Corrigo E

Lon-interface variable list

Covers all versions of Corrigo E….-LON from revision 1.2-1-0

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REGIN
THE CHALLENGER IN BUILDING AUTOMATION

Corrigo E Ventilation

The application file, CorrigoEVentilation.apb

The first time a Corrigo E Heating controller is to be used in a LON network the application file CorrigoEVentilation.apb must be loaded to the Corrigo E.
Use Echelon LonMaker (or any other LON network program that can download application software to a Lon device).

Table of Network Variables, Outputs (NVO)

Name	SNVT_type	Description
nvoOutdoorTemp	SNVT_temp_p	Outdoor temperature
nvoSuppAirTemp	SNVT_temp_p	Supply air temperature
nvoExstAirTemp	SNVT_temp_p	Exhaust air temperature
nvoRoomTemp	SNVT_temp_p	Room temperature
nvoExtraSensor	SNVT_temp_p	Temperature extra sensor
nvoSAFPressure	SNVT_press_p	Pressure Supply Air Fan
nvoEAFPressure	SNVT_press_p	Pressure Exhaust Air Fan
nvoSAFAirflow	SNVT_flow_p	Airflow Supply Fan
nvoEAFAirflow	SNVT_flow_p	Airflow Exhaust Fan
nvoDeicingTemp	SNVT_temp_p	De-icing temperature
nvoFrostProtTemp	SNVT_temp_p	Frost protect temperature
nvoCO2	SNVT_ppm	CO_2
nvoRoomHumidity	SNVT_lev_precent	Room humidity
nvoRunIndication	SNVT_state	Bit0 - Supply Air Fan run indication Bit1 - Exhaust Air Fan run indication Bit2 – Heating pump run indication Bit3 - De-icing active
nvoAo1	SNVT_volt_f	Output Ao1
nvoAo2	SNVT_volt_f	Output Ao2
nvoAo3	SNVT_volt_f	Output Ao3
nvoAo4	SNVT_volt_f	Output Ao4
nvoAo5	SNVT_volt_f	Output Ao5
nvoDo	SNVT_state	Bit0 – Output Do1 Bit1 – Output Do2 Bit2 – Output Do3 Bit3 – Output Do4 Bit4 – Output Do5 Bit5 – Output Do6 Bit6 – Output Do7
nvoVVXExchEffi	SNVT_lev_percent	Exchanger Efficiency
nvoSetpoint	SNVT_temp_p	Supply Air Set point
nvoCascadeSetp	SNVT_temp_p	Cascade Set point depending on configuration (Room temp if Room control is configured, Exhaust air temp if Exhaust air control is configured)
nvoSFPresSetpNor	SNVT_press_p	Set point Supply Fan Normal run
nvoEFPresSetpNor	SNVT_press_p	Set point Exhaust Fan Normal run
nvoSFPresSetptRed	SNVT_press_p	Set point Supply Fan Reduced run
nvoEFPresSetptRed	SNVT_press_p	Set point Exhaust Fan Reduced run
nvoMaxLimit	SNVT_temp_p	Max limit Supply Temperature
nvoMinLimit	SNVT_temp_p	Min limit Supply Temperature

Name	SNVT_type	Description
nvoAlarm	SNVT_state_64	Bit0 – Run Error Supply Air Fan Bit1 – Run Error Exhaust Air Fan Bit2 – Run Error P1-Heater Bit3 – Run Error P1-Cooler Bit4 – Run Error P1-Exchanger Bit5 – Filter guard Bit6 – Flow guard Bit7 – External frost guard Bit8 – De-icing pressure guard Bit9 – Fire alarm Bit10 – External switch Bit11 – External alarm Bit12 – Supply Air control error Bit13 – Not used Bit14 – High supply air temp Bit15 – Low supply air temp Bit16 – Supply Air temp max limit Bit17 – Supply Air temp min limit Bit18 – High room temp Bit19 – Low room temp Bit20 – High exhaust air temp Bit21 – Low exhaust air temp Bit22 – Electric heating is overheated Bit23 – Frost risk Bit24 – Low frost guard temp Bit25 – Low efficiency Bit26 – Sensor error Bit27 – Analogue deicing Bit28 – Rotation guard exchanger Bit29 – Fire damper is out of operation Bit30 – Supply Air Fan control error Bit31 – Exhaust Air Fan control error Bit32 – Supply Air Fan external operation Bit33 – Exhaust Air Fan external operation Bit34 – Ventilation Manual mode Bit35 – Manual supply air control Bit36 – Manual Supply Air Fan mode Bit37 – Manual Supply Air Fan freq control Bit38 – Manual Exhaust Air Fan mode Bit39 – Manual Exhaust Air Fan freq control Bit40 – Manual heater control Bit41 – Manual cooler control Bit42 – Manual exchanger control Bit43 – Manual P1-Heater Bit44 – Manual P1-Cooler Bit45 – Manual P1-Exchanger Bit46 – Manual fire damper Bit47 – Internal battery error

Name	SNVT_type	Description
nvoRunMode	SNVT_state	Binary 0 = Stop 1 = Starting up 2 = Starting half speed 3 = Starting full speed 4 = Alarm delay 5 = Normal run 6 = Support control Heating 7 = Support control Cooling 8 = CO_2 run 9 = Night cooling 10 = Full speed stop 11 = Fan stop

Table of Network Variables, Inputs (NVI)

Name	SNVT_type	Description
nviOutdoorTemp	SNVT_temp_p	Outdoor temp. Overrides local outdoor sensor
nviRoomTemp	SNVT_temp_p	Room temp. Overrides local room sensor
nviFullSpeedExt	SNVT_switch	Force to Full speed *)
nviExternalStop	SNVT_switch	External stop *)
nviFireAlarm	SNVT_switch	Fire Alarm *)
nviSetPoint	SNVT_temp_p	Supply Air Set point
nviCascadSetp	SNVT_temp_p	Cascade Set point depending on configuration (Room temp if Room control is configured Exhaust air temp if Exhaust air control is configured)
nviMaxLimit	SNVT_temp_p	Max limit Supply Temperature
nviMinLimit	SNVT_temp_p	Min limit Supply Temperature
nviOccCmd	SNVT_occupancy	0 = The unit is forced to run at 1/1-speed 1 = Shut down. Support control and free cooling **not active.** Frost protection active if configured. 2 = Runs according to the built-in timer. Support control and free cooling active if configured. 3 = Unit stopped. Support control and free cooling active if configured. Frost protection active if configured.
nviSndHrtB	SNVT_time_sec	Heart Beat (0 = disable)
nviTempHyst	SNVT_temp_p	Hysteresis on variables of type _temp_p **)
nviCO2Hyst	SNVT_ppm	Hysteresis on variables of type _ppm (CO_2) **)
nviPercentHyst	SNVT_lev_percent	Hysteresis on variables of type _lev_percent **)
nviPresHyst	SNVT_press_p	Hysteresis on variables of type _press_p (Pressure) **)
nviAirFlowHyst	SNVT_flow_p	Hysteresis on variables of type _flow_p (Airflow) **)
nviVoltHyst	SNVT_volt_f	Hysteresis on variables of type _volt_f (Ao) **)

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- For these parameters it is possible to use both a local hard-wired digital input and the Lon parameter. Activation of either alternative will trigger the function. However, if a function has been set using the Lon network it must also be reset using the Lon network since the nvi input value cannot be reset locally.

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- The hysteresis variables have nothing to do with the control software in the controller. They are internal to the LON interface and are used for minimizing the amount of communication in the LON network.

Corrigo E Heating

The application file, CorrigoEHeating.apb

The first time a Corrigo E Heating controller is to be used in a LON network the application file CorrigoEHeating.apb must be loaded to the Corrigo E.
Use Echelon LonMaker (or any other LON network program that can download application software to a Lon device).

Table of Network Variables, Outputs (NVO)

Name	SNVT_type	Description
nvoHS1SupplyTemp	SNVT_temp_p	Supply temperature HS1
nvoHS2SupplyTemp	SNVT_temp_p	Supply temperature HS2
nvoHS3SupplyTemp	SNVT_temp_p	Supply temperature HS3
nvoHS1SupplySetp	SNVT_temp_p	Supply Set point HS1
nvoHS2SupplySetp	SNVT_temp_p	Supply Set point HS2
nvoHS3SupplySetp	SNVT_temp_p	Supply Set point HS3
nvoOutdoorTemp	SNVT_temp_p	Outdoor temperature
nvoHS1RoomTemp	SNVT_temp_p	Room temperature HS1
nvoHS2RoomTemp	SNVT_temp_p	Room temperature HS2
nvoHS3RoomTemp	SNVT_temp_p	Room temperature HS3
nvoHW1SupplyTemp	SNVT_temp_p	Hot Water Supply Temperature, HW 1
nvoHW2SupplyTemp	SNVT_temp_p	Hot Water Supply Temperature, HW 2
nvoHW1SupplySetp	SNVT_temp_p	Hot Water setpoint temperature, HW 1
nvoHW2SupplySetp	SNVT_temp_p	Hot Water setpoint temperature, HW 2
nvoHP1SupplyTemp	SNVT_temp_p	Storage heater temperature
nvoHP1StartTemp	SNVT_temp_p	Storage heater charging, Start Temperature
nvoHP1StopTemp	SNVT_temp_p	Storage heater charging, Stop Temperature
nvoBoilerTemp	SNVT_temp_p	Boiler Supply Temperature
nvoBoilStartTmp1	SNVT_temp_p	Boiler Start Temperature 1
nvoBoilStartTmp2	SNVT_temp_p	Boiler Start Temperature 2
nvoBoilerStopTmp	SNVT_temp_p	Boiler Stop Temperature
nvoWindSpeed	SNVT_speed	Wind Speed
nvoDP	SNVT_press_f	Differential Pressure
nvoDPSetp	SNVT_press_f	Differential Pressure Setpoint
nvoVolume	SNVT_vol_kilo	Volyme Primary Circuit
nvoCW1Volume	SNVT_vol_kilo	Volyme Cold Water 1
nvoCW2Volume	SNVT_vol_kilo	Volyme Cold Water 2
nvoAo1	SNVT_volt_f	Output Ao1
nvoAo2	SNVT_volt_f	Output Ao2
nvoAo3	SNVT_volt_f	Output Ao3
nvoAo4	SNVT_volt_f	Output Ao4
nvoAo5	SNVT_volt_f	Output Ao5
nvoRunInd	SNVT_state	Bit0 – HS1-P1A Run indication Bit1 – HS 1-P1B Run indication Bit2 – HS 2-P1A Run indication Bit3 – HS 2-P1B Run indication Bit4 – HS 3-P1A Run indication Bit5 – HS 3-P1B Run indication Bit6 – HW 1 Run indication Bit7 – HP1 Run indication Bit8 – Frequency Converter Run indication Bits9 – 15 are not used

Name	SNVT_type	Description
nvoDoValue	SNVT_state	Bit0 – Output Do1 Bit1 – Output Do2 Bit2 – Output Do3 Bit3 – Output Do4 Bit4 – Output Do5 Bit5 – Output Do6 Bit6 – Output Do7 Bits7 – 15 are not used
nvoAlarm	SNVT_state_64	Bit0 – Run Error P1A-HS1 Bit1 – Run Error P1B-HS1 Bit2 – Run Error P1A-HS2 Bit3 – Run Error P1B-HS2 Bit4 – Run Error P1A-HS3 Bit5 – Run Error P1B-HS3 Bit6 – Run Error P1-Hot Water 1 Bit7 – Run Error P1-HP Bit8 – Run Error Frequency Converter Bit9 – Expansion Unit Error Bit10 – External Alarm 1 Bit11 – Boiler Error Bit12 – HS1 control error Bit13 – HS2 control error Bit14 – HS3 control error Bit15 – Hot Water 1 control error Bit16 – Hot Water 2 control error Bit17 – Sensor failure Bit18 – High Supply temp. HW 1 Bit19 – High Supply temp. HW2 Bit20 – High Supply temp. Boiler Bit21 – Low Supply temp. Boiler Bit22 – Error volume pulses Bit23 – Error energy pulses Bit24 – High CW Cons./Day Bit25 – High Energy Cons. Bit26 – High CW Cons./Hour Bit27 – Leakage Bit28 – Run Error P1A&B-HS1 Bit29 – Run Error P1A&B-HS2 Bit30 – Run Error P1A&B-HS3 Bit31 – Error CW1 pulses Bit32 – Error CW2 pulses Bit33 – Max. Limit Supply Temp. HS1 Bit34 – Max. Limit Supply Temp. HS2 Bit35 – Max. Limit Supply Temp. HS3 Bit36 – Min. Limit Supply Temp. HS1 Bit37 – Min. Limit Supply Temp. HS2 Bit38 – Min. Limit Supply Temp. HS3 Bit39 – Max. Limit Return Temp. HS1 Bit40 – Max. Limit Return Temp. HS2 Bit41 – Max. Limit Return Temp. HS3 Bit42 – Min. Limit Return Temp. HS1 Bit43 – Min. Limit Return Temp. HS2 Bit44 – Min. Limit Return Temp. HS3 Bit45 – Frost protection HS1 Bit46 – Frost protection HS2 Bit47 – Frost protection HS3 Bit48 – Internal Battery Error Bits49 – 63 are not used

Table of Network Variables, Inputs (NVI)

Name	SNVT_type	Description
nviOutdoorTemp	SNVT_temp_p	Outdoor temp. Overrides local outdoor sensor
nviHS1RoomTemp	SNVT_temp_p	Room temp HS1. Overrides local room sensor HS1
nviHS2RoomTemp	SNVT_temp_p	Room temp HS2. Overrides local room sensor HS2
nviHS3RoomTemp	SNVT_temp_p	Room temp HS3. Overrides local room sensor HS3
nviHW1Setp	SNVT_temp_p	Setpoint temperature, HW 1
nviHW2Setp	SNVT_temp_p	Setpoint temperature, HW 2
nviDPSetp	SNVT_press_f	Setpoint Differential Pressure
nviSndHrtB	SNVT_time_sec	Heart Beat (0 = disable)
nviTempHyst	SNVT_temp_p	Hysteresis on variables of type _temp_p *)
nviPresHyst	SNVT_press_f	Hysteresis on variables of type _press_f *)
nviSpeedHyst	SNVT_speed	Hysteresis on variables of type _speed *)
nviVoltHyst	SNVT_volt_f	Hysteresis on variables of type _volt_f (Ao) *)

*)

- The hysteresis variables have nothing to do with the control software in the controller. They are internal to the LON interface and are used for minimizing the amount of communication in the LON network.