SIMON-LINK Programming Guide

for

EV-301/601 Interface Panels

In partnership with

SIMON PROtec Systems GmbH

Group SCS
Capital Business Park
Cardiff, CF3 2PZ
groupscs.co.uk

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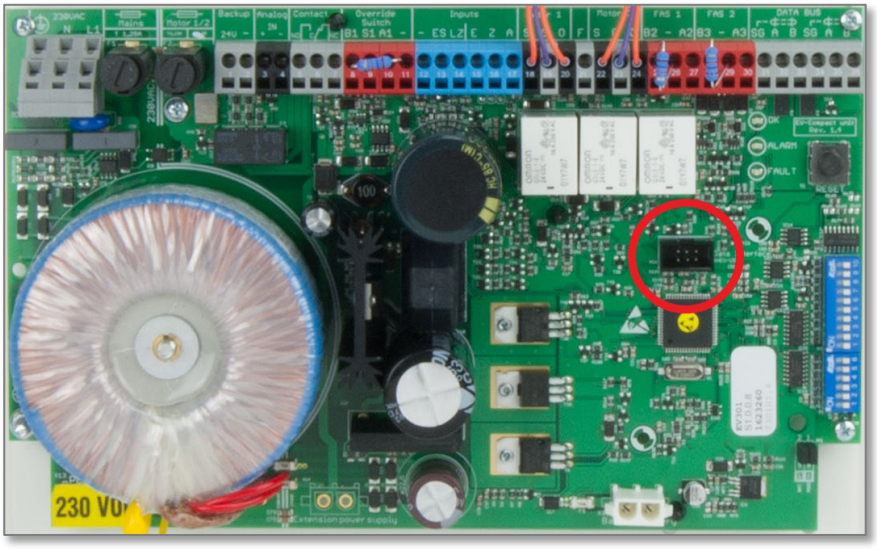
Introduction

The EV-301 intelligent range of smoke shaft interface panels have additional diagnostics and configuration features that can be accessed using the SIMON-LINK software tool.
The SIMON-LINK app and USB-300 connection cable (Part no. SD18511) needs to be installed on a Windows laptop or tablet with a USB port and requires valid licenses or tokens to run.

Panel Connection

Remove the interface panel cover to expose the control board and connect the SIMON-LINK 6-pin cable adapter to the SIMON-LINK port shown in figure 1. The plug is keyed and will only connect one way. The unit must be powered by mains or batteries to connect.

Figure 1 – Simon-Link Port



DANGER:
Risk of electrocution. Works on this equipment should only be carried out by a qualified and competent electrical person. Observe all electrical safety regulations and safe systems of work.

CAUTION:
The controls board is sensitive to electrostatic discharge causing damage to components. Do not remove or handle the board, this may invalidate the warranty.

SIMON-LINK App

The latest app and USB drivers can be downloaded free of charge from https://sico.simon-protec.com/
Connect the SIMON-LINK adapter and launch the SIMON-LINK software application. The default language (sprache) is German and can be changed to English if required.
Check the USB 210/300 is automatically detected and selected from the drop-down menu in the banner. If this option is not available check the cable connection and the correct USB drivers are installed.

SICO Tokens

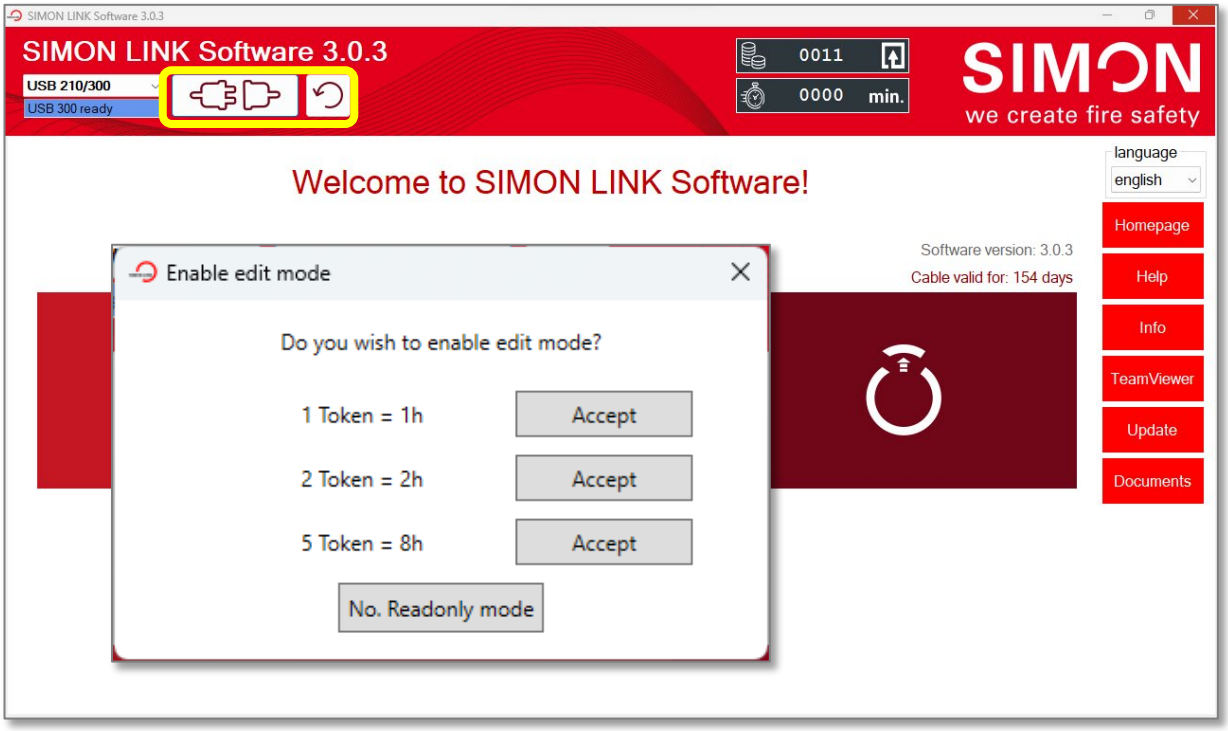
SIMON-LINK uses tokens to activate the USB adapter and enable parameter changes. The tokens can be purchased from Group SCS online shop https://groupscs.co.uk/product/sico-token/
To redeem tokens the USB adapter needs to be connected to the laptop/tablet with an open internet connection. Connection to the interface panel is not necessary. Click on the token bank counter and enter a valid token code. Press Accept to confirm the number of tokens accepted and added to the bank. The tokens are stored on the adapter and can be transferred between lapatops/tablets.

USB Cable Adapter Activation

When using the USB adapter to connect to a device for the first time, 2 tokens will be automatically debited to activate it for 365 days. When the activation time has expired an additional 2 tokens will be requested again.

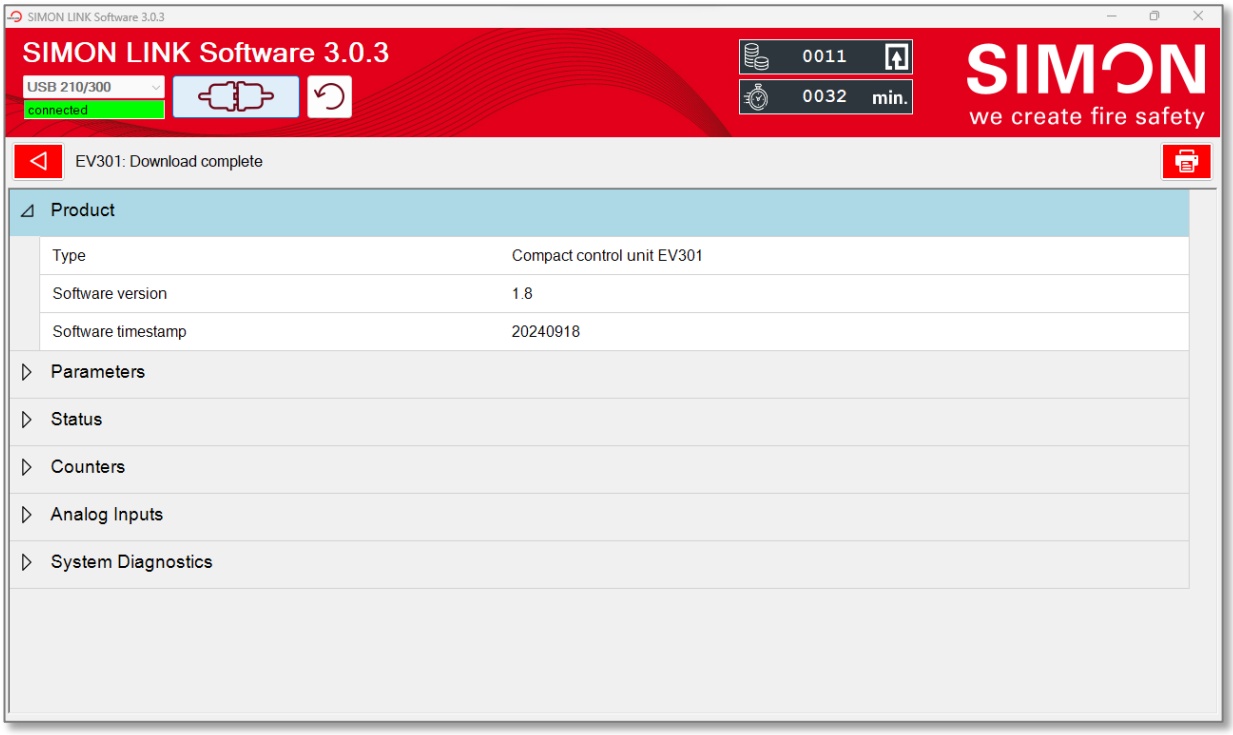
Connection Mode

Click on the connect button to connect to the panel. Confirm if edit parameters mode required by accepting the tokens for the time period required. No tokens are required for Readonly mode.



When editing mode is accepted the timer is immediately activated. An unlimited amount of panel connections and parameter changes are allowed during the editing time period.

On successful connection connected and *'EV301 Download complete'* status is shown to acknowledge online and all parameters successfully read. To refresh the connection and read all parameters press the refresh button.



When connected the panel parameters and status can be viewed by expanding or collapsing the group headings.
The status and parameter settings can be exported to a pdf report by clicking the print button. Under the print options you can select the groups to print.

Product Information

The Product group displays information on the panel type and operating software version.

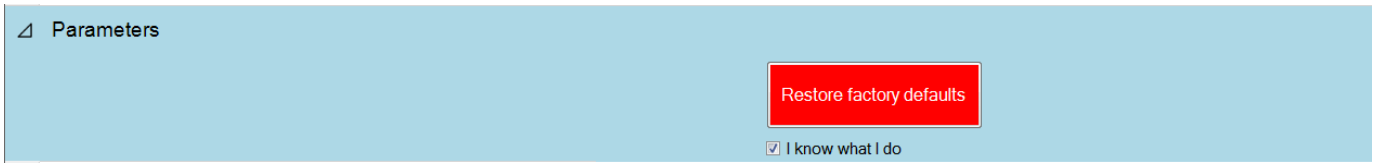
Edit Parameter

The parameters can be viewed by expanding the Parameter headings whilst connected.
To change a setting, click on the pencil icon or double-click on the parameter to edit the value. The new value can be selected from the drop-down box or by overwriting the existing value. Click the '*set default*' to set to the default value.
The **#** key opens a virtual keypad to enter the value.
The value must be within the range as shown. The factory default setting for the parameter is also displayed for reference.

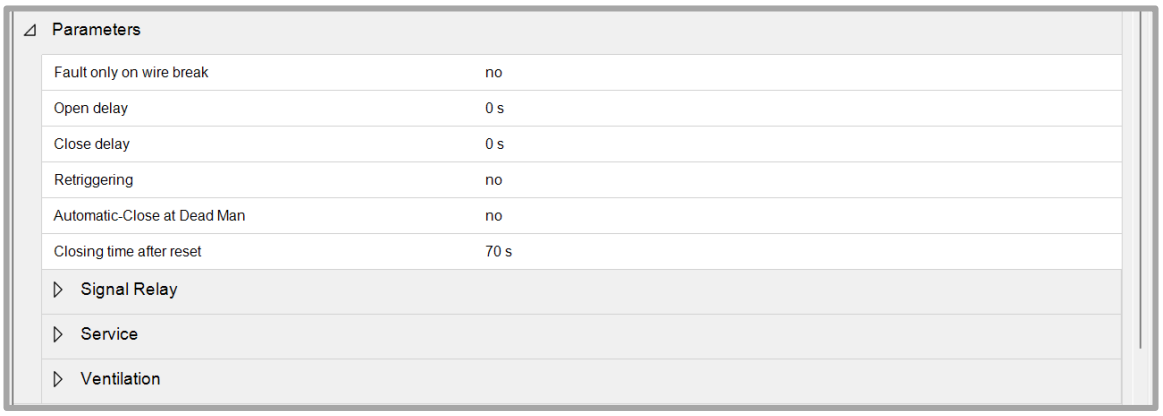
To store the new value click on the ✓ tick button. A green tick with '*stored successfully*' will be shown as confirmation the value has changed.

Restore to Factory Defaults

To restore all parameters back to factory defaults hold down the SHIFT key when clicking on the Parameters heading. This will display the Restore factory defaults button. Tick *'I know what I do'* box to enable the button as shown in figure 5 then apply.



Parameters



Fire alarm input behaviour

Fault only on wire break *Range: yes / no* *Default: no*

A fire alarm condition on FAS1 and FAS2 will be detected by a line wire break or short circuit across the end of line resistor. Selecting '**yes**' for a short circuit condition to indicate a line fault only and not activate a fire alarm condition.

Open vent delay

Open delay *Range: 0..3600 seconds* *Default: 0 s*

Automatic delay time to start opening the vent allowing for sequencing of events such as a lock to release.

Close vent delay

Close delay *Range: 0..60 seconds* *Default: 0 s*

Automatic delay time to start closing the vent allowing for sequencing of events such as allowing fans to stop.

Retriggering the vent output on alarm

Retriggering *Range: yes / no* *Default: no*

When opening the vents in alarm the power output can be recycled open/close several times first to help release frozen or sticking vent seals in winter conditions.

Automatic Closing with Dead Man Operation

Automatic-Close at Dead Man *Range: yes / no* *Default: no*

When daily ventilation function is set for dead man closing operation, automatic closing following an alarm reset can be enabled. When disabled the vent will need to be manually closed.

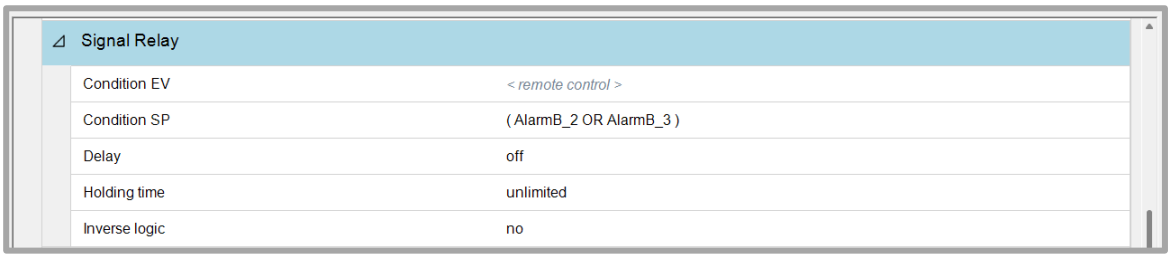
Disabling power after a reset when operating on batteries

Closing time after reset *Range: 0..180 seconds* *Default: 70 s*

The time after an emergency reset when operating on batteries to allow the vents to reset before the switching off the vent output power for sleep mode to preserve battery life.

Signal Relay Operation

The relay signal contact can be configured with logic functions to operate for predefined conditions.



Condition EV *Range: (see condition list)* *Default: < remote control >*

The condition the signal relay energises when in EV mode

Condition SP *Range: (see condition list)* *Default: (Alarm)*

The condition the signal relay energises when in SP mode

Delay *Range: off .. 1 hour* *Default: off*

A time delay before signal relay energises.

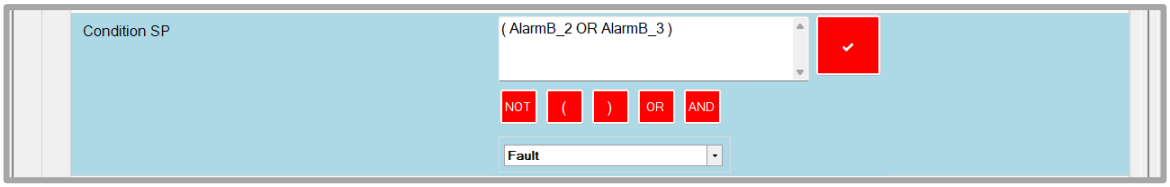
Holding time *Range: unlimited .. 1 hour* *Default: unlimited*

The time period the signal relay stays energised for. The relay will not energise again until the operating condition has been retriggered.

Inverse logic *Range: on/off* *Default: off*

Inverts the condition so the signal relay operates when the condition is false.

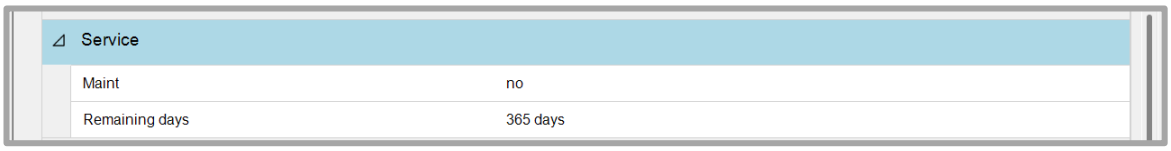
Operating conditions



The relay operating conditions can be selected from the drop-down box and logic functions can be applied to operate for multiple conditions. Brackets must be used to define and group multiple logic conditions.

NOT Inverts the condition i.e. NOT (*function*) will energise the relay when condition is false.
AND Both conditions must be true to energise the relay. i.e. (*function1* AND *function2*).
OR Either condition can be true to energise the relay. i.e. (*function1* OR *function2*).

Service Timer

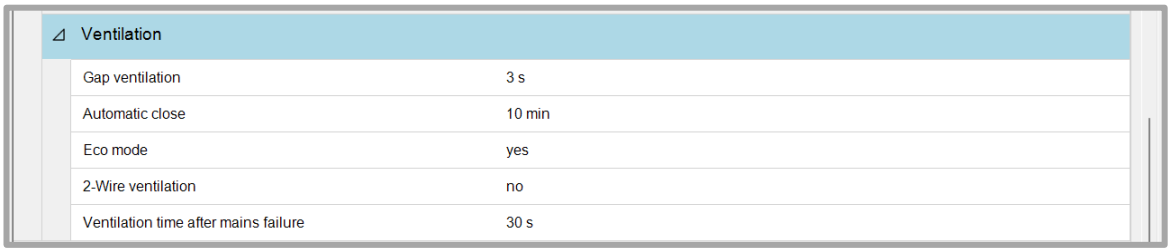


Maint *Range: yes / no* *Default: no*

Remaining days *Range: 1..1460 days* *Default: 365 days*

A service due timer can be set to countdown in days and when it expires the panel indicates a fault. To restart the timer reset the maintenance counter parameter to no then back to yes.

SP Mode Daily Ventilation Settings



Gap and timed ventilation modes are enabled by the DIP switches.

Gap Ventilation

Gap ventilation *Range: 3..255 seconds* *Default: 3 s*

Gap ventilation will partially open the vent for the set time when operating in daily ventilation mode.

Gap ventilation time can also be set by the DIP switches following a programming sequence. See the product Instruction Manual for further details.

Timed Ventilation

Automatic close *Range: 10 mins..18 hours* *Default: 10 min*

Timed ventilation will open the vent for a set time when operating in daily ventilation mode then automatically close it.
Automatic close time can also be set by the DIP switches following a programming sequence. See the product Instruction Manual for further details.

ECO Mode

ECO mode *Range: yes / no* *Default: no*

ECO mode will automatically switch off the vent output power after 180 seconds to save energy when operating in daily ventilation mode.

2 Wire Ventilation Input

2-Wire ventilation *Range: yes / no* *Default: no*

Automatic delay time to start closing the vent allowing for sequencing of events such as allowing fans to stop.

Ventilation Off Delay on Mains Failure

Ventilation time after mains failure *Range: 0..3600 seconds* *Default: 30 s*

The time delay following a mains failure and operating on batteries before automatically disabling daily ventilation modes and closing the vents to preserve battery life for emergency.

SP mode gap ventilation and automatic closing times can be set directly without following the programming sequence with the DIP switches.

Gap ventilation will partially open the vent with a timer when operating in daily ventilation mode.

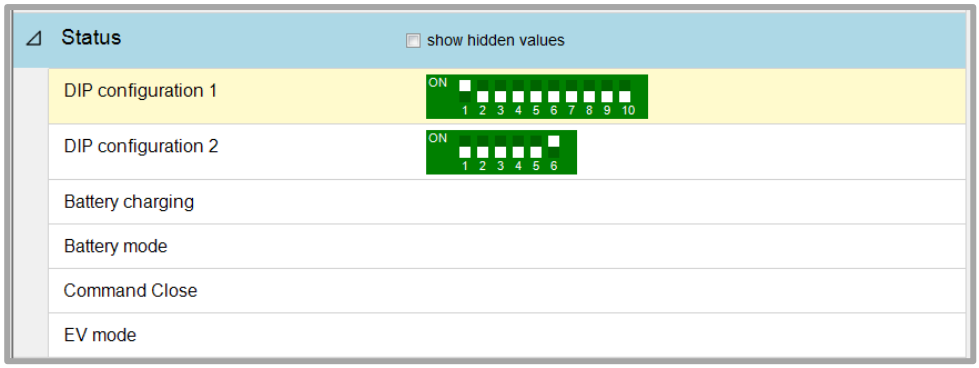
Automatic closing will automatically close the vent after a set time when open in daily ventilation mode.

ECO mode will automatically switch off the vent output power after 180 seconds to save energy when operating in daily ventilation mode.

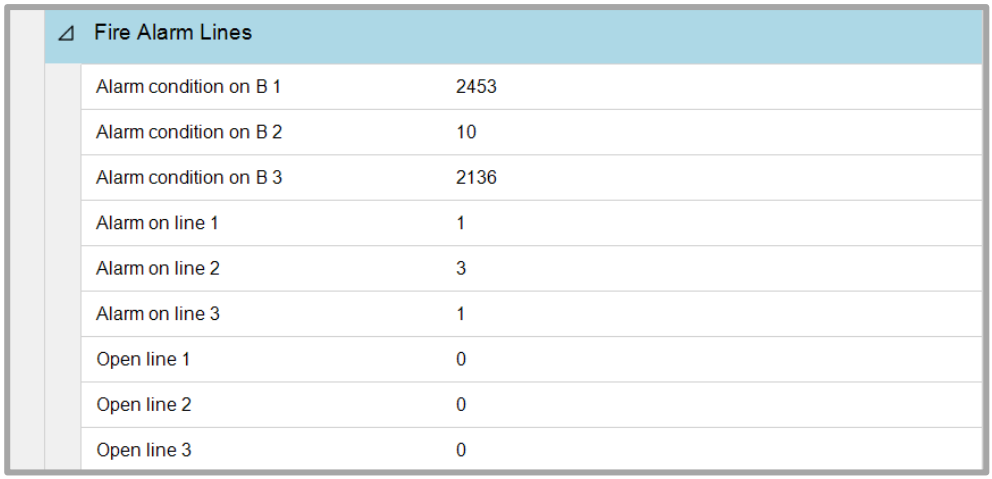
Status & Diagnostics

Status

Expand the status heading to view the current DIP Switch configuration and active conditions.
See Condition List for the condition definition.

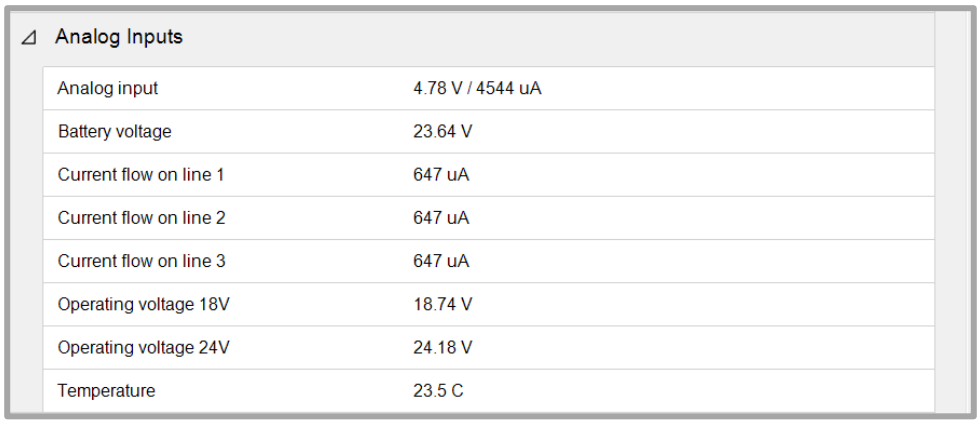


Counters



Actuators	Operations counter for each motor condition
Bus intern	Data bus communication counters
Fire Alarm Lines	Counter for each triggered alarm condition
Inputs	Counter for each triggered input condition
Power Management	Counter for each power condition detected

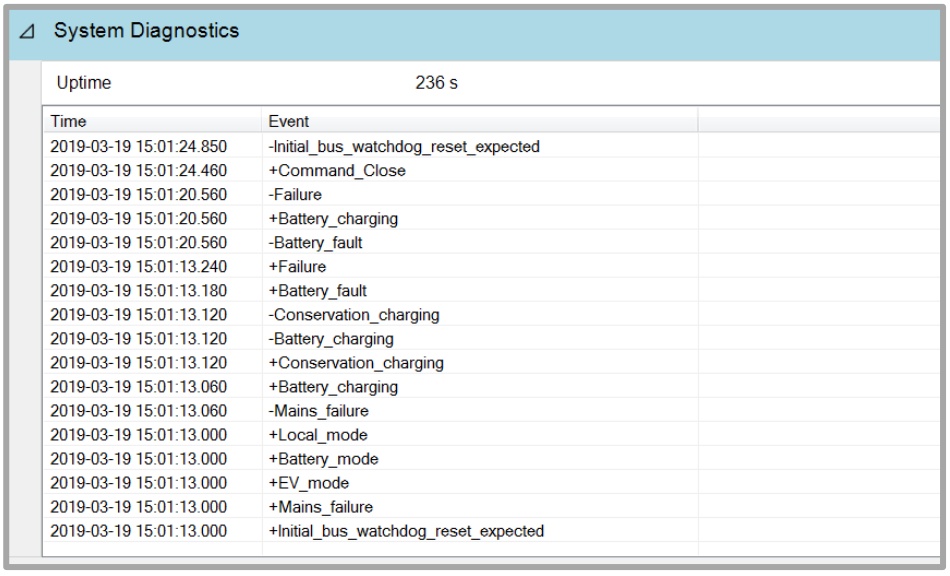
Analog Inputs



Analog Inputs	
Analog input	4.78 V / 4544 uA
Battery voltage	23.64 V
Current flow on line 1	647 uA
Current flow on line 2	647 uA
Current flow on line 3	647 uA
Operating voltage 18V	18.74 V
Operating voltage 24V	24.18 V
Temperature	23.5 C

Analog input	Voltage measured across Analog IN terminals
Battery voltage	Actual battery voltage
Current flow on line 1	Resistor monitoring on Override Switch input B1
Current flow on line 2	Resistor monitoring on FAS1 input B2
Current flow on line 3	Resistor monitoring on FAS2 input B3
Operating voltage 18V	Internal bus voltage
Operating voltage 24V	Internal DC power supply voltage
Temperature	Internal temperature in degrees Celsius

System Diagnostics



System Diagnostics

Uptime 236 s

Time	Event
2019-03-19 15:01:24.850	-Initial_bus_watchdog_reset_expected
2019-03-19 15:01:24.460	+Command_Close
2019-03-19 15:01:20.560	-Failure
2019-03-19 15:01:20.560	+Battery_charging
2019-03-19 15:01:20.560	-Battery_fault
2019-03-19 15:01:13.240	+Failure
2019-03-19 15:01:13.180	+Battery_fault
2019-03-19 15:01:13.120	-Conservation_charging
2019-03-19 15:01:13.120	-Battery_charging
2019-03-19 15:01:13.120	+Conservation_charging
2019-03-19 15:01:13.060	+Battery_charging
2019-03-19 15:01:13.060	-Mains_failure
2019-03-19 15:01:13.000	+Local_mode
2019-03-19 15:01:13.000	+Battery_mode
2019-03-19 15:01:13.000	+EV_mode
2019-03-19 15:01:13.000	+Mains_failure
2019-03-19 15:01:13.000	+Initial_bus_watchdog_reset_expected

Expand to display the event buffer. See Condition List for the event definition.
Each event is timestamped and prefixed with a (+) for when the condition was triggered and a (-) for when the condition was reset or returned healthy.
The Uptime indicates how long the panel has been alive for in seconds.

Status & Condition List

Condition	Old Condition	Definition
< remote control >	*< remote control >*	Relay controlled by the data bus (master panel).
Alarm	*Alarm_triggered*	Operating in an alarm condition
AlarmB_1	*Alarm_on_line_1*	Override switch alarm activated
AlarmB_2	*Alarm_on_line_2*	FAS1 alarm activated
AlarmB_3	*Alarm_on_line_3*	FAS2 alarm activated
AlarmBus	*Alarm_triggered_remotely*	Alarm triggered from the data bus (master panel)
AlarmClose	*Alarm_override*	Closed in alarm condition
AlarmOvr	*Alarm_override_requested*	Override closed condition
AlarmRA_1	*Signal_RA_1*	Alarm signal on Override Switch input A1 detected
AlarmRA_2	*Signal_RA_2*	Alarm signal on FAS1 input A2 detected
AlarmRA_3	*Signal_RA_3*	Alarm signal on FAS2 input A3 detected
AutoClose		SP Mode: Daily Vent automatic close command active
AutoReset		SP Mode: Fire alarm automatic reset enabled
BatChg	*Battery_charging*	Battery charging
BatFault	*Battery_fault*	Battery failed or disconnected
BatLow	*Battery_deep_discharge*	Battery fully discharged
BatOn	*Battery_mode*	Battery mode enabled (BAT jumper ON)
BatTrick	*Conservation_charging*	Battery trickle charging
BatUV	*Undervoltage*	Battery voltage low
BusCfg	*Invalid_bus_configuration*	Invalid panel address set
BusFault	*Bus_watchdog_timer_ expired*	Data bus communication error or disconnected
CmdClose	*Command_Close*	Vent output closing
CmdOpen	*Command_Open*	Vent output opening
FASClose	*FAS_triggers_alarm_ override*	Close vent on alarm enabled (SW1-5 set ON)
Fault	*Failure*	A fault condition is active
FaultM_1	*Motor_fault_1*	Motor 1 output has a line fault
FaultM_2	*Motor_fault_2*	Motor 2 output has a line fault
FuseM	*Fuse_fault*	Motor output fuse fault

Condition	Old Condition	Definition
GapLock	*Gap_ventilation_lock*	Gap ventilation open output stopped
GapVent	*Gap_ventilation*	Daily vent gap ventilation mode (partial opening)
InputB_1	*Alarm_condition_on_B_1*	Override switch input B1 in alarm
InputB_2	*Alarm_condition_on_B_2*	FAS1 input B2 in alarm
InputB_3	*Alarm_condition_on_B_3*	FAS2 input B3 in alarm
InputF	*Free_input*	Input F signal on
InputLZ	*WTS_(close_on_wind/rain)*	Input LZ (Wind/Rain sensor) signal on
InputA	*Button_Open*	Input A (Daily vent open) signal on
InputZ	*Button_Close*	Input Z (Daily vent close) signal on
LoadB_1	*Overload_line_1*	Overload detected on Override Switch input B1
LoadB_2	*Overload_line_2*	Overload detected on FAS1 input B2
LoadB_3	*Overload_line_3*	Overload detected on FAS2 input B3
Local	*Local_mode*	In standalone mode (SW2-10 set ON)
Lockout	*Lockout_mode*	SP Mode: Panel in lockout condition
Mains	*Mains_failure*	Mains power supply fault
MainsVentOff	*Ventilation_inactive_ {mains_fail}*	SP Mode: Daily ventilation disabled on mains failure
MainsVentOn	*Ventilation_after_mains_ failure_active*	SP Mode: Daily ventilation time after mains failure active
Maint	*Maintenance_counter*	Maintenance timer has expired
ModeEV	*EV_mode*	Operating in EV Mode (Mode Jumper set ON)
ModeSP	*SP_mode*	Operating in SP Mode (Mode Jumper set OFF)
Mute	*HE_muted*	HE-077 Override Switch buzzer muted
OpenB_1	*Open_line_1*	Open circuit detected on Override Switch input B1
OpenB_2	*Open_line_2*	Open circuit detected on FAS1 input B2
OpenB_3	*Open_line_3*	Open circuit detected on FAS2 input B3
ProgClose	*Programming_mode_ automatic_close*	SP Mode: In automatic closing programming mode
ProgGap	*Gap_ventilation_ programming*	SP Mode: In gap ventilation programming mode
Relay	*Relays_on*	Signal relay contact energised
RelayOn	*Relay_condition*	Signal relay operating condition is true

Condition	Old Condition	Definition
Reset	*Reset_button_intern*	Internal reset button pressed
ResetOvr	*Reset_button_extern*	HE-077 Override switch close/reset button pressed
ShortB_1	*Short_circuit_line_1*	Short circuit detected on Override Switch input B1
ShortB_2	*Short_circuit_line_2*	Short circuit detected on FAS1 input B2
ShortB_3	*Short_circuit_line_3*	Short circuit detected on FAS2 input B3
VentOff	*Ventilation_system_ disabled*	Daily ventilation mode disabled
VentReset	*Ventilation_after_reset_ active*	SP Mode: Vent output closing after reset
Watchdog	*Initial_bus_watchdog_ reset_expected*	Panel waiting for watchdog reset from data bus (master panel)