Wiring of Three Phase Distribution Board/Consumer Unit

Installation work is according to British Standards [IEE Regulations and Practice].

Accessories Required

1 nos - 12 Way Three Raw DB with facility to fix a 60A 3 Pole Moulded Case Circuit Breaker
3 nos - 2 Pole-60A-30mA Trip Current RCD
3 nos - 2 Pole -60A- MCB
15 nos - 1 Pole-10A-MCB
6 nos - 1 Pole -20A-MCB
3 nos - 1 Pole-16A-MCB
3 nos - Cu MCB Bus Bar segment-8 way
60A- 3 Pole MCCB [fixed type or Adj. Type]
Bus Bar Link for Neutral Cable Connections

Preparation

We are considering that the DB used here will power 5 nos. Lighting Sub Circuits, 2 nos 13A Radial Circuits for Socket outlets and 01 nos. 16A Circuit for an AC units on each Phase. That is to say, here we are having a power utilization twice more than in the Single Phase power distribution. But we don't have any Three Phase loads (items using three phase power, for example. 3 ph motors etc) connected to this power distribution

Method of Wiring

Sub Circuit wiring has been discussed in detail for 1W Light, 2W Light, 5A, 13A and 16A Socket outlets etc. These needs to be wired prior to wiring of the DB unit so that when the DB is installed, these circuits can be connected to the DB

DB Wiring and Installation

The DB used will either be Surface mount or Flush Mount [embedded] type. The enclosure will have entry points for connecting feeder cable and sub distribution cables on top and bottom sides. There will be many types of DBs in market but the example used here will enable the practitioner to handle any type with ease. The DB has a DIN rail for installing RCCB, and MCBs. It also has four Cu Connector Bars, three for connecting Neutral cables of the sub circuits of Red, Yellow and Blue phases separately and the other to connect all Earth cables used in socket outlets and electrical lighting fixtures etc. Compare the earlier single phase DB wiring with this one. You will see the similarities between the two in sub circuit wiring
The Practical Way of Wiring the Three Phase 60A Distribution Board with a MCCB.

Wiring Diagram according to Old Colour Code
The MCCB used here is a 3 Pole, 60A unit. An MCCB with 4 Poles also can be used and the Utility Neutral then first needs to be connected to the bottom side extreme right connector. The outgoing Neutral then needs to be connected to the Neutral Bus bar link provided and wired as shown.