|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LEADLAG - in case of AC INPUT( SINE WAVE ) with NOISE** | | | | | |
| **Various Detected Faults in LEADLAG in the presence of faults with deviations**  **(5% – 15%) & (20%-47%)** | | | | | |
| **=500, = 0.0420, Optimal Order – 18th** | | | | | |
| **Injected Faults** |  | **WITHOUT NOISE** | | **WITH NOISE** | |
| **No. of Coefficients Out of Bound** | **Fault Detection Status** | **No. of Coefficients Out of Bound** | **Fault Detection Status** |
| **R1 12%↑** |  | 113 | **√** | 151 | **√** |
| **R1 8% ↓** |  | 1 | **√** | 73 | **√** |
| **R2 9% ↑** |  | 0 | **X** | 63 | **√** |
| **R2 6% ↓** |  | 0 | **X** | 64 | **√** |
| **R3 10% ↑** |  | 71 | **√** | 61 | **√** |
| **R3 7%↓** |  | 0 | **X** | 100 | **√** |
| **C1 13%↑** |  | 0 | **X** | 66 | **√** |
| **C1 15% ↓** |  | 3 | **√** | 63 | **√** |
| **C2 11% ↑** |  | 0 | **X** | 62 | **√** |
| **C2 14% ↓** |  | 10 | **√** | 71 | **√** |
| **R1 20%↑** |  | 163 | **√** | 170 | **√** |
| **R1 30% ↓** |  | 183 | **√** | 179 | **√** |
| **R2 32% ↑** |  | 34 | **√** | 73 | **√** |
| **R2 40% ↓** |  | 104 | **√** | 124 | **√** |
| **R3 25% ↑** |  | 174 | **√** | 161 | **√** |
| **R3 45%↓** |  | 185 | **√** | 182 | **√** |
| **C1 42%↑** |  | 17 | **√** | 77 | **√** |
| **C1 25% ↓** |  | 15 | **√** | 72 | **√** |
| **C2 35% ↑** |  | 38 | **√** | 72 | **√** |
| **C2 47% ↓** |  | 140 | **√** | 149 | **√** |