**AVR-M SIMPLIFIED STRUCTURE**



**AVR MODEL PARAMETERS TABEL**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Symbol** | **Description** | **Number** | **Range** | | **Set** | **Units** |
| **Min** | **Max** |
| K1 | Voltage channel proportional gain | 410 | 0.1 | 50 | 15 | puUf/puUg |
| TA | Integrator time constant | 520 | 0.1 | 50 | 0.8 | s |
| Ccil | Exciter ceiling voltage | 515 | 1 | 50 | 6.55 | Pu\* |
| nFb | Proportional feedback gain | 518 | 1 | 50 | 10 | - |
| **Voltage derivation channel** | | | | | | |
| K1U | Gain | 450 | 0 | 30 |  | puUf/puUg |
| T1U | Derive time constant | 451 | 0.01 | 0.06 |  | s |
| Ta1U | Filter time constant | 452 | 0 | 0.2 |  | s |
| **Field current derivation channel** | | | | | | |
| K1If | Gain | 440 | 0 | 10 | 1 | puUf/pulf/s |
| T1If | Derive time constant | 441 | 0.01 | 0.06 | 0.02 | s |
| Ta11f | Filter time constant | 442 | 0 | 0.3 | 0.15 | s |
| **Frequency deviation channel** | | | | | | |
| K0F | Gain | 420 | 0 | 30 | 1.5 | puUf//Hz |
| T0F | Washout time constant | 421 | 0.5 | 5 | 0.02 | s |
| Ta0F | Filter time constant | 422 | 0 | 0.2 |  | s |
| **Frequency derivation channel** | | | | | | |
| K1F | Gain | 430 | 0 | 10 | 0.5 | puUf//Hz/s |
| Ta1F | Derive time constant | 432 | 0 | 0.2 | 0.08 |  |
| T1F | Filter time constant | 431 | 0.015 | 0.06 | 0.05 |  |
| **Variables** | | | | | | |
| VREF | Generator voltage set point | 400 |  |  |  | pu |
| VC | Output of load compensation | 413 |  |  |  | pu |
| UT | Generation terminal voltage | 100 |  |  |  | pu |
| IT | Generation current | 160 |  |  |  | pu |
| VS | Frequency deviation | 121 |  |  |  | pu |
| LED | Field current | 80 |  |  |  | pu |
| VFE | Field voltage | 260 |  |  |  | pu |
| IR | Exciter filed current | 240 |  |  |  | pu |
| VST | Power system stabilizer output | 432 |  |  |  | pu |
| VR | Exciter field voltage | … |  |  |  | … |
| VOEL | overexcitation lim. output | … |  |  |  | … |
| VUEL | Underexcitation lim. output | … |  |  |  | … |

\* pu- proportional unit (per unit)