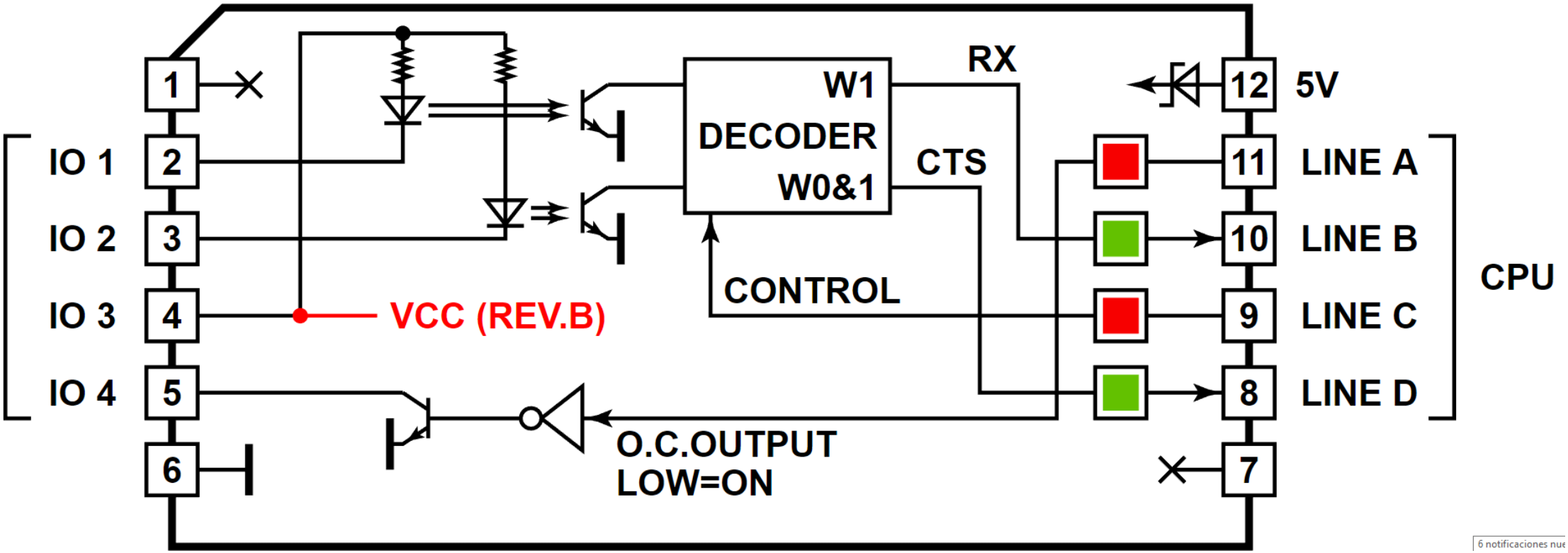
#08

M1S

Wiegand and clock/data reader port

Wiegand and clock/data reader port plus one open collector output.



Form: M1S

Power:

- 5V - Consumes 20mA

Mates with: #19, #20, #21

Details

Our programmable devices (such as *TPP2* and *TPP3*) have the unique ability to process input from card readers with clock/data or Wiegand interface. This is achieved through the ser. object running in the clock/data or Wiegand mode. Tibbit #08 implements necessary hardware.

In order to be able to process card reader output, this Tibbit has to be connected to the RX and CTS lines of the CPU's UART (see *[SER]*).

When connecting a clock/data reader, wire the clock line to IO1, and the data line to IO2. Set the CONTROL line to LOW — this selects the clock/data mode for the Tibbit's hardware.

When connecting a Wiegand reader, wire the W0 line to IO1, W1 line -- to IO2. Set the CONTROL line to HIGH to select the Wiegand mode.

Most card readers with clock/data and Wiegand interfaces have open collector outputs. Such outputs require pull-up resistors on the receiving end. On this Tibbit, the role of pull-up resistors is played by opto-LEDs and resistors connected in series. The original version of this Tibbit required 5V power to be connected to the IO line 3. On the new Tibbit #08 of the **revision B**, line IO3 is connected to the internal 5V power (the diagram above shows this modification in **red color**). This modification spares you from the necessity to provide external power for pull-ups. You can even use IO3 line to power your reader (if the reader can run on 5V and your TPS system has enough spare power). **Revision B** devices are marked by a small round sticker with letter "B". The sticker is on the side of the Tibbit.

Tibbit #08 has a standalone open collector output controlled through LINE D. Set LINE D LOW to open the transistor. When left unconnected, the line defaults to HIGH (hence, the transistor is closed).

Combine this Tibbit with terminal block devices -- #20 (nine terminal blocks) or #21 (four terminal blocks). Note that #21 doesn't provide the ground line, and using this Tibbit requires the ground line between the reader and your system. Hence, if you use Tibbit #21 you will need to "steal" the ground somewhere else.

Check out the Tibbit #11 (four open collector outputs) if you are looking to emulate clock/data or Wiegand reader output (that is, of you want to turn your device into a reader that outputs data).

LEDs

There are four LEDs: two red and two green. Red LEDs are connected to the CONTROL and OC line. Green LEDs are connected to W0&1 and W1 lines. All LEDs are buffered (with logic gates) and light up for the LOW state of control lines.

9F-3, No.31, Lane 169, Kang-Ning St., Hsi-Chih, New Taipei City, Taiwan 22180

Phone: 886-2-26925443 Email: sales@tibbo.com Web: tibbo.com