**Divisor de**

**Corriente**

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Resumen— Esta práctica me enseñó a realizar un divisor de corriente alimentado por una fuente de 12V el cual utilicé resistencias para hacer que circulé los dos últimos dígitos de mi matrícula 2023-1283 como la corriente del circuito (8.3mA) y que en RL halla un octavo 1/8 de la corriente del circuito. También se hicieron los cálculos correspondientes para obtener el voltaje y la corriente en cada una de las resistencias.

*Abstract*— This practice taught me how to make a current divider powered by a 12V source which I used resistors to make the last two digits of my license plate 2023-1283 circulate as the circuit current (8.3mA) and which in RL is one eighth 1/8 of the circuit current. The corresponding calculations were also made to obtain the voltage and current in each of the resistors.

Keywords—Fuente, voltage, corriente, Resistencia, etx…

1. NTRODUCCIÓN

A continuación, se construirá un divisor de corriente con 3 resistencias de distintos valores Ω y que no sean múltiplo de una ni de la otra, se utilizaran jumpers y una fuente de voltaje de 12v. Los cálculos teóricos de este divisor de corriente también se simularán en los programas "Multisim" y "Tinkercad". Para tener una mejor comprensión del funcionamiento del divisor de divisor de corriente, se anexarán imágenes y una tabla con valores que contiene los resultados reales y calculados.

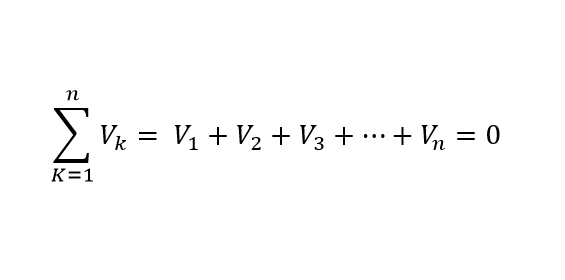
II. MARCO TEORICO

1. Divisor de Corriente.

¿Qué es un divisor de corriente? Un divisor de corriente es una configuración presente en circuitos eléctricos que puede fragmentar la corriente eléctrica de una fuente entre diferentes resistencias o impedancias conectadas en paralelo. El divisor de corriente satisface la ley de corriente de Kirchhoff (LCK).

B) Ley corriente de Kirchhoff

¿Qué nos dice la ley de corriente de Kirchhoff? En cualquier nodo, la suma de las corrientes que entran en ese nodo es igual a la suma de las corrientes que salen. De forma equivalente, la suma de todas las corrientes que pasan por el nodo es igual a cero.



En este divisor de corriente nos tiene que dar una corriente de 83mA ya que estos son los últimos dos digito de mi matricula, también queremos que en RL circule un octavo de la corriente del circuito vamos a utilizar 3 resistencias, 2 en serie y RL en paralelo a una de las otras, así según el homenaje de las resistencias y la formula:

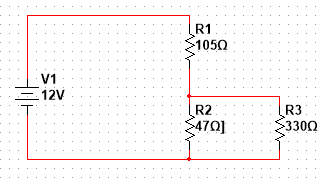
I = V/R

Para encontrar la corriente de RL y asegurarnos de que circule un octavo (1/8) de la corriente total del circuito.

1. Components utilizados:
2. Jumpers.
3. Resistencias de diferentes ohmios.
4. Multimetro.
5. Fuente de 12V.
6. Project Board.

2. Programas de simulación utilizados:

1) Multisin.

El diagrama del circuito a analizar es el siguiente:

El mandato establece que el divisor de corriente que su corriente total debe de ser los últimos dos dígitos de mi matricula que sería 83mA y que la corriente que pasa por RL debe ser igual a un 1/8 de la corriente del circuito.

Primeros calculas la la resistencia total de las 2 resistencia que están paralelo.

RT =

VRL = 41.14 \* 0.083A =3.4V

VR1 = 12V – 3.4V = 8.6V

R1 = = 104

Ahora calculamos la corriente en las resistencias del circuito:

IT : 0.083 A (83mA)

IRL = 0.083 / 8 =

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*a**b* 

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7. M. Young, The Technical Writer’s Handbook. Mill Valley, CA: University Science, 1989.

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