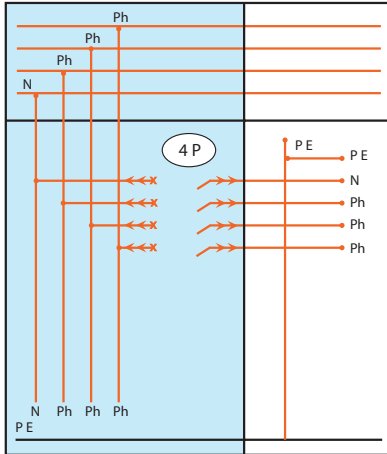


# APPENDIX 6 : TYPE of SYSTEM EARTHING

## 6.1 POWER SUPPLY FORMS and SIZING of THE PROTECTIVE CONDUCTORS

### TN-S

#### TN-S : 1/1 Section

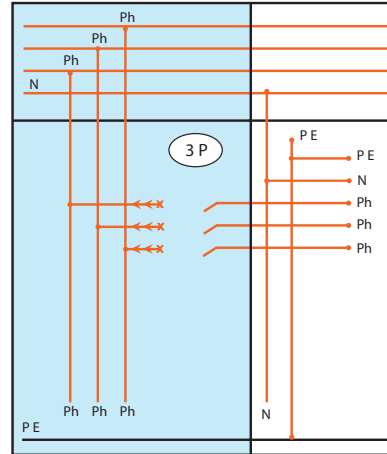


**MAIN BUSBAR :**  
 Phases = Size: A  
 Neutral (N) = A  
 Earthing (PE) = A/2

**VERTICAL BUSBAR :**  
 Phases = Size : B  
 Neutral (N) = B

**CABLING MODULE :**  
 Earthing (PE) = B/2

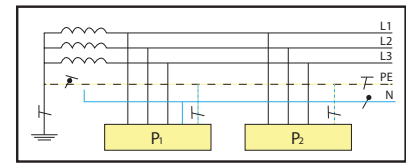
#### TN-S : 1/2 Section



**MAIN BUSBAR :**  
 Phases = Size: A  
 Neutral (N) = A/2  
 Earthing (PE) = A/4

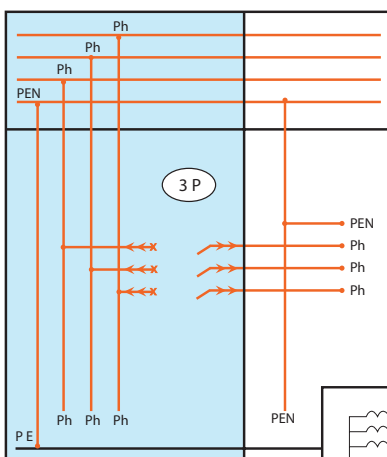
**VERTICAL BUSBAR :**  
 Phases = Size : B

**CABLING MODULE :**  
 Neutral (N) = B/2  
 Earthing (PE) = B/4



### TN-C (PEN)

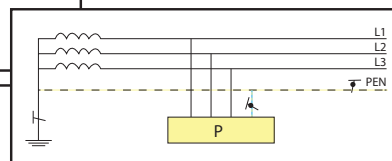
#### TN-C : 1/2 Section



**MAIN BUSBAR :**  
 Phases = Size: A  
 PEN = A/2  
 Earthing (PE) = 1x50/10

**VERTICAL BUSBAR :**  
 Phases = Size : B

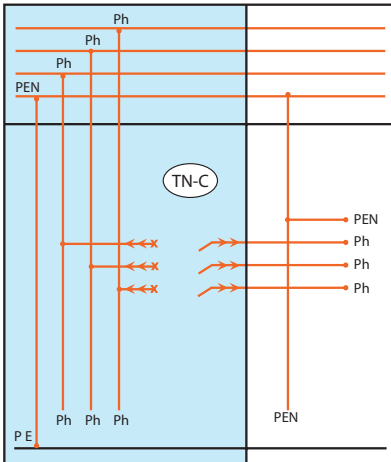
**CABLING MODULE :**  
 PEN = B/2



# APPENDIX 6 : TYPE of SYSTEM EARTHING

## ■ TN-C -S

### TN-C-S : 1/2 Section



#### TN-C Section

##### MAIN BUSBAR :

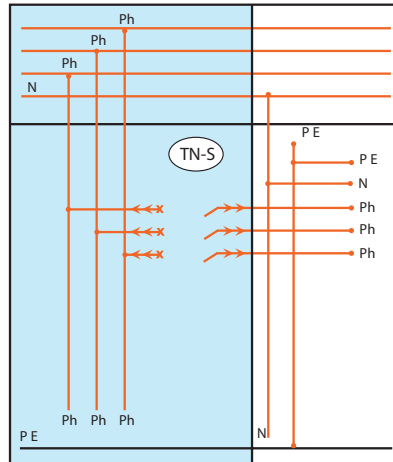
Phases = Size: A  
PEN = A/2  
Earthing (PE) = A/4

##### VERTICAL BUSBAR :

Phases = Size : B

##### CABLING MODULE:

PEN = B/2



#### TN-S Section

##### MAIN BUSBAR :

Phases = Size: A  
PEN = A/2  
Earthing (PE) = A/4

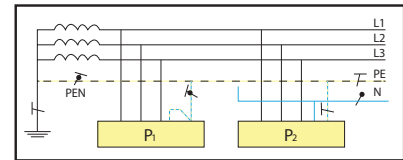
##### VERTICAL BUSBAR :

Phases = Size : C

##### CABLING MODULE:

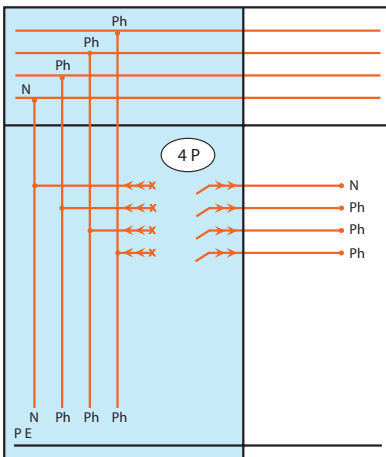
Neutral (N) = C/2  
Earthing (PE) = C/4

- Mixing TN-C / TN-S is possible in a switchboard.
- The horizontal PEN replaces the Neutral (the horizontal busbar is in TN-C).
- PE runs horizontally for earthing of the columns and the vertical PE connection (TN-S).
- PEN / PE link on each incomer (TN-C).



## ■ TT

### TT : 1/1 Section



#### MAIN BUSBAR :

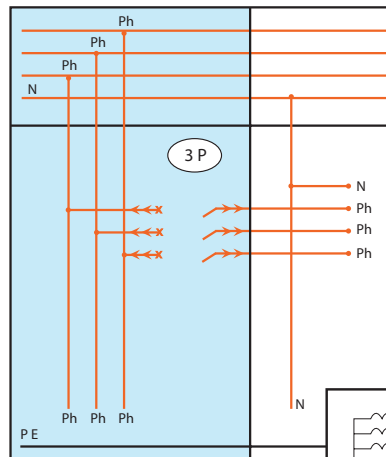
Phases = Size: A  
Neutral (N) = A  
Earthing (PE) = 1x50/10

#### VERTICAL BUSBAR :

Phases = Size : B  
Neutral (N) = B

#### CABLING MODULE:

### TT : 1/2 Section



#### MAIN BUSBAR :

Phases = Size: A  
Neutral (N) = A/2  
Earthing (PE) = 1 x 50/10

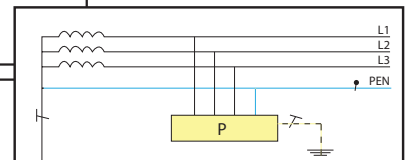
#### VERTICAL BUSBAR :

Phases = Size : B

#### CABLING MODULE:

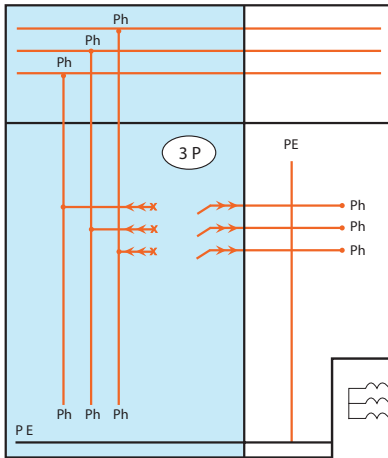
Neutral (N) = B/2

! Main PE Busbar must be direct earthing source connected



# APPENDIX 6 : TYPE of SYSTEM EARTHING

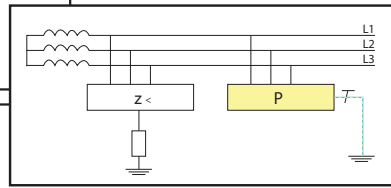
## ■ IT



**MAIN BUSBAR :**  
Phases = Size: A  
Earthing (PE) = A/4

**VERTICAL BUSBAR :**  
Phases = Size : B

**CABLING MODULE:**  
Earthing (PE) = B/4



! Main PE Busbar must be direct earthing source connected