|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Explanation | Dimensionless? | Units / normalized for |
| CB.xi and xi | Cross-bridge strain vector | Yes | Power stroke |
| f | Attachment rate | No | 1/s |
| g1 | Detachment rate | No | 1/s |
| b | Attachment rate through forcible detachment pathway | No | 1/s |
| k11 | Detachment rate negative strain | No | 1/s |
| k12 | Detachment rate exponential coefficient negative strain | Yes | Power stroke |
| k21 | Detachment rate positive strain | No | 1/s |
| k22 | Detachment rate exponential coefficient positive strain | Yes | Power stroke |
| k31 | Not in use | - | - |
| k32 | - | - | - |
| J1 | SRX state forward rate | No | 1/s |
| JF | SRX force dependence | Yes | FCB,max |
| kon | Thin filament activation forward rate | No | 1/s |
| koff | Thin filament activation backward rate | No | 1/s |
| kon\_of\_off | Ratio between kon and koff |  |  |
| koop | Thin filament cooperativity parameters |  |  |
| Noverlap |  |  |  |
| Fscale | 1/FXB,max |  |  |
| c | Compliance factor (not always in use) |  |  |
| ps | Power stroke (default = 1) |  |  |
| w | Width of attachment rate function | Yes | Power stroke |
| analytical | Not in use? |  |  |
| f\_func | Attachment rate function |  |  |
| g\_func | Detachment rate function |  |  |
| k\_func | Forcible detachment rate function |  |  |
| b\_func | Forcible detachment attachment rate function |  |  |
| gaussian | Gaussian function |  |  |
| kse | Series elastic stiffness coefficient |  |  |
| kse0 | Series elastic stiffness |  |  |
| kse\_func |  |  |  |
| Fse\_func |  |  |  |
| Lse\_func |  |  |  |
| Fpe0 |  |  |  |
| kpe |  |  |  |
| Fpe\_func |  |  |  |
| h | Power stroke size | No | meters |
| s | Sarcomere length | No | meters |
| lmtc0 | Fiber reference length |  |  |
| lce0 | Contractile element reference length |  |  |
| lse0 | Series elastic reference length |  |  |
| Fpece0 |  |  |  |
| kpece |  |  |  |
| Fpece\_func |  |  |  |
| Fv\_func |  |  |  |
| vmax | Maximal shortening velocity of a Hill model |  |  |
| e | Hill model force-velocity parameters |  |  |
| Fmax | Maximal tension | No | kPa |
| act\_max | Maximal relative activation |  |  |
| fHill | Hill curve |  |  |
| fcost | Cost for Hill curve |  |  |
| n | Hill curve cooperativity |  |  |
| kappa | Hill curve horizontal position |  |  |
| v | Imposed fiber velocity | Yes | Power stroke |
| AMP | Imposed fiber stretch amplitude | Yes | Power stroke |
| ISI | Imposed inter-stretch interval | No | s |
| tiso | Imposed isometric time | No | s |
| L\_func | Imposed length trajectory |  |  |
| isometric | Simulate isometric contraction |  |  |
| max | Simulate maximal contraction |  |  |
| vmtc | Imposed fiber velocity |  |  |
| no\_tendon | Optionally remove tendon |  |  |
| alpha |  |  |  |
| show |  |  |  |
| guess |  |  |  |
| optvars |  |  |  |
| x0 |  |  |  |
| actfunc |  |  |  |
| xss |  |  |  |
| opt\_method |  |  |  |
| amin | Minimal activation |  |  |
| k | Forcible detachment rate | No | 1/s |
| dLcrit | Forcible detachment critical stretch | Yes | Power stroke |
| forcible\_detachement | Optionally include forcible detachment |  |  |
| vF\_func | Hill force-velocity curve |  |  |