

MODBUS at 3200er on COM 2**UART-Settings**

Baud	57600
DataBits	8
StopBits	1
Parity	NONE
Handshake	NONE

MODBUS Protocol

MODBUS RTU
MODBUS ASCII

(Select on the Boiler Control)

MODBUS Slaveaddress space

1-247
(Select on the Boiler Control)

MODBUS avl. Commands

All Digital Outputs
Read Coil Status (FC=01) Adress 00001 - 00113

All Digital Inputs
Read Input Status (FC=02) Adress 10001 - 10048

All Parameter
Read Holding Registers (FC=03) Adress 40001 - 40877

Alle Aktual Values
Read Input Registers (FC=04) Adress 30001 - 30254

Error Log
Read Input Registers (FC=04) Adress 33001 - 33020

Boilerstate
Read Input Registers (FC=04) Adress 34001 - 34002

At the moment the Parameter write ist locked, unlocking only by Fröling

Write Single Register (FC=06) Adress 40001 - 40877

Digital Output (Coils FC 01)

Adress	Name
00001	Heating circuit pump 1
00002	Heating circuit pump 2
00003	Heating Circuit Mixer OPEN 1
00004	Heating Circuit 1 Mixer CLOSED
00005	Heating Circuit Mixer OPEN 2
00006	Heating Circuit Mixer CLOSED 2
00007	Lambda probe heating
00008	Burner relay
00009	Heating circuit pump 0
00010	
00011	
00012	
00013	
00014	
00015	
00016	Pellet suction fan
00017	WOS-drive
00018	Open grate
00019	Close grate
00020	Ignition
00021	Fault message
00022	BBF manual
00023	
00024	
00025	
00026	Heating circuit pump 3
00027	Heating circuit pump 4
00028	Heating Circuit Mixer OPEN 3
00029	Heating Circuit Mixer CLOSED 3
00030	Heating Circuit Mixer OPEN 4
00031	Heating Circuit Mixer CLOSED 4
00032	Heating circuit pump 5
00033	Heating circuit pump 6
00034	Heating Circuit Mixer OPEN 5
00035	Heating Circuit Mixer CLOSED 5
00036	Heating Circuit Mixer OPEN 6
00037	Heating Circuit Mixer CLOSED 6
00038	Heating circuit pump 7
00039	Heating circuit pump 8
00040	Heating Circuit Mixer OPEN 7
00041	Heating Circuit Mixer CLOSED 7
00042	Heating Circuit Mixer OPEN 8
00043	Heating Circuit Mixer CLOSED 8
00044	Heating circuit pump 9
00045	Heating circuit pump 10
00046	Heating Circuit Mixer OPEN 9
00047	Heating Circuit Mixer CLOSED 9
00048	Heating Circuit Mixer OPEN 10
00049	Heating Circuit Mixer CLOSED 10
00050	Heating circuit pump 11
00051	Heating circuit pump 12
00052	Heating Circuit Mixer OPEN 11
00053	Heating Circuit Mixer CLOSED 11

00054 Heating Circuit Mixer OPEN 12
00055 Heating Circuit Mixer CLOSED 12
00056 Heating circuit pump 13
00057 Heating circuit pump 14
00058 Heating Circuit Mixer OPEN 13
00059 Heating Circuit Mixer CLOSED 13
00060 Heating Circuit Mixer OPEN 14
00061 Heating Circuit Mixer CLOSED 14
00062 Heating circuit pump 15
00063 Heating circuit pump 16
00064 Heating Circuit Mixer OPEN 15
00065 Heating Circuit Mixer CLOSED 15
00066 Heating Circuit Mixer OPEN 16
00067 Heating Circuit Mixer CLOSED 16
00068 Heating circuit pump 17
00069 Heating circuit pump 18
00070 Heating Circuit Mixer OPEN 17
00071 Heating Circuit Mixer CLOSED 17
00072 Heating Circuit Mixer OPEN 18
00073 Heating Circuit Mixer CLOSED 18
00074
00075
00076
00077 WOS motor
00078 Vibrator
00079 Ash screw
00080 BBF motor
00081 Return feed mixer Open
00082 Return feed mixer Closed
00083 Stoker ON
00084 Feed screw ON
00085 grate tip drive
00086
00087
00088
00089
00090
00091
00092
00093
00094
00095
00096
00097
00098
00099
00100
00101
00102
00103
00104
00105 Rotary valve forwards
00106 Rotary valve backwards
00107 Delivery screw forwards
00108 Delivery screw backwards
00109 Intermediate screw forwards

00110 Intermediate screw backwards
00111
00112

Digital Inputs (Coils FC 02)

Adress	Name	
10001	Door switch	
10002	Hi-limit stat input	
10003	E-stop input	
10004		Not Used
10005		Not Used
10006	MAX level	
10007	Jam sensor	
10008	Back-fire slide valve closed	
10009		Not Used
10010	Grate open	
10011	Grate closed	
10012		
10013	Combustion chamber overpressure monitor input	Not Used
10014		
10015		
10016		
10017	Light barrier in drop box free	
10018	LS Ascheschnecke (Tipping grate closed)	
10019	Rotation protection switch OK	Not Used
10020		
10021	Drop-box cover on feed screw closed	
10022	Tipping grate closed	
10023		
10024	Lock on TMM active	
10025	Stoker motor protection tripped	
10026	Feed screw motor protection tripped	
10027		
10028		
10029		
10030		
10031		
10032		
10033		
10034		
10035		
10036		Not Used
10037		
10038	Motor protection delivery screw OK	
10039	Motor protection rotary valve OK	
10040	Motor protection intermediate screw OK	
10041		
10042		
10043		
10044		
10045		
10046		
10047		

Parameter - Holding Register (FC 04)

Adress 40001 - 40877

Adress	Name	Unit	Scale	Decimal
40001	Shutdown if current boiler temperature is higher than	°C	2	0
40002	Maximum heating up time	m	60	0
40003	Minimum flue gas temperature	°C	1	0
40004	Maximum flue gas temperature	°C	1	0
40005	Minimum difference between flue gas temperature and	°C	1	0
40006	Minimum boiler temperature to release all pumps	°C	2	0
40007				0
40077	Desired room temperature during heating mode HK	°C	2	0
40078	Desired room temperature during setback mode HK	°C	2	0
40079	Controller gain room temperature Kp-Rm HK 1		10	1
40080	Reduction of flow temperature in setback mode HK	°C	2	0
40081	External temperature HK 1	°C	2	0
40082	External temperature HK 1	°C	2	0
40083	Maximum flow temperature HK 1	°C	2	0
40084	Proportional factor for mixer control HK 1		10	1
40085	Controller reset time HK 1	s	1	0
40086	Mixer runtime HK 1	s	1	0
40087	Frost protection temperature HK 1	°C	2	0
40088	Flow temperature SP at external temperature of -10	°C	2	0
40089	Flow temperature SP at external temperature of +1	°C	2	0
40090		°C	2	0
40091	Desired room temperature during heating mode HK	°C	2	0
40092	Desired room temperature during setback mode HK	°C	2	0
40093	Controller gain room temperature Kp-Rm HK 2		10	1
40094	Reduction of flow temperature in setback mode HK	°C	2	0
40095	External temperature HK 2	°C	2	0
40096	External temperature HK 2	°C	2	0
40097	Maximum flow temperature HK 2	°C	2	0
40098	Proportional factor for mixer control HK 2		10	1
40099	Controller reset time HK 2	s	1	0
40100	Mixer runtime HK 2	s	1	0
40101	Frost protection temperature HK 2	°C	2	0
40102	Flow temperature SP at external temperature of -10	°C	2	0
40103	Flow temperature SP at external temperature of +1	°C	2	0
40104		°C	2	0
40105	Desired room temperature during heating mode HK	°C	2	0
40106	Desired room temperature during setback mode HK	°C	2	0
40107	Controller gain room temperature Kp-Rm HK 3		10	1
40108	Reduction of flow temperature in setback mode HK	°C	2	0
40109	External temperature HK 3	°C	2	0
40110	External temperature HK 3	°C	2	0
40111	Maximum flow temperature HK 3	°C	2	0
40112	Proportional factor for mixer control HK 3		10	1
40113	Controller reset time HK 3	s	1	0
40114	Mixer runtime HK 3	s	1	0
40115	Frost protection temperature HK 3	°C	2	0
40116	Flow temperature SP at external temperature of -10	°C	2	0
40117	Flow temperature SP at external temperature of +1	°C	2	0
40118		°C	2	0
40119	Desired room temperature during heating mode HK	°C	2	0
40120	Desired room temperature during setback mode HK	°C	2	0
40121	Controller gain room temperature Kp-Rm HK 4		10	1

40122	Reduction of flow temperature in setback mode HK	°C	2	0
40123	External temperature HK 4	°C	2	0
40124	External temperature HK 4	°C	2	0
40125	Maximum flow temperature HK 4	°C	2	0
40126	Proportional factor for mixer control HK 4		10	1
40127	Controller reset time HK 4	s	1	0
40128	Mixer runtime HK 4	s	1	0
40129	Frost protection temperature HK 4	°C	2	0
40130	Flow temperature SP at external temperature of -10	°C	2	0
40131	Flow temperature SP at external temperature of +1	°C	2	0
40132		°C	2	0
40133	Desired room temperature during heating mode HK	°C	2	0
40134	Desired room temperature during setback mode HK	°C	2	0
40135	Controller gain room temperature Kp-Rm HK 5		10	1
40136	Reduction of flow temperature in setback mode HK	°C	2	0
40137	External temperature HK 5	°C	2	0
40138	External temperature HK 5	°C	2	0
40139	Maximum flow temperature HK 5	°C	2	0
40140	Proportional factor for mixer control HK 5		10	1
40141	Controller reset time HK 5	s	1	0
40142	Mixer runtime HK 5	s	1	0
40143	Frost protection temperature HK 5	°C	2	0
40144	Flow temperature SP at external temperature of -10	°C	2	0
40145	Flow temperature SP at external temperature of +1	°C	2	0
40146		°C	2	0
40147	Desired room temperature during heating mode HK	°C	2	0
40148	Desired room temperature during setback mode HK	°C	2	0
40149	Controller gain room temperature Kp-Rm HK 6		10	1
40150	Reduction of flow temperature in setback mode HK	°C	2	0
40151	External temperature HK 6	°C	2	0
40152	External temperature HK 6	°C	2	0
40153	Maximum flow temperature HK 6	°C	2	0
40154	Proportional factor for mixer control HK 6		10	1
40155	Controller reset time HK 6	s	1	0
40156	Mixer runtime HK 6	s	1	0
40157	Frost protection temperature HK 6	°C	2	0
40158	Flow temperature SP at external temperature of -10	°C	2	0
40159	Flow temperature SP at external temperature of +1	°C	2	0
40160		°C	2	0
40161	Desired room temperature during heating mode HK	°C	2	0
40162	Desired room temperature during setback mode HK	°C	2	0
40163	Controller gain room temperature Kp-Rm HK 7		10	1
40164	Reduction of flow temperature in setback mode HK	°C	2	0
40165	External temperature HK 7	°C	2	0
40166	External temperature HK 7	°C	2	0
40167	Maximum flow temperature HK 7	°C	2	0
40168	Proportional factor for mixer control HK 7		10	1
40169	Controller reset time HK 7	s	1	0
40170	Mixer runtime HK 7	s	1	0
40171	Frost protection temperature HK 7	°C	2	0
40172	Flow temperature SP at external temperature of -10	°C	2	0
40173	Flow temperature SP at external temperature of +1	°C	2	0
40174		°C	2	0
40175	Desired room temperature during heating mode HK	°C	2	0
40176	Desired room temperature during setback mode HK	°C	2	0
40177	Controller gain room temperature Kp-Rm HK 8		10	1

40178	Reduction of flow temperature in setback mode HK	°C	2	0
40179	External temperature HK 8	°C	2	0
40180	External temperature HK 8	°C	2	0
40181	Maximum flow temperature HK 8	°C	2	0
40182	Proportional factor for mixer control HK 8		10	1
40183	Controller reset time HK 8	s	1	0
40184	Mixer runtime HK 8	s	1	0
40185	Frost protection temperature HK 8	°C	2	0
40186	Flow temperature SP at external temperature of -10	°C	2	0
40187	Flow temperature SP at external temperature of +1	°C	2	0
40188		°C	2	0
40189	Desired room temperature during heating mode HK	°C	2	0
40190	Desired room temperature during setback mode HK	°C	2	0
40191	Controller gain room temperature Kp-Rm HK 9		10	1
40192	Reduction of flow temperature in setback mode HK	°C	2	0
40193	External temperature HK 9	°C	2	0
40194	External temperature HK 9	°C	2	0
40195	Maximum flow temperature HK 9	°C	2	0
40196	Proportional factor for mixer control HK 9		10	1
40197	Controller reset time HK 9	s	1	0
40198	Mixer runtime HK 9	s	1	0
40199	Frost protection temperature HK 9	°C	2	0
40200	Flow temperature SP at external temperature of -10	°C	2	0
40201	Flow temperature SP at external temperature of +1	°C	2	0
40202		°C	2	0
40203	Desired room temperature during heating mode HK	°C	2	0
40204	Desired room temperature during setback mode HK	°C	2	0
40205	Controller gain room temperature Kp-Rm HK 10		10	1
40206	Reduction of flow temperature in setback mode HK	°C	2	0
40207	External temperature HK 10	°C	2	0
40208	External temperature HK 10	°C	2	0
40209	Maximum flow temperature HK 10	°C	2	0
40210	Proportional factor for mixer control HK 10		10	1
40211	Controller reset time HK 10	s	1	0
40212	Mixer runtime HK 10	s	1	0
40213	Frost protection temperature HK 10	°C	2	0
40214	Flow temperature SP at external temperature of -10	°C	2	0
40215	Flow temperature SP at external temperature of +1	°C	2	0
40216		°C	2	0
40217	Desired room temperature during heating mode HK	°C	2	0
40218	Desired room temperature during setback mode HK	°C	2	0
40219	Controller gain room temperature Kp-Rm HK 11		10	1
40220	Reduction of flow temperature in setback mode HK	°C	2	0
40221	External temperature HK 11	°C	2	0
40222	External temperature HK 11	°C	2	0
40223	Maximum flow temperature HK 11	°C	2	0
40224	Proportional factor for mixer control HK 11		10	1
40225	Controller reset time HK 11	s	1	0
40226	Mixer runtime HK 11	s	1	0
40227	Frost protection temperature HK 11	°C	2	0
40228	Flow temperature SP at external temperature of -10	°C	2	0
40229	Flow temperature SP at external temperature of +1	°C	2	0
40230		°C	2	0
40231	Desired room temperature during heating mode HK	°C	2	0
40232	Desired room temperature during setback mode HK	°C	2	0
40233	Controller gain room temperature Kp-Rm HK 12		10	1

40234	Reduction of flow temperature in setback mode HK	°C	2	0
40235	External temperature HK 12	°C	2	0
40236	External temperature HK 12	°C	2	0
40237	Maximum flow temperature HK 12	°C	2	0
40238	Proportional factor for mixer control HK 12		10	1
40239	Controller reset time HK 12	s	1	0
40240	Mixer runtime HK 12	s	1	0
40241	Frost protection temperature HK 12	°C	2	0
40242	Flow temperature SP at external temperature of -10	°C	2	0
40243	Flow temperature SP at external temperature of +10	°C	2	0
40244		°C	2	0
40245	Desired room temperature during heating mode HK	°C	2	0
40246	Desired room temperature during setback mode HK	°C	2	0
40247	Controller gain room temperature Kp-Rm HK 13		10	1
40248	Reduction of flow temperature in setback mode HK	°C	2	0
40249	External temperature HK 13	°C	2	0
40250	External temperature HK 13	°C	2	0
40251	Maximum flow temperature HK 13	°C	2	0
40252	Proportional factor for mixer control HK 13		10	1
40253	Controller reset time HK 13	s	1	0
40254	Mixer runtime HK 13	s	1	0
40255	Frost protection temperature HK 13	°C	2	0
40256	Flow temperature SP at external temperature of -10	°C	2	0
40257	Flow temperature SP at external temperature of +10	°C	2	0
40258		°C	2	0
40259	Desired room temperature during heating mode HK	°C	2	0
40260	Desired room temperature during setback mode HK	°C	2	0
40261	Controller gain room temperature Kp-Rm HK 14		10	1
40262	Reduction of flow temperature in setback mode HK	°C	2	0
40263	External temperature HK 14	°C	2	0
40264	External temperature HK 14	°C	2	0
40265	Maximum flow temperature HK 14	°C	2	0
40266	Proportional factor for mixer control HK 14		10	1
40267	Controller reset time HK 14	s	1	0
40268	Mixer runtime HK 14	s	1	0
40269	Frost protection temperature HK 14	°C	2	0
40270	Flow temperature SP at external temperature of -10	°C	2	0
40271	Flow temperature SP at external temperature of +10	°C	2	0
40272		°C	2	0
40273	Desired room temperature during heating mode HK	°C	2	0
40274	Desired room temperature during setback mode HK	°C	2	0
40275	Controller gain room temperature Kp-Rm HK 15		10	1
40276	Reduction of flow temperature in setback mode HK	°C	2	0
40277	External temperature HK 15	°C	2	0
40278	External temperature HK 15	°C	2	0
40279	Maximum flow temperature HK 15	°C	2	0
40280	Proportional factor for mixer control HK 15		10	1
40281	Controller reset time HK 15	s	1	0
40282	Mixer runtime HK 15	s	1	0
40283	Frost protection temperature HK 15	°C	2	0
40284	Flow temperature SP at external temperature of -10	°C	2	0
40285	Flow temperature SP at external temperature of +10	°C	2	0
40286		°C	2	0
40287	Desired room temperature during heating mode HK	°C	2	0
40288	Desired room temperature during setback mode HK	°C	2	0
40289	Controller gain room temperature Kp-Rm HK 16		10	1

40290	Reduction of flow temperature in setback mode HK	°C	2	0
40291	External temperature HK 16	°C	2	0
40292	External temperature HK 16	°C	2	0
40293	Maximum flow temperature HK 16	°C	2	0
40294	Proportional factor for mixer control HK 16		10	1
40295	Controller reset time HK 16	s	1	0
40296	Mixer runtime HK 16	s	1	0
40297	Frost protection temperature HK 16	°C	2	0
40298	Flow temperature SP at external temperature of -10	°C	2	0
40299	Flow temperature SP at external temperature of +1	°C	2	0
40300		°C	2	0
40301	Desired room temperature during heating mode HK	°C	2	0
40302	Desired room temperature during setback mode HK	°C	2	0
40303	Controller gain room temperature Kp-Rm HK 17		10	1
40304	Reduction of flow temperature in setback mode HK	°C	2	0
40305	External temperature HK 17	°C	2	0
40306	External temperature HK 17	°C	2	0
40307	Maximum flow temperature HK 17	°C	2	0
40308	Proportional factor for mixer control HK 17		10	1
40309	Controller reset time HK 17	s	1	0
40310	Mixer runtime HK 17	s	1	0
40311	Frost protection temperature HK 17	°C	2	0
40312	Flow temperature SP at external temperature of -10	°C	2	0
40313	Flow temperature SP at external temperature of +1	°C	2	0
40314		°C	2	0
40315	Desired room temperature during heating mode HK	°C	2	0
40316	Desired room temperature during setback mode HK	°C	2	0
40317	Controller gain room temperature Kp-Rm HK 18		10	1
40318	Reduction of flow temperature in setback mode HK	°C	2	0
40319	External temperature HK 18	°C	2	0
40320	External temperature HK 18	°C	2	0
40321	Maximum flow temperature HK 18	°C	2	0
40322	Proportional factor for mixer control HK 18		10	1
40323	Controller reset time HK 18	s	1	0
40324	Mixer runtime HK 18	s	1	0
40325	Frost protection temperature HK 18	°C	2	0
40326	Flow temperature SP at external temperature of -10	°C	2	0
40327	Flow temperature SP at external temperature of +1	°C	2	0
40338	In heating minimum secondary air from	%	1	0
40339	Load if temperature difference between storage tank	°C	2	0
40340	Set DHW temperature Boiler 1	°C	2	0
40341	Which storage tank or heat distributor supplies the		1	0
40342	Residual heat use Boiler 1		1	0
40343	Reload if DHW tank temperature is below Boiler 1	°C	2	0
40344	Only load DHW tank once a day Boiler 1		1	0
40345	Legionella heating activated Boiler 1		1	0
40346	Which day for legionella heating Boiler 1		1	0
40347	Load if temperature difference between boiler and	°C	2	0
40348	Setpoint for temperature difference between boiler -	°C	2	0
40349	Controller gain DHW pump Kp-Bo Boiler 1		256	2
40350	Controller reset time DHW tank pump Tn-Bo Boiler	s	1	0
40351	Minimum DHW tank speed Boiler 1	%	1	0
40352	Load if temperature difference between storage tank	°C	2	0
40353	Set DHW temperature Boiler 2	°C	2	0
40354	Which storage tank or heat distributor supplies the		1	0
40355	Residual heat use Boiler 2		1	0

40356	Reload if DHW tank temperature is below Boiler 2 °C	2	0
40357	Only load DHW tank once a day Boiler 2	1	0
40358	Legionella heating activated Boiler 2	1	0
40359	Which day for legionella heating Boiler 2	1	0
40360	Load if temperature difference between boiler and T °C	2	0
40361	Setpoint for temperature difference between boiler - °C	2	0
40362	Controller gain DHW pump Kp-Bo Boiler 2	256	2
40363	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0
40364	Minimum DHW tank speed Boiler 2 %	1	0
40365	Load if temperature difference between storage tank °C	2	0
40366	Set DHW temperature Boiler 3 °C	2	0
40367	Which storage tank or heat distributor supplies the tank	1	0
40368	Residual heat use Boiler 3	1	0
40369	Reload if DHW tank temperature is below Boiler 3 °C	2	0
40370	Only load DHW tank once a day Boiler 3	1	0
40371	Legionella heating activated Boiler 3	1	0
40372	Which day for legionella heating Boiler 3	1	0
40373	Load if temperature difference between boiler and T °C	2	0
40374	Setpoint for temperature difference between boiler - °C	2	0
40375	Controller gain DHW pump Kp-Bo Boiler 3	256	2
40376	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0
40377	Minimum DHW tank speed Boiler 3 %	1	0
40378	Load if temperature difference between storage tank °C	2	0
40379	Set DHW temperature Boiler 4 °C	2	0
40380	Which storage tank or heat distributor supplies the tank	1	0
40381	Residual heat use Boiler 4	1	0
40382	Reload if DHW tank temperature is below Boiler 4 °C	2	0
40383	Only load DHW tank once a day Boiler 4	1	0
40384	Legionella heating activated Boiler 4	1	0
40385	Which day for legionella heating Boiler 4	1	0
40386	Load if temperature difference between boiler and T °C	2	0
40387	Setpoint for temperature difference between boiler - °C	2	0
40388	Controller gain DHW pump Kp-Bo Boiler 4	256	2
40389	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0
40390	Minimum DHW tank speed Boiler 4 %	1	0
40391	Load if temperature difference between storage tank °C	2	0
40392	Set DHW temperature Boiler 5 °C	2	0
40393	Which storage tank or heat distributor supplies the tank	1	0
40394	Residual heat use Boiler 5	1	0
40395	Reload if DHW tank temperature is below Boiler 5 °C	2	0
40396	Only load DHW tank once a day Boiler 5	1	0
40397	Legionella heating activated Boiler 5	1	0
40398	Which day for legionella heating Boiler 5	1	0
40399	Load if temperature difference between boiler and T °C	2	0
40400	Setpoint for temperature difference between boiler - °C	2	0
40401	Controller gain DHW pump Kp-Bo Boiler 5	256	2
40402	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0
40403	Minimum DHW tank speed Boiler 5 %	1	0
40404	Load if temperature difference between storage tank °C	2	0
40405	Set DHW temperature Boiler 6 °C	2	0
40406	Which storage tank or heat distributor supplies the tank	1	0
40407	Residual heat use Boiler 6	1	0
40408	Reload if DHW tank temperature is below Boiler 6 °C	2	0
40409	Only load DHW tank once a day Boiler 6	1	0
40410	Legionella heating activated Boiler 6	1	0
40411	Which day for legionella heating Boiler 6	1	0

40412	Load if temperature difference between boiler and l °C	2	0	
40413	Setpoint for temperature difference between boiler - °C	2	0	
40414	Controller gain DHW pump Kp-Bo Boiler 6	256	2	
40415	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0	
40416	Minimum DHW tank speed Boiler 6 %	1	0	
40417	Load if temperature difference between storage tank °C	2	0	
40418	Set DHW temperature Boiler 7 °C	2	0	
40419	Which storage tank or heat distributor supplies the l	1	0	
40420	Residual heat use Boiler 7	1	0	
40421	Reload if DHW tank temperature is below Boiler 7 °C	2	0	
40422	Only load DHW tank once a day Boiler 7	1	0	
40423	Legionella heating activated Boiler 7	1	0	
40424	Which day for legionella heating Boiler 7	1	0	
40425	Load if temperature difference between boiler and l °C	2	0	
40426	Setpoint for temperature difference between boiler - °C	2	0	
40427	Controller gain DHW pump Kp-Bo Boiler 7	256	2	
40428	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0	
40429	Minimum DHW tank speed Boiler 7 %	1	0	
40430	Load if temperature difference between storage tank °C	2	0	
40431	Set DHW temperature Boiler 8 °C	2	0	
40432		1	0	
40433	Residual heat use Boiler 8	1	0	
40434	Reload if DHW tank temperature is below Boiler 8 °C	2	0	
40435	Only load DHW tank once a day Boiler 8	1	0	
40436	Legionella heating activated Boiler 8	1	0	
40437	Which day for legionella heating Boiler 8	1	0	
40438		°C	2	0
40439		°C	2	0
40440	Controller gain DHW pump Kp-Bo Boiler 8	256	2	
40441	Controller reset time DHW tank pump Tn-Bo Boiler s	1	0	
40442	Minimum DHW tank speed Boiler 8 %	1	0	
40443	Which second Boiler is installed?	1	0	
40444	Heating circuit release from following storage tank t °C	2	0	
40445	Residual heat use Puffer 1	1	0	
40446	Temperature difference between boiler and border l °C	2	0	
40447	Minimum storage tank pump speed Puffer 1 %	1	0	
40448	Controller gain for storage tank pump Kp-Pu Puffer	256	2	
40449	Controller reset time Puffer 1 s	1	0	
40450	Top storage tank minimum temperature - startup po °C	2	0	
40451	storage tank fully loaded if temperature difference b °C	2	0	
40452	Heating circuit release from following storage tank t °C	2	0	
40453	Residual heat use Puffer 2	1	0	
40454	Temperature difference between boiler and border l °C	2	0	
40455	Minimum storage tank pump speed Puffer 2 %	1	0	
40456	Controller gain for storage tank pump Kp-Pu Puffer	256	2	
40457	Controller reset time Puffer 2 s	1	0	
40458	Top storage tank minimum temperature - startup po °C	2	0	
40459	storage tank fully loaded if temperature difference b °C	2	0	
40460	Heating circuit release from following storage tank t °C	2	0	
40461	Residual heat use Puffer 3	1	0	
40462	Temperature difference between boiler and border l °C	2	0	
40463	Minimum storage tank pump speed Puffer 3 %	1	0	
40464	Controller gain for storage tank pump Kp-Pu Puffer	256	2	
40465	Controller reset time Puffer 3 s	1	0	
40466	Top storage tank minimum temperature - startup po °C	2	0	
40467	storage tank fully loaded if temperature difference b °C	2	0	

40468	Heating circuit release from following storage tank t ^l °C	2	0
40469	Residual heat use Puffer 4	1	0
40470	Temperature difference between boiler and border l °C	2	0
40471	Minimum storage tank pump speed Puffer 4 %	1	0
40472	Controller gain for storage tank pump Kp-Pu Puffer	256	2
40473	Controller reset time Puffer 4 s	1	0
40474	Top storage tank minimum temperature - startup po °C	2	0
40475	storage tank fully loaded if temperature difference b °C	2	0

Min	Max	Default
2	20	5
1	60	10
85	300	120
85	300	250
0	50	15
60	80	65
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60

0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60

0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60

0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60

0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
1	365	1
10	30	20
10	30	16
0	200	60
0	70	15
-20	50	18
-20	50	7
20	110	75
1	1000	5
10	320	60
30	600	240
-10	20	10
10	110	60
10	110	40
0	100	10
3	50	6
10	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0

1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1

3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
3	50	6
30	100	55
0	4	1
0	1	0
1	90	45
0	1	0
0	1	1
1	8	1
3	50	6
3	50	10
1	9999	500
10	3600	120
0	100	45
0	3	0
20	100	30
0	1	0
2	80	20
0	100	35
1	9999	250
10	3600	600
15	120	65
3	50	10
20	100	30
0	1	0
2	80	20
0	100	35
1	9999	250
10	3600	600
15	120	65
3	50	10
20	100	30
0	1	0
2	80	20
0	100	35
1	9999	250
10	3600	600
15	120	65
3	50	10

20	100	30
0	1	0
2	80	20
0	100	35
1	9999	250
10	3600	600
15	120	65
3	50	10

Actual Values - Input Register (FC 03)

Adress 30001 - 30254

Adress	Name	Unit	Scale	Decimal places
30001	Boiler temperature	°C	2	0
30002	Flue gas temperature	°C	1	0
30003	Board Temperature	°C	2	0
30004	Residual oxygen content	%	10	1
30005	Outside air temperature	°C	2	0
30006				
30007				
30008	ID fan speed	U	1	0
30009				
30010				
30011	Return sensor	°C	2	0
30012				
30013				
30014				
30015				
30016	ID fan control	%	1	0
30017	Primary air	%	1	0
30018	Secondary air	%	1	0
30019	Boiler control variable	%	1	0
30020	Flue gas setpoint	°C	1	0
30021	Oxygen control	%	1	0
30022	Actual flow temperature 1	°C	2	0
30023	Flow temperature setpoint 1	°C	2	0
30024	Override switch 1		1	0
30025	Room temperature 1	°C	2	0
30026	Actual flow temperature 2	°C	2	0
30027	Flow temperature setpoint 2	°C	2	0
30028	Override switch 2		1	0
30029	Room temperature 2	°C	2	0
30030	Actual flow temperature 3	°C	2	0
30031	Flow temperature setpoint 3	°C	2	0
30032	Override switch 3		1	0
30033	Room temperature 3	°C	2	0
30034	Actual flow temperature 4	°C	2	0
30035	Flow temperature setpoint 4	°C	2	0
30036	Override switch 4		1	0
30037	Room temperature 4	°C	2	0
30038	Actual flow temperature 5	°C	2	0
30039	Flow temperature setpoint 5	°C	2	0
30040	Override switch 5		1	0
30041	Room temperature 5	°C	2	0
30042	Actual flow temperature 6	°C	2	0
30043	Flow temperature setpoint 6	°C	2	0
30044	Override switch 6		1	0
30045	Room temperature 6	°C	2	0
30046	Actual flow temperature 7	°C	2	0
30047	Flow temperature setpoint 7	°C	2	0
30048	Override switch 7		1	0
30049	Room temperature 7	°C	2	0
30050	Actual flow temperature 8	°C	2	0
30051	Flow temperature setpoint 8	°C	2	0
30052	Override switch 8		1	0
30053	Room temperature 8	°C	2	0

30054	Actual flow temperature 9	°C	2	0
30055	Flow temperature setpoint 9	°C	2	0
30056	Override switch 9		1	0
30057	Room temperature 9	°C	2	0
30058	Actual flow temperature 10	°C	2	0
30059	Flow temperature setpoint 10	°C	2	0
30060	Override switch 10		1	0
30061	Room temperature 10	°C	2	0
30062	Actual flow temperature 11	°C	2	0
30063	Flow temperature setpoint 11	°C	2	0
30064	Override switch 11		1	0
30065	Room temperature 11	°C	2	0
30066	Actual flow temperature 12	°C	2	0
30067	Flow temperature setpoint 12	°C	2	0
30068	Override switch 12		1	0
30069	Room temperature 12	°C	2	0
30070	Actual flow temperature 13	°C	2	0
30071	Flow temperature setpoint 13	°C	2	0
30072	Override switch 13		1	0
30073	Room temperature 13	°C	2	0
30074	Actual flow temperature 14	°C	2	0
30075	Flow temperature setpoint 14	°C	2	0
30076	Override switch 14		1	0
30077	Room temperature 14	°C	2	0
30078	Actual flow temperature 15	°C	2	0
30079	Flow temperature setpoint 15	°C	2	0
30080	Override switch 15		1	0
30081	Room temperature 15	°C	2	0
30082	Actual flow temperature 16	°C	2	0
30083	Flow temperature setpoint 16	°C	2	0
30084	Override switch 16		1	0
30085	Room temperature 16	°C	2	0
30086	Actual flow temperature 17	°C	2	0
30087	Flow temperature setpoint 17	°C	2	0
30088	Override switch 17		1	0
30089	Room temperature 17	°C	2	0
30090	Actual flow temperature 18	°C	2	0
30091	Flow temperature setpoint 18	°C	2	0
30092	Override switch 18		1	0
30093	Room temperature 18	°C	2	0
30094	DHW tank top temperature 1	°C	2	0
30095	DHW tank bottom temperature 1	°C	2	0
30096				
30097				
30098	Delivery screw current	A	1000	2
30099	Service hours	h	1	0
30100	DHW tank top temperature 2	°C	2	0
30101	DHW tank bottom temperature 2	°C	2	0
30102	DHW tank top temperature 3	°C	2	0
30103	DHW tank bottom temperature 3	°C	2	0
30104	DHW tank top temperature 4	°C	2	0
30105	DHW tank bottom temperature 4	°C	2	0
30106	DHW tank top temperature 5	°C	2	0
30107	DHW tank bottom temperature 5	°C	2	0
30108	DHW tank top temperature 6	°C	2	0
30109	DHW tank bottom temperature 6	°C	2	0

30110	DHW tank top temperature 7	°C	2	0
30111	DHW tank bottom temperature 7	°C	2	0
30112	DHW tank top temperature 8	°C	2	0
30113	DHW tank bottom temperature 8	°C	2	0
30114	Pellet container level	%	207	1
30115	Number of burner starts		0 1	0
30116	Service hours in slumber	h	10	1
30117	Feed	%	1	0
30118	Oxygen control	%	1	0
30119	storage tank top temperature 1	°C	2	0
30120	storage tank middle temperature 1	°C	2	0
30121	storage tank bottom temperature 1	°C	2	0
30122	storage tank top temperature 2	°C	2	0
30123	storage tank middle temperature 2	°C	2	0
30124	storage tank bottom temperature 2	°C	2	0
30125	storage tank top temperature 3	°C	2	0
30126	storage tank middle temperature 3	°C	2	0
30127	storage tank bottom temperature 3	°C	2	0
30128	storage tank top temperature 4	°C	2	0
30129	storage tank middle temperature 4	°C	2	0
30130	storage tank bottom temperature 4	°C	2	0
30131		°C	2	0
30132		°C	3	0
30133		°C	4	0
30134		°C	5	0
30135		°C	6	0
30136		°C	7	0
30137		°C	8	0
30138		°C	9	0
30139	Calculated boiler setpoint	°C	2	0
30140	Solar temperature storage tank bottom	°C	2	0
30141	storage tank pump control 1	%	1	0
30142	storage tank pump control 2	%	1	0
30143	storage tank pump control 3	%	1	0
30144	storage tank pump control 4	%	1	0
30145	DHW tank pump control 1	%	1	0
30146	DHW tank pump control 2	%	1	0
30147	DHW tank pump control 3	%	1	0
30148	DHW tank pump control 4	%	1	0
30149	DHW tank pump control 5	%	1	0
30150	DHW tank pump control 6	%	1	0
30151	DHW tank pump control 7	%	1	0
30152	DHW tank pump control 8	%	1	0
30153	Collector pump control	%	1	0
30154	Feed screw current	A	1000	2
30155	Stoker screw current	A	1000	2
30156	Comb. chamber under-pressure	P	1	0
30157	Return sensor	°C	2	0
30158				
30159				
30160	Feed	%	1	0
30161	Flue gas setpoint	°C	1	0
30162	Oxygen control	%	1	0
30163				
30164				
30165				

30166				
30167	Feed correction control	%	1	0
30168	Return pump controller	%	1	0
30169	FD fan	%	1	0
30170	Oxygen control	%	1	0
30171	Flue gas setpoint	°C	1	0
30172	Network pump speed	%	1	0
30173	Network return temperature	°C	2	0
30174				
30175				
30176				
30177				
30178				
30179				
30180				
30181				
30182				
30183				
30184				
30185				
30186				
30187				
30188	Speed	%	1	0
30189	Return temperature feeder 1	°C	2	0
30190	Speed	%	1	0
30191	Return temperature feeder 2	°C	2	0
30192	Speed	%	1	0
30193	Return temperature feeder 3	°C	2	0
30194	Speed	%	1	0
30195	Return temperature feeder 4	°C	2	0
30196	Measured path of slide valve	%	10	0
30197	Temperature of secondary boiler	°C	2	0
30198	Collector Temperature	°C	2	0
30199	Heat source sensor DRA	°C	2	0
30200	Heat sink sensor DRA	°C	2	0
30201	Pump speed DRA	%	1	0
30202	Speed of the circulation pump	%	1	0
30203	Return temperature in secondary circulation ltr	°C	2	0
30204	Burner relay status	0	1	0
30205	Collector pump runtime	h	1	0
30206	Collector return temperature	°C	2	0
30207	Heat exchanger sec. return temperature (line 1)	°C	2	0
30208	Pump between heat exchanger and storage tank	%	1	0
30209	Pump between heat exchanger and DHW tank	%	1	0
30210	Diverter valve for top/bottom coils	%	1	0
30211	Flow switch on the domestic hot water line	0	2	0
30212				
30213				
30214				
30215				
30216				
30217				
30218				
30219				
30220				
30221				

30222		
30223		
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30232		
30233		
30234		
30235		
30236		
30237		
30238		
30239		
30240		
30241		
30242		
30243		
30244	Not Used	2
30245	Not Used	2
30246	Not Used	3
30247	Not Used	3
30248	Not Used	0
30249	Not Used	0
30250	Not Used	0
30251	Not Used	0
30252	Not Used	0
30253	Not Used	0
30254	Not Used	0

Actual Value - Input Register (FC 03)

Adress 33001 - 33020

Adress	Name
33001	Error 1 / no fault = 0xffff (65535)
33002	Error 2
33003	Error 3
33004	Error 4
33005	Error 5
33006	Error 6
33007	Error 7
33008	Error 8
33009	Error 9
33010	Error 10
33011	Error 11
33012	Error 12
33013	Error 13
33014	Error 14
33015	Error 15
33016	Error 16
33017	Error 17
33018	Error 18
33019	Error 19
33020	Error 20

Errorcodes

0	Overheat Thermostat (STL) or EMERGENCY OFF activated
1	Boiler temperature sensor faulty
2	Primary air flap blocked
3	Secondary air flap blocked
4	Boiler has air leak
5	Test combustion chamber overpressure monitor
6	Back-fire slide valve does not close
7	Back-fire slide valve does not open
8	Grate drive defective
9	Grate fault
10	Grate cleaning fault
11	Igntion not successful
12	Safety time expired
13	Safety time expired
14	Boiler door open too long
15	Screw suction system suction point faulty
16	Check fuel outfeeder
17	Check fuel store
18	Return feed temperature faulty
19	Return feed temperature too low for more than 30 minutes
20	Remote control of heating circuit 1 faulty
21	Flow temperature sensor of heating circuit 1 faulty
22	Remote control of heating circuit 2 faulty
23	Flow temperature sensor of heating circuit 2 faulty
24	External temperature sensor faulty
25	EMERGENCY OFF switch was activated
26	Remote control in heating circuit 3 faulty
27	Remote control in heating circuit 4 faulty
28	Remote control in heating circuit 5 faulty

29 Remote control in heating circuit 6 faulty
30 Remote control in heating circuit 7 faulty
31 Remote control in heating circuit 8 faulty
32 Remote control in heating circuit 9 faulty
33 Remote control in heating circuit 10 faulty
34 Remote control in heating circuit 11 faulty
35 Remote control in heating circuit 12 faulty
36 Remote control in heating circuit 13 faulty
37 Remote control in heating circuit 14 faulty
38 Remote control in heating circuit 15 faulty
39 Remote control in heating circuit 16 faulty
40 Remote control in heating circuit 17 faulty
41 Remote control in heating circuit 18 faulty
42 Outfeed temperature sensor in heating circuit 3 faulty
43 Outfeed temperature sensor in heating circuit 4 faulty
44 Outfeed temperature sensor in heating circuit 5 faulty
45 Outfeed temperature sensor in heating circuit 6 faulty
46 Outfeed temperature sensor in heating circuit 7 faulty
47 Outfeed temperature sensor in heating circuit 8 faulty
48 Outfeed temperature sensor in heating circuit 9 faulty
49 Outfeed temperature sensor in heating circuit 10 faulty
50 Outfeed temperature sensor in heating circuit 11 faulty
51 Outfeed temperature sensor in heating circuit 12 faulty
52 Outfeed temperature sensor in heating circuit 13 faulty
53 Outfeed temperature sensor in heating circuit 14 faulty
54 Outfeed temperature sensor in heating circuit 15 faulty
55 Outfeed temperature sensor in heating circuit 16 faulty
56 Outfeed temperature sensor in heating circuit 17 faulty
57 Outfeed temperature sensor in heating circuit 18 faulty
58 Bus module faulty before power switched off
59 ID fan does not rotate
60 Sensor in DHW tank 1 faulty
61 Communication with pellet module faulty
62
63 001 EEPROM Read error
64 002 EEPROM Zero checksum
65 003 EEPROM Read error
66 004 EEPROM Incorrect software version
67 005 EEPROM Incorrect parameter length
68 006 EEPROM Read error
69 007 EEPROM Incorrect checksum
70 008 EEPROM Write error
71 009 EEPROM Write error
72 010 Config. List faulty
73 Sensor in DHW tank 2 faulty
74 Sensor in DHW tank 3 faulty
75 Sensor in DHW tank 4 faulty
76 Sensor in DHW tank 5 faulty
77 Sensor in DHW tank 6 faulty
78 Sensor in DHW tank 7 faulty
79 Sensor in DHW tank 8 faulty
80 Bottom sensor in DHW tank 1 faulty
81 Bottom sensor in DHW tank 2 faulty
82 Bottom sensor in DHW tank 3 faulty
83 Bottom sensor in DHW tank 4 faulty
84 Bottom sensor in DHW tank 5 faulty

85 Bottom sensor in DHW tank 6 faulty
86 Bottom sensor in DHW tank 7 faulty
87 Bottom sensor in DHW tank 8 faulty
88 Top sensor in storage tank 1 faulty
89 Top sensor in storage tank 2 faulty
90 Top sensor in storage tank 3 faulty
91 Top sensor in storage tank 4 faulty
92 Middle sensor in storage tank 1 faulty
93 Middle sensor in storage tank 2 faulty
94 Middle sensor in storage tank 3 faulty
95 Middle sensor in storage tank 4 faulty
96 Bottom sensor in storage tank 1 faulty
97 Bottom sensor in storage tank 2 faulty
98 Bottom sensor in storage tank 3 faulty
99 Bottom sensor in storage tank 4 faulty
100 Sensor in follow-up boiler faulty
101 Sensor in collector faulty
102 Sensor in additional boiler faulty
103 Fill level cannot be correctly interpreted
104 Bypass flap could not be opened
105 Bypass flap could not be closed
106 Runtime for filling was exceeded
107 Delivery screw is blocked at the suction point
108 Bypass flap could neither be closed nor opened
109 Ignition attempt failed
110 ID fan motor protection switch failed
111 Stoker motor protection switch failed
112 Feed screw motor protection switch failed
113 Back-burn flap opens too quickly
114 Back-burn flap closes too quickly
115 No/both end positions of back-burn flap activated
116 Rotary valve motor protection switch tripped
117 Lambda probe defective
118 Flue gas temperature sensor defective
119 Combustion chamber temperature sensor defective
120 Light barrier in gravity shaft defective
121 Drop box cover open
122 Underpressure sensor cartridge defective
123 Grate does not open
124 Safety time expired because of fill level sensor in suction cyclone.
125 Motor protection delivery screw
126 Stoker error
127 Delivery screws error
128 DANGEROUS status possible
129 Wood chip module failed -> immediate shutdown
130 Suction module failed \n-> immediate shutdown
131 Load fuel as per instructions
132 Return sensor for network pump defective
133 Light barrier in gravity shaft of delivery screw defective(full)
134 Drop box cover of delivery screw open
135 Delivery screw motor protection switch tripped
136 Light barrier in gravity shaft of intermediate screw 1 defective(full)
137 Drop box cover of intermediate screw 1 open
138 Intermediate screw 1 motor protection switch tripped
139 Clean /check burner
140 Grate will not close

141 Back-burn flap will not close
142 Back-burn flap won't open
143 Rotary valve frequent overcurrent
144 Stoker screw frequent overcurrent
145 Feed screw frequent overcurrent
146 Control restart
147 Return feed sensor for feeder 1 faulty
148 Return feed sensor for feeder 2 faulty
149 Return feed sensor for feeder 3 faulty
150 Return feed sensor for feeder 4 faulty
151 Maximum feed after alteration re-calculated and limited
152 Light barrier in gravity shaft of intermediate screw 1 defective (empty)
153 Light barrier in gravity shaft of delivery screw defective (empty)
154 Slide valve blocked
155 Error in boiler and fuel selection
156 Self test error during preparation
157 Boiler air leak detected by feed
158 Boiler air leak detected by O2 monitoring
159 Sensor for circulation pump faulty
160 Sensor for solar heat exchanger secondary flow faulty
161 Sensor for solar collector return faulty
162 Lambda probe defective
163 Troubleshooting interrupted
164 Wärmequellen Fühler des Differenzregler defekt
165 Wärmesenken Fühler des Differenzregler defekt
166 Variante 3
167 Sondenumschaltung beim Befüllvorgang aufgrund Pelletsmangel
168 Vorratsbehälter leer
169 Aschebox voll
170 Rostantrieb hat Überstrom
171 Fühler 1 in der STB Hülse Fehlerhaft
172 Solarreferenz Fühler Fehlerhaft
173 Ascheschnecke blockiert
174 Stokermotor nicht angesteckt oder funktioniert nicht
175 Breitbandsonde nicht angesteckt oder Heizung der Sonde defekt
176 Sensorelement der Breitbandsonde Fehlerhaft oder Kurzschluss
177 Stokermotor nicht angesteckt oder funktioniert nicht
178 Förderschnecke nicht angesteckt oder funktioniert nicht

Aktual values - Input Register (FC 03)
Anlagen und Kesselzustand

Adress 34001 - 34002

Adresse	Name
34001	Plantstate
34002	Boilerstate

Analgenzustand

0	winter operation
1	Summer operation
2	Transition operation
3	Firewood operation
4	
5	Boiler off
6	Extra heating
7	Chimney sweep
8	Cleaning

Kesselzustand

0	FAULT
1	Boiler off
2	Heating up
3	Heating
4	Slumber
5	Off
6	Door open
7	Preparation
8	Pre-heating
9	Ignition
10	Shutdown wait
11	Shutdown wait 1
12	Shutdown feed 1
13	Shutdown wait 2
14	Shutdown feed 2
15	Cleaning
16	Wait 2h
17	Suction / Heating
18	Ignition fault
19	Standby
20	Close grate
21	Empty stoker
22	Pre-Heating
23	Suction
24	Close BBF
25	Open BBF
26	Tip grate
27	Warming-Up / Ignition
28	Empty feed
29	Stoker fill
30	Warming-Up Lambda Probe
31	FD fan run-on I
32	FD fan run-on II

33 Stopped
34 Additional Ignition
35 Ignition wait
36 TS: Close BBF
37 TS: Ventilate boiler
38 TS: Ignition
39 TS: min. feed
40 Close BBF
41 FAULT: HL/ES
42 FAULT: Tilting grate
43 FAULT: C.C.Overpressure
44 FAULT: Door Switch
45 FAULT: ID Fan
46 FAULT: Heating system
47 ERROR: STL/EO
48 ERROR: Tilting grate
49 ERROR: C.C. Overpressure
50 ERROR: Door Switch
51 ERROR: ID Fan
52 ERROR: Heating system
53 ERROR: Stoker
54 FAULT: Stoker
55 TS: Empty stoker
56 Purge
57 FAULT: wood chip
58 ERROR: Waste wood
59 Emerg. Oper.: Door open
60 Emerg. Oper.: Heating up
61 Emerg. Oper.: Heating
62 ERROR: STL/EO
63 ERROR: General
64 Emerg. Oper.: Shutdown
65 Self test active
66 Troubleshooting 20min
67 ERROR: Drop box
68 FAULT: Drop box
69 Cleaning possible
70