

INGENIERÍA MECATRÓNICA



DI_CERO

DIEGO CERVANTES RODRÍGUEZ

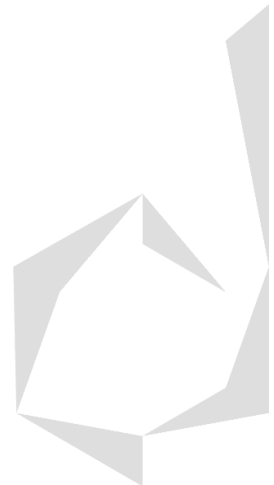
AUTOMATIZACIÓN INDUSTRIAL: PRÁCTICA

ISP SOFT Y COMMGR

3: Funciones Lógicas
Básicas en un PLC

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Desarrollo:

Por medio del programa ISPSOft se realizarán las funciones lógicas básicas utilizando un PLC.

FUNCIONES LÓGICAS BÁSICAS

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1. AND

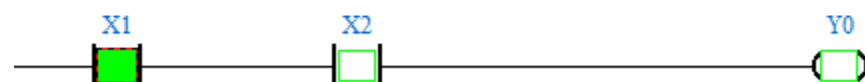
Network 1



Network 1



Network 1

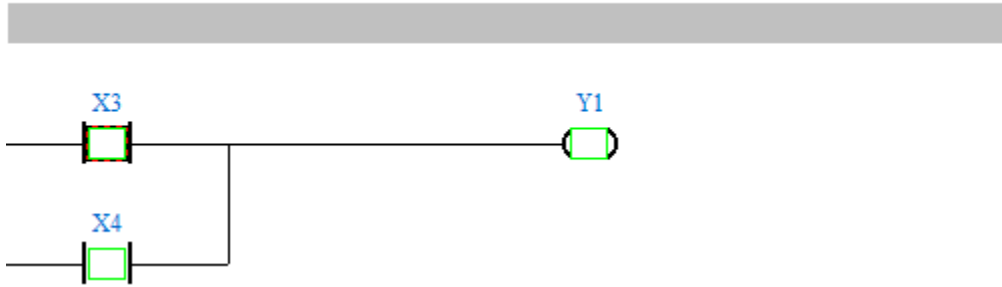


[-] Network 1

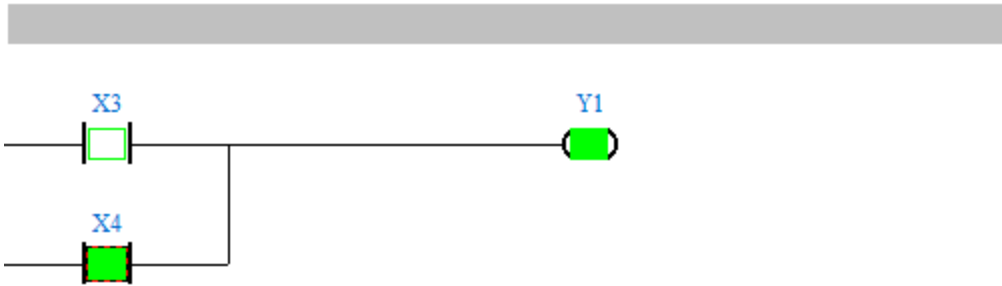


2. OR

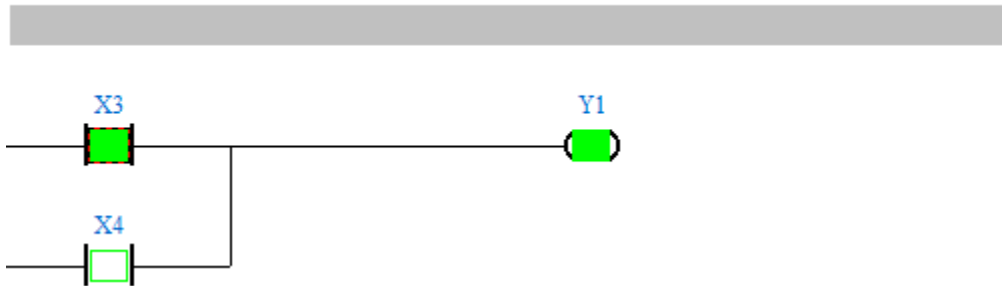
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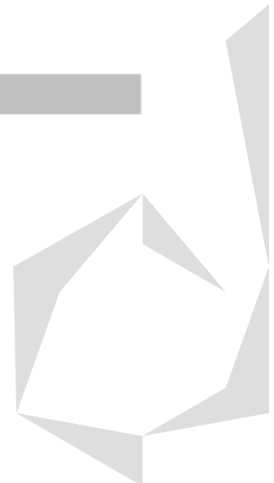
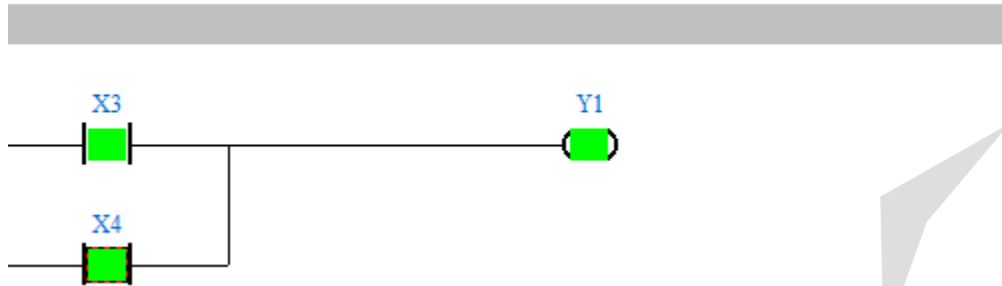
[-] Network 2



[-] Network 2

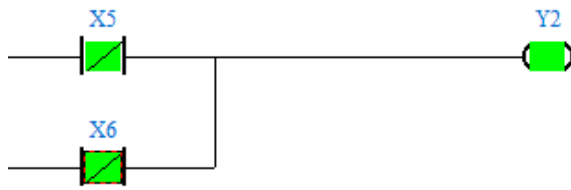


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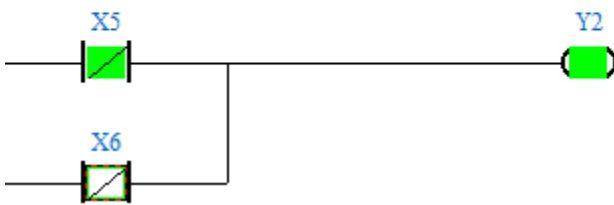


3. NAND

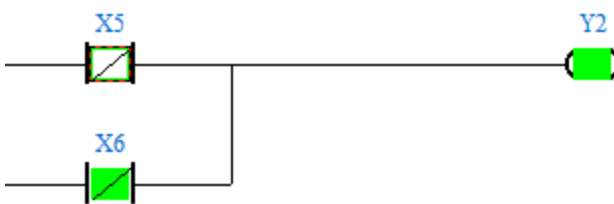
Network 3



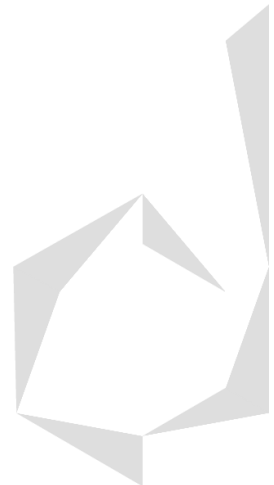
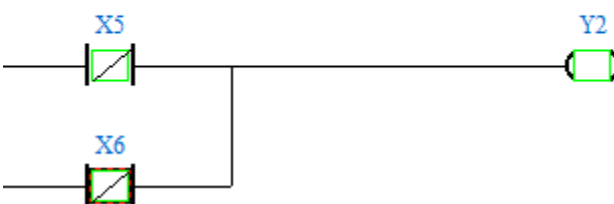
Network 3



Network 3



Network 3

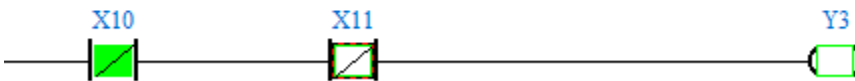


4. NOR

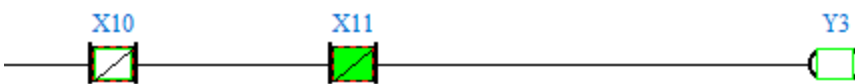
[-] Network 4



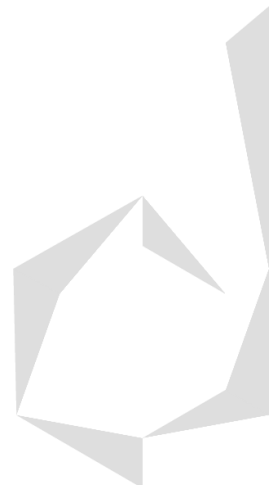
[-] Network 4



[-] Network 4

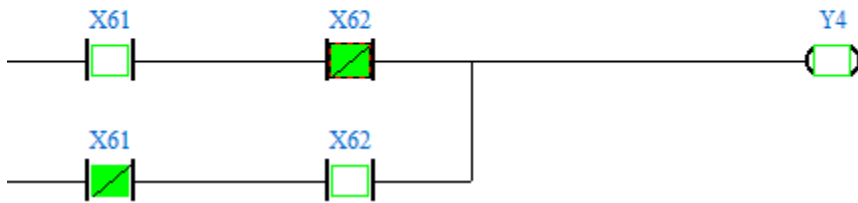


[-] Network 4

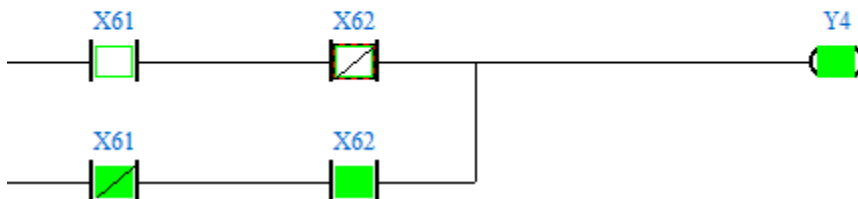


5. XOR

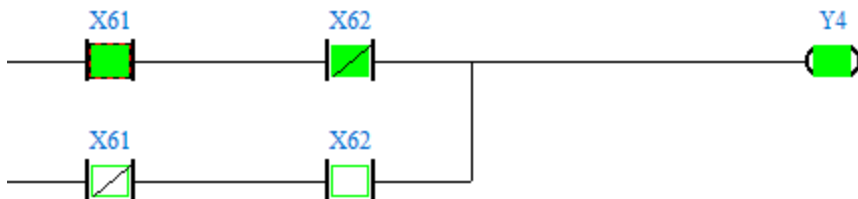
Network 5



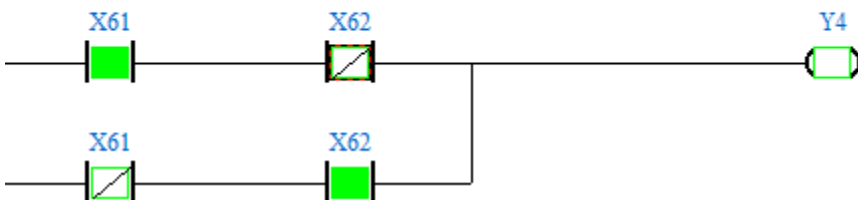
Network 5



Network 5



Network 5



6. Función Compuesta con Tabla de verdad

"Se cuenta con tres botones de pulso y tres lámparas etiquetadas como H1, H2 y H3. Al presionar un botón de pulso, no importa cual, se enciende H1. Al presionar dos botones de pulso, no importa la combinación de botones, se enciende la lámpara H2, al presionar los tres botones

se enciende la lámpara H3 y en caso de no tener ningún botón oprimido, ninguna lámpara deberá encender."

S1	S2	S3	H1, H2, H3
0	0	0	0, 0, 0
0	0	1	1, 0, 0
0	1	0	1, 0, 0
0	1	1	1, 1, 0
1	0	0	1, 0, 0
1	0	1	1, 1, 0
1	1	0	1, 1, 0
1	1	1	1, 1, 1

Resultado:

H1 = S1 OR S2 OR S3

H2 = (S2ANDS3) OR (S1ANDS3) OR (S1ANDS2)

H3 = S1 AND S2 AND S3

