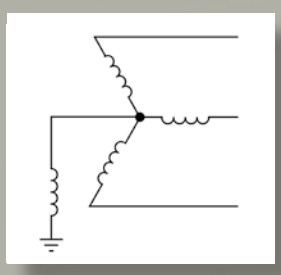
FEATURE

System Grounding

in the Americas, Australia, South Africa and Other Regions

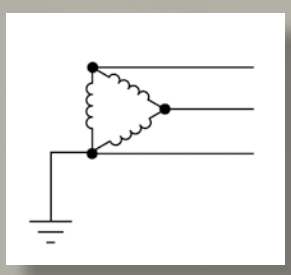
Industrial power-system grounding in the Americas, Australia, South Africa and other regions, in different industries and applications, has evolved over time. Typically, low voltage systems (those below 600 V) employ one of the three most common grounding methods: solidly grounded, resistance grounded and ungrounded. There have been trials and applications that have tried reactance grounding and corner- or center-grounded delta but those are extremely rare. In many areas, a preference for resistance grounding has been growing. There are benefits with resistance grounding, but there should be an understanding of the hazards and potential faults on such systems to best prepare the design engineer not just for code compliance and minimum design requirements, but also for proper system performance and protection.

Figure 1:

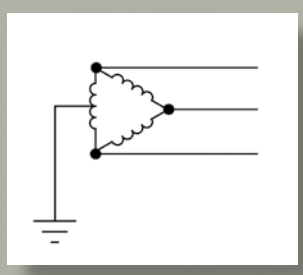


Reactance Grounding

Figure 2:



Corner-grounded delta



Center-grounded delta