

Testing the sensors

Section Euro

STI GEM

Choose a Target

18E8390

18F8410 18F8490 18F8527 18F8622 18F8627

18F8722 ECIO-28

ECIO-40

?

Choose a target for this flowchart

R

PICmicros

Cancel

Run the software

Run Flowcode V4 by double clicking on this icon. Select "Create a new Flowcode flowchart..." on the opening screen and click "OK".

Select to device

Select the "Formula Flowcode Buggy" as the target device and click "OK" (see screenshot above).

Click the "Formula Flowcode" component icon:

Testing the Infra Red sensors (IR)

<u>The goal</u>: in this activity you will test the IR sensors to determine the value you need for the robot to know if there is a wall in front of it and if there is a wall on its side.

The program you will write will display the value of the IR sensor on the LEDs. The sensor gives a value between 0 and 255. This program will display this value on the LEDs as a pattern representing the binary equivalent of this value.

| 2° 2° 2° 2° 2° 2° 2° 18 2° 2° 18 2° 2° 18 2° 2° 18 2° 18 2° 18 2° 18 2° | |
|--|---|
| OOOOOO = 0b00000111 = 0x07 = 4+2+1 = 7 | |
| •••••••••••••••••••••••••••••••••••••• | |
| OOOOO = 0b11000011 = 0xC3 = 128+64+2+1 = 195 | |
| OOOOO = 0b01110110 = 0x76 = 64+32+16+4+2 = 11 | 8 |
| 7 6 5 4 3 2 1 0 | |

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|-------------------------------|-----------------------|--------------------------------|--|
| | | | ITTELLET I I I I I I I I I I I I I I I I I I I |
| Propriétés : Routi | ine Composant | | |
| Nom Affiché : | Appel de la Routine (| Composant | |
| Composant : | | Macro : | |
| ADC(0) | e(0) | ReadLDR CheckIR | <u> </u> |
| | | ReadIRSensor ReadLineSensor | |
| Paramètres : sensor(OCTET) | | | |
| | | | Variables |
| Valeur Retour :(El | NTIER) | | |
| | | • | Variables |
| ? | | OK | Annuler |



ΟK

If you put an "L" in the box parameter then the value of the <u>left</u> sensor will be read. If you put an "R" in the box parameter then the value of the <u>right</u> sensor will be read. If you put an "F" in the box parameter then the value of the **front** sensor will be read.

| Number of your robot: | |
|--------------------------|--|
| Appropriate left value: | |
| Appropriate right value: | |
| Appropriate front value: | |

Testing the line follower sensors

Do the same to test the line follower sensor and write your conclusion in the box: