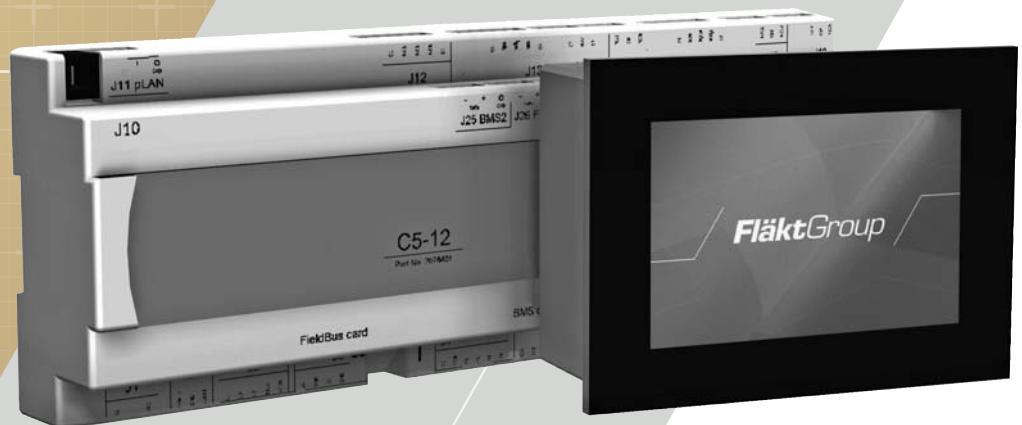


FläktGroup

C5-12

OPERATION MANUAL
SUPERVISORY VARIABLE LIST



C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Analog	1	Control Temperature	R	-99.9	99.9	°C	
Analog	2	Control Humidity	R	0	100	%RH	
Analog	3	Return Air Temperature	R	-99.9	99.9	°C	
Analog	4	Return Air Humidity	R	0	100	%RH	
Analog	5	Cooling demand	R	0	100	%	
Analog	6	Heating demand	R	0	100	%	
Analog	7	Humidity demand	R	0	100	%	
Analog	8	Dehum demand	R	0	100	%	
Analog	9	Freecooling Demand	R	0	100	%	
Analog	10	Special Cooling Demand	R	0	100	%	
Analog	11	Supply Air Temperature	R	-99.9	99.9	°C	
Analog	12	Supply Air Humidity	R	0	100	%RH	
Analog	13	Water temperature inlet	R	-99.9	99.9	°C	
Analog	14	Liquid/Water outlet temperature outlet	R	-99.9	99.9	°C	
Analog	15	Discharge Pressure	R	-99.9	99.9	BAR	
Analog	16	Discharge temperature	R	-99.9	99.9	°C	
Analog	17	Suction pressure	R	-99.9	99.9	BAR	
Analog	18	Suction temperature	R	-99.9	99.9	°C	
Analog	19	Suction pressure (Danfoss - 2nd circuit)	R	-99.9	99.9	BAR	
Analog	20	Suction temperature (Danfoss - 2nd circuit)	R	-99.9	99.9	°C	
Analog	21	AP5 Pressure Transducer	R	-99.9	99.9	PSI	
Analog	22	Ambient Temperature	R	-99.9	99.9	°C	
Analog	23	Temperature Set Point	R/W	-99.9	99.9	°C	
Analog	24	Humidity Set Point	R/W	0	100	%RH	
Analog	25	Temperature Alarm Band	R/W	-99.9	99.9	°C	
Analog	26	Humidity Alarm Band	R/W	0	100	%RH	
Analog	27	Cooling Dead Zone	R/W	-99.9	99.9	°C	
Analog	28	Cooling Proportional Band	R/W	-99.9	99.9	°C	
Analog	29	Heating Dead Zone	R/W	-99.9	99.9	°C	
Analog	30	Heating Proportional Band	R/W	-99.9	99.9	°C	
Analog	31	Dehum Dead Zone	R/W	-99.9	99.9	%RH	
Analog	32	Dehum Proportional Band	R/W	-99.9	99.9	%RH	
Analog	33	Humidity Dead Zone	R/W	-99.9	99.9	%RH	
Analog	34	Humidity Proportional Band	R/W	0	100	%RH	
Analog	35	CW Feedback valve	R	0	100	%	
Analog	36	Superheat valve A	R	-99.9	99.9	%K	
Analog	37	Superheat valve B	R	-99.9	99.9	%K	
Analog	38	Compressor 1 speed	R	0	100	rps	
Analog	39	Compressor 2 speed	R	0	100	rps	
Analog	40	EEV valve A position	R	-99.9	99.9	%	
Analog	41	EEV valve B position	R	-99.9	99.9	%	
Analog	42	Voltage L1	R	0	999.9	V	
Analog	43	Voltage L2	R	0	999.9	V	
Analog	44	Voltage L3	R	0	999.9	V	
Analog	45	Current L1	R	0	999.9	A	

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Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Analog	46	Current L2	R	0	999.9	A	
Analog	47	Current L3	R	0	999.9	A	
Analog	48	Active Power L1	R	0	999.9	kW	
Analog	49	Active Power L2	R	0	999.9	kW	
Analog	50	Active Power L3	R	0	999.9	kW	
Analog	51	Reactive Power L1	R	0	999.9	kVAr	
Analog	52	Reactive Power L2	R	0	999.9	kVAr	
Analog	53	Reactive Power L3	R	0	999.9	kVAr	
Analog	54	Power Factor	R	-9.9	9.9		
Analog	55	Active Energy (high part)	R	0	999.9	kWh	
Analog	56	Active Energy (low part)	R	0	999.9	kWh	
Analog	57	Apparent Energy (high part)	R	0	999.9	kVArh	
Analog	58	Apparent Energy (low part)	R	0	999.9	kVArh	
Analog	59	Fan request	R	0	100	%	
Analog	60	Cooling request	R	0	100	%	
Analog	61	DCRA/DDRA request	R	0	100	%	
Analog	62	Ambicool/Combicool request	R	0	100	%	
Analog	68	Condensing temperature	R	-99.9	99.9	BAR	
Analog	69	Discharge Subcooling	R	-99.9	99.9		
Analog	70	Discharge superheat	R	-99.9	99.9		
Analog	71	Cooling PLC valve minimum closing	R/W	0	100	%	
Analog	73	LECU 01 Damper Demand	R	0	100	%	
Analog	74	LECU 01 Room Temperature	R	-99.9	99.9	°C	
Analog	75	LECU 01 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	76	LECU 01 Underfloor Temperature	R	-99.9	99.9	°C	
Analog	77	LECU 02 Damper Demand	R	0	100	%	
Analog	78	LECU 02 Room Temperature	R	-99.9	99.9	°C	
Analog	79	LECU 02 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	80	LECU 02 Underfloor Temperature	R	-99.9	99.9	°C	
Analog	81	LECU 03 Damper Demand	R	0	100	%	
Analog	82	LECU 03 Room Temperature	R	-99.9	99.9	°C	
Analog	83	LECU 03 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	84	LECU 03 Underfloor Temperature	R	-99.9	99.9	°C	
Analog	85	LECU 04 Damper Demand	R	0	100	%	
Analog	86	LECU 04 Room Temperature	R	-99.9	99.9	°C	
Analog	87	LECU 04 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	88	LECU 04 Underfloor Temperature	R	-99.9	99.9	°C	
Analog	89	LECU 05 Damper Demand	R	0	100	%	
Analog	90	LECU 05 Room Temperature	R	-99.9	99.9	°C	
Analog	91	LECU 05 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	92	LECU 05 Underfloor Temperature	R	-99.9	99.9	°C	
Analog	93	LECU 06 Damper Demand	R	0	100	%	
Analog	94	LECU 06 Room Temperature	R	-99.9	99.9	°C	
Analog	95	LECU 06 Temperature Setpoint	R/W	-99.9	99.9	°C	
Analog	96	LECU 06 Underfloor Temperature	R	-99.9	99.9	°C	

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Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Analog	97	LECU 07 Damper Demand	R	0	100	%	
Analog	98	LECU 07 Room Temperature	R	-99.9	99.9	°C	
Analog	99	LECU 07 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	100	LECU 07 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	101	LECU 08 Damper Demand	R	-327.7	327.7	%	
Analog	102	LECU 08 Room Temperature	R	-327.7	327.7	°C	
Analog	103	LECU 08 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	104	LECU 08 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	105	LECU 09 Damper Demand	R	-327.7	327.7	%	
Analog	106	LECU 09 Room Temperature	R	-327.7	327.7	°C	
Analog	107	LECU 09 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	108	LECU 09 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	109	LECU 10 Damper Demand	R	-327.7	327.7	%	
Analog	110	LECU 10 Room Temperature	R	-327.7	327.7	°C	
Analog	111	LECU 10 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	112	LECU 10 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	113	LECU 11 Damper Demand	R	-327.7	327.7	%	
Analog	114	LECU 11 Room Temperature	R	-327.7	327.7	°C	
Analog	115	LECU 11 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	116	LECU 11 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	117	LECU 12 Damper Demand	R	-327.7	327.7	%	
Analog	118	LECU 12 Room Temperature	R	-327.7	327.7	°C	
Analog	119	LECU 12 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	120	LECU 12 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	121	LECU 13 Damper Demand	R	-327.7	327.7	%	
Analog	122	LECU 13 Room Temperature	R	-327.7	327.7	°C	
Analog	123	LECU 13 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	124	LECU 13 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	125	LECU 14 Damper Demand	R	-327.7	327.7	%	
Analog	126	LECU 14 Room Temperature	R	-327.7	327.7	°C	
Analog	127	LECU 14 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	128	LECU 14 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	129	LECU 15 Damper Demand	R	-327.7	327.7	%	
Analog	130	LECU 15 Room Temperature	R	-327.7	327.7	°C	
Analog	131	LECU 15 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	132	LECU 15 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	133	LECU 16 Damper Demand	R	-327.7	327.7	%	
Analog	134	LECU 16 Room Temperature	R	-327.7	327.7	°C	
Analog	135	LECU 16 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	136	LECU 16 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	137	LECU 17 Damper Demand	R	-327.7	327.7	%	
Analog	138	LECU 17 Room Temperature	R	-327.7	327.7	°C	
Analog	139	LECU 17 Temperature Setpoint	R/W	0	3276.7	°C	
Analog	140	LECU 17 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	141	LECU 18 Damper Demand	R	-327.7	327.7	%	

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Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Analog	142	LECU 18 Room Temperature	R	-327,7	327,7	°C	
Analog	143	LECU 18 Temperature Setpoint	R/W	0	327,7	°C	
Analog	144	LECU 18 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	145	LECU 19 Damper Demand	R	-327,7	327,7	%	
Analog	146	LECU 19 Room Temperature	R	-327,7	327,7	°C	
Analog	147	LECU 19 Temperature Setpoint	R/W	0	327,7	°C	
Analog	148	LECU 19 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	149	LECU 20 Damper Demand	R	-327,7	327,7	%	
Analog	150	LECU 20 Room Temperature	R	-327,7	327,7	°C	
Analog	151	LECU 20 Temperature Setpoint	R/W	0	327,7	°C	
Analog	152	LECU 20 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	153	Temperature by BMS	R/W	-327,6,8	327,6,7	°C	
Analog	154	Fan speed by BMS	R/W	0	999,9		
Analog	155	Freecooling Demand	R	0	327,7	%	
Analog	156	LECU Temperature Set-Point (Network Default)	R/W	15	35	°C	
Analog	161	LECU 21 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	162	LECU 22 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	163	LECU 23 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	164	LECU 24 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	165	LECU 21 Room Temperature	R	-327,7	327,7	°C	
Analog	166	LECU 21 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	167	LECU 21 Damper Demand	R	-327,7	327,7	%	
Analog	168	LECU 22 Room Temperature	R	-327,7	327,7	°C	
Analog	169	LECU 22 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	170	LECU 22 Damper Demand	R	-327,7	327,7	%	
Analog	171	LECU 23 Room Temperature	R	-327,7	327,7	°C	
Analog	172	LECU 23 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	173	LECU 23 Damper Demand	R	-327,7	327,7	%	
Analog	174	LECU 24 Room Temperature	R	-327,7	327,7	°C	
Analog	175	LECU 24 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	176	LECU 24 Damper Demand	R	-327,7	327,7	%	
Analog	177	LECU 25 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	178	LECU 26 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	179	LECU 25 Room Temperature	R	-327,7	327,7	°C	
Analog	180	LECU 25 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	181	LECU 25 Damper Demand	R	-327,7	327,7	%	
Analog	182	LECU 26 Room Temperature	R	-327,7	327,7	°C	
Analog	183	LECU 26 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	184	LECU 26 Damper Demand	R	-327,7	327,7	%	
Analog	185	LECU 27 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	186	LECU 27 Room Temperature	R	-327,7	327,7	°C	
Analog	187	LECU 27 Underfloor Temperature	R	-327,7	327,7	°C	
Analog	188	LECU 27 Damper Demand	R	-327,7	327,7	%	
Analog	189	LECU 28 Temperature Setpoint	R/W	0	327,6,7	°C	
Analog	190	LECU 28 Room Temperature	R	-327,7	327,7	°C	

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Analog	191	LECU 28 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	192	LECU 28 Dampfer Demand	R	-327.7	327.7	%	
Analog	193	LECU 29 Temperature Setpoint	R/W	0	327.7	°C	
Analog	194	LECU 29 Room Temperature	R	-327.7	327.7	°C	
Analog	195	LECU 29 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	196	LECU 29 Dampfer Demand	R	-327.7	327.7	%	
Analog	197	LECU 30 Temperature Setpoint	R/W	0	327.7	°C	
Analog	198	LECU 30 Room Temperature	R	-327.7	327.7	°C	
Analog	199	LECU 30 Underfloor Temperature	R	-327.7	327.7	°C	
Analog	200	LECU 30 Dampfer Demand	R	-327.7	327.7	%	
Analog	201	CW Exercising minimum threshold to enable exercising	R/W	0	100	%	
Analog	1050	CW Exercising minimum threshold to cancel scheduled exercise	R/W	0	100	%	
Digital	1	BMS Unit On/Off	R/W	0	1		
Digital	2	Alarm Reset By BMS	R/W	0	1		
Digital	3	Return air temperature sensor fail alarm	R	0	1		
Digital	4	Return air humidity sensor fail alarm	R	0	1		
Digital	5	Supply air temperature sensor fail alarm	R	0	1		
Digital	6	Supply air humidity sensor fail alarm	R	0	1		
Digital	7	Water inlet temperature sensor fail alarm	R	0	1		
Digital	8	Water/Liquid temperatures sensor fail alarm	R	0	1		
Digital	9	Discharge pressure sensor fail alarm	R	0	1		
Digital	10	Discharge temperature sensor fail alarm	R	0	1		
Digital	11	Airflow sensor fail alarm	R	0	1		
Digital	12	APS Pressure sensor fail alarm	R	0	1		
Digital	13	Ambient temperature sensor fail alarm	R	0	1		
Digital	14	Airflow fail alarm	R	0	1		
Digital	15	Filter blocked alarm	R	0	1		
Digital	16	Water detection alarm	R	0	1		
Digital	17	Auxiliary alarm 1	R	0	1		
Digital	18	Auxiliary Alarm 2	R	0	1		
Digital	19	High control temperature alarm	R	0	1		
Digital	20	Low control temperature alarm	R	0	1		
Digital	21	High control humidity alarm	R	0	1		
Digital	22	Low control humidity alarm	R	0	1		
Digital	23	Low supply temperature alarm	R	0	1		
Digital	24	High supply humidity alarm	R	0	1		
Digital	25	Heater over temp alarm	R	0	1		
Digital	26	Refrigerant leak detection alarm	R	0	1		
Digital	27	Sump pump alarm	R	0	1		
Digital	28	Denconet comms alarm	R	0	1		
Digital	29	Clock alarm	R	0	1		
Digital	30	Critical alarm status	R	0	1		
Digital	31	Maintenance Alarm Status	R	0	1		
Digital	32	System on	R	0	1		
Digital	33	Compressor 1 alarm	R	0	1		

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Digital	34	Compressor 2 alarm	R	0	1		
Digital	35	EVB alarm	R	0	1		
Digital	36	CPV alarm	R	0	1		
Digital	37	Energy meter alarm	R	0	1		
Digital	38	Global alarm	R	0	1		
Digital	39	Expansion off-line alarm	R	0	1		
Digital	40	Expansion off-line alarm (pCOe 2)	R	0	1		
Digital	42	LP Switch by digital input	R	0	1		
Digital	43	HP Switch by digital input	R	0	1		Not Used
Digital	44	Freecooling	R/W	0	1		
Digital	45	Remote humidifier alarm	R	0	1		
Digital	46	Remote humidifier request	R/W	0	1		
Digital	47	Low Discharge SuperHeat Alarm	R	0	1		
Digital	49	High Discharge SuperHeat Alarm	R	0	1		
Digital	65	Power+1 offline alarm	R	0	1		
Digital	66	Power+2 offline alarm	R	0	1		
Digital	67	Danfoss inverter offline alarm	R	0	1		
Digital	68	CPV offline alarm	R	0	1		
Digital	69	Energy meters offline alarm	R	0	1		
Digital	71	LP alarm by transducer	R	0	1		
Digital	72	LP alarm by digital inputs	R	0	1		
Digital	73	LP alarm by Danfoss inverter	R	0	1		
Digital	74	LP alarm by Digital I/input	R	0	1		
Digital	86	LECU 21 BMS On/Off	R/W	0	1		
Digital	87	LECU 21 Damper	R	0	1		0=Auto; 1=100% OPEN
Digital	88	LECU 22 BMS On/Off	R/W	0	1		
Digital	89	LECU 22 Damper	R	0	1		0=Auto; 1=100% OPEN
Digital	90	LECU 23 BMS On/Off	R/W	0	1		
Digital	91	LECU 01 Generic alarm	R	0	1		
Digital	92	LECU 01 Off-line alarm	R	0	1		
Digital	93	LECU 01 Damper	R	0	1		0=Auto; 1=100% OPEN
Digital	94	LECU 01 Heater On	R	0	1		
Digital	95	LECU 01 BMS On/Off	R/W	0	1		
Digital	96	LECU 02 Generic alarm	R	0	1		
Digital	97	LECU 02 Off-line alarm	R	0	1		
Digital	98	LECU 02 Damper	R	0	1		0=Auto; 1=100% OPEN
Digital	99	LECU 02 Heater On	R	0	1		
Digital	100	LECU 02 BMS On/Off	R/W	0	1		
Digital	101	LECU 03 Generic alarm	R	0	1		
Digital	102	LECU 03 Off-line alarm	R	0	1		
Digital	103	LECU 03 Damper	R	0	1		0=Auto; 1=100% OPEN
Digital	104	LECU 03 Heater On	R	0	1		
Digital	105	LECU 03 BMS On/Off	R/W	0	1		
Digital	106	LECU 04 Generic alarm	R	0	1		
Digital	107	LECU 04 Off-line alarm	R	0	1		

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Digital	108	LECU 04 Dampfer	R	0	1		
Digital	109	LECU 04 Heater On	R	0	1		0 =Auto; 1=100% OPEN
Digital	110	LECU 04 BMS On/Off	R/W	0	1		
Digital	111	LECU 05 Generic alarm	R	0	1		
Digital	112	LECU 05 Off-line alarm	R	0	1		
Digital	113	LECU 05 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	114	LECU 05 Heater On	R	0	1		
Digital	115	LECU 05 BMS On/Off	R/W	0	1		
Digital	116	LECU 06 Generic alarm	R	0	1		
Digital	117	LECU 06 Off-line alarm	R	0	1		
Digital	118	LECU 06 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	119	LECU 06 Heater On	R	0	1		
Digital	120	LECU 06 BMS On/Off	R/W	0	1		
Digital	121	LECU 07 Generic alarm	R	0	1		
Digital	122	LECU 07 Off-line alarm	R	0	1		
Digital	123	LECU 07 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	124	LECU 07 Heater On	R	0	1		
Digital	125	LECU 07 BMS On/Off	R/W	0	1		
Digital	126	LECU 08 Generic alarm	R	0	1		
Digital	127	LECU 08 Off-line alarm	R	0	1		
Digital	128	LECU 08 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	129	LECU 08 Heater On	R	0	1		
Digital	130	LECU 08 BMS On/Off	R/W	0	1		
Digital	131	LECU 09 Generic alarm	R	0	1		
Digital	132	LECU 09 Off-line alarm	R	0	1		
Digital	133	LECU 09 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	134	LECU 09 Heater On	R	0	1		
Digital	135	LECU 09 BMS On/Off	R/W	0	1		
Digital	136	LECU 10 Generic alarm	R	0	1		
Digital	137	LECU 10 Off-line alarm	R	0	1		
Digital	138	LECU 10 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	139	LECU 10 Heater On	R	0	1		
Digital	140	LECU 10 BMS On/Off	R/W	0	1		
Digital	141	LECU 11 Generic alarm	R	0	1		
Digital	142	LECU 11 Off-line alarm	R	0	1		
Digital	143	LECU 11 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	144	LECU 11 Heater On	R	0	1		
Digital	145	LECU 11 BMS On/Off	R/W	0	1		
Digital	146	LECU 12 Generic alarm	R	0	1		
Digital	147	LECU 12 Off-line alarm	R	0	1		
Digital	148	LECU 12 Dampfer	R	0	1		0 =Auto; 1=100% OPEN
Digital	149	LECU 12 Heater On	R	0	1		
Digital	150	LECU 12 BMS On/Off	R/W	0	1		
Digital	151	LECU 13 Generic alarm	R	0	1		
Digital	152	LECU 13 Off-line alarm	R	0	1		

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Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Digital	153	LECU 13 Damper	R	0	1		
Digital	154	LECU 13 Heater On	R	0	1		0 =Auto; 1=100% OPEN
Digital	155	LECU 13 BMS On/Off	R/W	0	1		
Digital	156	LECU 14 Generic alarm	R	0	1		
Digital	157	LECU 14 Off-line alarm	R	0	1		
Digital	158	LECU 14 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	159	LECU 14 Heater On	R	0	1		
Digital	160	LECU 14 BMS On/Off	R/W	0	1		
Digital	161	LECU 15 Generic alarm	R	0	1		
Digital	162	LECU 15 Off-line alarm	R	0	1		
Digital	163	LECU 15 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	164	LECU 15 Heater On	R	0	1		
Digital	165	LECU 15 BMS On/Off	R/W	0	1		
Digital	166	LECU 16 Generic alarm	R	0	1		
Digital	167	LECU 16 Off-line alarm	R	0	1		0 =Auto; 1=100% OPEN
Digital	168	LECU 16 Damper	R	0	1		
Digital	169	LECU 16 Heater On	R	0	1		
Digital	170	LECU 16 BMS On/Off	R/W	0	1		
Digital	171	LECU 17 Generic alarm	R	0	1		
Digital	172	LECU 17 Off-line alarm	R	0	1		
Digital	173	LECU 17 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	174	LECU 17 Heater On	R	0	1		
Digital	175	LECU 17 BMS On/Off	R/W	0	1		
Digital	176	LECU 18 Generic alarm	R	0	1		
Digital	177	LECU 18 Off-line alarm	R	0	1		0 =Auto; 1=100% OPEN
Digital	178	LECU 18 Damper	R	0	1		
Digital	179	LECU 18 Heater On	R	0	1		
Digital	180	LECU 18 BMS On/Off	R/W	0	1		
Digital	181	LECU 19 Generic alarm	R	0	1		
Digital	182	LECU 19 Off-line alarm	R	0	1		
Digital	183	LECU 19 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	184	LECU 19 Heater On	R	0	1		
Digital	185	LECU 19 BMS On/Off	R/W	0	1		
Digital	186	LECU 20 Generic alarm	R	0	1		
Digital	187	LECU 20 Off-line alarm	R	0	1		
Digital	188	LECU 20 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	189	LECU 20 Heater On	R	0	1		
Digital	190	LECU 20 BMS On/Off	R/W	0	1		
Digital	193	LECU 23 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	194	LECU 24 BMS On/Off	R/W	0	1		
Digital	195	LECU 24 Damper	R	0	1		0 =Auto; 1=100% OPEN
Digital	196	LECU 25 BMS On/Off	R/W	0	1		
Digital	197	LECU 26 BMS On/Off	R/W	0	1		
Digital	198	LECU 27 BMS On/Off	R/W	0	1		
Digital	199	LECU 28 BMS On/Off	R/W	0	1		

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Digital	200	LECU 29 BMS On/Off	R/W	0	1		
Digital	201	LECU 30 BMS On/Off	R/W	0	1		
Digital	202	LECU 21 Heater On	R	0	1		
Digital	203	LECU 21 Generic alarm	R	0	1		
Digital	204	LECU 21 Off-line alarm	R	0	1		
Digital	205	LECU 22 Heater On	R	0	1		
Digital	206	LECU 22 Generic alarm	R	0	1		
Digital	207	LECU 22 Off-line alarm	R	0	1		
Digital	208	LECU 24 Heater On	R	0	1		
Digital	209	LECU 23 Heater On	R	0	1		
Digital	210	LECU 23 Generic alarm	R	0	1		
Digital	211	LECU 23 Off-line alarm	R	0	1		
Digital	212	LECU 24 Generic alarm	R	0	1		
Digital	213	LECU 24 Off-line alarm	R	0	1		
Digital	214	LECU 25 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	215	LECU 26 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	216	LECU 25 Heater On	R	0	1		
Digital	217	LECU 25 Generic alarm	R	0	1		
Digital	218	LECU 25 Off-line alarm	R	0	1		
Digital	219	LECU 26 Heater On	R	0	1		
Digital	220	LECU 26 Generic alarm	R	0	1		
Digital	221	LECU 26 Off-line alarm	R	0	1		
Digital	222	LECU 27 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	223	LECU 27 Heater On	R	0	1		
Digital	224	LECU 27 Generic alarm	R	0	1		
Digital	225	LECU 27 Off-line alarm	R	0	1		
Digital	226	LECU 28 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	227	LECU 28 Heater On	R	0	1		
Digital	228	LECU 28 Generic alarm	R	0	1		
Digital	229	LECU 28 Off-line alarm	R	0	1		
Digital	230	LECU 29 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	231	LECU 29 Heater On	R	0	1		
Digital	232	LECU 29 Generic alarm	R	0	1		
Digital	233	LECU 30 Off-line alarm	R	0	1		
Digital	234	LECU 30 Damper	R	0	1		0 = Auto, 1 = 100% OPEN
Digital	235	LECU 30 Heater On	R	0	1		
Digital	236	LECU 30 Generic alarm	R	0	1		
Digital	237	LECU 30 Off-line alarm	R	0	1		
Digital	562	BMS Heart Beat - BMS Watchdog	R/W	0	1		Needs to be changed periodically from zero to one by the BMS system. Variable will be reset automatically after 1 second back to „zero“. After 30 seconds without any change alarm „BMS Offline“ will rise.
Digital	563	BMS offline - BMS Watchdog	R/W	0	1		1 = Enable Watchdog function
Digital	1051	CW Exercising - Enable	R/W	0	1		0 = Unit On, 1 = Off by Alarms, 2 = Off by BMS, 3 = Off by Time Zones, 4 = Off by DI, 5 = Off by Keyboard, 6 = On HOA Mode, 7 = Stand-by, 8 = On Generator Mode, 9 = Night Purge Mode, 10 = Defrost Mode
Integer	1	Unit Status	R	0	10		

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Integer	2	Compressor 1 status	R	0	999		Use "Digital Variable 3" for compressor alarm conditions. Values are status of compressor and not necessarily alarms. 0 = Off, 1 = Inside envelope, 2 = High compression ratio, 3 = High discharge press., 4 = High current, 5 = High suction press., 6 = Low compression ratio, 7 = Low press.differential, 8 = Low discharge press., 9 = Low suction press., 10 = Max Speed allowed (x), 11 = Power limit by Zone 1a, 12 = Power limit by Zone 1b, 13 = Power limit by Zone 1c, 14 = Max PD prevent, 15 = Low PD, 16 = Oil management request, 17 = On (min n - startup power), 18 = On (min n - running time), 19 = Off (safety time), 31 = Overcurrent, 32 = Motor overload, 33 = Overvoltage, 35 = Drive overv., 36 = Drive underv., 37 = Overcurrent HW, 38 = Motor overtemp., 39 = Drive failure, 40 = CPU error, 41 = Param - Default, 42 = DC bus ripple, 43 = Data comms fault, 44 = Drive thermistor, 45 = Autotune fault, 46 = Drive disabled, 47 = Motor phase, 48 = Fan fault, 49 = Speed fault, 50 = PFC failure, 51 = error code 21, 52 = PFC undervoltage, 53 = STO survey fail, 54 = STO survey fail, 55 = error synchronized, 62 = HP Prevent Alarm, 63 = LP Prevent Alarm, 64 = error code 27, 58 = error code 28, 59 = error code 29, 60 = error code 30, 61 = EVO not synchronized, 66 = Unit off by alarms Discharge pressure probe fault, 65 = Discharge temperature fault, 66 = Unit off by alarms
Integer	3	Compressor 2 status	R	0	999		Use "Digital Variable 3" for compressor alarm conditions. Values are status of compressor and not necessarily alarms. 0 = Off, 1 = Inside envelope, 2 = High compression ratio, 3 = High discharge press., 4 = High current, 5 = High suction press., 6 = Low compression ratio, 7 = Low press.differential, 8 = Low discharge press., 9 = Low suction press., 10 = Max Speed allowed (x), 11 = Power limit by Zone 1a, 12 = Power limit by Zone 1b, 13 = Power limit by Zone 1c, 14 = Max PD prevent, 15 = Low PD, 16 = Oil management request, 17 = On (min n - startup power), 18 = On (min n - running time), 19 = Off (safety time), 31 = Overcurrent, 32 = Motor overload, 33 = Overvoltage, 35 = Drive overv., 36 = Drive underv., 37 = Overcurrent HW, 38 = Motor overtemp., 39 = Drive failure, 40 = CPU error, 41 = Param - Default, 42 = DC bus ripple, 43 = Data comms fault, 44 = Drive thermistor, 45 = Autotune fault, 46 = Drive disabled, 47 = Motor phase, 48 = Fan fault, 49 = Speed fault, 50 = PFC failure, 51 = error code 21, 52 = PFC undervoltage, 53 = STO survey fail, 54 = STO survey fail, 55 = error code 25, 56 = error code 26, 57 = error code 27, 58 = error code 28, 59 = error code 29, 60 = error code 30, 61 = EVO not synchronized, 66 = Unit off by alarms Discharge pressure probe fault, 65 = Discharge temperature fault, 66 = Unit off by alarms
Integer	4	Airflow m ³ /h (highest part)	R	0	999		
Integer	5	Airflow m ³ /h (medium part)	R	0	999		
Integer	6	Airflow m ³ /h (lowest part)	R	0	999		
Integer	7	Airflow m ³ /sec (high part)	R	0	999		
Integer	8	Airflow m ³ /sec (low part)	R	0	999		
Integer	9	Unit Fan Run Hours (high part)	R	0	999		
Integer	10	Unit Fan Run Hours (low part)	R	0	999		
Integer	11	Compressor 1 Run Hours (high part)	R	0	999		
Integer	12	Compressor 1 Run Hours (low part)	R	0	999		
Integer	13	Compressor 2 Run Hours (high part)	R	0	999		
Integer	14	Compressor 2 Run Hours (low part)	R	0	999		
Integer	15	0 - 10v Cooling Run Hours (high part)	R	0	999		
Integer	16	0 - 10v Cooling Run Hours (low part)	R	0	999		
Integer	17	DODC Cooling Run Hours (high part)	R	0	999		
Integer	18	DODC Cooling Run Hours (low part)	R	0	999		
Integer	19	Ambicool Run Hours (high part)	R	0	999		
Integer	20	Ambicool Run Hours (low part)	R	0	999		
Integer	21	Heater 1 Run Hours (high part)	R	0	999		
Integer	22	Heater 1 Run Hours (low part)	R	0	999		
Integer	23	Heater 2 Run Hours (high part)	R	0	999		
Integer	24	Heater 2 Run Hours (low part)	R	0	999		
Integer	25	0 - 10v Heating Run Hours (high part)	R	0	999		
Integer	26	0 - 10v Heating Run Hours (low part)	R	0	999		
Integer	27	DODC Heating Run Hours (high part)	R	0	999		
Integer	28	DODC Heating Run Hours (low part)	R	0	999		
Integer	29	Dehum Run Hours (high part)	R	0	999		

C5-12 Supervisory Variable List

Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units	Comments
Integer	30	Dehum Run Hours (low part)	R	0	999	h	
Integer	31	Current day	R	1	31		
Integer	32	Current month	R	1	12		
Integer	33	Current year	R	0	99		
Integer	34	Current hour	R	0	23	h	
Integer	35	Current minutes	R	0	59		
Integer	38	DC Bus voltage [V]	R	0	9999	V	
Integer	39	Compressor power on (delay)	R	0	9999	sec	
Integer	40	Humidifier request (analog output)	R/W	0	9999	%	
Integer	41	LECU 01 Alarm index	R	0	9		
Integer	42	LECU 01 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	43	LECU 02 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	44	LECU 02 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	45	LECU 03 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	46	LECU 03 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	47	LECU 04 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	48	LECU 04 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	49	LECU 05 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	50	LECU 05 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	51	LECU 06 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	52	LECU 06 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	53	LECU 07 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	54	LECU 07 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	55	LECU 08 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	56	LECU 08 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	57	LECU 09 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	58	LECU 09 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	59	LECU 10 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	60	LECU 10 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	61	LECU 11 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	62	LECU 11 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	63	LECU 12 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	64	LECU 12 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	65	LECU 13 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	66	LECU 13 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	67	LECU 14 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm
Integer	68	LECU 14 Fan Speed	R/W	0	10		0 = Auto, 1-10 = Manual Speed
Integer	69	LECU 15 Alarm index	R	0	9		0 = No alarm, 1 = EEPROM Faulty, 2 = Serial option fault, 3 = Room probe fault, 4 = Probe S12/S3 alarm, 5 = Open window alarm, 6 = Generic alarm by Di, 7 = local stop, 8 = Off-line alarm

Comments						
Variable Type	Carel	Description	Read or Read / Write	Min	Max	Units
integer	70	LECU 15 Fan Speed	R/W	0	10	
Integer	71	LECU 16 Alarm index	R	0	9	
Integer	72	LECU 16 Fan Speed	R/W	0	10	
Integer	73	LECU 17 Alarm index	R	0	9	
Integer	74	LECU 17 Fan Speed	R/W	0	10	
Integer	75	LECU 18 Alarm index	R	0	9	
Integer	76	LECU 18 Fan Speed	R/W	0	10	
Integer	77	LECU 19 Alarm index	R	0	9	
Integer	78	LECU 19 Fan Speed	R/W	0	10	
Integer	79	LECU 20 Alarm index	R	0	9	
Integer	80	LECU 20 Fan Speed	R/W	0	10	
Integer	81	LECU Fan Speed (Network Default)	R/W	0	100	
Integer	88	LECU 21 Fan Speed	R/W	0	10	
Integer	89	LECU 22 Fan Speed	R/W	0	10	
Integer	90	LECU 23 Fan Speed	R/W	0	10	
Integer	91	LECU 24 Fan Speed	R/W	0	10	
Integer	92	LECU 21 Alarm index	R	0	9	
Integer	93	LECU 22 Alarm index	R	0	9	
Integer	94	LECU 23 Alarm index	R	0	9	
Integer	95	LECU 24 Alarm index	R	0	9	
Integer	96	LECU 25 Fan Speed	R/W	0	10	
Integer	97	LECU 26 Fan Speed	R/W	0	10	
Integer	98	LECU 25 Alarm index	R	0	9	
Integer	99	LECU 27 Alarm index	R	0	9	
Integer	100	LECU 26 Alarm index	R	0	9	
Integer	101	LECU 27 Fan Speed	R/W	0	10	
Integer	102	LECU 28 Fan Speed	R/W	0	10	
Integer	103	LECU 28 Alarm index	R	0	9	
Integer	104	LECU 29 Fan Speed	R/W	0	10	
Integer	105	LECU 29 Alarm index	R	0	9	
Integer	106	LECU 30 Fan Speed	R/W	0	10	
Integer	107	LECU 30 Alarm index	R	0	9	
Integer	118	Humidification Integral time	R/W	0	15	
Integer	1051	CW Exercising - Threshold before enabling valve exercising	R/W	0	720	
Integer	1052	CW Exercising - Time at Maximum Position	R/W	0	300	
Integer	1053	CW Exercising - Time at Minimum Position	R/W	0	300	

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