

Technical Note

Vertex[™] Software Release 1.23.1

1998-0736 Rev 1 2/08

Software update provides improved performance

Honeywell Analytics is pleased to announce the release of software version 1.23.1 for the Vertex[™]. The installation procedure for the software is presented in Technical Note 1998-0558. This new release provides improvements to performance and information.

Parameter renamed for accuracy

The "20 mA Conc" field on the Point Configuration screen has been renamed "PLC F/S Conc." This change is appropriate because the 20 mA output option has been discontinued. The modified label on the configuration editor is shown in the pink rectangle in Figure 1.

Configure Point 1 (Analyzer 1-1	Point 1)	×
CC Analyzer 1-1 XPV Hydrid	les	
Gas Calibration AsH3 TLV:50 ppb LAL:3 ppb LDL:3 ppb F/S:500 ppb	Image: Warning Enabled Image: Warning Enabled Image: Alarm L1 25 Image: Participation of the state	Units PPx C &TLV C &F/S C mg/m^3
Disable Point - No Monitoring	Perform Optional Line Integrity Test	
Associated (*.HTM) File fo	r Event (82)	Pt1 Pt5
Gas Location Name:		Pt 2 Pt 6
(default)	v	Pt3 Pt7
New Location	Edit Location	Pt4 Pt8
<< Last Point	Done Next Point >>	

Figure 1 – Configure Point Form

Along with the change to the Point Configuration screen, the PLC F/S Conc information has been added to the point detail screen. The new data is shown in the pink rectangle in Figure 2.

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Locatio	n: Point	2-2-6 (<i>)</i>	Az 2-2	/ Point	6)					Pump 1 Pu UNK G	mp 2 Tuesday.	January 22, 2008 08:56 PM
<u>РТ</u> 2-2-6	<u>Analyzer</u> CC	Gas Nan	<u>ne</u>				<u>Level</u> 0.000	ppb	<u>Alarm</u>	1-1 IDLE N\A		N\A N\A
<u>PT</u>	<u>AL1</u>	<u>AL2</u>	<u>TWA</u>	<u>TLV</u>	LDL	Full Scale	PLC F	100.0	nab	NVA	N\A Analyzer 2-2	NVA Pt 5
2.2-0	23.86	55.55	0.000	00.00	0.000	300.0			him.	Pt	2	Pt 6
										Pt 3 Pt 4	3	Pt 7 Pt 8
<u>РТ</u> 2-2-6	<u>Fault Co</u>	ondition:								Event History	Data Trend	Runtime Options
										ChemCam	Main Screen	Help

Figure 2 -- Point Detail Screen

Alarm and Fault Simulation made more intuitive

The HMI screen for alarm and fault simulation has been made more intuitive. The changes to the alarm simulation screen are shown below in the pink rectangle in Figure 3, changes to fault simulation in Figure 4. Specifically, the analyzer and point selection are retained after an alarm or fault test to ease repeating the test. Also, a label has been added above the button that indicates what is being simulated. For alarms, the mnemonic location name is displayed. This is "Lincolnshire, Illinois" in the example below. The button text is improved to make it clear that pressing the "Create" button is the final step before an alarm or fault.

Alarm Test					Pump 1 Pu UNK C OFF	UMP 2 VVer OFF	dnesday, Janu 8:32:26	ary 23, 2008 AM
1. Select Anal		1-1			No Of Event: 12	8	D	isplay Events 1 - 4
2. Select Point			N\A	NIA	OPC 270.COM	A71-1 BR0	OKEN	F
3. Select Aları			2-2	N\A	1/17/2008	02:30:05 F	PM	
4. Select Simulation Scope		N\A	IDLE N\A	N\A	OPC 413 CMD 1/17/2008	ERR AZ1-1 02:29:36 F	1 PM	F
o. Select Crea				OPC 413 CMD ERR AZ2-2				
Alarm Le∨el 1	Alarm Level 2	Pt '		Pt 5	1/17/2008	02:22:09 F	РМ	
-	Pt 2	Pt 2 Pt 6 AZI-1 219 DOUBLE PUMP FAIL			FAIL	F		
Simulation Sco	Pt 3	3	Pt 7	1/16/2008 10:53:17 AM				
Event And Relay	vs Only	Pt 4	۱ (Pt 8	I	Mo	re	
C Full Simulation V	Vith Concentration			_	Ack Current	Ack ALL	Reset Current	Reset ALL
Click below to crea Pt 1-1-1 <lincolns< td=""><td></td><td></td><td></td><td>Alarm Test</td><td>Fault Test</td><td>Event History</td><td>Event Help</td></lincolns<>				Alarm Test	Fault Test	Event History	Event Help	
Create A				PLC Conc/ 4-20 mA Test	Authorized Service	Main Screen	Help	

Figure 3 -- Alarm Test Screen

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Fault Test				Pump 1 Pr UNK C OFF	off	dnesday, Janu 8:33:45	iery 23, 2008 AM
1. Select Analyzer	1-1	N\A	N\A	No Of Event 12 OPC	8	C	Display Events 1 - 4
3. Select Create Fault Now	N۱A	2-2	N\A	270 COM 1/17/2008 OPC	AZ1-1 BRC 02:30:05 F	PKEN ™	
	N۱A	N\A	N\A	413 CMD 1/17/2008	ERR AZ1-1 02:29:36 F	I PM	F
Instrument Fault				OPC 413 CMD 1/17/2008	ERR AZ2-3 02:22:09 F	2 PM	F
Maintenance Fault				Az1-1 219 DOU 1/16/2008	BLE PUMP I 10:53:17 A	FAIL	F
Click below to create an Instrument Fault on Az 1-1				Ack Current	Ack	Reset Current	Reset ALL
Create Fault Now				Alarm Test	Fault Test	Event History	Event Help
				PLC Conc/ 4-20 mA Test	Authorized Service	Main Screen	Help

Figure 4 -- Fault Test Screen

New Gas Calibration Available

A new calibration has been added for SiH4 low-level detection using the XP-Hydrides tape.

Gas Name	TLV	LAL	LDL	Default Alarm Level 1	Default Alarm Level 2	Range	Alarm Setting	Initial Analysis Period (sec)	Time to 1 TLV Alarm @ 2 TLV Concentration 10 Foot Sample Line	Chemcassette Part Number
Silane XP (SiH₄) Low Level	500 ppb	50 ppb	50 ppb	250 ppb	500 ppb	50-5000 ppb	50-249 ppb 250-499 ppb 500-999 ppb 1000-5000 ppb	360 240 120 60 0	99 sec	1295-0226

Flow Auto-Balance improved

The "flow auto-balance" function has been modified to be more thorough. Now a check for the slope of valve response uses three sample windows of tape instead of one. This reduces the effect of any tape variations on the analyzer's flow corrections.

The auto balance routine has been modified to create a maintenance fault if the valve characteristics seem unsuitable. The new fault's short name is "127 AUTOBALANCE FAIL" and the long name is "127 Flow Autobalance Failed".

If auto-balance is started while fault 127 is active, the Vertex will not perform another auto balance. Instead, it will create an informational event "Auto balance skipped - Flt 127 Active"

Note: This improvement causes the flow balance time to increase from 80 to 130 seconds.

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Flow control logic changed to control maintenance fault

The flow control logic has been changed to reduce in frequency of maintenance fault 108 ("FLOW ADJ ERR HI") Now fault 108 will only be issued if the flow is out of tolerance on two windows consecutively. The first window will be truncated early as with low flows.

Profile editor modified to prevent inadvertent setting change

The profile editor has been changed to reduce the danger that the "Inverted Gas Alarm Relays" setting can be changed inadvertently. To accomplish this, the five tabs shown in Figure 5 are changed such that the "Misc." tab is now visible by default and not the "Events / Alarms" tab. Furthermore, the checkboxes are rearranged such that "non-latching" is in the top left position instead of "invert relays". These changes are highlighted in color in Figure 5.

As before, actually changing the "invert relays" checkbox causes a message box to appear: "Do you really want to change the setting for inverted relays?".

I want to Information & Options: Set Initial Configuration Profile File Name : · · · · Mike2.za_VT Configure Analyzer / Points Profile File Name : · · · · · User specified revision : · · V 1.0 Define Gas Location Names Profile File Name : · · · · · · User specified revision : · · V 1.0 Define Gas Location Names Twx End At Time · · · · · O400 / 12:00 / 20:00 Define and Assign PLCs New default tab See Summary Information Misc. Data Logging Optional Features Events / Atams Timeout Functions Open Profile Filpped Non-Latching Gas Alarm Relays Ignore Low ChemC. Alert File Save Save As Filpped Timeente Gas Alarm Relays Ignore Low ChemC. Alert Install Current Profile Disabled Alarm Action © Gas Relays Disabled Full (No Gas Events)	File Other Help / About		
Set Initial Configuration Profile File Name Mike2.za_VT Last Modified File Name	I want to		Information & Options: Profile Information
Configure Analyzer / Points Profile Descripton User specified revision V 1.0 User specified revision V 1.0 Define Gas Location Names User Auto Logout Period - 08:00 (rh/mm) Define and Assign PLCs New default tab See Summary Information Misc. Data Logging Open Profile Flipped Vertex Options File Sove Save As Flipped Install Current Profile Disabled Alarm Action © Gas Relays Disabled © Full [No Gas Events]	Set Initial Configura	tion	Profile File Name Mike2.za_VT Last Modified date 1/23/2008 8:57:50 AM
Define Gas Location Names IWA Find At Ime 04/00 / 1/20/00 Define Gas Location Names Data Log giony (5ab) - e - 62/00 (hhrmm) Define and Assign PLCs New default tab See Summary Information Misc. Data Log giong Optional Features Open Profile File Save Save As File period Ignore Low ChemC. Alert File Save Save As Disabled Alarm Action © Full (No Gas Events)	Configure Analyzer / F	Points	Profile Descripton User specified revision V 1.0
Define and Assign PLCs New default tab Misc. Data Logging Optional Features See Summary Information Events / Alarms Timeout Functions Open Profile Flipped Vertex Options Install Current Profile Install Current Profile Disabled Alarm Action © Gas Relays Disabled © Full (No Gas Events)	Define Gas Location N	ames	1WA End At Time 04:00 / 12:00 / 22:00 Data Log (slow / fast) every 60 Sec / 10 Sec User Auto Logout Period08:00 (htmm)
See Summary Information Misc. Data Logging Optional Features Open Profile Events / Alarms Timeout Functions File Save Save As Non-Latching Gas Alarm Relays I Ignore Low ChemC. Alert File Save Save As Misc. Data Logging Optional Features Install Current Profile Misc. Data Logging Optional Features Chose Window / Done Conset Window / Done Disabled Alarm Action Conset Window / Done	Define and Assign P	_Cs New default t	ab
Open Profile Flipped Vetex: Options Ignore Low ChemC. Alert File Save Save As Non-Latching Gas Alarm Relays Ignore Low ChemC. Alert Install Current Profile Invented Gas Alarm Relays 2 mA indicates Fault Disabled Alarm Action Of Gas Relays Disabled Full (No Gas Events)	See Summary Inform	ation	Misc. Data Logging Optional Features Events / Alarms Timeout Functions
File Save Save As File Save Save As Install Current Profile Inverted Gas Alarm Relays Disabled Alarm Action Oras Events)	Open Profile		Vertex Options
Install Current Profile Disabled Alarm Action Close Window / Done Close Window / Done	File Save Save	As	All events require User Ack 2 mA indicates Fault
Disabled Alarm Action Gas Relays Disabled C Full (No Gas Events)	Install Current Profi	e	Linvertea das Alarin helays
LIOSE WIDDOW / LIODE	01		Disabled Alarm Action G Gas Relays Disabled C Full (No Gas Events)
	Liose Window / Do	ne	

Figure 5 -- Configuration Editor



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