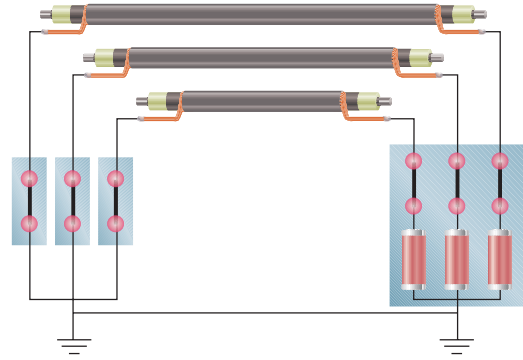


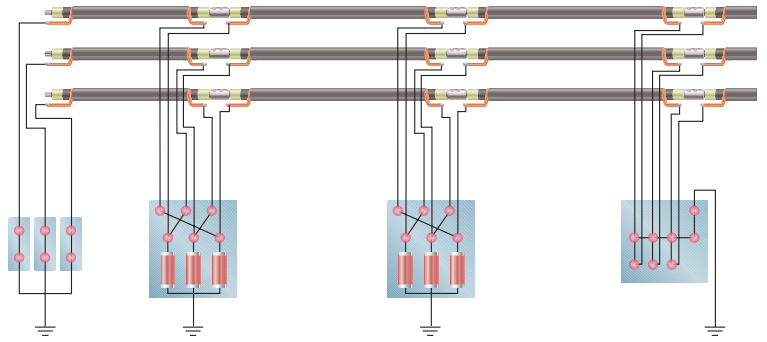
SINGLE POINT EARTHING

On relatively short cable sections the cable sheaths are solidly bonded together and earthed at one position. The sheaths of the three cable sections are connected and grounded at one point only. At all other points, there will be a voltage between sheath and ground that will be at its maximum at the farthest point from the ground bond. Since there is no closed sheath circuit, current does not flow along the sheaths and no sheath circulation current loss occurs.



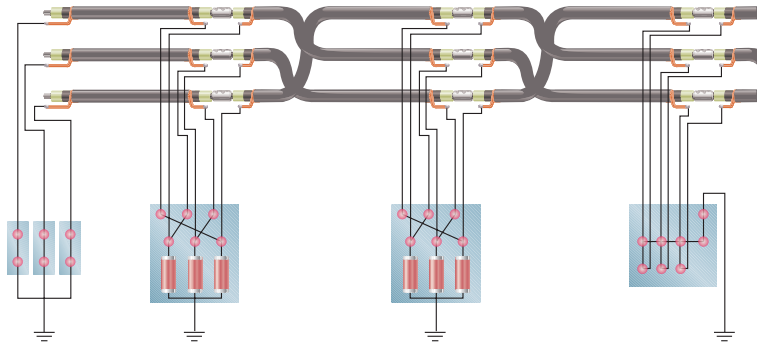
CROSS BONDING

The cable route is sectionalized into equal lengths. The sections are cross connected to neutralize the induced voltages. The phase sum of the introduced voltages will be zero and hence there will be no circulating currents when the cable laying is symmetrical.



CROSS BONDING AND TRANSPOSITION

For cable laying in unsymmetrical formations the induced voltages are not equal at each phase and therefore the phase sum of the voltages are not zero despite cross bonding. The cables are transposed at each joint position and the cable sheaths are cross connected, each cable occupies the same relative position in the cable formation. By this means the phase sum of the induced voltage sheaths is over three sections the same.



TYPICAL APPLICATION EXAMPLE

