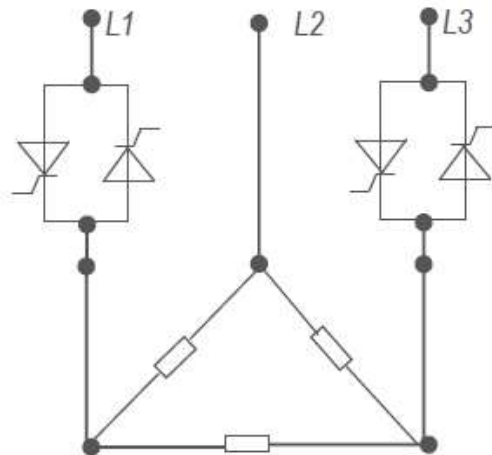
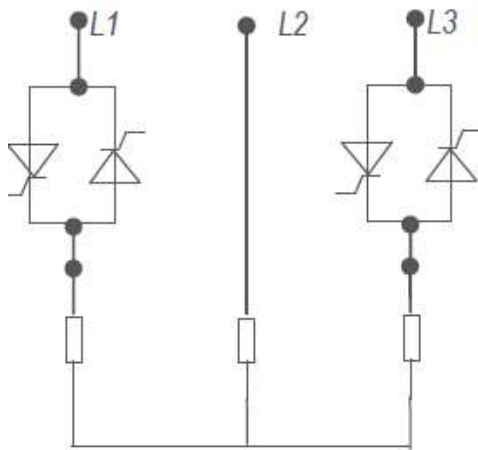


In this article we discuss the advantages of 2 Leg Control for 3 Wire, 3 Phase Systems using Burst Fire Control Method



2. Three-phase eco circuit, load in Y-configuration without neutral conductor

3. Three-phase circuit, load in delta configuration



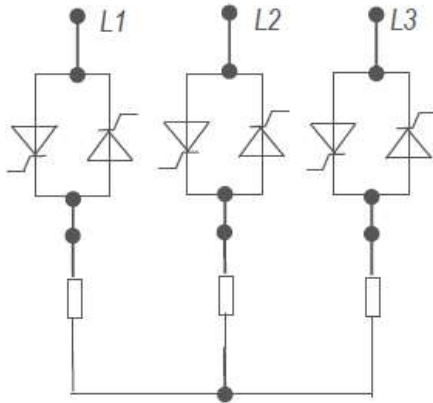
Requirement for 2 Leg Control Method

- 1) Burst Fire Control is Acceptable
- 2) 3 Phase 3 Wire system

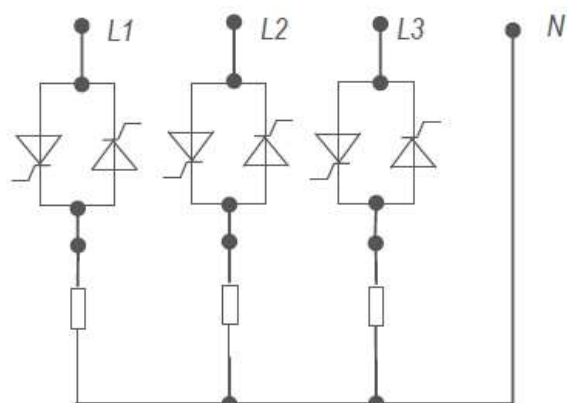
2 Leg Control Can Not be used in the following configurations

- 1) 4 Wire System
- 2) 3 Wire Inside Delta Wiring Arrangement
- 3) Phase Angle Control
- 4) Hybrid Phase/Burst Control

4. Three-phase circuit,
load in Y-configuration
without neutral
conductor



5. Three-phase circuit,
load in Y-configuration
with neutral conductor



5 Main Advantages to 2 Leg Control

- 1) **High Efficiency/Economical** – 33% less losses due to only switching two legs. The load current passes through 4 SCR's instead of 6.
- 2) **Lower heat dissipation** – Since we are only switching 2 legs, then the heat dissipation is 33% less than switching all three legs
- 3) **Safety** – 3 Leg and 2 Leg Controllers have the same level of safety as both require a mechanical Contactor for safety disconnect. This is a clear requirement for the National Electricity Code since SCR's are not considered a complete disconnect.
- 4) **Lower EMC and Harmonics** due to having one phase connected at all times. This reduces potential clipping when one phase turns on while there is no return current path. 2 Leg Control generates less noise and harmonics than both 3 Phase Burst and Phase Angle Control

Conclusion

We Highly Recommend the use for 2 Leg Control for [Open Delta](#), or [3 Wire Star](#) applications using [Burst Fire control](#), and in particular in [EMC/Harmonics sensitive environments](#).

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