Fantech Car Park Ventilation BACnet Integration

BACnet mapping to BMS Guide

JETVENT Impulse Ventilation for Car Parks

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Contents

General Description

The Fantech Smart Car Park Controller can be easily mapped to a Building Management System (BMS). This document has been designed as a guide to simplify the integration process.

The Fantech Car Park Jetvent Controller is based on the CAREL PC05 module. There are three options for connecting to a BMS via BACnet.

1. pCOWeb Module

The CAREL pCOWeb module (PC01000WB0) can be installed to allow the BMS to be connected to the controller via BACnet over TCP\IP. Refer to the CAREL document '030220471' and '050003238' for a detailed explanation of the installation and configuration process.

2. pCONet Module

The CAREL pCONet module (PC01000BA0) can be installed to allow the BMS to be connected to the controller via BACnet over RS485. Refer to the CAREL document '050000930'for more detail.

3. ModBus Module

The CAREL ModBus module (PC0S004850) can be installed to allow the BMS to be connected to the controller via BACNet via ModBus.

Output from BMS

- Remote alarm reset - if the current alarm condition has cleared then this signal will clear the alarm and strobe status at the controller. (True\ False)

Inputs to BMS

There are a number of items that can be monitored by the BMS.

Analogue Mode

- CO Sensor probes 1 to 22 raw sensor value (ppm)
- CO Sensor probes 1 to 22 normalised value (ppm)
- VSD analogue outputs to Jet Fans, Exhaust Fan and Supply Fan (%)
- Full speed override and Fire mode active signals (True\ False)
- Expansion board off-line 1 to 5, no communications detected (True\ False)
- Fan fault alarm 1 to 16, the fan is reporting a fault condition is present (True\ False)

Digital EC Mode

- CO Sensor probes 1 to 32 raw sensor value (ppm)
- CO Sensor probes 1 to 32 normalised value (ppm)
- Actual Fan Speed 1 to 16 (rpm)
- VSD analogue outputs to Exhaust Fan and Supply Fan (%)
- Full speed override and Fire mode active signals (True\ False)
- Fan off-line alarm 1 to 16, no communications detected (True\ False)
- Ebm Fan alarm 1 to 16, communications detected but a fault exists (True\ False)
- ZA Fan alarm 1 to 16, communications detected but a fault exists (True\ False)

Normalisation

Normalisation is used to scale difference sensor's signals so that they can be all of an even importance. An example of this is a CO and NO sensor, the CO sensor has an output between 0 and 200ppm and the NO sensor has an output between 0 and 20ppm. Hence, the NO sensor can be given a weighting of 1000%, hence its scaling will now be measured between 0 and 200ppm, now both sensors have an even importance.

BACnet Mapping

The BACnet mapping tables are included below.

	Purple Common to both Analogue and Digital Cark Park Solutions
	Orange is for a digital solution only
	Blue is for an analogue solution only
	Clear is common optional information

Analogue Variables

BMS Address	Description	Default	Min	Max	Read/Write	Variable name	Note
1	Probe 1 value	0	-3276.8	3276.7	R	Probe_Value_1	Fan 1 / Sensor 1 OR Probe B1
2	Probe 2 value	0	-3276.8	3276.7	R	Probe_Value_2	Fan 2 / Sensor 1 OR Probe B2
3	Probe 3 value	0	-3276.8	3276.7	R	Probe_Value_3	Fan 3 / Sensor 1 (ppm)
4	Probe 4 value	0	-3276.8	3276.7	R	Probe_Value_4	Fan 4 / Sensor 1
5	Probe 5 value	0	-3276.8	3276.7	R	Probe_Value_5	Fan 5 / Sensor 1
6	Probe 6 value	0	-3276.8	3276.7	R	Probe_Value_6	Fan 6 / Sensor 1
7	Probe 7 value	0	-3276.8	3276.7	R	Probe_Value_7	Fan 7 / Sensor 1
8	Probe 8 value	0	-3276.8	3276.7	R	Probe_Value_8	Fan 8 / Sensor 1
9	Probe 9 value	0	-3276.8	3276.7	R	Probe_Value_9	Fan 9 / Sensor 1
10	Probe 10 value	0	-3276.8	3276.7	R	Probe_Value_10	Fan 10 / Sensor 1
11	Probe 11 value	0	-3276.8	3276.7	R	Probe_Value_11	Fan 11 / Sensor 1
12	Probe 12 value	0	-3276.8	3276.7	R	Probe_Value_12	Fan 12 / Sensor 1
13	Probe 13 value	0	-3276.8	3276.7	R	Probe_Value_13	Fan 13 / Sensor 1
14	Probe 14 value	0	-3276.8	3276.7	R	Probe_Value_14	Fan 14 / Sensor 1

15	Probe 15 value	0	-3276.8	3276.7	R	Probe_Value_15	Fan 15 / Sensor 1
16	Probe 16 value	0	-3276.8	3276.7	R	Probe_Value_16	Fan 16 / Sensor 1
17	Expansion 1 Ain probe value channel 1	0	-999.9	999.9	R	Exp_1_AI_1	Expansion 1 / Sensor 1 (ppm)
18	Expansion 1 Ain probe value channel 2	0	-999.9	999.9	R	Exp_1_AI_2	Expansion 1 / Sensor 2
19	Expansion 1 Ain probe value channel 3	0	-999.9	999.9	R	Exp_1_AI_3	Expansion 1 / Sensor 3
20	Expansion 1 Ain probe value channel 4	0	-999.9	999.9	R	Exp_1_AI_4	Expansion 1 / Sensor 4
21	Expansion 2 Ain probe value channel 1	0	-999.9	999.9	R	Exp_2_AI_1	Expansion 2 / Sensor 1
22	Expansion 2 Ain probe value channel 2	0	-999.9	999.9	R	Exp_2_AI_2	Expansion 2 / Sensor 2
23	Expansion 2 Ain probe value channel 3	0	-999.9	999.9	R	Exp_2_AI_3	Expansion 2 / Sensor 3
24	Expansion 2 Ain probe value channel 4	0	-999.9	999.9	R	Exp_2_AI_4	Expansion 2 / Sensor 4
25	Expansion 3 Ain probe value channel 1	0	-999.9	999.9	R	Exp_3_AI_1	Expansion 3 / Sensor 1
26	Expansion 3 Ain probe value channel 2	0	-999.9	999.9	R	Exp_3_AI_2	Expansion 3 / Sensor 2
27	Expansion 3 Ain probe value channel 3	0	-999.9	999.9	R	Exp_3_AI_3	Expansion 3 / Sensor 3
28	Expansion 3 Ain probe value channel 4	0	-999.9	999.9	R	Exp_3_AI_4	Expansion 3 / Sensor 4
29	Expansion 4 Ain probe value channel 1	0	-999.9	999.9	R	Exp_4_AI_1	Expansion 4 / Sensor 1
30	Expansion 4 Ain probe value channel 2	0	-999.9	999.9	R	Exp_4_AI_2	Expansion 4 / Sensor 2
31	Expansion 4 Ain probe value channel 3	0	-999.9	999.9	R	Exp_4_AI_3	Expansion 4 / Sensor 3
32	Expansion 4 Ain probe value channel 4	0	-999.9	999.9	R	Exp_4_AI_4	Expansion 4 / Sensor 4
33	Expansion 5 Ain probe value channel 1	0	-999.9	999.9	R	Exp_5_AI_1	Expansion 5 / Sensor 1
34	Expansion 5 Ain probe value channel 2	0	-999.9	999.9	R	Exp_5_AI_2	Expansion 5 / Sensor 2
35	Expansion 5 Ain probe value channel 3	0	-999.9	999.9	R	Exp_5_AI_3	Expansion 5 / Sensor 3
36	Expansion 5 Ain probe value channel 4	0	-999.9	999.9	R	Exp_5_AI_4	Expansion 5 / Sensor 4
37	Probe 1_1 value	0	-3276.8	3276.7	R	Probe_Value_1_1	Fan 1 / Sensor 2 (ppm)
38	Probe 2_1 value	0	-3276.8	3276.7	R	Probe_Value_2_1	Fan 2 / Sensor 2
39	Probe 3_1 value	0	-3276.8	3276.7	R	Probe_Value_3_1	Fan 3 / Sensor 2

40	Probe 4_1 value	0	-3276.8	3276.7	R	Probe_Value_4_1	Fan 4 / Sensor 2
41	Probe 5_1 value	0	-3276.8	3276.7	R	Probe_Value_5_1	Fan 5 / Sensor 2
42	Probe 6_1 value	0	-3276.8	3276.7	R	Probe_Value_6_1	Fan 6 / Sensor 2
43	Probe 7_1 value	0	-3276.8	3276.7	R	Probe_Value_7_1	Fan 7 / Sensor 2
44	Probe 8_1 value	0	-3276.8	3276.7	R	Probe_Value_8_1	Fan 8 / Sensor 2
45	Probe 9_1 value	0	-3276.8	3276.7	R	Probe_Value_9_1	Fan 9 / Sensor 2
46	Probe 10_1 value	0	-3276.8	3276.7	R	Probe_Value_10_1	Fan 10 / Sensor 2
47	Probe 11_1 value	0	-3276.8	3276.7	R	Probe_Value_11_1	Fan 11 / Sensor 2
48	Probe 12_1 value	0	-3276.8	3276.7	R	Probe_Value_12_1	Fan 12 / Sensor 2
49	Probe 13_1 value	0	-3276.8	3276.7	R	Probe_Value_13_1	Fan 13 / Sensor 2
50	Probe 14_1 value	0	-3276.8	3276.7	R	Probe_Value_14_1	Fan 14 / Sensor 2
51	Probe 15_1 value	0	-3276.8	3276.7	R	Probe_Value_15_1	Fan 15 / Sensor 2
52	Probe 16_1 value	0	-3276.8	3276.7	R	Probe_Value_16_1	Fan 16 / Sensor 2

Integer Variables

BMS Address	Description	Default	Min	Max	Direction	Variable name	Note
1	normalised value	0	-32768	32767	R	Val_1	Fan 1 / Sensor 1 OR Probe B1
2	normalised value	0	-32768	32767	R	Val_2	Fan 2 / Sensor 1 OR Probe B2
3	normalised value	0	-32768	32767	R	Val_3	Fan 3 / Sensor 1 (ppm)
4	normalised value	0	-32768	32767	R	Val_4	Fan 4 / Sensor 1
5	normalised value	0	-32768	32767	R	Val_5	Fan 5 / Sensor 1
6	normalised value	0	-32768	32767	R	Val_6	Fan 6 / Sensor 1
7	normalised value	0	-32768	32767	R	Val_7	Fan 7 / Sensor 1
8	normalised value	0	-32768	32767	R	Val_8	Fan 8 / Sensor 1
9	normalised value	0	-32768	32767	R	Val_9	Fan 9 / Sensor 1
10	normalised value	0	-32768	32767	R	Val_10	Fan 10 / Sensor 1
11	normalised value	0	-32768	32767	R	Val_11	Fan 11 / Sensor 1
12	normalised value	0	-32768	32767	R	Val_12	Fan 12 / Sensor 1
13	normalised value	0	-32768	32767	R	Val_13	Fan 31 / Sensor 1
14	normalised value	0	-32768	32767	R	Val_14	Fan 14 / Sensor 1
15	normalised value	0	-32768	32767	R	Val_15	Fan 15 / Sensor 1
16	normalised value	0	-32768	32767	R	Val_16	Fan 16 / Sensor 1
17	normalised value	0	-32768	32767	R	Val_1_1	Expansion 1 / Sensor 1 (ppm)
18	normalised value	0	-32768	32767	R	Val_1_2	Expansion 1 / Sensor 2
19	normalised value	0	-32768	32767	R	Val_1_3	Expansion 1 / Sensor 3
20	normalised value	0	-32768	32767	R	Val_1_4	Expansion 1 / Sensor 4
21	normalised value	0	-32768	32767	R	Val_2_1	Expansion 2 / Sensor 1
22	normalised value	0	-32768	32767	R	Val_2_2	Expansion 2 / Sensor 2

23	normalised value	0	-32768	32767	R	Val_2_3	Expansion 2 / Sensor 3
24	normalised value	0	-32768	32767	R	Val_2_4	Expansion 2 / Sensor 4
25	normalised value	0	-32768	32767	R	Val_3_1	Expansion 3 / Sensor 1
26	normalised value	0	-32768	32767	R	Val_3_2	Expansion 3 / Sensor 2
27	normalised value	0	-32768	32767	R	Val_3_3	Expansion 3 / Sensor 3
28	normalised value	0	-32768	32767	R	Val_3_4	Expansion 3 / Sensor 4
29	normalised value	0	-32768	32767	R	Val_4_1	Expansion 4 / Sensor 1
30	normalised value	0	-32768	32767	R	Val_4_2	Expansion 4 / Sensor 2
31	normalised value	0	-32768	32767	R	Val_4_3	Expansion 4 / Sensor 3
32	normalised value	0	-32768	32767	R	Val_4_4	Expansion 4 / Sensor 4
33	normalised value	0	-32768	32767	R	Val_5_1	Expansion 5 / Sensor 1
34	normalised value	0	-32768	32767	R	Val_5_2	Expansion 5 / Sensor 2
35	normalised value	0	-32768	32767	R	Val_5_3	Expansion 5 / Sensor 3
36	normalised value	0	-32768	32767	R	Val_5_4	Expansion 5 / Sensor 4
37	normalised value	0	-32768	32767	R	FVal_1_1	Fan 1 / Sensor 2 (ppm)
38	normalised value	0	-32768	32767	R	FVal_2_1	Fan 2 / Sensor 2
39	normalised value	0	-32768	32767	R	FVal_3_1	Fan 3 / Sensor 2
40	normalised value	0	-32768	32767	R	FVal_4_1	Fan 4 / Sensor 2
41	normalised value	0	-32768	32767	R	FVal_5_1	Fan 5 / Sensor 2
42	normalised value	0	-32768	32767	R	FVal_6_1	Fan 6 / Sensor 2
43	normalised value	0	-32768	32767	R	FVal_7_1	Fan 7 / Sensor 2
44	normalised value	0	-32768	32767	R	FVal_8_1	Fan 8 / Sensor 2
45	normalised value	0	-32768	32767	R	FVal_9_1	Fan 9 / Sensor 2
46	normalised value	0	-32768	32767	R	FVal_10_1	Fan 10 / Sensor 2
47	normalised value	0	-32768	32767	R	FVal_11_1	Fan 11 / Sensor 2

48	normalised value	0	-32768	32767	R	FVal_12_1	Fan 12 / Sensor 2
49	normalised value	0	-32768	32767	R	FVal_13_1	Fan 13 / Sensor 2
50	normalised value	0	-32768	32767	R	FVal_14_1	Fan 14 / Sensor 2
51	normalised value	0	-32768	32767	R	FVal_15_1	Fan 15 / Sensor 2
52	normalised value	0	-32768	32767	R	FVal_16_1	Fan 16 / Sensor 2
60	Analog 1 output	0	0	1000	R	AO1_Out	Analog 1 output to Jet Fan VS Drive
61	Analog 2 output	0	0	1000	R	AO2_Out	Analog 2 output to Exhaust Fan VS Drive
62	Analog 3 output	0	0	1000	R	AO3_Out	Analog 3 output to Supply Fan VS Drive
63	Maximum value used for control and display	0	0	9999	R	display_max	Maximum value used for control and display
64	Minimum value used for control and display	0	0	9999	R	display_min	Minimum value used for control and display
65	Average value used for control and display	0	0	9999	R	display_ave	Average value used for control and display
70	Fan speed 1	0	-32768	32767	R	Actual_speed_1	EC Fan 1 Speed (rpm)
71	Fan speed 2	0	-32768	32767	R	Actual_speed_2	EC Fan 2 Speed
72	Fan speed 3	0	-32768	32767	R	Actual_speed_3	EC Fan 3 Speed
73	Fan speed 4	0	-32768	32767	R	Actual_speed_4	EC Fan 4 Speed
74	Fan speed 5	0	-32768	32767	R	Actual_speed_5	EC Fan 5 Speed

75	Fan speed 6	0	-32768	32767	R	Actual_speed_6	EC Fan 6 Speed
76	Fan speed 7	0	-32768	32767	R	Actual_speed_7	EC Fan 7 Speed
77	Fan speed 8	0	-32768	32767	R	Actual_speed_8	EC Fan 8 Speed
78	Fan speed 9	0	-32768	32767	R	Actual_speed_9	EC Fan 9 Speed
79	Fan speed 10	0	-32768	32767	R	Actual_speed_10	EC Fan 10 Speed
80	Fan speed 11	0	-32768	32767	R	Actual_speed_11	EC Fan 11 Speed
81	Fan speed 12	0	-32768	32767	R	Actual_speed_12	EC Fan 12 Speed
82	Fan speed 13	0	-32768	32767	R	Actual_speed_13	EC Fan 13 Speed
83	Fan speed 14	0	-32768	32767	R	Actual_speed_14	EC Fan 14 Speed
84	Fan speed 15	0	-32768	32767	R	Actual_speed_15	EC Fan 15 Speed
85	Fan speed 16	0	-32768	32767	R	Actual_speed_16	EC Fan 16 Speed
100		15018	0	32767	R	BMS_Sw_Ver	Info on S/Ware version
101		15018	0	32767	R	BMS_Sw_Date	Info on S/Ware date
102		0	0	9999	R	New_Manuf_Pass	info
103	Current year	0	0	99	R	CURRENT_YEAR	info
104	Current month	1	1	12	R	CURRENT_MONTH	info
105	Current day	1	1	31	R	CURRENT_DAY	info
106	Current hour	0	0	23	R	CURRENT_HOUR	info
107	Current minute	0	0	59	R	CURRENT_MINUTE	info

Digital Variables

BMS Address	Description	Default	Min	Max	Direction	Variable name	Note
1	Digital input 1	0	0	1	R	Din_1	Full Speed Override
2	Digital input 2	0	0	1	R	Din_2	Fire Mode Activation
3	Digital input 3	0	0	1	R	Din_3	Optional fault input for Fan 1
4	Digital input 4	0	0	1	R	Din_4	Optional fault input for Fan 2
5	Digital input 5	0	0	1	R	Din_5	Optional fault input for Fan 3
6	Digital input 6	0	0	1	R	Din_6	Optional fault input for Fan 4
7	Digital input 7	0	0	1	R	Din_7	Optional fault input for Fan 5
8	Digital input 8	0	0	1	R	Din_8	Optional fault input for Fan 6
9	Digital input 9	0	0	1	R	Din_9	Optional fault input for Fan 7
10	Digital input 10	0	0	1	R	Din_10	Optional fault input for Fan 8
11	Digital input 11	0	0	1	R	Din_11	Optional fault input for Fan 9
12	Digital input 12	0	0	1	R	Din_12	Optional fault input for Fan 10
13	Digital input 13	0	0	1	R	Din_13	Optional fault input for Fan 11
14	Digital input 14	0	0	1	R	Din_14	Optional fault input for Fan 12
15	Digital input 15	0	0	1	R	Din_15	Optional fault input for Fan 13
16	Digital input 16	0	0	1	R	Din_16	Optional fault input for Fan 14
17	Digital input 17	0	0	1	R	Din_17	Optional fault input for Fan 15
18	Digital input 18	0	0	1	R	Din_18	Optional fault input for Fan 16
19		0	0	1	R	REL1_Out	Relay 1 output for fan
20		0	0	1	R	REL2_Out	Relay 2 output for fan

21		0	0	1	R	REL3_Out	Relay 2 output for fan
22		0	0	1	R	AL_Alarm_rel	Alarm relay output
24	Buzzer / Siren relay output	0	0	1	R	Buzzer_out	Buzzer / Siren relay output
49	On-Off unit state (0: Off; 1: On)	0	0	1	R/W	Sys_On	not used
50	Supervisor (BMS) On-Off. Show the state OFFbyBMS in main mask (0: Off; 1: On)	0	0	1	R/W	Superv_OnOff	not used
51		1	0	1	R/W	RST_Alarms	Remote reset of Alarm
120	Alarm relay output	0	0	1	R	Alarm_out	Alarm present
121	Expansion board 1 Alarm offline of pCOe	0	0	1	R	Al_Exp_1_Offline	Expansion board 1 Alarm offline of pCOe
122	Expansion board 2 Alarm offline of pCOe	0	0	1	R	Al_Exp_2_Offline	Expansion board 2 Alarm offline of pCOe
123	Expansion board 3 Alarm offline of pCOe	0	0	1	R	Al_Exp_3_Offline	Expansion board 3 Alarm offline of pCOe
124	Expansion board 4 Alarm offline of pCOe	0	0	1	R	Al_Exp_4_Offline	Expansion board 4 Alarm offline of pCOe
125	Expansion board 5 Alarm offline of pCOe	0	0	1	R	Al_Exp_5_Offline	Expansion board 5 Alarm offline of pCOe
126	Offline_fan1	0	0	1	R	Al_Offline_fan1	Offline alarm_fan1
127	Offline_fan2	0	0	1	R	Al_Offline_fan2	Offline alarm_fan2
128	Offline_fan3	0	0	1	R	Al_Offline_fan3	Offline alarm_fan3
129	Offline_fan4	0	0	1	R	Al_Offline_fan4	Offline alarm_fan4
130	Offline_fan5	0	0	1	R	Al_Offline_fan5	Offline alarm_fan5

131	Offline_fan6	0	0	1	R	AI_Offline_fan6	Offline alarm_fan6
132	Offline_fan7	0	0	1	R	AI_Offline_fan7	Offline alarm_fan7
133	Offline_fan8	0	0	1	R	AI_Offline_fan8	Offline alarm_fan8
134	Offline_fan9	0	0	1	R	AI_Offline_fan9	Offline alarm_fan9
135	Offline_fan10	0	0	1	R	AI_Offline_fan10	Offline alarm_fan10
136	Offline_fan11	0	0	1	R	AI_Offline_fan11	Offline alarm_fan11
137	Offline_fan12	0	0	1	R	AI_Offline_fan12	Offline alarm_fan12
138	Offline_fan13	0	0	1	R	AI_Offline_fan13	Offline alarm_fan13
139	Offline_fan14	0	0	1	R	AI_Offline_fan14	Offline alarm_fan14
140	Offline_fan15	0	0	1	R	AI_Offline_fan15	Offline alarm_fan15
141	Offline_fan16	0	0	1	R	AI_Offline_fan16	Offline alarm_fan16
142	Alarm from Fan 1 (Type 1)	0	0	1	R	AL_MB_Fan_1	Alarm from Fan 1 (Type 1)
143	Alarm from Fan 2 (Type 1)	0	0	1	R	AL_MB_Fan_2	Alarm from Fan 2 (Type 1)
144	Alarm from Fan 3 (Type 1)	0	0	1	R	AL_MB_Fan_3	Alarm from Fan 3 (Type 1)
145	Alarm from Fan 4 (Type 1)	0	0	1	R	AL_MB_Fan_4	Alarm from Fan 4 (Type 1)
146	Alarm from Fan 5 (Type 1)	0	0	1	R	AL_MB_Fan_5	Alarm from Fan 5 (Type 1)
147	Alarm from Fan 6 (Type 1)	0	0	1	R	AL_MB_Fan_6	Alarm from Fan 6 (Type 1)
148	Alarm from Fan 7 (Type 1)	0	0	1	R	AL_MB_Fan_7	Alarm from Fan 7 (Type 1)
149	Alarm from Fan 8 (Type 1)	0	0	1	R	AL_MB_Fan_8	Alarm from Fan 8 (Type 1)
150	Alarm from Fan 9 (Type 1)	0	0	1	R	AL_MB_Fan_9	Alarm from Fan 9 (Type 1)
151	Alarm from Fan 10 (Type 1)	0	0	1	R	AL_MB_Fan_10	Alarm from Fan 10 (Type 1)
152	Alarm from Fan 11 (Type 1)	0	0	1	R	AL_MB_Fan_11	Alarm from Fan 11 (Type 1)
153	Alarm from Fan 12 (Type 1)	0	0	1	R	AL_MB_Fan_12	Alarm from Fan 12 (Type 1)
154	Alarm from Fan 13 (Type 1)	0	0	1	R	AL_MB_Fan_13	Alarm from Fan 13 (Type 1)
155	Alarm from Fan 14 (Type 1)	0	0	1	R	AL_MB_Fan_14	Alarm from Fan 14 (Type 1)

156	Alarm from Fan 15 (Type 1)	0	0	1	R	AL_MB_Fan_15	Alarm from Fan 15 (Type 1)
157	Alarm from Fan 16 (Type 1)	0	0	1	R	AL_MB_Fan_16	Alarm from Fan 16 (Type 1)
158	Alarm from Fan 1 (Type 2)	0	0	1	R	AL_MB_Fan_Z1	Alarm from Fan 1 (Type 2)
159	Alarm from Fan 2 (Type 2)	0	0	1	R	AL_MB_Fan_Z2	Alarm from Fan 2 (Type 2)
160	Alarm from Fan 3 (Type 2)	0	0	1	R	AL_MB_Fan_Z3	Alarm from Fan 3 (Type 2)
161	Alarm from Fan 4 (Type 2)	0	0	1	R	AL_MB_Fan_Z4	Alarm from Fan 4 (Type 2)
162	Alarm from Fan 5 (Type 2)	0	0	1	R	AL_MB_Fan_Z5	Alarm from Fan 5 (Type 2)
163	Alarm from Fan 6 (Type 2)	0	0	1	R	AL_MB_Fan_Z6	Alarm from Fan 6 (Type 2)
164	Alarm from Fan 7 (Type 2)	0	0	1	R	AL_MB_Fan_Z7	Alarm from Fan 7 (Type 2)
165	Alarm from Fan 8 (Type 2)	0	0	1	R	AL_MB_Fan_Z8	Alarm from Fan 8 (Type 2)
166	Alarm from Fan 9 (Type 2)	0	0	1	R	AL_MB_Fan_Z9	Alarm from Fan 9 (Type 2)
167	Alarm from Fan 10 (Type 2)	0	0	1	R	AL_MB_Fan_Z10	Alarm from Fan 10 (Type 2)
168	Alarm from Fan 11 (Type 2)	0	0	1	R	AL_MB_Fan_Z11	Alarm from Fan 11 (Type 2)
169	Alarm from Fan 12 (Type 2)	0	0	1	R	AL_MB_Fan_Z12	Alarm from Fan 12 (Type 2)
170	Alarm from Fan 13 (Type 2)	0	0	1	R	AL_MB_Fan_Z13	Alarm from Fan 13 (Type 2)
171	Alarm from Fan 14 (Type 2)	0	0	1	R	AL_MB_Fan_Z14	Alarm from Fan 14 (Type 2)
172	Alarm from Fan 15 (Type 2)	0	0	1	R	AL_MB_Fan_Z15	Alarm from Fan 15 (Type 2)
173	Alarm from Fan 16 (Type 2)	0	0	1	R	AL_MB_Fan_Z16	Alarm from Fan 16 (Type 2)