

SICO-300 COLUMN OVEN

DataApex Clarity Control

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Science Instruments and Software, s.r.o. Havlovská 1114/14 160 00 Praha 6, Czech Republic TEL. +420 246 037 483 FAX +420 246 030 500 info@sisw.cz www.sisw.cz Office: Fetrovská 59 160 00 Praha 6, Czech Republic

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SISW SICO-300 CONTROL MODULE

This manual describes the setting of Science Instruments and Software **SICO-300 Column Oven**. The control module enables direct control and continuous monitoring of temperature. SICO-300 column oven communicates via computer USB interface.



Direct control means that the temperature setting and heating is fully controlled from Clarity environment. Measured temperature data may be permanently stored in the measured chromatograms.

The control is performed via the UNI Ruby control module provided by SISW.

REQUIREMENTS

- Clarity installation package with appropriate control license (P/N A24 LC Control)
- Free USB port in the PC
- USB A-B Cable
- SICO-300 USB Drivers Installed (FTDI Drivers Download Page)

In you need the on-line assistance with data system configuration, ask Science Instruments and Support technical support for remote help.

- 1) Download TeamViewer Quick Support Application (from SISW website)
- 2) Ask technical support (servis@sisw.cz or call +420 246 037 483)

INSTALLATION PROCEDURE

Following chapter describes installation of SICO-300 USB drivers followed by Clarity system configuration.

INSTALLING SICO-300

Installation of driver package should be performed prior to connection of device to the computer.

Now connect the SICO-300 to a free USB port on computer. The installation of USB drivers will be finalized within a minute.

Verify the correct installation of drivers in Windows Devices and Printer. "SICO-300 OVEN" should be listed.

CLARITY CONFIGURATION

- Start the Clarity by clicking on its icon on the desktop.
- Invoke the System Configuration dialog from Clarity window using System | Configuration command.
- Click the *Add...* button (1) on System Configuration window to invoke the *Available Control Modules dialog.*

0.1				
Setup Cor	ntrol Modules		Number of Instruments:	1
	Used S/N		M Instrument 1 × Instrument 2	K Instrument 3 K Instrument 4
			Instrument Type	Name
GC Detector			LC	Instrument 1
Wet-PAD	19		Image for Closed Instrument	Image for Opened Instrument
A Net+PAD - 1 A Net-PAD - 2 Balance Thermostat B SICO-200 Device 0 Thermostat 1	instrument 1 Instrument 1		0	*
Fraction Collector				From
Capillary Electrophoresis		> <	AS C C C C C C C C C C C C C	Net-PAD SICO-200 Device
			Data Inputs & Outputs	
			Ext. Start Dig. Insuite	Device Number
			Ready Dig, Output: Net-D	
1			Miccellaneous Cettings	
T			Units Setup	Method Options
Add Rimove	About Setup			OK Cancel Hel
Available Control Modul	es			
+ -		Filter: All		×
+ -	Status	Filter: All	Comment	
As Detector Adde Adde Ac Ac Adde Ac Ac	Status Status	Filter: All Vendor Spark Holland DataApex DataApex DataApex - Spark Holland Ecom Spark Holland SISw DataApex DataApex DataApex	Comment Comment Automatic Catridge Exchanger Audiary module for tracking the DEMO GCxGC Modulator by U Driver for DID (Digital Input De GCxGC modulator developed a High Pressure Dispenser, as pa Driver for Panda-30 HID allowir System incorporating Spack AC USB Accessory to check Vacu Simulated connected Output ar	As part of Sp column usag Testing II Ruby script ice) allowing t Faculty of Sci Testing it of Spark Sy g to start acq Developed by E E, Spark HPD m level by U Developed by S d Inputs

- Expand the Auxiliary
- Select "UNI Ruby" (2) and click the Add button (3).

• The DataApex UNI Setup dialog will appear.

ataApex UNI Set	up		×
Ruby Script:	C:\Clarity\Bin\UTILS\Uni_Driver		
Port:	SISW SICO-200 - 40029	•	
	Property	Value	
1 Thermostat	Name		Thermostat 1
		OK Cancel	Halp

- Set desired Ruby Script for SICO-300 Column Oven. The SISWSICO300Oven.rb script (4) can be found in the Clarity\Bin*UTILS\Uni_Drivers\SISW*\ folder (accessible through the ______ button) of the Clarity root directory. If not, download and copy the script to this folder.
- In the UNI Setup select the correct SICO-300 from *Port* drop down box (you can recognize it using the displayed serial number).
- You might want to change *Device Name* for the SICO-300 (Thermostat) device.

		and the second se	-
Jspořádat 🔻 Nová složka		100 V	
🚖 Oblibené položky	Název položky	Datum zmény	Тур
🔢 Naposledy navštivené	SISWLCMonitor th	22.4.2016 16:38	Soubor
Plocha	SawSIC0100Oven.tb	22.4.2016 16:38	Soubor
🕌 Stažené soubory	SISWSIC0200Oven.rb	11.3.2017 13:54	Soubor
🕌 Disk Google	SISWSIC0300Oven.rb	11.3.2017 13:56	Soubor
Autodesk 360	SISwSSIpumpUSBinte	erface.rb 22.4.2016 16:38	Soubor
	SISwSystecDegasserin	terface.sb 22.4.2016 16:38	Soubor
Plocha			
Ca Knihovny			
Dokumenty			
🚽 Hudba			
🔛 Obrázky			
🔚 Videa			
🕌 Roman Kysilka			
Počítač			
🗣 Sit			
IN SISW_ROMAN			
Ovládací panely			
🗑 Koš			
Název souboru: SISWSICO3000ven.rb		 Ruby script 	*

DataApex UNI Setup dialog contains several items which can be modified.

RUBY SCRIPT

Ruby Scrip shows actually selected UNI Ruby script for the SICO-300 device.

PORT

Port serves for selecting the SICO-300.

INSTRUMENT NAME (THERMOSTAT NAME)

Thermostat Name allows customize the name of the instrument. This name (in the *Value* column) will be used throughout the Clarity station.

- SICO-300 Oven item (5) will appear in the *Thermostat* section of *Setup Control Modules* list.
- Select desired instrument tab (6).
- Drag the *SICO-300* item from the *Setup Control Modules* list on the left side to the list of desired modules on the right side (7). You can use the ---> button (8) alternatively.

System Configuration		×
Setup Control Mo	dules	6 Number of Instruments: 1
Used	S/N	AA Instrument 1 x Instrument 2 x Instrument 3 x Instrument 4
AS CC CC CC CC CC CC CC CC CC C	19 rent 1 8	Instrument Type Instrument 1 Image for Closed Instrument Image for Closed Instrument Image for Opened Image for Opened
		Data Inputs & Outputs Device Number Ext. Start Dig. Input: Net-PAD 1 Ready Dig. Output: Net-PAD 1 Miscellaneous Settings Units Setup Method Options
Add Remove About.	Setup	OK Cancel Help

USING THE CONTROL MODULE

Thermostat tab is created in the *Method Setup* dialog when SICO-300 is configured. The SICO-300 panel is also created in the *Device Monitor* window.

Meth	nod Se	etup Default1		x
Sel	ect Th	ermostat	SICO-200 Device	
			UNI Ruby Thermostat Method	
	Prope	erties		
		1		
		Proper	ty Value	
	1	Init Temperature [°C]	8	30,0
	2	Equilibration wait time [nin]	0,0
	3	Equilibration temperatu	e tolerance [℃]	1,0
5	Status	Ready	Th. Stat.	IS
E	vent Ta	able Measurement Ac	uisition Thermostat Integration Calculation Advanced	
		ОК	Cancel Send Method Report Audit Trail	Help

The desired temperature value should be entered into Thermostat Method Setup. The default Ready (Equilibration) temperature tolerance is pre-set to 1 °. You can modify it to different value. This setting has no influence to SICO-300 internal setting of "Ready" interval (1 °C).

METHOD SETUP – ADVANCED

New auxiliary signal (Temperature) is now available on the *Advanced* tab of *Method Setup* dialog. Checking the *Store* checkbox enables displaying temperature signal in the *Data Acquisition* window. Temperature data will be stored in the measured chromatograms.

ubtraction				User Variables	
Chromatogram	[None]			Variable 1	
Matching	No Change		•	Name	MethodUserVar1
	Set	t	None	Value	0
olumn Calculations					
Unreta	ined Time	0	[min]	Variable 2	
Column	Length	50	[mm]	Name	MethodUserVar2
Column	Lengui		[mm]	Value	0
	Statist	tical Moments	3		-
	From	Width at 50%	b	Variable 3	
	Auxiliary Sig	gnal	Store	Name	MethodUserVar3
Temperature The	ermostat 1			Value	0
				- Clock	

DEVICE MONITOR

Monitor | Device Monitor command from the Instruments window invokes the *Device Monitor* window with actual SICO-300 status. The *Current Temperature* value is continuously the updated.

😳 Inst	🕸 Instrument 1 - Device Monitor								X	
File	Control	View	Window	Help		11 8	5 <i>6</i> •	Ö 8 💿 🏹	7 🖗 🔘	
🔽 Net	-PAD SN 19								Read	/ 🔘
Inpu no.	t Current State:		Descrip	tions:		Outpu no.	t Current State:	Descrip	tions:	
1	0	Dig	ital Input 1			1	0-/L	Digital Output 1	L:]
2	0	Dig	ital Input 2			2	0/L	Digital Output 2	2	
3	0	Dig	ital Input 3			3	0/L	Digital Output 3	3	
4	0	Dig	ital Input 4			4	0/L	Digital Output 4	ł	
5						5	0./L	Digital Output 5	i	
6						6	0/L	Digital Output 6	.	
7						7	0/L	Digital Output 7	7	
8						8	0/L	Digital Output 8		
🔽 SIC	O-300 Devi	ce							Read	/ 0
		Pro	operty					Value		
1 5	Set Tempera	ature [°	C]						40,0)
2 (Current Tem	peratu	re [ºC]						42,6	5
For He	lp, press F1									

DATA ACQUSITION WINDOW

When enabled in the *Method Setup* dialog – *Advanced* tab, auxiliary signal Temperature is displayed in the *Data Acquisition* window. Axis range for temperature signal can be set in the Axes Range dialog. Axes Range dialog will be invoked by View|Set Axes Ranges... in the Data Acquisition window. When *Auto* checkbox is checked, the temperature signal axis range starts at a minimal value and enlarges according to the signal change. When unchecked, the axis range is fixed to the entered values.

		Fixed	Floating	
	From	То	Range	
Time Axis	0 min	5 min	10 min	
Signal Axis	-10 mV	100 mV	5 mV	
				L
dividual Settings				
unduar setungs		Fived	Floating	_
			I loguito	
	Erom	То	Range	
Net-PAD - 1	From -10 mV	To 1000 mV	Range 10 mV	
Net-PAD - 1	From -10 mV	1000 mV	Range 10 mV	
Net-PAD - 1	From -10 mV	1000 mV	Range 10 mV	
Net-PAD - 1	From -10 mV	To 1000 mV	Range 10 mV	
Net-PAD - 1	From -10 mV	To 1000 mV	Range 10 mV	
Jet-PAD - 1 uxiliary Signals	From -10 mV	To 1000 mV	Range 10 mV	
Net-PAD - 1 uxiliary Signals	From -10 mV	To 1000 mV	Range 10 mV Auto	
Net-PAD - 1 uxiliary Signals Temperature Thermostat 1	From -10 mV -10 mV	To 1000 mV 1000 c	Range 10 mV	
Net-PAD - 1 uxiliary Signals Femperature Thermostat 1	From -10 mV -10 mV From 0.℃	To 1000 mV 1000 °C	Range 10 mV	
Vet-PAD - 1 uxiliary Signals Femperature Thermostat 1	From -10 mV -10 mV From 0 ℃	To 1000 mV 1000 c	Auto	
Vet-PAD - 1 uxiliary Signals Temperature Thermostat 1	From -10 mV -10 mV From 0 ℃	To 1000 mV 1000 °C	Auto	
Vet-PAD - 1 uxiliary Signals Temperature Thermostat 1	From -10 mV -10 mV From 0 ℃	To 1000 mV 1000 °C	Auto	

Temperature value provided by SICO-300 is then displayed in the *Data Acquisition* window of the appropriate instrument.



REPORT SETUP

The reporting of the SICO-300 temperature in the Method section of report can be enabled by checking the *Instrument Control* checkbox on the *Method* tab of the *Report Setup* dialog.

Report Setup Instrument	:		×
Page Setup ✓ Lab. Header ✓ Report Header ✓ Method × Calibration ✓ Chromatogram ✓ Results × Sequence × Audt & Signatures	 ✓ Print On New Page Signals All Ø Active Chromatogram Only Active Signal 	 Info Header Instrument Parameters Acquisiton Parameters G.P. Info Event Table Injection Control Instrument Control Integration Table Calconom of ameters PDA Method 	OK Cancel Help New Open Save As Printer Printer Print To PDF Send PDF

SICO-300 settings are then reported.

