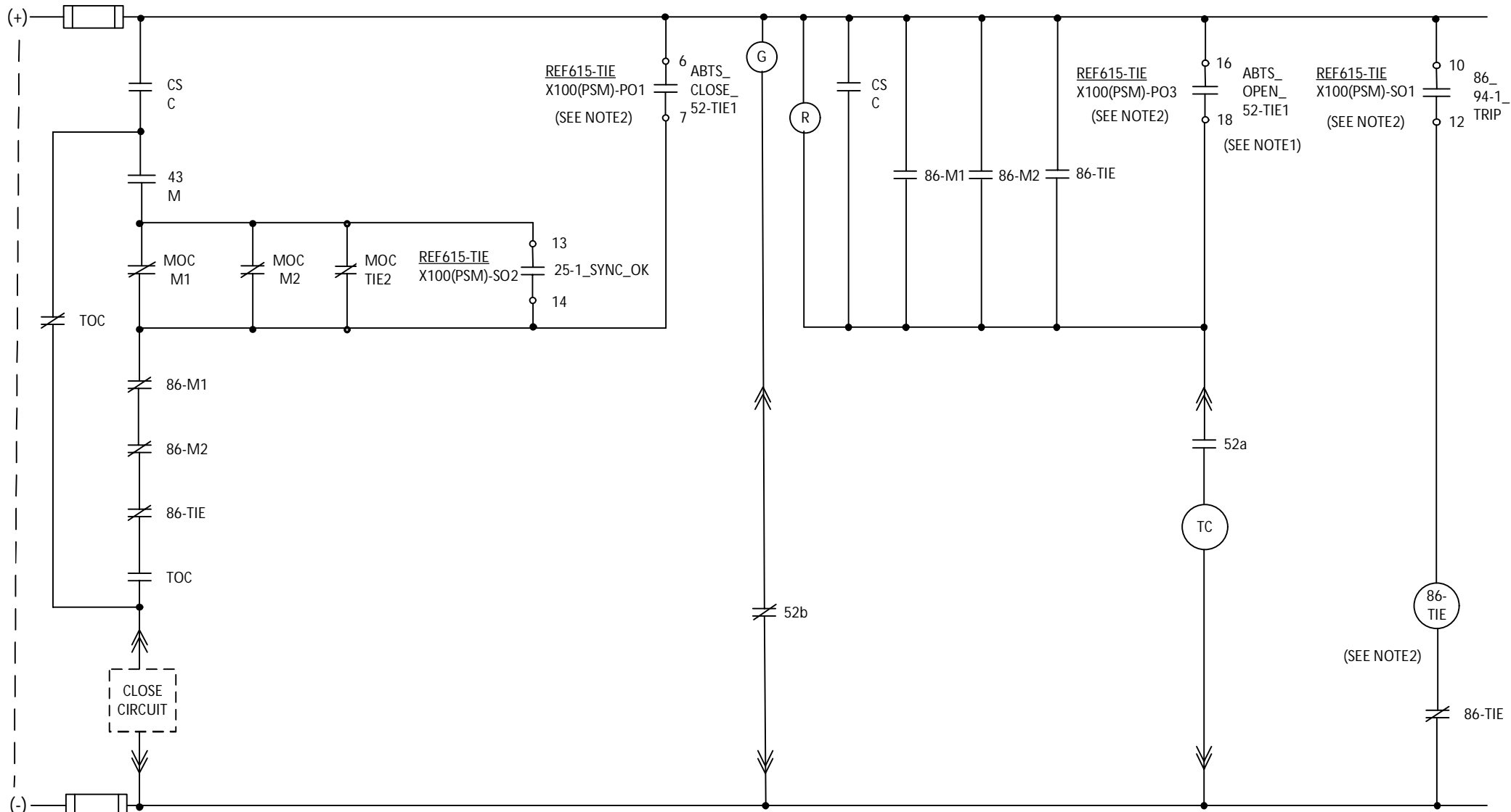


# BREAKER CONTROL SCHEMATIC – TIE1 (M-T-T-M)

Schemes: Universal

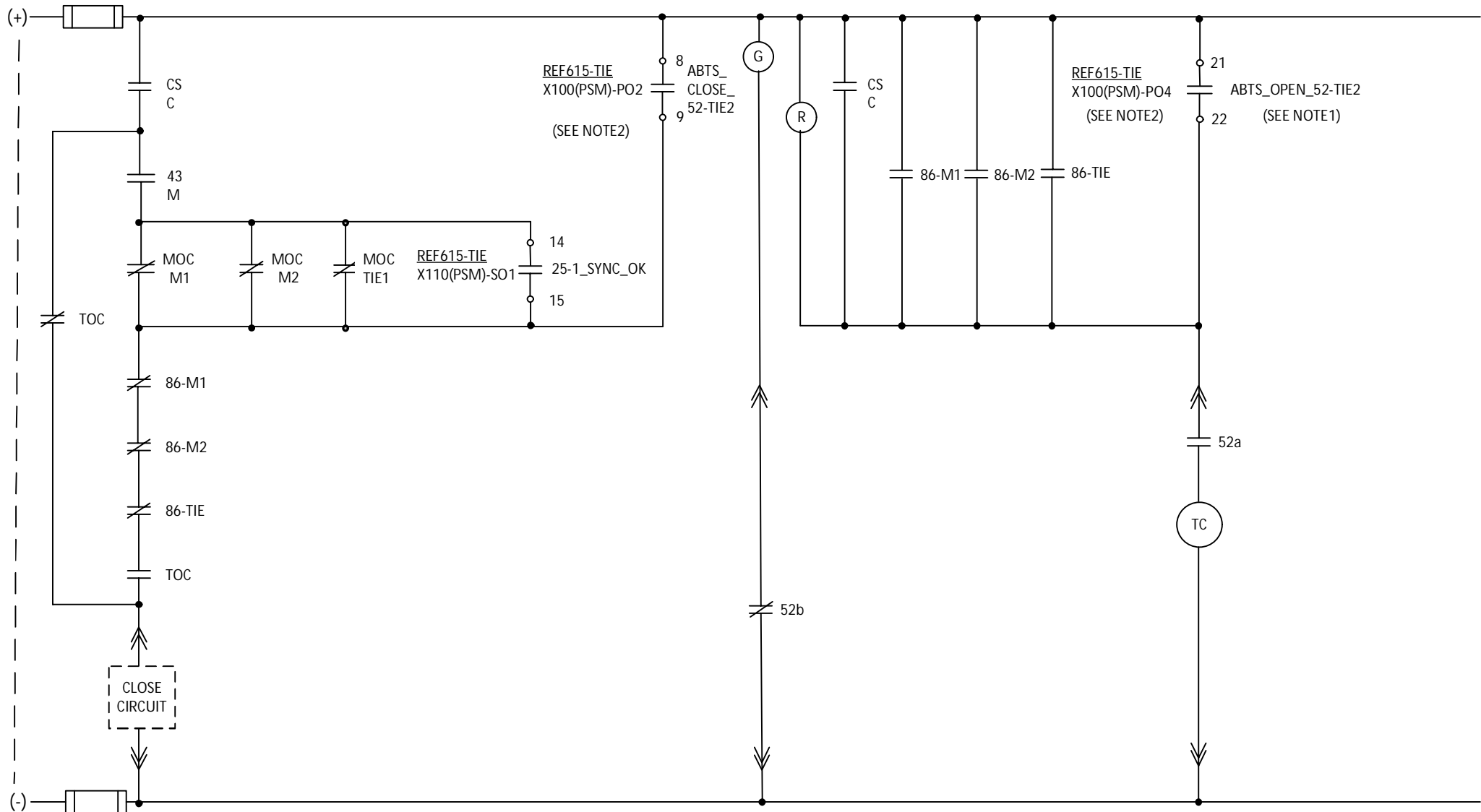


## NOTES:

1. Refer to DC RELAY SCHEMATIC - TIE for Trip Coil Monitoring connections.
2. 'TIE' notation is used to designate lockout relay and trip contacts from 'TIE' relay (REF615-TIE) regardless of number of tie breakers used (ie., TIE( M-T-M) or TIE1/2 (M-T-T-M) since only one relay protecting tie in both schemes.

# BREAKER CONTROL SCHEMATIC – TIE2 (M-T-T-M)

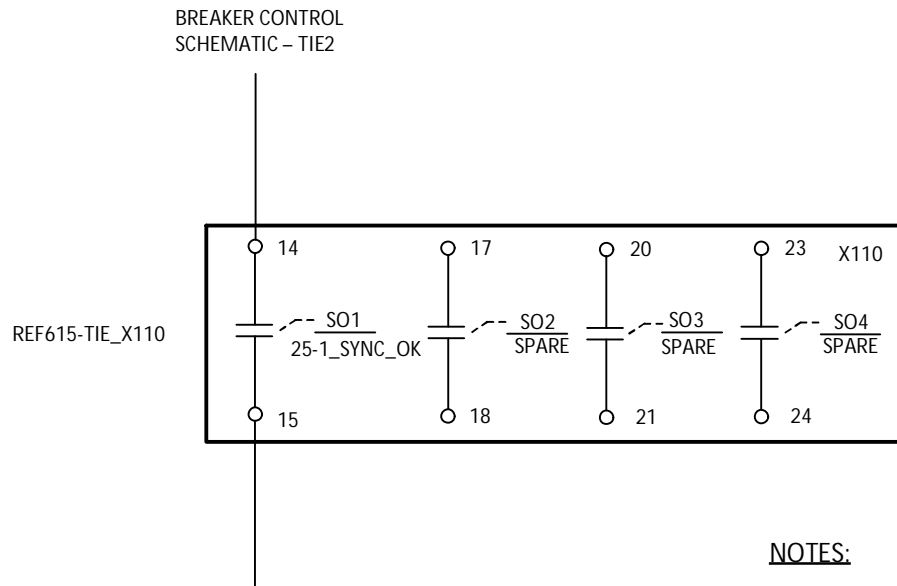
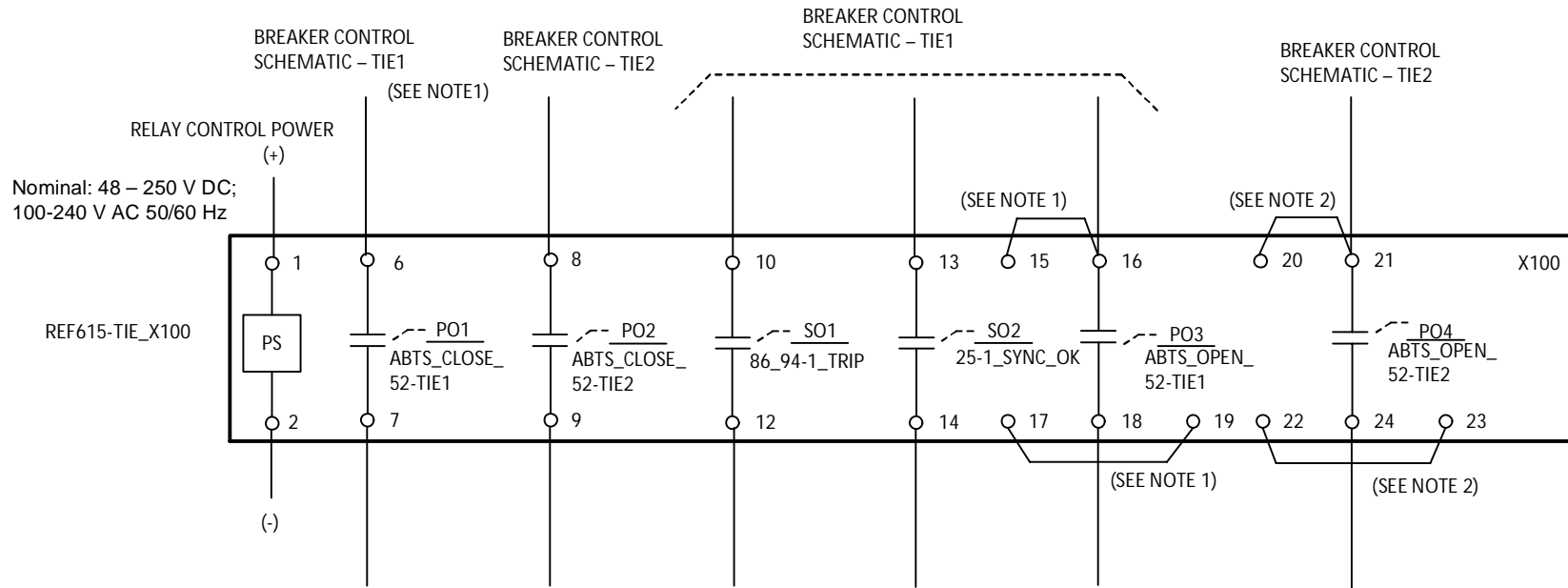
Schemes: Universal



## NOTES:

1. Refer to DC RELAY SCHEMATIC - TIE for Trip Coil Monitoring connections.
2. 'TIE' notation is used to designate lockout relay and trip contacts from 'TIE' relay (REF615-TIE) regardless of number of tie breakers used (ie., TIE( M-T-M) or TIE1/2 (M-T-T-M) since only one relay protecting tie in both schemes.

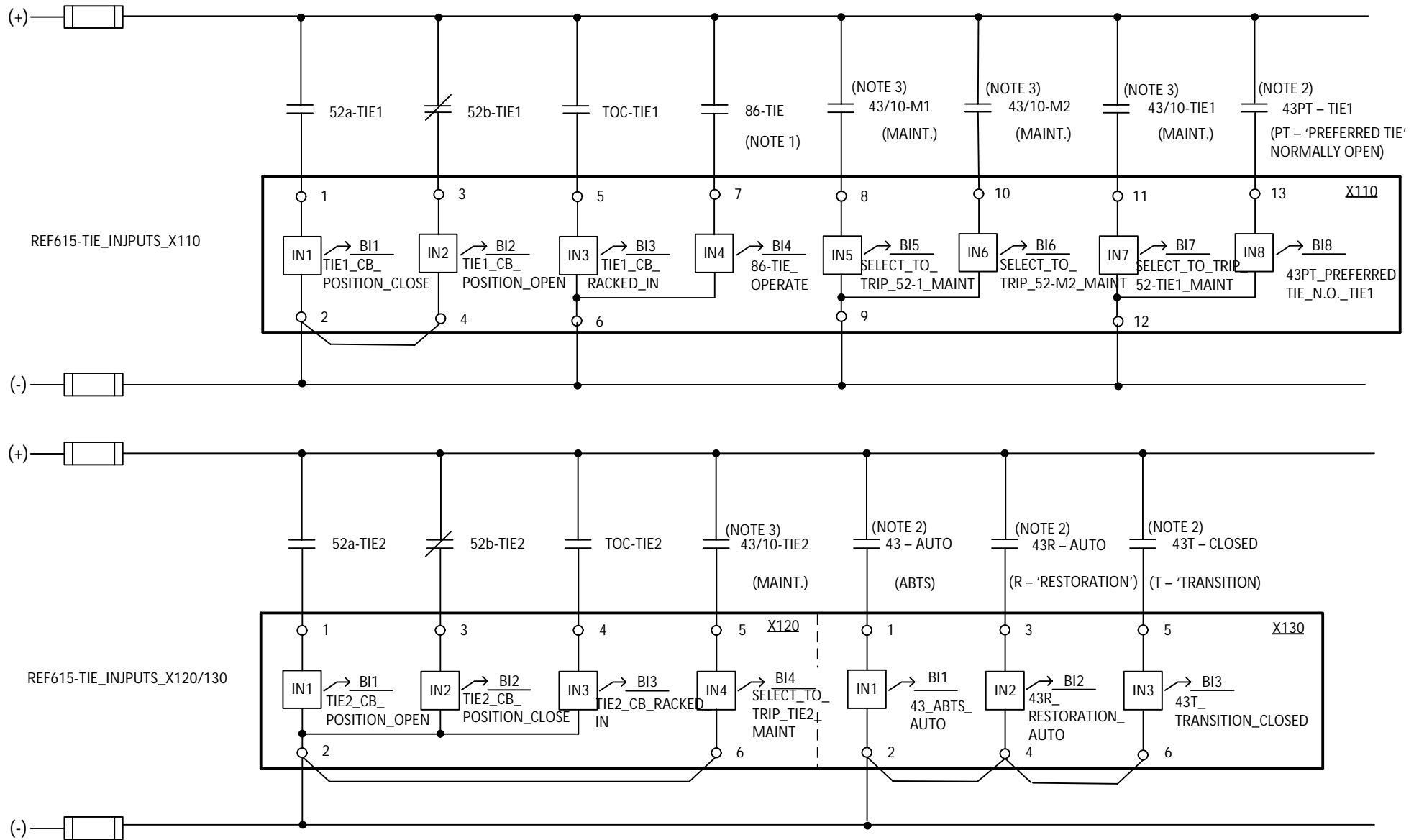
# TEMPLATE FOR DC RELAY SCHEMATIC – TIE (PS & OUTPUTS)



## NOTES:

1. Jumpers connected to PO3 (X100\_15-16, 17-19) used for Trip Coil Monitoring on TIE(1) breaker.
2. Jumpers connected to PO4 (X100\_20-21, 22-23) used for Trip Coil Monitoring on TIE2 breaker.

## TEMPLATE FOR DC RELAY SCHEMATIC – TIE (INPUTS)

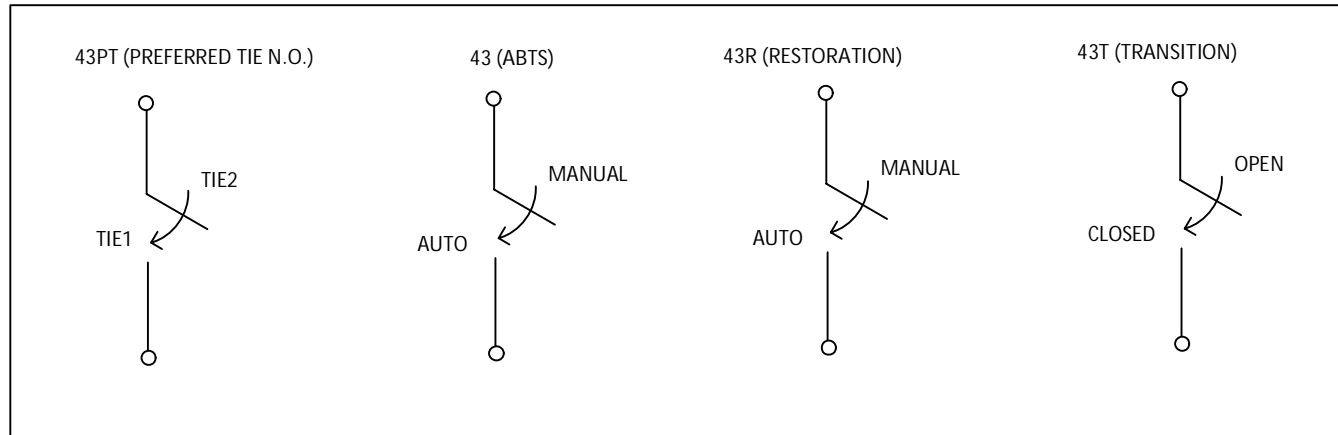


### NOTES:

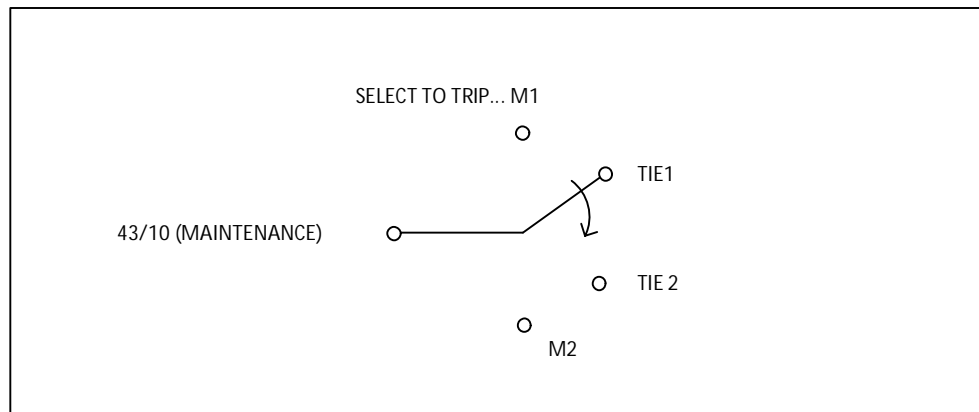
1. 'TIE' notation is used to designate lockout relay and trip contacts from 'TIE' relay (REF615-TIE) regardless of number of tie breakers used (ie., TIE( M-T-M) or TIE1/2 (M-T-T-M) since only one relay protecting tie in both schemes.
2. Two position switch. See SWITCH POSITIONS drawing for other position.
3. Four (M-T-T-M) position switch. See SWITCH POSITIONS drawing

## SWITCH POSITIONS – TIE RELAY INPUTS

NOTE 2 – RELAY INPUTS\_TIE

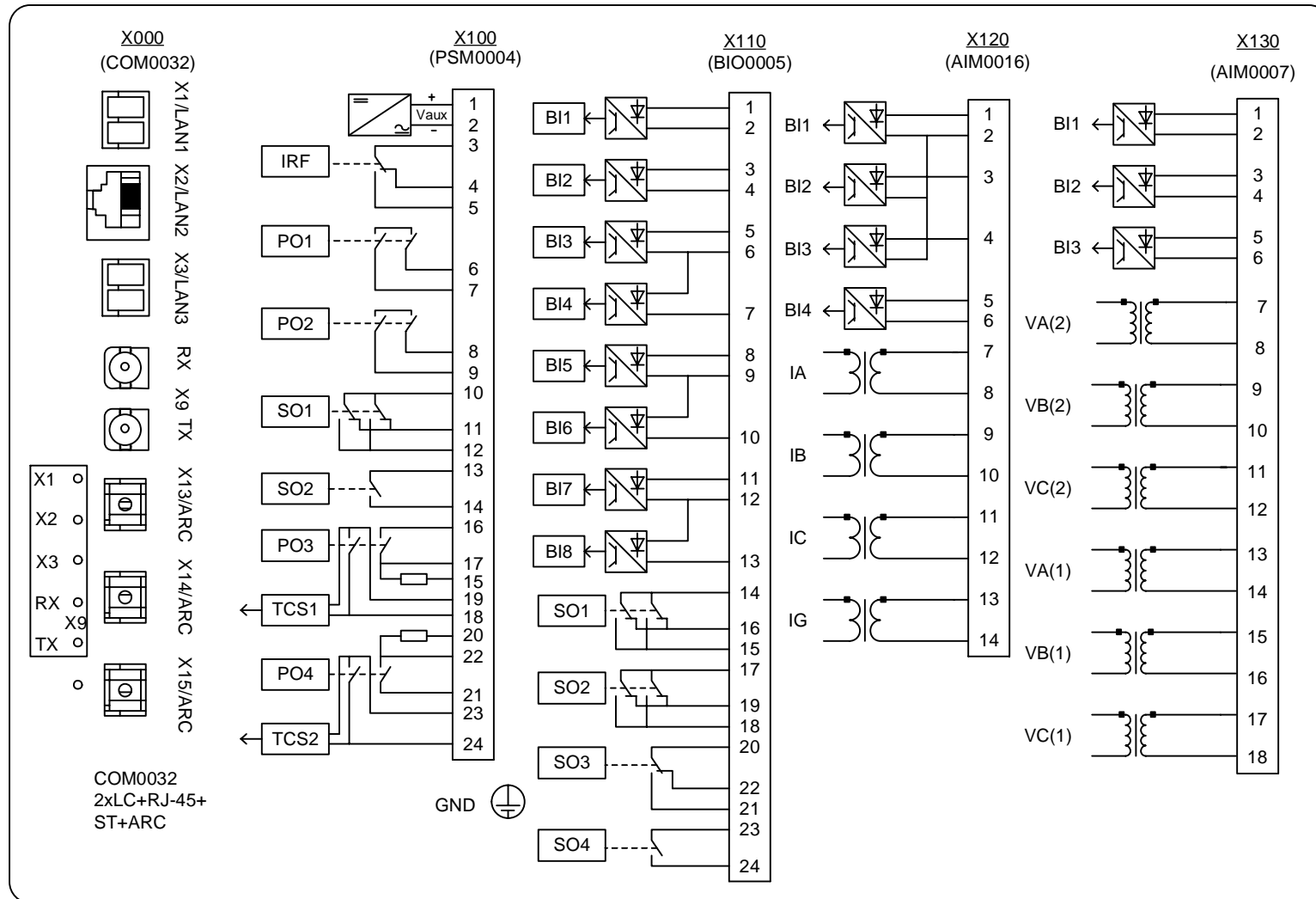


NOTE 3 – RELAY INPUTS\_TIE



# RELAY REAR VIEW HARDWARE AND TERMINAL DIAGRAM - TIE

REF615 'F' - TIE



X000-X1:  
X000-X2:  
X000-X3:  
X000-X9:  
X000-X13:  
X000-X14:  
X000-X15:

X100-1:  
X100-2:  
X100-3:  
X100-4:  
X100-5:  
X100-6:  
X100-7:  
X100-8:  
X100-9:  
X100-10:  
X100-11:  
X100-12:  
X100-13:  
X100-14:  
X100-15:  
X100-16:  
X100-17:  
X100-18:  
X100-19:  
X100-20:  
X100-21:  
X100-22:  
X100-23:  
X100-24:

X110-1:  
X110-2:  
X110-3:  
X110-4:  
X110-5:  
X110-6:  
X110-7:  
X110-8:  
X110-9:  
X110-10:  
X110-11:  
X110-12:  
X110-13:  
X110-14:  
X110-15:  
X110-16:  
X110-17:  
X110-18:  
X110-19:  
X110-20:  
X110-21:  
X110-22:  
X110-23:  
X110-24:

X120-1:  
X120-2:  
X120-3:  
X120-4:  
X120-5:  
X120-6:  
X120-7:  
X120-8:  
X120-9:  
X120-10:  
X120-11:  
X120-12:  
X120-13:  
X120-14:

X130-1:  
X130-2:  
X130-3:  
X130-4:  
X130-5:  
X130-6:  
X130-7:  
X130-8:  
X130-9:  
X130-10:  
X130-11:  
X130-12:  
X130-13:  
X130-14:  
X130-15:  
X130-16:  
X130-17:  
X130-18:

GND: