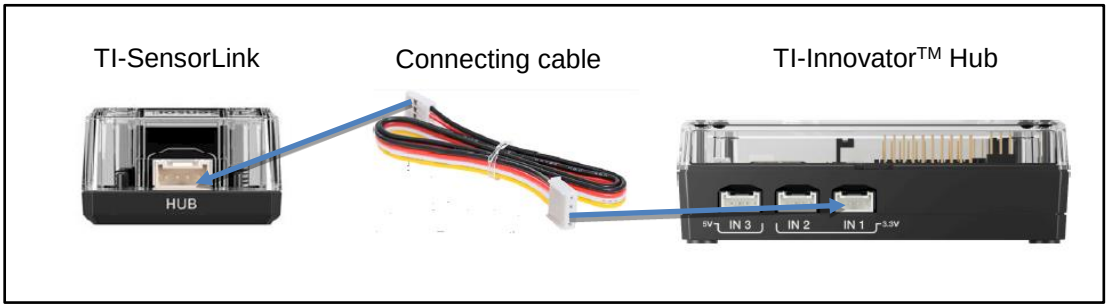
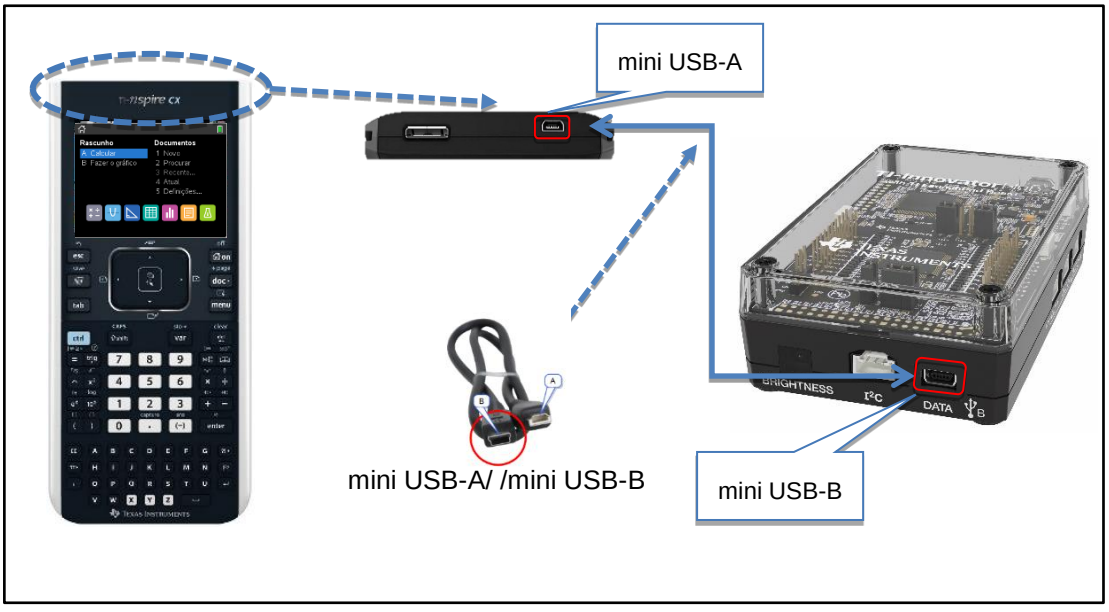
APPLICATION 1 – COMUNICATING WITH SENSORLINK

A. SYSTEM CONNECTION

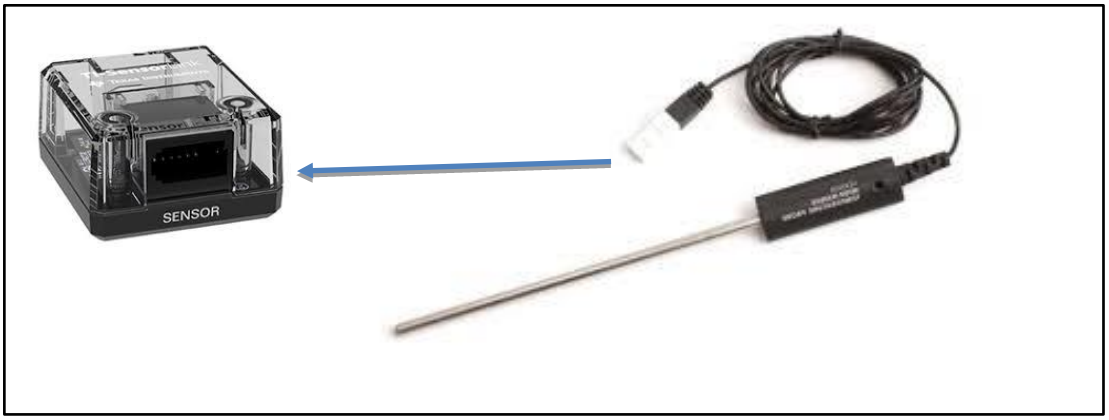
1. Connect SensorLink to one of the inputs of the TI-Innovator ™ Hub (IN 1, IN 2 or IN 3) using the supplied cable:



2. Connect TI-Innovator™ Hub to TI-Nspire™ CX with mini USB-A/mini USB-B cable:

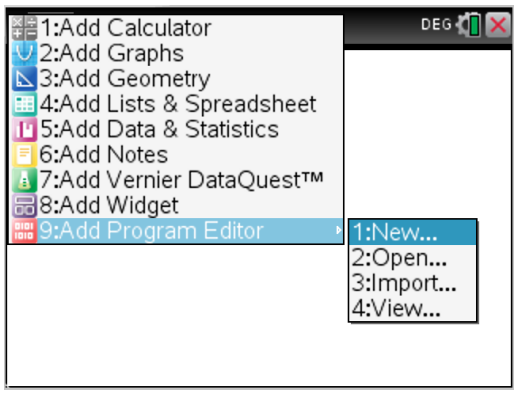


3. Connect one of the four analogic sensors with the supplied cable:

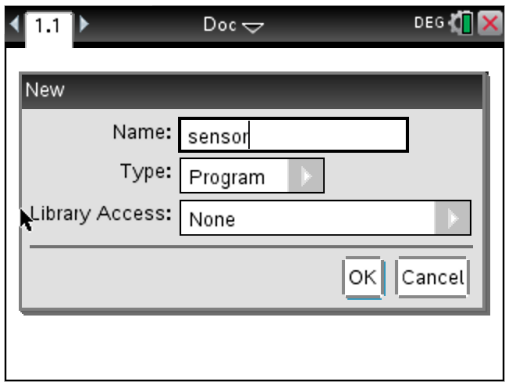


B. COMMUNICATION PROGRAM

1. Add a new *Program Editor* page, by pressing [on] | [1] (New Document) | | [9] (Add Program Editor) | [1] (New)



2. Write a name for your program and press [enter]



3. The coding lines must be written between lines ***Prgm*** and ***EndPrgm***

4. The first line must establish the connection between sensor, Hub and calculator:

   Send "CONNECT VERNIER 1 TO IN1 AS …"

   After the word **AS**, complete the sentence with the correct designation of the sensor used – **TEMPERATURE, PRESSURE, PH, FORCE** or **FORCE50** (the last one used only if the range of dual Range Force Sensor is 0 – 50 N).

5. Add an instruction to acquire sensor reading, with the following 2 lines:

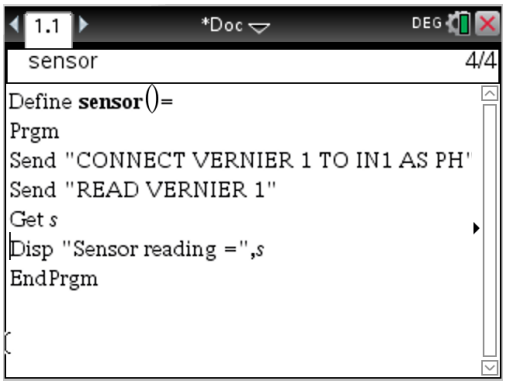
Send "READ VERNIER 1"

Get s

6. Finish your program with an instruction to output the reading of the sensor:

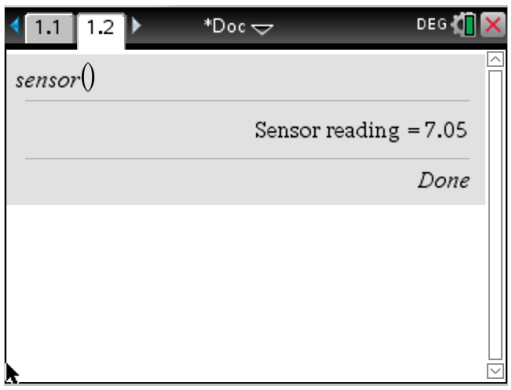
Disp "Sensor reading = ", s

7. The whole coding must look similar to this (adapted to pH sensor):



8. To execute (and test) the program, press ctrl | B (Check Syntax & Store) then ctrl | R (Run) and enter.

9. If everything is right, you should get the information about sensor reading in display:



APPLICATION 2 – DIGITAL SCALE

- Idealize and execute a program to function as a digital scale (0-50N)

Notes:

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APPLICATION 3 – TEMPERATURE ALARM

- Idealize and execute a program to display the room temperature.
- Improve the above program to print “CRITICAL TEMPERATURE!”, in case of “very high” or low temperatures, of your own choice (suggestion: use an IF…THEN…ENDIF condition statement, menu | 4 (Control) | 2 (If…Then…EndIf)

Notes:

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APPLICATION 4 – PRESSURE SWITCH

- Idealize and execute a program to display pressure exerted on the syringe of a pressure sensor
- Improve the above program to make a different sound in case of “very” high or low pressures, of your own choice (suggestion: to make the sound use a Send "SET SOUND 220, 3" instruction, where 220 is the sound frequency – of your choice – and 3 is sound duration, in seconds – of your choice)

Notes:

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APPLICATION 5 – FURTHER EXAMPLES

- Explore activities “How is your water?” and “Who’s the strongest?”
- Take a careful look of the algorithm and code lines used in each activity.

Notes:

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THANKS FOR JOINING US!