



Commissioning report / parameter list

Document no. 3064362

**Ventilation unit CRL
Version with DHW coil**



COMMISSIONING REPORT/PARAMETER LIST

CRL with pumped hot water - factory settings

1. Configuration

Language selection	German
System type	Vent./extr. air system
Fan	
Heating	No heating
Cooling	No cooling
Air dampers	No air dampers
HR	RHE
Control type	Vent. air control
Filter	No filter
Number FD	No FD available
External demand	None available
Remote control	None available
Humidifier - Appliance type	None available
Humidifier - Controltype	None available
Adiabatic cooling	No adiabatic cooling
Reheating	No reheater bank
BMS	No BMS available

2. Standard settings

Description	Unit	Range	Factory setting	Customer setting
Set temp value for manual mode	°C	14..60°C	21	
Fan, manual mode	-	On/Off St. 1-3	Off	
Ventilation air speed for manual mode	%	0..100	20	
Extract air speed for manual mode	%	0..100	20	
Vent. air fan pressure set value for manual mode	Pa	0..3000	250	
Extr. air fan pressure set value for manual mode	Pa	0..3000	250	
Vent. air flow rate set value for manual mode	m³/h	0..12000	100	
Extract air flow rate set value for manual mode	m³/h	0..12000	100	
Prop. fresh air for manual mode	%	0..100	60	
Vent. air speed for external demand Stage 3	%	0..100	100	
- Stage 2	%	0..100	60	
- Stage 1	%	0..100	30	
Extract air speed for external demand Stage 3	%	0..100	100	
- Stage 2	%	0..100	60	
- Stage 1	%	0..100	30	
Vent. air pressure for external demand Stage 3	Pa	0..3000	300	
'- Stage 2	Pa	0..3000	200	
'- Stage 1	Pa	0..3000	100	
Extr. air pressure for external demand Stage 3	Pa	0..3000	300	
- Stage 2	Pa	0..3000	200	
- Stage 1	Pa	0..3000	100	
Flow rate, vent. air for external demand Stage 3	m³/h	0..12000	2000	
- Stage 2	m³/h	0..12000	1500	
- Stage 1	m³/h	0..12000	1000	
Extr. air flow rate for external demand Stage 3	m³/h	0..12000	2000	
- Stage 2	m³/h	0..12000	1500	
- Stage 1	m³/h	0..12000	1000	
Automatic start via external demand	-	Yes/No	Yes	
Set value rel. humidity	%r.H.	10-95 %	50	
Set value absolute humidity	g/kg	2-30	8	
Operating mode	-	7-day prog./Man./BMS	7-day programm	
Backup mode, heating active	-	Yes/No	No	
Backup mode, cooling active	-	Yes/No	No	
Fresh air mode		Fixed prop. fresh air/Modulating reduction/Energy optimised	Fixed prop. fresh air	
Natural Cooling active	-	Yes/No	Yes	
Night ventilation active	-	Yes/No	No	
Ext. utilisation time	-	Yes/No	No	
Peak ventilation	-	Yes/No	No	
Air quality control active	-	Yes/No	No	
Hygrostat function active	-	Yes/No	No	
Const hygrostat function active	-	Yes/No	No	
Adiabatic cooling active	-	Yes/No	No	

3. Other...

Select language	German/English/French/Dutch/Russia	German	German
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4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Alarm management - Filter monitor				
Interval	Days	1..365	28	
Time	h	0:00.23:59	05:00:00	
Fan stage during filter test		1..3	2/3	
Fan speed during filter test	%	20..100	80	
Alarm delay filter monitor	s	0..99	20	
Alarm management - Frost protection				
Frost thermostat restart		automatic/ after acknowledgement	auto	
Frost thermostat number automatic restart		2..10	5	
<i>within</i>	min	20..180	30	
Frost prot. above vent. air temp.		Yes/No	No	
Limit	°C	0-10	6	
Runtime	min	1-99	5	
Frost prot. vent. air number automatic restart repeats		2..10	5	
<i>within</i>	min	20..180	60	
Alarm management - Air flow monitoring				
Alarm delay at the start (Elec heater bank)	s	0..600	180 (5)	
Alarm delay in operation (Elec heater bank)	s	0..600	30(5)	
Service - Hours run				
System limit	h	0..999000	0	
Fan limit	h	0..999000	0	
Heating pump limit	h	0..999000	0	
Cooling pump limit	h	0..999000	0	
Compressor 1 limit	h	0..999000	0	
Compressor 2 limit	h	0..999000	0	
Elec heater bank limit	h	0..999000	0	
Heat pump limit	h	0..999000	0	
Reheater bank limit	h	0..999000	0	
Adiabatic cooling limit	h	0..999000	0	
Service - Sensor adjustment				
Room temperature	K	-5..5	0	
Vent. air temperature	K	-5..5	0	
Extract air temp	K	-5..5	0	
Outside temperature	K	-5..5	0	
Exhaust air temp.	K	-5..5	0	
Rel. hum., vent. air	r.H.	-20..20	0	
Rel. humidity (room)	r.H.	-20..20	0	
Rel. hum., extract air	r.H.	-20..20	0	
Rel. hum., outside air	r.H.	-20..20	0	
Air quality CO2	ppm	-200..200	0	
Diff. pressure sensors Ventilation air	Pa	-100..100	0	
Diff. pressure sensors Extract air	Pa	-100..100	0	
Extract air temp after adiabatic cooling	K	-5..5	0	

4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Backup mode				
Heating - Enabling				
		Yes/No	No	
Backup temp.	°C	5..30	18	
Fan stage		1..3	1	
Fan speed	%	20..100	50	
Pressure	Pa	0..6000	250	
Flow rate	m³/h	0..120000	1000	
Cooling - Enabling				
		Yes/No	No	
Backup temp.	°C	10..40	28	
Fan stage		1..3	1	
Fan speed	%	20..100	50	
Pressure	Pa	0..6000	250	
Flow rate	m³/h	0..120000	1000	
Night ventilation				
Enabling		Yes/No	No	
Start value, room temperature	°C	5..50	22	
Room temp. differential	K	1..10	2	
Delta outside temp. / Room temp.	K	2..20	5	
Delta outside temp. / Room temp. / Differential	K	2..20	2	
Enable acc. to outside temperature	°C	10..20	15	
Fan speed	%	20..100	60	
Fan stage		1..3	2	
Fan Pressure	Pa	0..6000	250	
Fan Flow rate	m³/h	0..120000	1000	
Limits				
Set value limits maximum	°C	20..70	28	
Set value limits minimum	°C	14..20	16	
Ventilation air limit maximum temperature	°C	20..70	42	
Ventilation air limit minimum temperature	°C	14..20	16	
Ventilation fan min. speed	%	0..99	25	
Ventilation fan max. speed	%	0..100	100	
Extract fan min. speed	%	0..99	25	
Extract fan max. speed	%	0..100	100	
Heat generation				
Enable preheat program		Yes/No	Yes	
Preheat below outside temperature	°C	-20..15	10	
Preheat time, heater bank	min	1..30	2	
Min. fan speed when KGWO active	%	0..100	30%	
Min. fan stage when KGWO active		1..3	1	
Min damper position when KGWO active	%	0..100	35%	
Minimum runtime, heat source demand	min	0..20	6	

4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Pump control				
<i>Pump, DHW Operating mode</i>		Demand-dependent / above outside temperature / Constant operation	Demand- dependent	
<i>Pump, DHW limit, outside temperature</i>	°C	-20..15	2	
<i>Pump, DHW, run-on time</i>	min	0..60	2	
<i>Heating valve control with weather-comp. Pump operating mode</i>	%	0..100	0	
<i>Min. heating valve control during operation</i>	%	0..100	0	
<i>Pump, coldwater Operating mode</i>		Demand-dependent / Constant operation	Demand- dependent	
<i>Pump, coldwater, run-on time</i>	min	0..60	2	
<i>Pump reheater bank run-on time</i>	min	0..60	2	
<i>Cyclical pump start after hours</i>	Hour	2..99	24	
<i>Cyclical pump start</i>	s	0..99	5	
<i>Cyclical pump start</i>	h	0:00-23:59	5:00	
Air dampers				
<i>Start delay for fan</i>	s	0..180	120	
<i>Start time for recirc. mode</i>	min	0..180	0	
<i>Min. proportion fresh air</i>	%	0..100	10	
<i>Modulating reduction, Min. proportion fresh air with outside temp. standard fresh air proportion /Reduced fresh air proportion</i>	°C	10..30□(-20..30	0□(-10)	
<i>Energy optimised heating</i>	K	0..30	10	
<i>Energy optimised cooling</i>	K	0..30	10	
Cooling		0	0	
<i>Switching time for chiller demand Stage 2</i>	%	2..100	50	
<i>Minimum runtime, stage</i>	min	0..20	6	
<i>Direct evaporator - Times, stages Minimum ON</i>	s	0..999	420	
<i>Times, stages Minimum OFF</i>	s	0..999	420	
<i>Switch delay stages, same direct evaporator</i>	s	0..999	0	
<i>Switch delay stages, different direct evaporator</i>	s	0..999	60	
<i>Direct evaporator - Switching pts, cooling K1 ON</i>	K	-9,9..9,9	0,5	
<i>Direct evaporator - Switching pts, cooling K1 OFF</i>	K	-9,9..9,9	-0,5	
<i>Direct evaporator - Switching pts, cooling K2 ON</i>	K	-9,9..9,9	1,5	
<i>Direct evaporator - Switching pts, cooling K2 OFF</i>	K	-9,9..9,9	0,5	
<i>Direct evaporator - Compressor block outs. air, cooling K1 ON above</i>	°C	10..24	18	
<i>Compressor block outs. air, cooling K1 OFF below</i>	°C	2..20	8	
<i>Direct evaporator - Compressor block vent. air, enable</i>		Yes/No	Yes	
<i>Direct evaporator - Compressor Block vent. air, cooling K1-ON above</i>	°C	0..30	0	
<i>Compressor Block vent. air, cooling K1-OFF below</i>	°C	0..30	0	
<i>Direct evaporator - Compressor Block vent. air, cooling K2-ON above</i>	°C	0..30	0	
<i>Compressor Block vent. air, cooling K2-OFF below</i>	°C	0..30	0	
<i>Direct evaporator - Chiller integrated</i>		Yes/No	No	
<i>Direct evaporator - Fan min. stage</i>		1..3	3	
<i>Direct evaporator - Fan min. speed</i>	%	20..100	100	
<i>Direct evaporator - Chiller max. output</i>	%	20..100	100	
<i>Direct evaporator - Chiller max. stage</i>		1 - 2	Stage 2	
<i>Direct evaporator - Forced control of the fresh air damper 100%</i>	-	Yes/No	Yes	

4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Adiabatic cooling block via differential extract/outdoor air	K	0..10	2	
<i>Min. cooling differen. extract air</i>	K	0..10	3	
<i>Min. fresh air with adiabatic cooling</i>	%	0..100	100	
<i>Drying time humidifier</i>	min	0..120	60	
<i>Start delay cooling bank</i>	min	0..30	10	
<i>Enable draining</i>	-	Yes/No	No	
<i>Draining</i>	°C	0..20	6	
<i>Filling</i>	°C	0..30	20	
<i>Hygiene function - draining interval</i>	Days	1..365	90	
<i>Hygiene function - draining interval</i>	h	0:00..23:59	00:00	
<i>Alarm delay scaling</i>	s	0..600	60	
<i>High pressure limit, refrigerant circuit</i>	bar	-9,9...0	-2,0	
<i>Low pressure limit, refrigerant circuit</i>	bar	0...9,9	2,0	
<i>Max. speed for pressure control</i>	%	0...100	100%	
SP compensation				
<i>Summer</i>	K	0..4	0	
<i>Start at</i>	°C	2..42	24	
<i>End at</i>	°C	2..42	36	
<i>Winter</i>	K	0..4	0	
<i>Start at</i>	°C	-15..15	5	
<i>End at</i>	°C	-15..15	-15	
Temperature control				
<i>Control type</i>	Vent. air control			
<i>Set value deviation Offset heating</i>	K	0..20	0	
<i>Offset cooling</i>	K	0..20	2	
<i>Interlock between heating and cooling</i>	min	0..99	0	
<i>Enable acc. to outside temperature</i>			Yes/No	Yes
<i>Offset heating</i>	K	-20 .. 20	5	
<i>Offset cooling</i>	K	-20 .. 20	5	
<i>Temperature difference for natural cooling cooling</i>	K	1..20	2	
<i>Speed reduction Enable</i>			Yes/No	Yes
<i>Delay</i>	min	0..30	5	
Ext. utilisation time				
<i>Extension time</i>	min	5..720	30	
<i>Setback mode</i>	-	Yes/No	No	
<i>Outside temp limit for setback mode</i>	°C	-20,0..50,00	0	
Peak ventilation				
<i>Runtime</i>	min	5..300	20	
<i>Proportion fresh air</i>	%	20..100	100	
<i>Fan stage</i>			1..3	Stufe 3
<i>Fan speed</i>	%	20..100	100	
<i>Vent. air fan pressure</i>	Pa	0..6000	250	
<i>Extract air</i>	Pa	0..6000	250	
<i>Fan Flow rate Ventilation air</i>	m³/h	0-120000	1000	
<i>Extract air</i>	m³/h	0-120000	1000	
Ice guard				
<i>Exhaust air temperature limit</i>	°C	-10,0...10,00	3	
<i>Outside temperature limit</i>	°C	-20,0...10,00	-3	
<i>Enable air volumes imbalance</i>	-	Yes/No	No	
<i>Max air volumes imbalance</i>	%	0...-30	-30	
<i>Enable winter start HR</i>	-	Yes/No	No	
<i>Lead time winter start</i>	min	0...10	2	
<i>Enable defrost function</i>	-	Yes/No	No	
<i>Run-on time, defrost function</i>	min	0..60	20	
<i>Extract air fan speed in winter start/defrost function</i>	%	0,0..100,0	25	

4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Air quality				
Control range Start	V	0..9,9	4	
	ppm	0..2000	700	
End	V	0..9,9	8	
	ppm	0..2000	1000	
Max. speed	%	20..100	100	
Maximum stage		1..3	3	
Max. proportion of fresh air	%	0..100	100	
Automatic start for poor air quality	-	Yes/No	No	
Press/flow rate ctrl				
Diff. pressure sensors Number		1..2	2	
Range diff. pressure sensors	Pa	0..6000	1000	
Diff. extract fan	%	-50..50	0	
Ventilation fan k-factor		0...2000	0	
Fan type		1 - 2	1	
Extract fan k-factor		0...2000	0	
Fan type		1 - 2	1	
Humidity control				
Prop. fresh air for hygrostat function	%	0..100	100	
Fan stage for hygrostat function	-	1-3	3	
Fan speed for hygrostat function	Ventilation air	%	0..100	80
	Extract air	%	0..100	80
Fan pressure for hygrostat function	ventilation air	Pa	0..6000	250
	Extract air	Pa	0..6000	250
Flow rate for hygrostat function	vent. air	m³/h	0-120000	1000
	Extract air	m³/h	0-120000	1000
Const hygrostat funct.	Start	r.H.	0..100	60
	End	r.H.	0..100	80
Const hygrostat funct. max. fan speed	%	20..100	100	
Const hygrostat funct. max. stage	-	1..3	3	
Const hygrostat funct. maximal proportion fresh air	%	0..100	100	
Automatic start via hygrostat function	-	Yes/No	No	
Set value humidity (Ventilation air, extract air or room air)	%r.H.	10..95	50	
	g/kg	2..30	8	
Max. rh, vent. air	%r.H.	50..100	90	
Minimum control humidifier	%	0..100	35	
Minimum runtime humidifier	min	0..99	0/(10)	
Humidifier run-on time, drying	min	0..99	10/(2)	
Enable below outside temperature	-	Yes/No	No	
	°C	0..40	15	
Delay, temperature priority control	min	0..60	5/0	
Humidifier Start delay	min	0..99	5/0	
Reference temp for set humidity level		Actual/Set	Actual temperature	

4. Contractor menu

Description	Unit	Range	Factory setting	Customer setting
Other...				
New password	-	0000-9999	1234	
Key lock activ	-	Yes/No	No	
BMS-Protocol		none available/LON/BACnet/ Modbus/Ethernet/pCO Manager	Subject to order	
Transfer rate LON BACnet	-	1200.. 38400	4800 19200	
BMS-Address	-	0..200	0 / 1	
Remote control installed?	-	Yes/No	Variable	
BMK-F key lock		locked/enabled	enabled	
ON / OFF key		locked/enabled	enabled	
Manual / auto key		locked/enabled	enabled	
Speed key		locked/enabled	enabled	
Fresh air key		locked/enabled	enabled	
Ext. utilisation time key		locked/enabled	enabled	
Peak ventilation key		locked/enabled	enabled	
Increase/Reduce values key		locked/enabled	enabled	
Touch panel present	-	Yes/No	Subject to order	
Air quality sensor	-	Yes/No	Subject to order	
Input	-	0-10	8	
Type	V	0-10V	0-10V	
Version	-	VOC/CO2	Subject to order	
Diff. pressure sensors Ventilation air	-	Yes/No	Subject to order	
Input	-	0-10	7	
Range	Pa	0-6000	1000	
Diff. pressure sensors Extract air	-	Yes/No	Subject to order	
Input	-	0-10	6	
Range	Pa	0-6000	1000	
Room temperature	-	Yes/No	Subject to order	
Input	-	0-10	3	
Extract air temp	-	Yes/No	Subject to order	
Input	-	0-10	9	
Remote switch ON/OFF	-	Yes/No	Subject to order	
Input	-	0-18	6	
Hygrostat	-	Yes/No	Subject to order	
Input	-	0-18	10	
Reconfiguration controller	-	Yes/No	No	



5. Manufacturer level

In-/Outputs		
In-/Output	Allocation	
Digital inputs		
	ID	
	ID	
	ID	
	ID	
	ID	
	ID	
	ID	
	ID	
Analogue inputs		
	U	
	U	
	U	
	U	
	U	
Digital outputs		
	NO	
	NO	
	NO	
	NO	
	NO	
	NO	
Analogue outputs		
	Y	
	Y	
	Y	

5. Manufacturer level

Description	Unit	Range	Factory setting	Customer setting
System parameters				
Set value resolution temperature	°C	0,1 / 0,5	0,5	
Vent. air min. limit for contractors	°C	5..14	14	
Ctrl sensor, humidity	Vent. air / Room air / Extract air		-	
Stop delay fan /(El. htr bank/Direct evaporator)	s	0..980	0 / (120)	
Minimum runtime per fan stage	s	0..180	10	
Delay in switching to next highest fan stage	s	0..9	1	
Delay in switching to next lowest fan stage	s	0..99	10	
Pressure control P	Pa	0..20000	2000	
Pressure control I	s	0..1000	5	
Pressure control Refrigerant circuit P	bar	1..30	10	
Pressure control Refrigerant circuit I	s	1..120	30	
Speed reduction via supply air temperature P	K	0..99	30	
Speed reduction via supply air temperature I	s	0..999	120	
Heating parameters		0	0	
Cascade calculation P band	K	1..20	10	
Faktor		0..9,9	0,2	
Max. gradient	K	0..9,9	0,2	
Interval	s	10..999	120	
Set/act diff supp air preheater bank factor	%/K	0,1..9,9	0,5	
Max. gradient	K	0..9,9	0,1	
Interval	s	10..180	15	
Set/act diff supp air reheater bank factor	%/K	0,1..9,9	0,5	
Max. gradient	K	0..9,9	0,1	
Interval	s	1..180	15	
Heating valve minimum voltage	%	0..30	0	
Modulation	-	On/Off	On	
Interval	s	0..180	20	
Electric heater bank number of stages	-	1..5	-	
Elec heater bank st 1 Switching OFF	%	0..100	0	
Switching ON	%	0..100	20	
Elec heater bank st 2 Switching OFF	%	0..100	20	
Switching ON	%	0..100	40	
Elec heater bank st 3 Switching OFF	%	0..100	40	
Switching ON	%	0..100	60	
Elec heater bank st 4 Switching OFF	%	0..100	60	
Switching ON	%	0..100	80	
Elec heater bank st 5 Switching OFF	%	0..100	80	
Switching ON	%	0..100	100	

5. Manufacturer level

Description	Unit	Range	Factory setting	Customer setting
Cooling parameters				
<i>Cascade calculation P band</i>	K	1..20	5	
<i>Faktor</i>	%/K	0,1..9,9	0,2	
<i>Max. gradient</i>	K	0..9,9	0,2	
<i>Interval</i>	s	10..999	120	
<i>Vent air set/act diff. Factor</i>	%/K	0,1..9,9	0,5	
<i>Max. gradient</i>	K	0..9,9	0,1	
<i>Interval</i>	s	1..180	10	
<i>Cooling source minimum runtime</i>	min	0..99	6	
Natural Cooling				
<i>Vent air set/act diff. Factor</i>	%/K	0,1..9,9	0,5	
<i>Vent air set/act diff. max. gradient</i>	K	0..9,9	0,2	
<i>Interval</i>	s	1..180	10	
Heat recovery				
<i>Vent air set/act diff. Factor</i>	%/K	0,1..9,9	0,5	
<i>Max. gradient</i>	K	0..9,9	0,2	
<i>Interval</i>	s	10..180	10	
<i>Calculation imbalance factor</i>	K	0..9,9	5	
<i>Max. gradient</i>	K	0..9,9	0,2	
<i>Interval</i>	s	1..180	10	
<i>Calculation HR signal</i>	K	0..99	30	
<i>l</i>	s	0..999	120	
Humidification				
<i>Vent air set/act diff. Factor</i>	g/kg	0,1..9,9	2	
<i>Max. gradient</i>	g/kg	0..9,9	0,1	
<i>Interval</i>	s	10..180	30	
<i>Maximum temperature shortfall, vent. Air</i>	K	0,1..9,9	1	
<i>Stop delay</i>	s	0..600	120	
<i>Set value input</i>	absolute g/kg / relative %rh		-	
<i>Temperature filter for absolute humidity - Factor</i>	%	0..100	5	
<i>- Cycle</i>	s	0..99	5	
<i>Humidifier effect on heating valve - Factor</i>	%	0..200	0/30	
<i>Minimum change</i>	%	0..99	5	
<i>Cascade calculation from set/act room temp for vent air set value</i>	g/kg	0,1..9,9	0,3	
<i>-Factor</i>	g/kg	0,1..9,9	0,2	
<i>Max. gradient</i>	g/kg	0,1..9,9	0,2	
<i>Interval</i>	min	0..99	10	
Adiabatic cooling				
<i>Max. cooling diff.</i>	K	0,0..2,0	0,5	
<i>Max. gradient</i>	K	0,0..9,9	0,2	
<i>Interval</i>	min	1..60	15	
<i>Set humidity level</i>	%r.H.	60..100	85	





