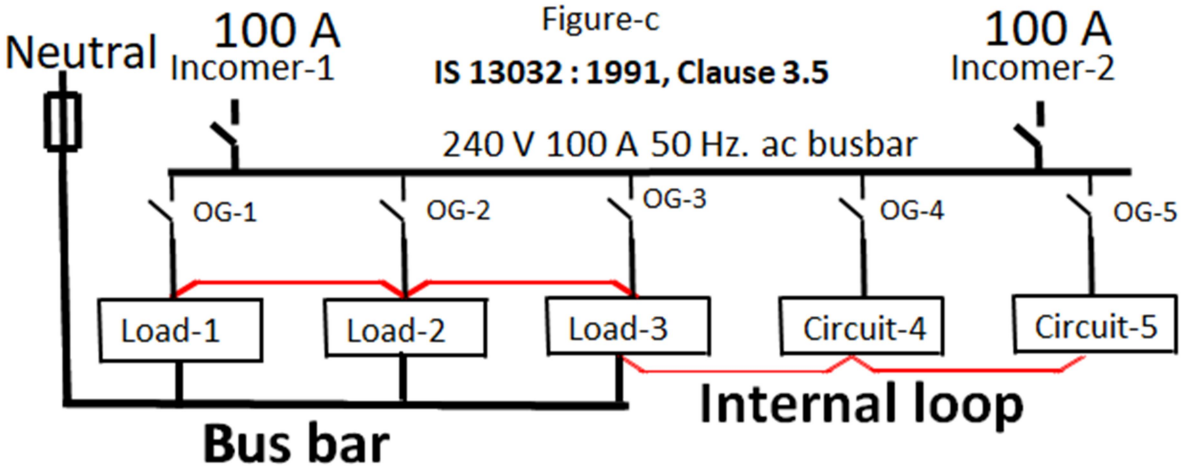
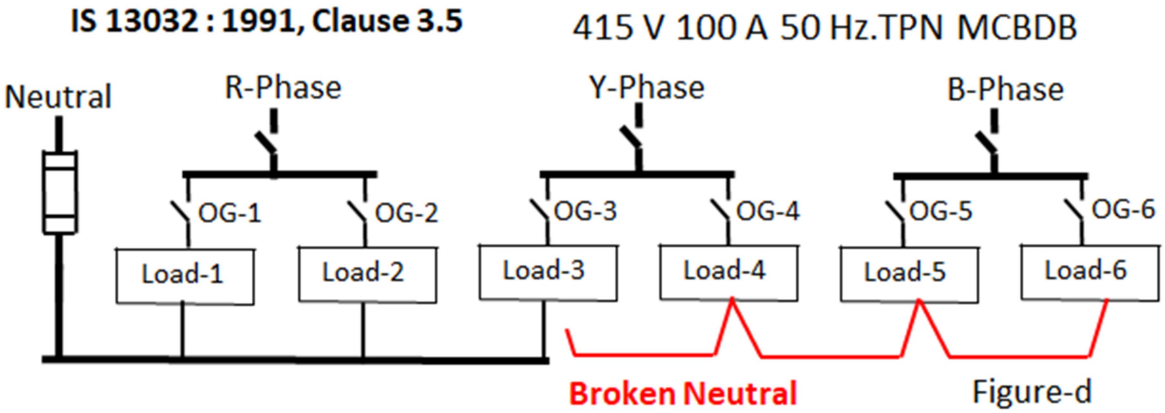
## VI. IS 13032 : 1991 clause 3.5 Neutral of an MCB Board

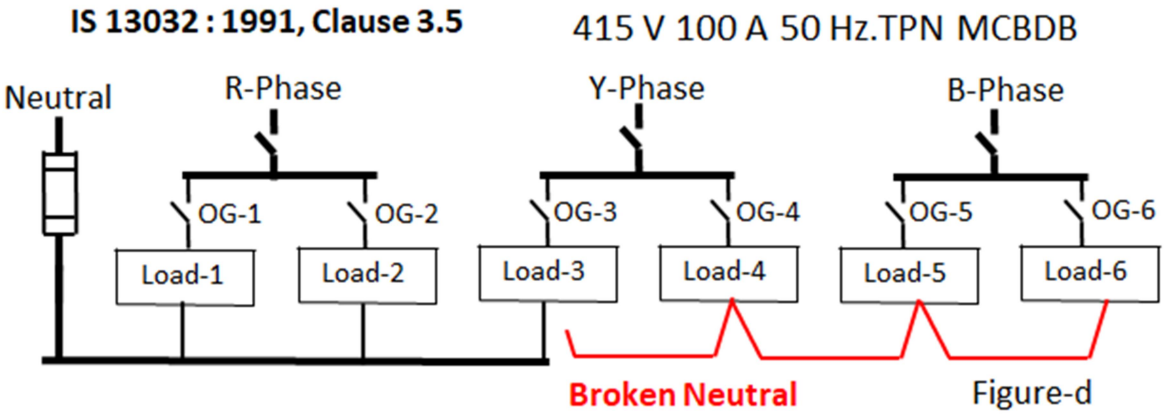
"A bus bar provided with terminals (and if required links) for connection to the neutral conductor of outgoing and incoming circuits of distribution system".




1. More than one or all outgoing circuits could be looped with a single neutral at load circuit irrespective of the current rating of the loads from an SPN OR TPN MCBDB (refer to Figure-c). This may overheat that neutral wire towards an undesired event of electrical fire hazard.




2. More than one or all outgoing circuits could be looped with a single neutral at load circuit irrespective of the current rating of the loads in a TPN MCBDB (refer to Figure-d). A loose or disconnection of the looped neutral may back feed phase line through the neutral wire up to the disconnected end of the neutral wire with a rise in voltage through other switched phase line. Unknown back feeding may cause electric shock to working personnel.




3. More than one or all outgoing circuits could be looped with a single neutral at load circuit irrespective of the current rating of the loads (refer to Figure-d). In case of a TPN MCBDB, a loose or disconnection of the looped neutral may back feed phase line through the neutral wire up to the disconnected end of the neutral wire through other switched phase line. This will make a 240 V rated device working with 415 V in series with other switched phase load in such a way that one load with overcurrent and the other load with over voltage until a possible electric fire hazard in that premise.

**IS 13032 : 1991**

**Recommended Changes**

**(To be added shown bolded/underlined)**

I. 3.1 Miniature Circuit- Breaker Board

An enclosure containing bus bars**,** miniature circuit-breaker (MCB) **and residual current circuit-breaker (RCCB)** for the purpose of protecting, controlling or connecting **each** outgoing circuit fed from one or more incoming circuits **through manual change over**. Miniature Circuit-Breaker Boards are also known as miniature Circuit-Breaker Distribution Boards (MCBDB) or MCB Boards.

II. 3.2 MCB Way

The part of the MCB board comprising a Miniature Circuit-Breaker **and residual current circuit-breaker (RCCB)** connected to **each** circuit.

III. 3.2 MCB Way NOTES-1

The neutral **must** form part of the MCB way.

IV. 3.5 Neutral of an MCB Board

Provided with terminals (and if required links) for connection to the neutral conductor of **each** outgoing and incoming circuit of distribution system.

V. 6.1 Preferred rated voltage

The preferred rated voltage **is 240 V for all out going and** 240 V **or** 415 V **for incoming.**

VI. 9.1.2 Routine Tests

Another routine test at place of installation is required for ensuring **MCB, RCCB and each circuit function test reports**.