

LEONARDO EVOLUTION: DIGITAL VARIABLES

variable address	description	variable type
0	Not used	...
1	System On (Fan)	R
2	Compressor 1	R
3	Compressor 2	R
4	Compressor 3	R
5	Compressor 4	R
6	El. Heater 1	R
7	El. Heater 2	R
8	Not Used	R
9	Hot gas ON	R
10	Dehumidification	R
11	Humidification	R
12	Emergency Working	R
13	Not used	...
14	Not used	...
15	Not used	...
16	Not used	...
17	Not used	...
18	Not used	...
19	Not used	...
20	Wrong Password Alarm	R
21	High Room Temperature Alarm	R
22	Low Room Temperature Alarm	R
23	High Room Humidity Alarm	R
24	Low Room Humidity Alarm	R
25	Room Temp. And Humidity Limits by External Sensors	R
26	Clogged Filter Alarm	R
27	Flooding Alarm	R
28	Loss of Air Flow Alarm	R
29	Heater Overheating Alarm	R
30	Circuit 1 High Pressure Alarm	R
31	Circuit 2 High Pressure Alarm	R
32	Circuit 1 Low Pressure Alarm	R
33	Circuit 2 Low Pressure Alarm	R
34	Circuit 1 Electronic Valve Failure	R
35	Circuit 2 Electronic Valve Failure	R
36	Wrong Phase Sequence Alarm	R
37	Smoke-Fire Alarm	R
38	Interrupted LAN Alarm	R
39	Humidifier: High Current Alarm	R

40	Humidifier: Low Current Alarm	R
41	Humidifier: Water Loss Alarm	R
42	CW Temperature too High for Dehumidification	R
43	CW Valve Failure or Water Flow too Low	R
44	Loss of Water Flow Alarm	R
45	High Chilled Water Temperature Alarm	R
46	Room Air Sensor Failed/Disconnected	R
47	Hot Water Temp. Sensor Failed/Disconnected	R
48	Chilled Water Temp. Sensor Failed/Disconnected	R
49	Outdoor Temperature Sensor Failed/Disconnected	R
50	Delivery Air Temp. Sensor Failed/Disconnected	R
51	Room Humidity Sensor Failed/Disconnected	R
52	Chilled Water Outlet Temp.Sensor Failed/Disconnected	R
53	Compressor 1: hour counter threshold Alarm	R
54	Compressor 2: hour counter threshold Alarm	R
55	Compressor 3: hour counter threshold Alarm	R
56	Compressor 4: hour counter threshold Alarm	R
57	Air filter: hour counter threshold Alarm	R
58	Heater 1: hour counter threshold Alarm	R
59	Heater 2: hour counter threshold Alarm	R
60	Humidifier: hour counter threshold Alarm	R
61	Air conditioning unit: hour counter threshold Alarm	R
62	Alarm by Digital Input 2	R
63	Alarm by Digital Input 4	R
64	Alarm by Digital Input 6	R
65	Humidifier General Alarm	R
66	Unit on Alarm	R
67	Unit on Rotation Alarm	R
68	Unit on Alarm Type A	R
69	Unit on Alarm Type B	R
70	Unit on Alarm Type C	R
71	DX/CW Switch on TC Units	R/W
72	Summer/Winter Switch	R/W
73	Not used	...
74	Not used	...
75	Unit ON/OFF Switch	R/W
76	Buzzer and Alarm Unit Reset	R/W
77	Filter Run Hours Reset	R/W
78	Compressor 1 Run Hours Reset	R/W
79	Compressor 2 Run Hours Reset	R/W
80	Compressor 3 Run Hours Reset	R/W
81	Compressor 4 Run Hours Reset	R/W

82	Compressor 1 Starting Reset	R/W
83	Compressor 2 Starting Reset	R/W
84	Compressor 3 Starting Reset	R/W
85	Compressor 4 Starting Reset	R/W
86	Heater 1 Run Hours Reset	R/W
87	Heater 2 Run Hours Reset	R/W
88	Heater 1 Starting Reset	R/W
89	Heater 2 Starting Reset	R/W
90	Humidifier Run Hours Reset	R/W
91	Humidifier Starting Reset	R/W
92	Unit Run Hours Reset	R/W
93	Not used	...
94	Not used	...
95	Setback Mode (Sleep Mode)	R/W
96	Sleep Mode Test	R/W
97	Local/Mean Usage of Values	R/W
98	No. of Stand-by Units	R
99	Not used	...
100	Unit 2 on Rotation Alarm	R
101	Unit 3 on Rotation Alarm	R
102	Unit 4 on Rotation Alarm	R
103	Unit 5 on Rotation Alarm	R
104	Unit 6 on Rotation Alarm	R
105	Unit 7 on Rotation Alarm	R
106	Unit 8 on Rotation Alarm	R
107	Unit 9 on Rotation Alarm	R
108	Unit 10 on Rotation Alarm	R
109	AFPS: Air Pressure Sensor Failed/Disconnected	R
110	AFPS: Low Air Pressure Alarm	R
111	Expansion Board Offline	R
112	EEPROM Failure	R
113	Compensation Enabled (with delivery temp. regulation)	R/W
114	High Delivery Temperature Alarm	R
115	Humidifier: High Conductivity Alarm	R
116	Humidifier: Low Production	R
117	Humidifier: Drain Malfunction (lock)	R
118	Humidifier: Bottle Full Of Water Alarm (lock)	R
119	Humidifier: Mandatary Maintenance (lock)	R

LEONARDO EVOLUTION: ANALOG VARIABLES

(all values x 10)

variable address	description	m.u.	variable type
0	Not used	-	-
1	Room Temperature	°C	R
2	Outdoor Temperature	°C	R
3	Delivery Air Temperature	°C	R
4	Chilled Water Temperature	°C	R
5	Hot Water Temperature	°C	R
6	Room Relative Humidity	rH%	R
7	Outlet Chilled Water Temperature	°C	R
8	Circuit 1 Evaporating Pressure	bar	R
9	Circuit 2 Evaporating Pressure	bar	R
10	Circuit 1 Suction Temperature	°C	R
11	Circuit 2 Suction Temperature	°C	R
12	Circuit 1 Evaporating Temperature	°C	R
13	Circuit 2 Evaporating Temperature	°C	R
14	Circuit 1 Superheat	°C	R
15	Circuit 2 Superheat	°C	R
16	Cold Water Valve Ramp	%	R/W
17	Hot Water Valve Ramp	%	R/W
18	Evaporating Fan Speed	%	R/W
19	Not_used	-	-
20	Cooling Setpoint	°C	R/W
21	Cooling Sensitivity	°C	R/W
22	Second Cooling Setpoint	°C	R/W
23	Heating Setpoint	°C	R/W
24	Second Heating setpoint	°C	R/W
25	Heating Sensitivity	°C	R/W
26	High Room Temperature Alarm Threshold(1)	°C	R/W
27	Low Room Temperature Alarm Threshold(1)	°C	R/W
28	Setback Mode: Cooling Setpoint	°C	R/W
29	Setback Mode: Heating Setpoint	°C	R/W
30	CW Setpoint to Start Dehumidification	°C	R/W
31	CW High Temperature Alarm Threshold	°C	R/W
32	CW Setpoint to start CW Operating Mode (Only TC Units)	°C	R/W
33	Radcooler Setpoint in Energy Saving Mode	°C	R/W
34	Radcooler Setpoint in DX Mode	°C	R/W
35	Delivery Temperature Low Limit Setpoint(1)	°C	R/W
36	Delta Temperature for Automatic Mean/Local Changeover	°C	R/W
37	Serial Transmission Offset		R/W

38	Not used	-	-
39	Not used	-	-
40	Not used	-	-
41	Not used	-	-
42	Not used	-	-
43	Not used	-	-
44	Not used	-	-
45	Not used	-	-
46	Not used	-	-
47	Not used	-	-
48	Not used	-	-
49	Not used	-	-
50	LAN Unit 2 Room Temperature	°C	R
51	LAN Unit 3 Room Temperature	°C	R
52	LAN Unit 4 Room Temperature	°C	R
53	LAN Unit 5 Room Temperature	°C	R
54	LAN Unit 6 Room Temperature	°C	R
55	LAN Unit 7 Room Temperature	°C	R
56	LAN Unit 8 Room Temperature	°C	R
57	LAN Unit 9 Room Temperature	°C	R
58	LAN Unit 10 Room Temperature	°C	R
59	Not used		-
60	LAN Unit 2 Room Humidity	rH%	R
61	LAN Unit 3 Room Humidity	rH%	R
62	LAN Unit 4 Room Humidity	rH%	R
63	LAN Unit 5 Room Humidity	rH%	R
64	LAN Unit 6 Room Humidity	rH%	R
65	LAN Unit 7 Room Humidity	rH%	R
66	LAN Unit 8 Room Humidity	rH%	R
67	LAN Unit 9 Room Humidity	rH%	R
68	LAN Unit 10 Room Humidity	rH%	R
69	AFPS: Air Pressure	Pa	R
70	AFPS: Setpoint	Pa	R/W
71	AFPS: Dead Band	Pa	R/W
72	AFPS: Regulation Band	Pa	R/W
73	AFPS: Alarm Treshold	Pa	R/W
74	Compensation: Room Temperature (T1) (With Delivery Temp. Regulation)	°C	R/W
75	Compensation: Setpoint 2 (SP2) (With Delivery Temp. Regulation)	°C	R/W
76	Compensation: Room Temperature (T2) (With Delivery Temp. Regulation)	°C	R/W

N.B.: all the analog variables are expressed in °C/10 except for those indicated by (1) these one are the expressed in °C.

LEONARDO EVOLUTION: INTEGER VARIABLES

variable address	description	m.u.	variable type
0	Not Used	-	-
1	Air Filter Run Hours	h	R
2	Unit Run Hours	h	R
3	Compressor 1 Run Hours	h	R
4	Compressor 2 Run Hours	h	R
5	Compressor 3 Run Hours	h	R
6	Compressor 4 Run Hours	h	R
7	Heater 1 Run Hours	h	R
8	Heater 2 Run Hours	h	R
9	Humidifier Run Hours	h	R
10	Not used	-	-
11	Not used	-	-
12	Dehumidification Prop.Band	rH%	R/W
13	Humidification Prop.Band	rH%	R/W
14	High Humidity Alarm Threshold	rH%	R/W
15	Low Humidity Alarm Threshold	rH%	R/W
16	Dehumidification Setpoint	rH%	R/W
17	Setback Mode: Dehumidification Setpoint	rH%	R/W
18	Humidification Setpoint	rH%	R/W
19	Setback Mode: Humidification Setpoint	rH%	R/W
20	Restart Delay	sec	R/W
21	Regulation Start Transitory	sec	R/W
22	Low Pressure Delay	sec	R/W
23	Temp./Humid.Limits Alarm Delay	min	R/W
24	Anti-Hunting Constant	min	R/W
25	Stand-by Cycle Base Time	h	R/W
26	Not Used	-	-
27	Number of LAN Units	n	R/W
28	Fan: Cicle Time (Sleep mode)	min	R/W
29	Circuit 1 Electronic Valve Position	step	R
30	Circuit 2 Electronic Valve Position	step	R
31	AFPS: Integral time	s	R/W
32	AFPS: Derivative Time	s	R/W
33	AFPS: Fan Min. Speed	%	R/W
34	AFPS: Fan Max Speed	%	R/W
35	AFPS: Alarm Delay	s	R/W
36	High Delivery Temp. Alarm Threshold	°C	R/W