

## DIGITAL INPUT MODULE

Clarity Control Module

ENG

Code/Rev.: M121/90A

Date: 2024-05-14

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To facilitate the orientation in the **Digital Input Module** manual and **Clarity** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

*Open File* (italics) describes the commands and names of fields in **Clarity**, parameters that can be entered into them or a window or dialog name.

WORK1 (capitals) indicates the name of the file and/or directory.

ACTIVE (capital italics) marks the state of the station or its part.

Chromatogram (blue underlined) marks clickable links referring to related chapters.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity** station. Moreover, some sections are written in format other than normal text. These sections are formatted as follows:

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**Note:** Notifies the reader of relevant information.

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**Caution:** Warns the user of possibly dangerous or very important information.

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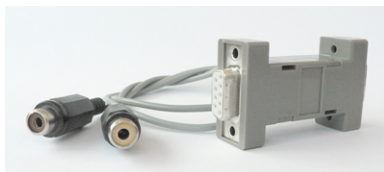
**Marks the problem statement or trouble question.**

**Description:** Presents more detailed information on the problem, describes its causes, etc.

**Solution:** Marks the response to the question, presents a procedure how to remove it.

# 1 Digital Input Module

This manual describes the use of the **Digital Input Module** with the **Clarity** software.



*Fig. 1: Digital Input Device for the Digital Input Module*

**DIM - Digital Input Module** serves for processing starting signals received from the **DID - Digital Input Device** (p/n DID01). This enables you to start your detector by the external signal.

**Note:** **DIM** is not necessary if you use a control module for selected detectors (Ecom TOPAZ/SAPHIRE, Sykam S3210/3240, SoftA ELSD). These control modules are able to receive signals from the DID directly. For devices that do not support DID directly, it is necessary to configure DID to a separate COM port (for details, see in the chapter "**DataApex DIM Setup**" on pg. 6.).

**Caution:** For **Digital Input Device**, use the inputs with contact or button only; do not connect voltage (TTL signal) to it.

## 2 Requirements

- **Clarity** Installation with GC (p/n A23) or LC Control Module (p/n A24).
- Free serial COM port in the PC.

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*Note:* Modern computers usually have only 1 (if any) serial (COM) port installed. To use more devices requiring the RS232 port, the **MultiCOM** adapter (p/n MC01) is available.

## 3 Installation procedure

### 3.1 Hardware - Wiring

The **Digital Input Module** detector uses the Digital Input Device (p/n DID01) connected to the serial port.

#### Starting your detector by external signal

The analysis is usually started by the injection using the injector valve or autosampler. This instrument then has to let **Clarity** know that the analysis is already running. While some of these instruments are also controlled and are able to send the notification of the start to **Clarity** via serial line, others can't do that and only send the notification via TTL signal.

In case your detector doesn't have any digital input, the **Digital Input Device** (p/n DID01) together with the **DIM** control module is helpful. When the **Digital Input Device** is connected to the COM port it is able to utilize the onstate on some pins of the COM port and the **DIM** transfers a signal to your detector control module. The digital input can be triggered either by the button or by Start contact (e.g. from the autosampler). The scheme of the **Digital Input Device** wiring is shown in the **Fig. 2** on pg. 3.

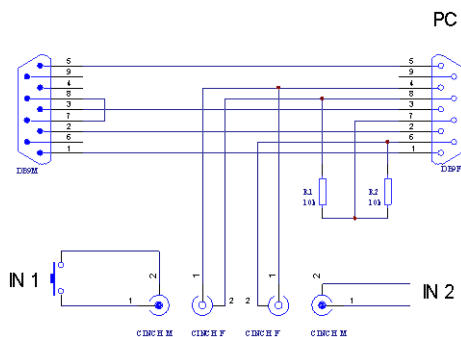


Fig. 2: Digital Input Device scheme

Detailed description of the **Digital Input Device** (p/n DID01) can be found in the datasheet **D025** available on the **Clarity** installation CD or the **DataApex** website ([www.dataapex.com](http://www.dataapex.com)).

### 3.2 Clarity Configuration

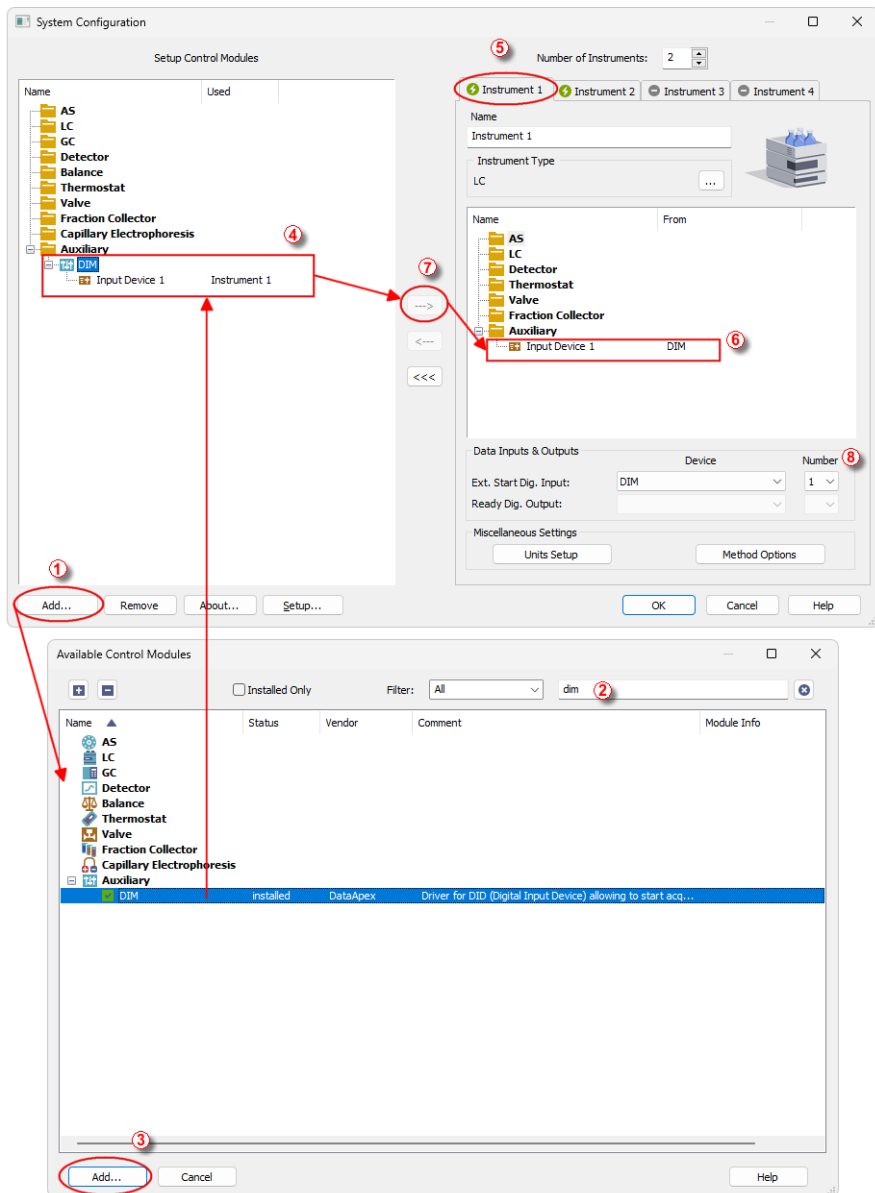



Fig. 3: System Configuration



- Start the **Clarity** station by clicking on the  icon on the desktop.
- Invoke the *System Configuration* dialog accessible from the *Clarity* window using the *System - Configuration...* command.
- Press the *Add* button ① (See **Fig. 3** on pg. 4.) to invoke the *Available Control Modules* dialog.
- You can specify the searching filter ② to simplify the finding of the driver.
- Select the **DIM** item in the *Auxiliary* section and press the *Add* ③ button.
- The [DataApex DIM Setup](#) dialog will appear.

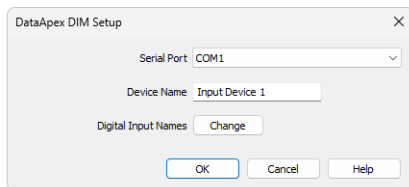



Fig. 4: DataApex DIM Setup

- Select *Serial Port* where the Digital Input Device is connected.

*Note:* A detailed description of this dialog can be found in the chapter "**DataApex DIM Setup**" on pg. 6.

- Set the *Device Name*.
- Press the *OK* button.
- The **DIM** will appear in the *Setup Control Modules* list ④ of the *System Configuration* dialog.
- Drag and drop the **DIM** icon from the *Setup Control Modules* list ④ on the left side of the *System Configuration* dialog to the desired *Instrument* ⑤ tab on the right side ⑥ (or use the  button ⑦ to do so).

*Note:* The configuration dialog of the **Digital Input Device** ([DataApex DIM Setup](#)) can be displayed any time by double-clicking on its icon or using the *Setup* button.

- Set the *Ext. Start Dig. Input* to the **DataApex DIM** and the appropriate Number ⑧ for the connection between the **Digital Input Device** and the **Digital Input Module**.

## 4 DataApex DIM Setup

The **DataApex DIM Setup** dialog serves for setting the connection between the **Digital Input Device** and the **Digital Input Module** (p/n DID01).

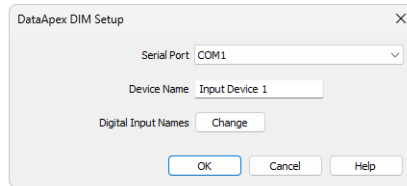


Fig. 5: DataApex DIM Setup dialog

### Serial Port

Sets the serial port where the Digital Input Device is connected. The Digital Input Device using the DIM module must be connected to a different COM port than the detector.

### Device Name

Enables to set the Device Name.

### Digital Input

Displays the *Digital Input Names* dialog which enables to set the custom labels of **DataApex DIM** digital inputs. These inputs are, however, only physically present when digital input device (p/n DID01) is used. The custom names are displayed in the *Method Setup - Event Table*.

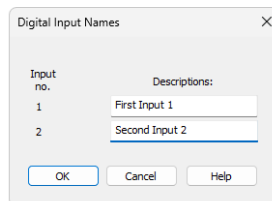


Fig. 6: Digital Input Names dialog