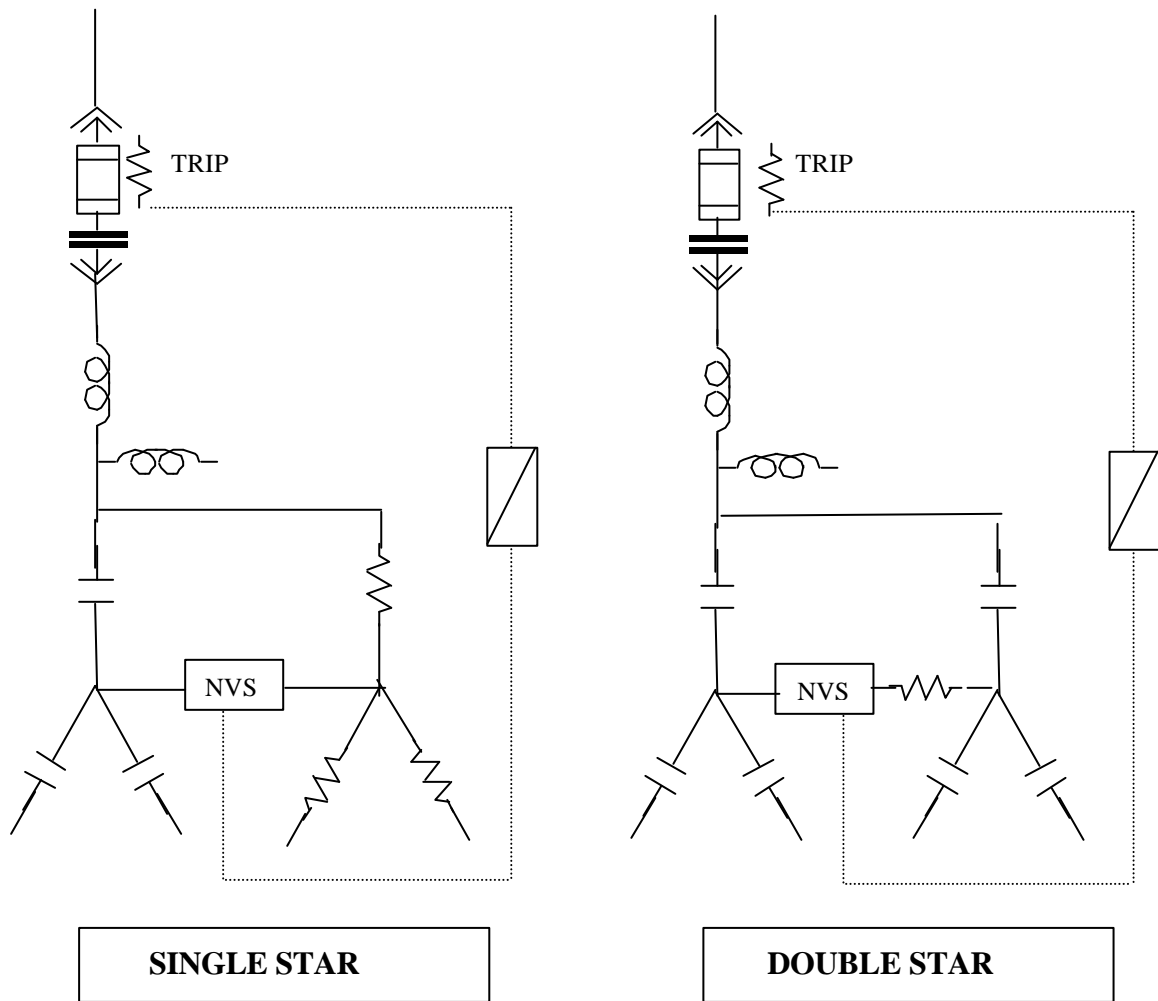


NVS (Neutral Voltage Sensor)

1. NVS

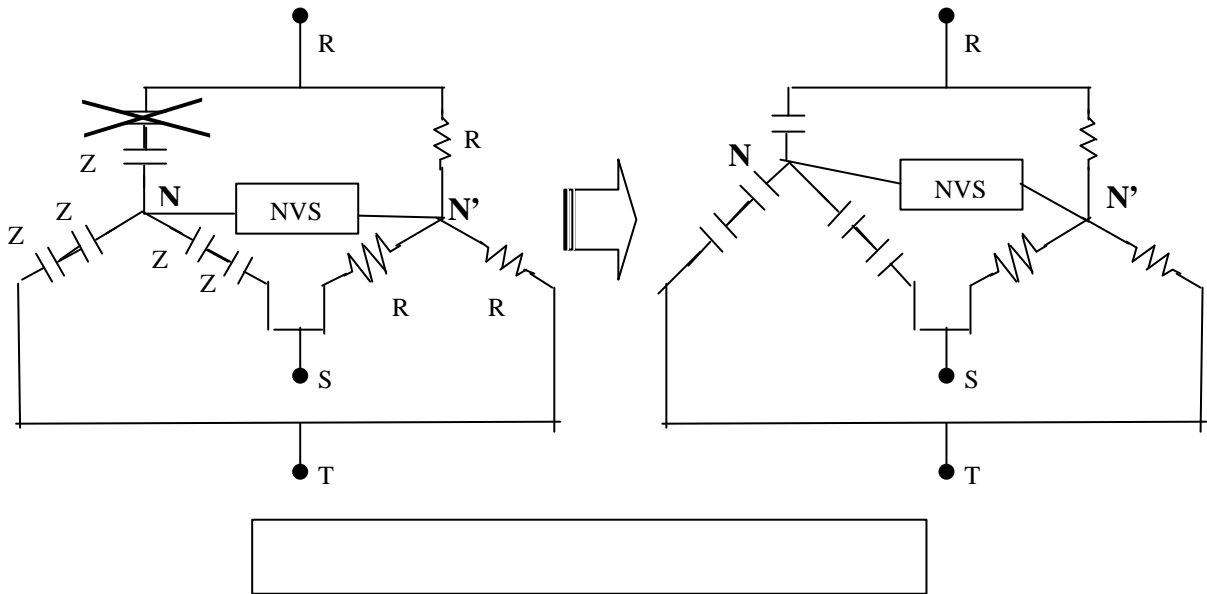
NVS Condenser Bank Condenser Bank
Condenser Bank Condenser Bank
TRIP
가 .

2.



3.

N-N 가 0 V .
(30V) N-N 가
N 가 N-N 가
NVS 가 TRIP



2 가 , 6600V
N-N
(NVS) 950V 가 .

* N NODE 0 (KIRCHHOFF
(KCL))

$$I_R + I_S + I_T = 0$$

$$\frac{V_R - V_n}{Z} + \frac{V_S - V_n}{2Z} + \frac{V_T - V_n}{2Z} = 0$$

(V_S, V_T V_R 120 , 240)

$$\frac{V\angle 0^\circ - V_n}{Z} + \frac{V\angle 120^\circ - V_n}{2Z} + \frac{V\angle -120^\circ - V_n}{2Z} = 0$$

$$2V\angle 0^\circ - 2V_n + V\angle 120^\circ - V_n + V\angle -120^\circ - V_n = 0$$

$$4V_n = V\angle 0^\circ$$

$$V_n = \frac{V\angle 0^\circ}{4} = \frac{V_L/\sqrt{3}}{4} = \frac{6600/\sqrt{3}}{4} = 952.6 [V]$$

가

(2 1 가 1/2,
 2 , 4 1 가
 1/4, 4 가)

$(N-N') \quad V_n = \frac{V}{3(S-1)+1}$		
Vn :		(N-N')
S :	(6600V	2)
V :		

4. NVS

가.
 NVS (-5%
 ~ +10%) N-N'
 250V ± 10% Setting .
 NVS 가 ,
 NVS TEST 가 가 .

 NVS (250V)

$$I_R + I_S + I_T = 0$$

가 Xz ,

$$\frac{V_R - V_n}{xZ} + \frac{V_S - V_n}{Z} + \frac{V_T - V_n}{Z} = 0$$

$$\frac{1}{x}(V_R - V) + (V_S - V) + (V_T - V) = 0$$

$$\left(\frac{1}{x} - 1\right)V_R = \left(\frac{1}{x} + 2\right)V_n$$

$$V_R + V_S + V_T = 0$$

$$(1 + 2x)V_n = (1 - x)V_R$$

** NVS (Vn) 250V (V_R = 6600V / 3 = 3810V)

$$(1 + 2x) 250V = (1 - x) 3810V$$

$$x = 0.826$$

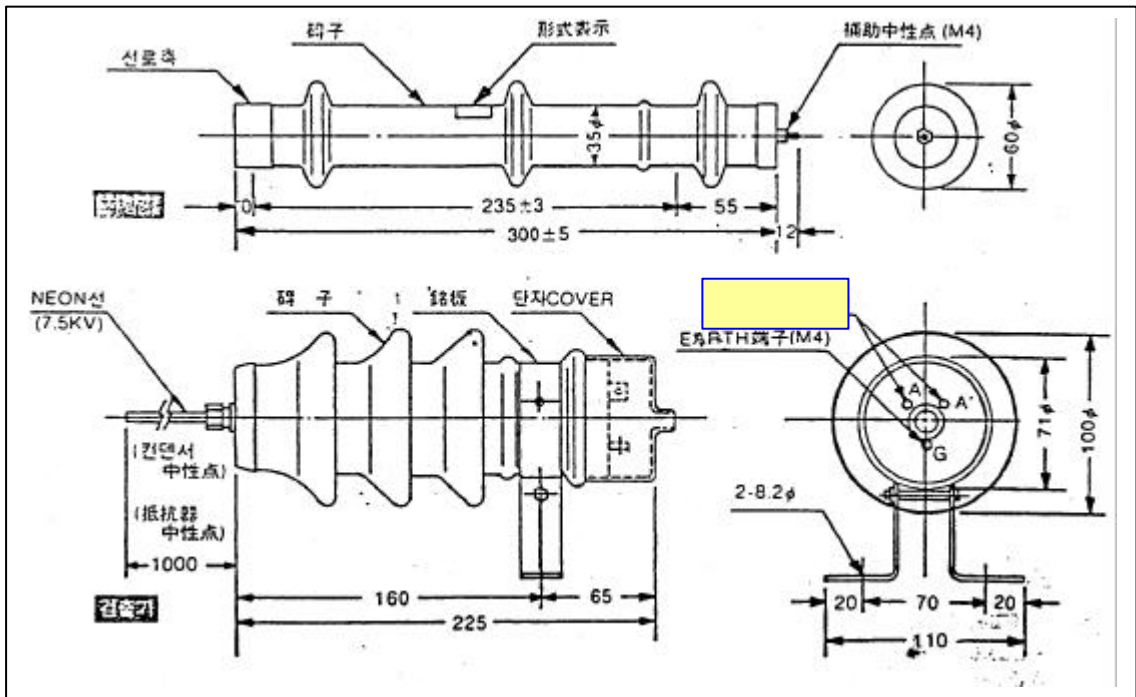
30μF : 30 / 0.826 = 36.3 μF NVS 가 .
 82.6 % 가

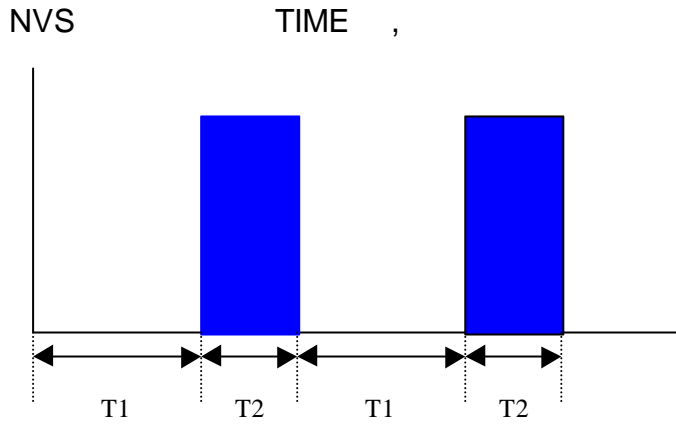
NVS 가 가
21% 가 . (:
)

NVS

NVS , NVS 가
PULSE TRIP

NVS ,()





가		
	(T1)	(T2)
AC 250V±10%		
AC 950V±10%	1.16 ±20%	0.1
AC 1900V±10%	0.52 ±20%	0.1

가
 PULSE
 가
 TRIP
 N-N'
 가 TRIP
 PULSE TRIP
 PULSE
 가 TRIP