|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Info type | P Controller | PD Controller | PI Controller | PID Controller | PIDF Controller | PDF Controller | A unity feedback LAM Controller w/ stepitae | A unity feedback LAM Controller w/ stepshape | 2-parameters LAM controller |
| RiseTime | 0.0589 | 0.0382 | 0.1088 | 0.0712 | 0.0710 | 0.0380 | 0.2890 | 0.2136 | 2.1786 |
| SettlingTime | 0.5734 | 0.2161 | 0.4908 | 0.3151 | 0.3156 | 0.2156 | 0.6919 | 0.3836 | 3.9999 |
| SettlingMin | 0.5432 | 0.6730 | 0.9120 | 0.9118 | 0.9231 | 0.6704 | -164.4212 | 0.9043 | 0.9000 |
| SettlingMax | 0.8939 | 0.9250 | 1.0976 | 1.0682 | 1.0672 | 0.9239 | -144.6159 | 0.9995 | 0.9985 |
| Overshoot | 37.1986 | 24.5415 | 9.7624 | 6.8172 | 6.7243 | 24.7320 | 3.0160 | 0 | 0 |
| Undershoot | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak | 0.8939 | 0.9250 | 1.0976 | 1.0682 | 1.0672 | 0.9239 | 164.4212 | 0.9995 | 0.9985 |
| PeakTime | 0.1508 | 0.0900 | 0.2309 | 0.1418 | 0.1403 | 0.0899 | 0.6163 | 0.5962 | 6.5568 |
| Umax | 437.7165 | Inf | 310.6495 | Inf | 3.0872e+04 | 9.3633e+04 | 3.9019e+04 | 234.1833 | 235.9200 |
| EssStep | 0.3485 | 0.2573 | 0 | 0 | 0 | 0.2593 | 160.6074 | 0 | 0 |
| EssRamp | Inf | Inf | -0.1042 | -0.0565 | -0.0571 | Inf | Inf | -0.1705 | -1.1137 |
| Gm | 9.8811 | Inf | 11.1148 | Inf | 38.4646 | 39.8322 | 0.0543 | 14.9558 | 40.8000 |
| Pm | 60.0521 | 60.0086 | 60 | 60.0008 | 60.0003 | 60 | -0.4077 | 68.7622 | 88.5298 |
| Wcg | 34.4987 | Inf | 27.1423 | Inf | 217.0343 | 327.1503 | 0 | 23.2454 | 68.7842 |
| Wcp | 18.3519 | 30.8153 | 10.9777 | 19.7042 | 19.7044 | 30.8196 | 5.0740 | 5.8026 | 0.9831 |
| Vm | 0.5344 | 0.6921 | 0.5840 | 0.6922 | 0.6884 | 0.6890 | 0.0062 | 0.7292 | 0.9782 |
| Wvm | 26.5172 | 46.2437 | 18.7948 | 31.7808 | 31.8196 | 46.2806 | 0 | 15.5337 | 20.2135 |
| Smax | 1.8712 | 1.4449 | 1.7124 | 1.4446 | 1.4527 | 1.4514 | 160.6074 | 1.3713 | 1.0223 |

* Rise Time --> Time it takes the system to rise from 10% to 90% of the final value.
* Settling Time --> Time it takes the system to settle to within 2% of the final value.
* Settling Min --> Minimum value of output once the response has risen.
* Settling Max --> Maximum value of output once the response has risen.
* Overshoot --> Percent overshoot relative to the final value.
* Undershoot --> Percent undershoot
* Peak --> Peak absolute value of output.
* Peak Time --> Time where Peak occurs.
* Umax --> Peak control effort for unit step input
* EssStep --> Steady state error for a unit step input
* EssRamp --> Steady state error for a unit ramp input