TABLE I

Information of Cases

|  |  |  |  |
| --- | --- | --- | --- |
| **Cases** | ***U*0 (kV)** | **(kA)** | **[, ] (p.u.)** |
| **IEEE 33-bus** | 10 | 0.25 | [0.9025, 1.1025] |
| **IEEE 69-bus** | 12.66 | 0.25 | [0.81,1,21] |
| **118-bus** | 11 | 1 | [0.81,1,21] |
| **136-bus** | 13.8 | 1 | [0.9025, 1.1025] |
| **141-bus** | 12.47 | 1 | [0.81,1,21] |

TABLE Ⅱ

Lower and Upper Bounds of Power Outputs

|  |  |  |  |
| --- | --- | --- | --- |
| **Cases** | **Buses** | **[, ] (MW)** | **[, ] (Mvar)** |
| **IEEE 33-bus** | 0 | [0, 10] | [0, 10] |
| 1 | [0, 0] | [0, 0.3] |
| 13 | [0, 0.64] | [0, 0.6] |
| 21 | [0, 0.427] | [0, 0.6] |
| 24 | [0, 1.067] | [0, 0.6] |
| 32 | [0, 0.854] | [0, 0.6] |
| **IEEE 69-bus** | 0 | [0, 10] | [0, 10] |
| 4 | [0, 0] | [0, 0.4] |
| 30 | [0, 0.18] | [0, 0.3] |
| 58 | [0, 0.75] | [0, 0.6] |
| **118-bus** | 0 | [0, 100] | [0, 100] |
| 22 | [0, 0.75] | [0, 0.8] |
| 43 | [0, 1] | [0, 1.1] |
| 56 | [0, 0.5] | [0, 0.4] |
| 75 | [0, 1] | [0, 1] |
| 104 | [0, 1] | [0, 1.2] |
| **136-bus** | 0 | [0,100] | [0, 100] |
| 17 | [0, 1.2] | [0, 1] |
| 34 | [0, 0.5] | [0, 0.3] |
| 78 | [0, 1] | [0, 0.8] |
| 108 | [0, 1] | [0, 0.8] |
| **141-bus** | 0 | [0, 100] | [0, 100] |
| 30 | [0, 1] | [0, 1.1] |
| 75 | [0, 2] | [0, 1.5] |
| 117 | [0, 1] | [0, 1.1] |