GPIO Pulse Input

Version 1.0

Date:09/08/2021

SGS

Overview

The Pulse input is designed to interface the Compac dispenser to a third party meter. The Pulse input can be up to 35 VDC.
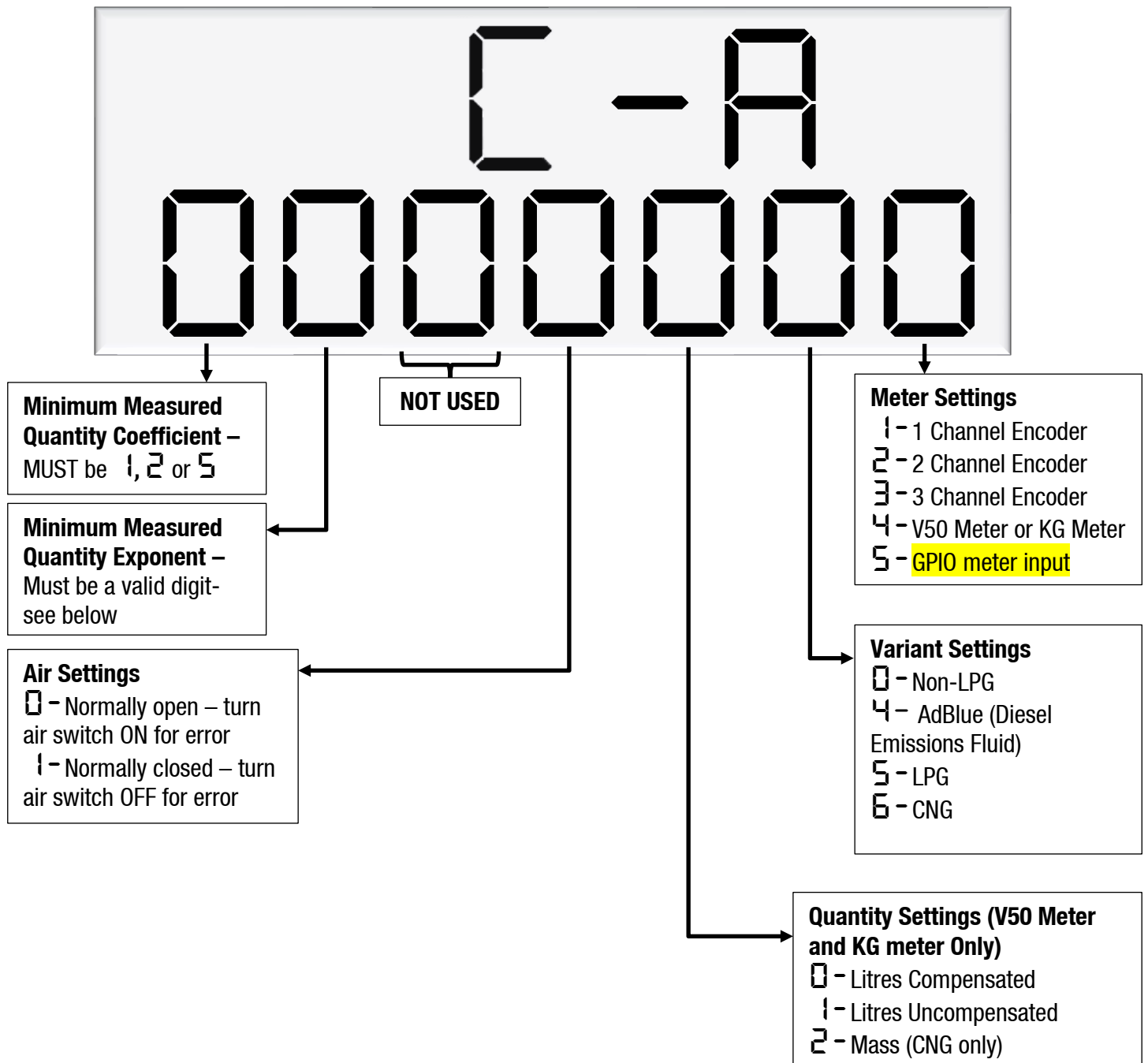
There are 2 settings that need to be set to enable the C5000 for third party meter input. The first is in the CA/CB. The CA/CB needs to be set to CA XXXXXX5.

The Pulse input can be configure for the following meter types

- Single channel
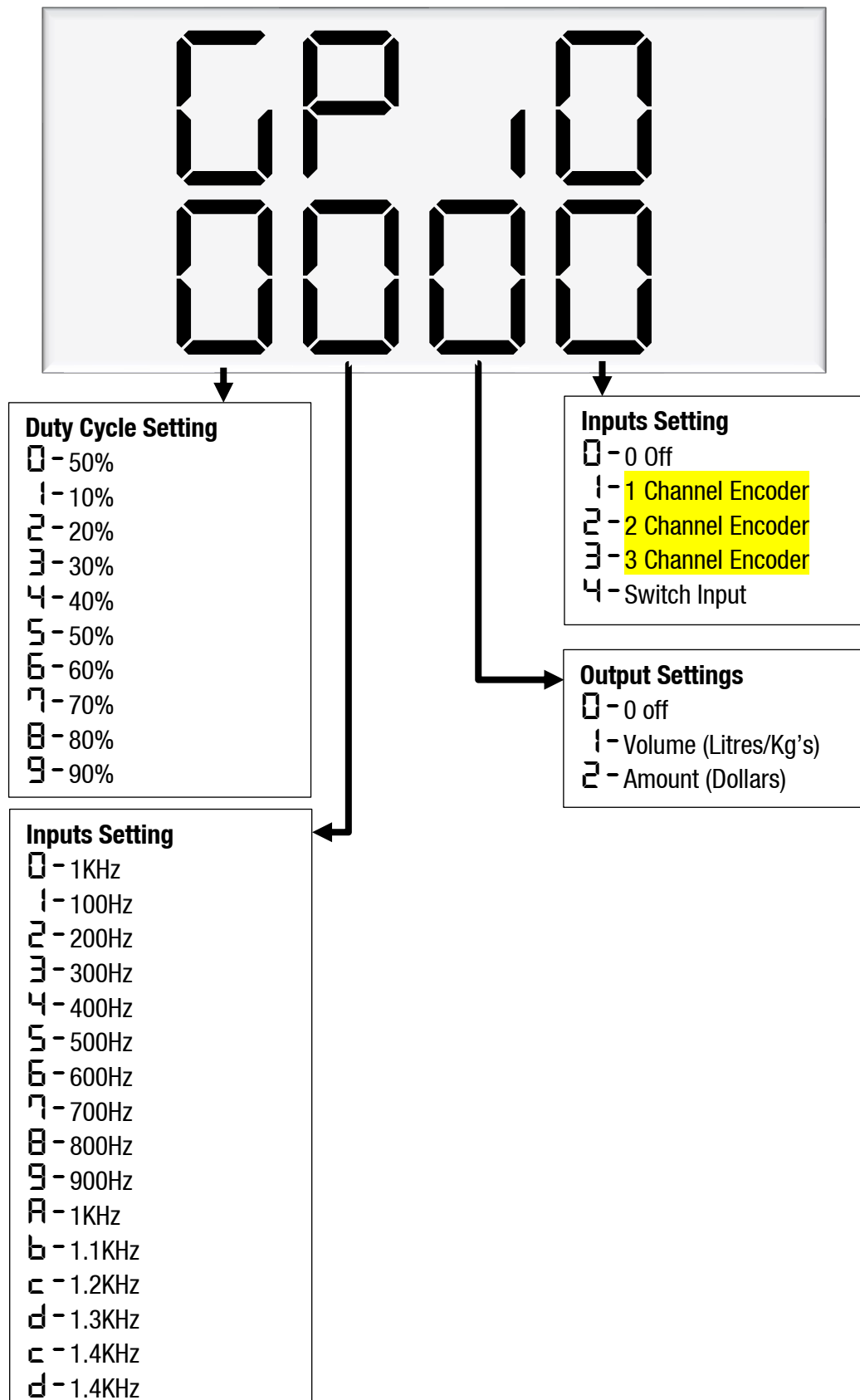- Two channel quadrature
- Three channel

CA/CB Setting for third party input

To tell the C5000 to read meter pulses from the GPIO board you need to set the CA/CB to XXXXXX5. This 5 disables the meter input on the K Factor board and tells the C5000 to read pulses from the GPIO board.

NOT USED

Minimum Measured Quantity Coefficient – MUST be 1, 2 or 5

Minimum Measured Quantity Exponent – Must be a valid digit- see below

Air Settings
0 – Normally open – turn air switch ON for error
1 – Normally closed – turn air switch OFF for error

Meter Settings
1 – 1 Channel Encoder
2 – 2 Channel Encoder
3 – 3 Channel Encoder
4 – V50 Meter or KG Meter
5 – GPIO meter input

Variant Settings
0 – Non-LPG
4 – AdBlue (Diesel Emissions Fluid)
5 – LPG
6 – CNG

Quantity Settings (V50 Meter and KG meter Only)
0 – Litres Compensated
1 – Litres Uncompensated
2 – Mass (CNG only)

GPIO K Factor settings

The GPIO settings in the K factor board is where you set the GPIO specific settings. The below figure shows details of all the options available for each setting.

Duty Cycle Setting

0 – 50%
1 – 10%
2 – 20%
3 – 30%
4 – 40%
5 – 50%
6 – 60%
7 – 70%
8 – 80%
9 – 90%

Inputs Setting

0 – 0 Off
1 – 1 Channel Encoder
2 – 2 Channel Encoder
3 – 3 Channel Encoder
4 – Switch Input

Output Settings

0 – 0 off
1 – Volume (Litres/Kg's)
2 – Amount (Dollars)

Inputs Setting

0 – 1KHz
1 – 100Hz
2 – 200Hz
3 – 300Hz
4 – 400Hz
5 – 500Hz
6 – 600Hz
7 – 700Hz
8 – 800Hz
9 – 900Hz
A – 1KHz
b – 1.1KHz
c – 1.2KHz
d – 1.3KHz
c – 1.4KHz
d – 1.4KHz

Third party meter wiring

There are different types of meters with different numbers of channels. The below is the meter type and how to wire them to the GPIO Board.

When connecting to a reed switch type meter you connect the GPIO 5-volt to the reed switch and then all 3 inputs to the other terminal on the meter.
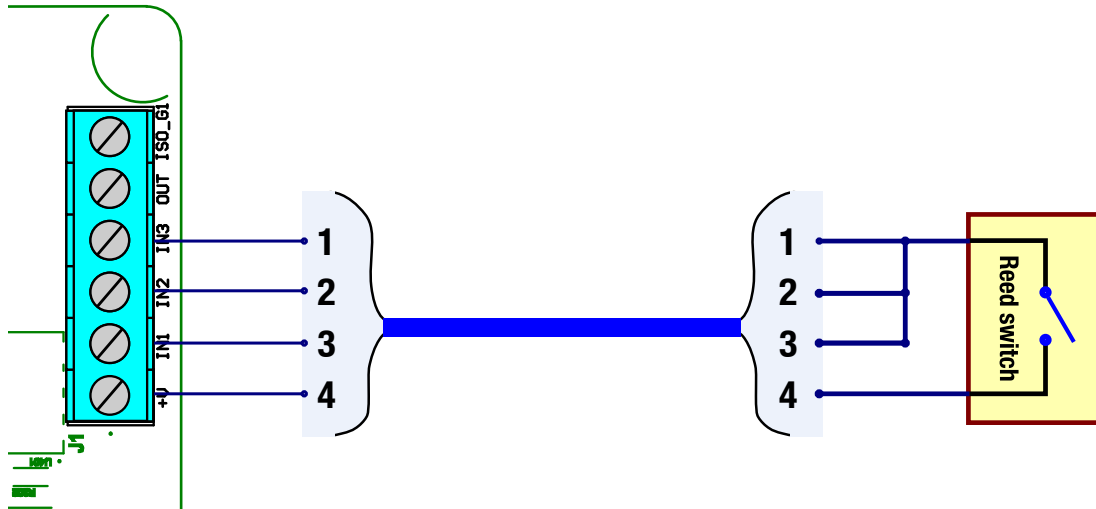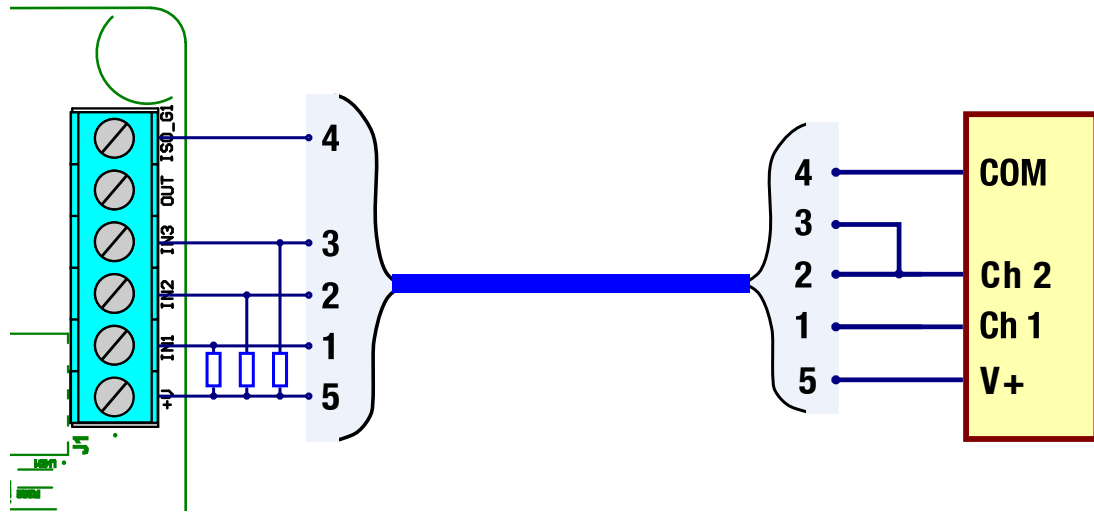

Single channel Reed Switch meter

The two Channel 12 volt meter is not powered from the GPIO Board, instead it is powered by its own power supply. Depending on the meter, pullup resistors may need to be added.
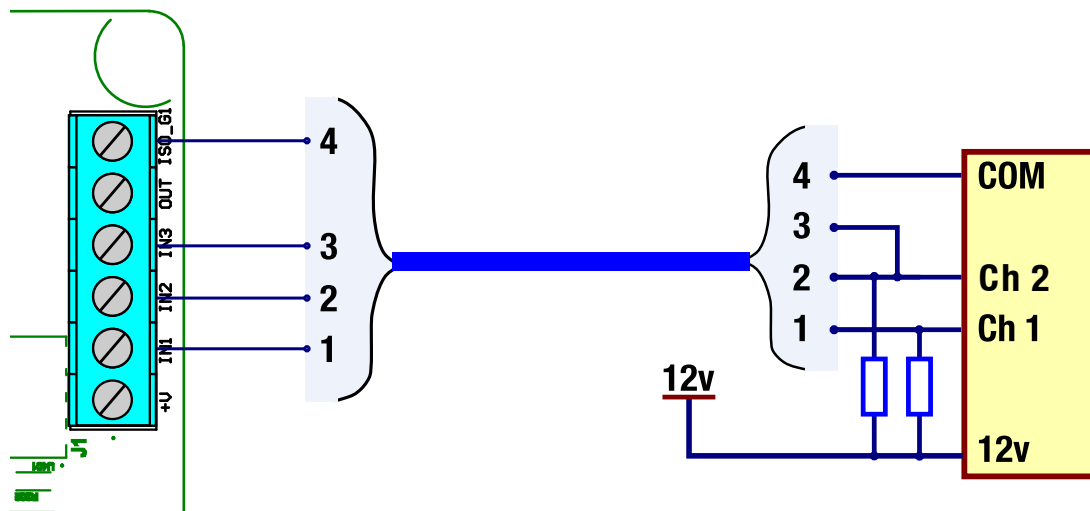
12-volt two channel meter

The 2 channel 5 volt meter is powered from the GPIO board. This means that the meter doesn't need power from an external source. Depending on the meter pullup resistors may need to be added. For 5 volts the pull up resister should be 820Ω

5 volt two Channel meter