6451	6601	6751	100	° C	Buffer cylinder temperature
36002	6002	6152	6302	6452	6602	6752	100	° C	Heating circuit 1 flow temperature
36003	6003	6153	6303	6453	6603	6753	100	° C	Heating circuit 2 flow temperature
36004	6004	6154	6304	6454	6604	6754	100	° C	Heating circuit 3 flow temperature
36005	6005	6155	6305	6455	6605	6755	100	° C	Heating circuit 4 flow temperature
36006	6006	6156	6306	6456	6606	6756	100	° C	Heating circuit 5 flow temperature
36007	6007	6157	6307	6457	6607	6757	100	° C	Heating circuit 2 return temperature
36008	6008	6158	6308	6458	6608	6758	100	° C	Heating circuit 3 return temperature
36009	6009	6159	6309	6459	6609	6759	100	° C	Heating circuit 4 return temperature
36010	6010	6160	6310	6460	6610	6760	100	° C	Heating circuit 5 return temperature
36011	6011	6161	6311	6461	6611	6761	100	° C	Cooling circuit return temperature
36012	6012	6162	6312	6462	6612	6762	100	° C	Cooling cylinder temperature
36013	6013	6163	6313	6463	6613	6763	100	° C	Cooling cylinder return temperature
36014	6014	6164	6314	6464	6614	6764	100	° C	Cooling cylinder flow temperature
36015	6015	6165	6315	6465	6615	6765	100	° C	DHW draw-off control flow temperature
36016	6016	6166	6316	6466	6616	6766	100	° C	DHW draw-off control return temperature
36017	6017	6167	6317	6467	6617	6767	100	° C	DHW charging system return temperature
36018	6018	6168	6318	6468	6618	6768	100	° C	DHW draw-off control cylinder temperature
36019	6019	6169	6319	6469	6619	6769	100	° C	System sensor, upper DHW temperature
36020	6020	6170	6320	6470	6620	6770	100	° C	System sensor, lower DHW temperature
36021	6021	6171	6321	6471	6621	6771	100	° C	Brine inlet temperature
36022	6022	6172	6322	6472	6622	6772	100	° C	Brine outlet temperature
36023	6023	6173	6323	6473	6623	6773	100	° C	Hot gas temperature
36024	6024	6174	6324	6474	6624	6774	100	° C	Condenser inlet temperature
36025	6025	6175	6325	6475	6625	6775	100	° C	Condenser outlet temperature
36026	6026	6176	6326	6476	6626	6776	100	° C	Liquid line temperature
36027	6027	6177	6327	6477	6627	6777	100	° C	Suction gas temperature
36028	6028	6178	6328	6478	6628	6778	100	° C	Pool flow temperature
36029	6029	6179	6329	6479	6629	6779	100	° C	Pool return temperature
36030	6030	6180	6330	6480	6630	6780	100	° C	Hot gas mode DHW flow temperature
36031	6031	6181	6331	6481	6631	6781	1	boolean	SG Ready input 1
36032	6032	6182	6332	6482	6632	6782	1	boolean	SG Ready input 2
36033	6033	6183	6333	6483	6633	6783	1	boolean	External stop, pool heating

Modbus system values for heat pumps with WPMG (WPE-I 33-87 H400 Premium)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
36034	6034	6184	6334	6484	6634	6784	1	boolean	External start, brine pump
36035	6035	6185	6335	6485	6635	6785	10	kWh	Electrical energy kWh, total (LSW)
36036	6036	6186	6336	6486	6636	6786	10	kWh	Electrical energy kWh, total (MSW)
36050	6050	6200	6350	6500	6650	6800	1	h	Hours run, compressor (LSW)
36051	6051	6201	6351	6501	6651	6801	1	h	Hours run, compressor (MSW)
36052	6052	6202	6352	6502	6652	6802	1	h	Hours run, booster heater (LSW)
36053	6053	6203	6353	6503	6653	6803	1	h	Hours run, booster heater (MSW)
36054	6054	6204	6354	6504	6654	6804	1	h	Hours run, DHW heating (LSW)
36055	6055	6205	6355	6505	6655	6805	1	h	Hours run, DHW heating (MSW)
36100	6100	6250	6400	6550	6700	6850	100	°C	Outside temperature, averaged
36101	6101	6251	6401	6551	6701	6851	100	°C	DHW temperature, weighted
36102	6102	6252	6402	6552	6702	6852	100	°C	Evaporation temperature in high pressure range
36103	6103	6253	6403	6553	6703	6853	100	°C	Condensation temperature in high pressure range
36104	6104	6254	6404	6554	6704	6854	100	°C	Condensation temperature in low pressure range
36105	6105	6255	6405	6555	6705	6855	100	K	Superheating
36106	6106	6256	6406	6556	6706	6856	100	K	Supercooling
36107	6107	6257	6407	6557	6707	6857	100	bar	Pressure, low pressure side
36108	6108	6258	6408	6558	6708	6858	100	bar	Pressure, high pressure side
36109	6109	6259	6409	6559	6709	6859	100	A	L1 current
36110	6110	6260	6410	6560	6710	6860	100	A	L2 current
36111	6111	6261	6411	6561	6711	6861	100	A	L3 current
36112	6112	6262	6412	6562	6712	6862	100	V	L1-N voltage
36113	6113	6263	6413	6563	6713	6863	100	V	L2-N voltage
36114	6114	6264	6414	6564	6714	6864	100	V	L3-N voltage
36115	6115	6265	6415	6565	6715	6865	10	V	L1-L2 voltage
36116	6116	6266	6416	6566	6716	6866	10	V	L2-L3 voltage
36117	6117	6267	6417	6567	6717	6867	10	V	L3-L1 voltage
36118	6118	6268	6418	6568	6718	6868	1	W	L1 power consumption
36119	6119	6269	6419	6569	6719	6869	1	W	L2 power consumption
36120	6120	6270	6420	6570	6720	6870	1	W	L3 power consumption
36121	6121	6271	6421	6571	6721	6871	1	kWh	Energy, total
36122	6122	6272	6422	6572	6722	6872	1	boolean	Comfort mode
36123	6123	6273	6423	6573	6723	6873	100	°C	Room dew point temperature
36124	6124						100	°C	Set buffer cylinder temperature
36125	6125						1	boolean	Start delay active
36126	6126						1		Current output stage, compressor
36127	6127						1		Current output stage, internal booster heater
36128	6128						1		Percentage compressor speed

Block 2: System parameters (read/write holding register)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
47200	7200	7201	7202	7203	7204	7205		boolean	Reset all alarms
47001	7001							boolean	Activate booster heater (without compressor)
47002	7002							boolean	Activate external booster heater for pool
47003	7003							boolean	Activate internal booster heater for pool
47004	7004							boolean	Activate internal booster heater
47005	7005							boolean	Activate external booster heater
47006	7006							boolean	Activate DHW hot gas mode
47008	7008							boolean	Activate hot gas pump
47012	7012							boolean	Activate DHW circulation pump
47013	7013							boolean	Activate cooling mode for mixing valve 1
47014	7014							boolean	Activate energy meter
47015	7015							°C	Min. outside temperature for passive cooling
47016	7016							boolean	Activate DHW heating
47017	7017							boolean	Activate heating mode
47018	7018							boolean	Activate current limiting
47019	7019							boolean	Activate pasteurisation function

Modbus system values for heat pumps with WPMG (WPE-I 33-87 H400 Premium)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
47020	7020							boolean	Activate cooling mode (secondary heat pump)
47021	7021							boolean	Activate pool
47022	7022							boolean	Activate season end for cooling mode?
47023	7023							boolean	Activate passive cooling
47024	7024						100	°C	Maximum temperature
47025	7025						100	°C	Minimum temperature
47029	7029						100	°C	Heating curve set value 1 (highest value)
47030	7030						100	°C	Heating curve set value 2
47031	7031						100	°C	Heating curve set value 3
47032	7032						100	°C	Heating curve set value 4
47033	7033						100	°C	Heating curve set value 5
47034	7034						100	°C	Heating curve set value 6
47035	7035						100	°C	Heating curve set value 7 (lowest value)
47036	7036						100	°C	Heating circuit 1 maximum temperature
47037	7037						100	°C	Heating circuit 1 minimum temperature
47038	7038						100	°C	Heating circuit 1 heating curve set value 1 (highest value)
47039	7039						100	°C	Heating circuit 1 heating curve set value 2
47040	7040						100	°C	Heating circuit 1 heating curve set value 3
47041	7041						100	°C	Heating circuit 1 heating curve set value 4
47042	7042						100	°C	Heating circuit 1 heating curve set value 5
47043	7043						100	°C	Heating circuit 1 heating curve set value 6
47044	7044						100	°C	Heating circuit 1 heating curve set value 7 (lowest value)
47045	7045						100	°C	Heating circuit 2 maximum temperature
47046	7046						100	°C	Heating circuit 2 heating curve set value 1 (highest value)
47047	7047						100	°C	Heating circuit 2 heating curve set value 2
47048	7048						100	°C	Heating circuit 2 heating curve set value 3
47049	7049						100	°C	Heating circuit 2 heating curve set value 4
47050	7050						100	°C	Heating circuit 2 heating curve set value 5
47051	7051						100	°C	Heating circuit 2 heating curve set value 6
47052	7052						100	°C	Heating circuit 2 heating curve set value 7 (lowest value)
47053	7053						100	°C	Heating circuit 3 maximum temperature
47054	7054						100	°C	Heating circuit 3 minimum temperature
47055	7055						100	°C	Heating circuit 3 heating curve set value 1 (highest value)
47056	7056						100	°C	Heating circuit 3 heating curve set value 2
47057	7057						100	°C	Heating circuit 3 heating curve set value 3
47058	7058						100	°C	Heating circuit 3 heating curve set value 4
47059	7059						100	°C	Heating circuit 3 heating curve set value 5
47060	7060						100	°C	Heating circuit 3 heating curve set value 6
47061	7061						100	°C	Heating circuit 3 heating curve set value 7 (lowest value)
47062	7062						100	°C	Heating circuit 4 maximum temperature
47063	7063						100	°C	Heating circuit 4 minimum temperature
47064	7064						100	°C	Heating circuit 4 heating curve set value 1 (highest value)
47065	7065						100	°C	Heating circuit 4 heating curve set value 2
47066	7066						100	°C	Heating circuit 4 heating curve set value 3
47067	7067						100	°C	Heating circuit 4 heating curve set value 4
47068	7068						100	°C	Heating circuit 4 heating curve set value 5
47069	7069						100	°C	Heating circuit 4 heating curve set value 6
47070	7070						100	°C	Heating circuit 4 heating curve set value 7 (lowest value)
47071	7071						100	°C	Heating circuit 5 maximum temperature
47072	7072						100	°C	Heating circuit 5 minimum temperature
47073	7073						100	°C	Heating circuit 5 heating curve set value 1 (highest value)
47074	7074						100	°C	Heating circuit 5 heating curve set value 2
47075	7075						100	°C	Heating circuit 5 heating curve set value 3
47076	7076						100	°C	Heating circuit 5 heating curve set value 4
47077	7077						100	°C	Heating circuit 5 heating curve set value 5

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
47078	7078						100	°C	Heating circuit 5 heating curve set value 6
47079	7079						100	°C	Heating circuit 5 heating curve set value 7 (lowest value)
47080	7080						100	°C	Heating limit, summer mode
47081	7081						100	°C	DHW start temperature
47082	7082						100	°C	DHW stop temperature
47083	7083						1		Minimum output stage, heating
47084	7084						1		Maximum output stage, heating
47085	7085						1		Maximum output stage, DHW
47086	7086						1		Minimum output stage, DHW
47087	7087						100	°C	Set cooling temperature
47088	7088						100	°C	DHW start temperature, booster heater
47089	7089						100	°C	DHW start delay, booster heater
47090	7090						100	°C	DHW stop temperature, booster heater
47091	7091						100	°C	Set pool temperature
47092	7092						1		Minimum output stage, pool
47093	7093						1		Maximum output stage, pool
47094	7094						1		Minimum output stage, cooling mode
47095	7095						1		Maximum output stage, cooling mode
47096	7096						100	°C	Cooling mode start temperature
47097	7097						100	°C	Cooling mode stop temperature
47098	7098						100	°C	Pool set return temperature
47099	7099						100	K	Pool hysteresis

Block 3: System status (read input register)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
37500	7500						1	boolean	Control signal, external booster heater
37501	7501						1	boolean	Control signal, internal booster heater, stage 2
37502	7502						1	boolean	Control signal, heating circuit 1, circulation pump
37503	7503						1	boolean	Control signal, condenser
37504	7504						1	boolean	Control signal, internal booster heater, stage 1
37505	7505						1	boolean	Control signal, hot gas circulation pump
37506	7506						1	boolean	Control signal, brine pump
37507	7507						1	boolean	Control signal, external booster heater, DHW circulation pump
37508	7508						1	boolean	Control signal, external relay for brine pump
37600	7600						1	boolean	Feedback, external booster heater
37601	7601						1	boolean	Feedback, internal booster heater
37602	7602						1	boolean	Control signal, hot gas control
37603	7603						1	boolean	Heat pump OFF
37604	7604						1	boolean	Heat pump ready to start
37650	7650						1	boolean	Control signal, DHW draw-off control, flow, DHW circulation pump
37651	7651						1	boolean	Control signal, DHW charging system control
37652	7652						1	boolean	Control signal, DHW charging system, DHW circulation pump
37653	7653						1	boolean	Control signal, DHW draw-off control, cylinder heating
37655	7655						1	boolean	Control signal, cooling circuit, DHW circulation pump
37656	7656						1	boolean	Control signal, pool, DHW circulation pump
37657	7657						1	boolean	Control signal, cooling circuit control
37660	7660						1	boolean	Control signal, pool control
37661	7661						1	boolean	Note, if mixing valve used for passive cooling
37663	7663						1	boolean	Control signal, compressor
37700	7700						1	boolean	Compressor cannot start
37701	7701						1	boolean	Compressor, available output stages
37702	7702						1	boolean	Compressor speed
39000	9000	9150	9300	9450	9600	9750	1	boolean	Level 1 notification

Modbus system values for heat pumps with WPMG (WPE-I 33-87 H400 Premium)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
39001	9001	9151	9301	9451	9601	9751	1	boolean	Level 2 notification
39002	9002	9152	9302	9452	9602	9752	1	boolean	Level 3 notification
39003	9003						1	boolean	Level 1 notification, high pressure
39004	9004						1	boolean	Level 1 notification, low pressure
39005	9005						1	boolean	Level 1 notification, hot gas temperature
39006	9006						1	boolean	Level 1 notification, operating pressure
39007	9007						1	boolean	Level 1 notification, hot gas line sensor
39008	9008						1	boolean	Level 1 notification, liquid line sensor
39009	9009						1	boolean	Level 1 notification, suction gas sensor
39010	9010						1	boolean	Level 1 notification, flow rate / pressure, brine or condenser
39011	9011						1	boolean	Level 1 notification, BM card phase sequence
39012	9012						1	boolean	Level 1 notification, inverter fault
39013	9013						1	boolean	Level 3 notification, low source temperature
39014	9014						1	boolean	Level 1 notification, low compressor speed
39015	9015						1	boolean	Level 1 notification, low superheating
39016	9016						1	boolean	Level 1 notification, outside pressure ratio
39017	9017						1	boolean	Level 1 notification, outside operating range
39018	9018						1	boolean	Level 1 notification, brine temperature outside range
39019	9019						1	boolean	Level 2 notification, brine inlet sensor
39020	9020						1	boolean	Level 2 notification, brine outlet sensor
39021	9021						1	boolean	Level 2 notification, condenser inlet sensor
39022	9022						1	boolean	Level 2 notification, condenser outlet sensor
39023	9023						1	boolean	Level 2 notification, outside temperature sensor
39024	9024						1	boolean	Level 2 notification, system flow sensor
39025	9025						1	boolean	Level 2 notification, heating circuit 1 sensor
39026	9026						1	boolean	Level 2 notification, heating circuit 2 sensor
39027	9027						1	boolean	Level 2 notification, heating circuit 3 sensor
39028	9028						1	boolean	Level 2 notification, heating circuit 4 sensor
39029	9029						1	boolean	Level 2 notification, heating circuit 5 sensor
39030	9030						1	boolean	Level 2 notification, DHW charging circuit sensor
39031	9031						1	boolean	Level 2 notification, DHW sensor
39032	9032						1	boolean	Level 2 notification, cooling buffer sensor
39033	9033						1	boolean	Level 2 notification, cooling cylinder flow sensor
39034	9034						1	boolean	Level 2 notification, cooling circuit return sensor
39035	9035						1	boolean	Level 2 notification, source circuit, spread, max.
39036	9036						1	boolean	Level 2 notification, DHW centre sensor
39037	9037						1	boolean	Level 2 notification, DHW return sensor
39038	9038						1	boolean	Level 2 notification, DHW hot gas sensor
39039	9039						1	boolean	Level 2 notification, internal booster heater
39040	9040						1	boolean	Level 3 notification, condenser maximum temperature
39041	9041						1	boolean	Level 2 notification, max. brine inlet
39042	9042						1	boolean	Level 2 notification, min. brine inlet
39043	9043						1	boolean	Level 2 notification, min. brine outlet
39044	9044						1	boolean	Level 3 notification, min. DHW circulation return
39045	9045						1	boolean	Level 3 notification, min. DHW circulation temperature
39046	9046						1	boolean	Level 3 notification, heating circuit 1 temperature
39047	9047						1	boolean	Level 3 notification, heating circuit 2 temperature
39048	9048						1	boolean	Level 3 notification, heating circuit 3 temperature
39049	9049						1	boolean	Level 3 notification, heating circuit 4 temperature
39050	9050						1	boolean	Level 3 notification, heating circuit 5 temperature

Modbus system values for heat pumps with WPMG (WPE-I 33-87 H400 Premium)

Modbus address	Primary heat pump	Secondary heat pump 1	Secondary heat pump 2	Secondary heat pump 3	Secondary heat pump 4	Secondary heat pump 5	Factor	Unit	Object designation
39051	9051						1	boolean	Level 3 notification, DHW circulation return temperature
39052	9052						1	boolean	Notification, central message
39053	9053						1	boolean	Level 3 notification, cooling circuit temperature
39054	9054						1	boolean	Level 3 notification, cooling buffer temperature
39055	9055						1	boolean	Level 2 notification, humidity sensor
39056	9056						1	boolean	Level 2 notification, cooling buffer return sensor
39057	9057						1	boolean	Level 3 notification, room temperature sensor
39058	9058						1	boolean	Level 1 notification, inverter communication
39059	9059						1	boolean	Level 2 notification, pool return sensor
39060	9060						1	boolean	Level 2 notification, cooling, heating circuit 1 sensor
39061	9061						1	boolean	Level 2 notification, DHW cylinder sensor
39062	9062						1	boolean	Level 2 notification, maximum pasteurisation time
39063	9063						1	boolean	Level 3 notification, external alarm

Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

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