	name	symbol	value	unit	source	explanation
0	`size`					Number of agents
1	`shape`					Shape for arrays
2	`three_circles_flag`					Boolean indicating if agent is modeled with three circle model
3	`orientable_flag`					Boolean indicating if agent is orientable
4	`active`					Boolean indicating if agent is active
5	`goal_reached`					Boolean indicating if goal is reahed
6	`mass`	m		kg	fds+evac	Mass
7	`radius`	r		m	fds+evac	Radius
8	`r_t`	r_t		m	fds+evac	Radius of torso
9	`r_s`	r_s		m	fds+evac	Radius of shoulder
10	`r_ts`	r_{ts}		m	fds+evac	Distance from torso to shoulder
11	`position`	x		m		Position
12	`velocity`	v		$\frac{\mathrm{m}}{\mathrm{s}}$		Velocity
13	`target_velocity`	v_0	5	$\frac{\mathrm{m}}{\mathrm{s}}$		Target velocity
14	`target_direction`	e				Target direction
15	`force`	f		N		Force
16	`force_adjust`	f_{adj}		N		Adjusting force
17	`force_agent`	f_{agent}		N		Agent to agent force
18	`force_wall`	f_{wall}		N		Agent to wall force
19	`inertia_rot`	I_{rot}	4	$\mathrm{m}^2\,\mathrm{kg}$	fds+evac	Rotational moment
20	`angle`	φ	$[-\pi, \pi]$	rad		Angle
21	`angular_velocity`	ω		$\frac{\mathrm{rad}}{\mathrm{s}}$		Angular velocity
22	`target_angle`	φ_0	$[-\pi, \pi]$	rad		Target angle
23	`target_angular_velocity`	ω_0	4π	$\frac{\mathrm{rad}}{\mathrm{s}}$	fds+evac	Target angular velocity
24	`torque`	M		$\mathrm{N\,m}$		Torque
25	`position_ls`	x_{ls}		m		Position of the left shoulder
26	`position_rs`	x_{rs}		m		Position of the right shoulder
27	`front`	x_{front}		m		Position of the front
28	`tau_adj`	τ_{adj}	0.5	s	fds+evac	Characteristic time for agent adjusting its movement
29	`tau_adj_rot`	τ_{adjrot}	0.2	s	fds+evac	Characteristic time for agent adjusting its rotational movement
30	`k`	k	1.5	N	power law	Social force scaling constant
31	`tau_0`	τ_0	3	s	power law	Interaction time horizon
32	`mu`	μ	12000	$\frac{\mathrm{kg}}{\mathrm{s}^2}$	fds+evac	Compression counteraction constant
33	`kappa`	κ	40000	$\frac{\mathrm{kg}}{\mathrm{m\,s}}$	fds+evac	Sliding friction constant
34	`damping`	c_d	500	N	fds+evac	Damping coefficient for contact force
35	`a`	A	2000	N	helbing	Scaling coefficient for social force
36	`b`	B	0.08	m	helbing	Coefficient for social force
37	`std_rand_force`	ξ/m	0.1		fds+evac	Standard deviation for random force from truncated normal distribution
38	`std_rand_torque`	η/I_{rot}	0.1		fds+evac	Standard deviation for random torque from truncated normal distribution
39	`f_soc_ij_max`		2000	N		Truncation for social force with agent to agent interaction
40	`f_soc_iw_max`		2000	N		Truncation for social force with agent to wall interaction
41	`sight_soc`		7	m		Maximum distance for social force to effect
42	`sight_wall`		7	m		Maximum distance for social force to effect

	name	adult	male	female	child	eldery	symbol	explanation
0	`radius`	0.255	0.27	0.24	0.21	0.25	r	Total radius of the agent
1	`dr`	0.035	0.02	0.02	0.015	0.02	dr	Difference bound for total radius
2	`k_t`	0.5882	0.5926	0.5833	0.5714	0.6	k_t	Ratio of total radius and radius torso
3	`k_s`	0.3725	0.3704	0.375	0.3333	0.36	k_s	Ratio of total radius and radius shoulder
4	`k_ts`	0.6275	0.6296	0.625	0.6667	0.64	k_{ts}	Ratio of total radius and distance from torso to shoulder
5	`v`	1.25	1.35	1.15	0.9	0.8	v	Walking speed of agent
6	`dv`	0.3	0.2	0.2	0.3	0.3	dv	Difference bound for walking speed
7	`mass`	73.5	80.0	67.0	57.0	70.0	m	Mass of an agent
8	`mass_scale`	8.0	8.0	6.7	5.7	7.0	dm	Standard deviation of mass of the agent

r	m		Total radius
r_t	m		Torso radius
r_s	m		Shoulder radius
r_{ts}	m		Distance from torso to shoulder
m	kg	80	Mass
I	$\mathrm{kg} \cdot \mathrm{m}^2$	4.0	Rotational moment
$\mathbf{x}$	m		Position
$\mathbf{v}$	m/s		Velocity
v_0	m/s		Goal velocity
$\hat{\mathbf{e}}_0$			Goal direction
$\hat{\mathbf{e}}$			Target direction
φ	rad	$[-\pi, \pi]$	Body angle
ω	rad/s		Angular velocity
φ_0	rad	$[-\pi, \pi]$	Target angle
ω_0	rad/s	0.4π	Max angular velocity
$\tilde{\mathbf{x}} = \mathbf{x}_i - \mathbf{x}_j$	Relative position		
$\tilde{\mathbf{v}} = \mathbf{v}_i - \mathbf{v}_j$	Relative velocity		
$d = \|\tilde{\mathbf{x}}\|$	Distance		
$\hat{\mathbf{n}} = \tilde{\mathbf{x}}/d$	Normal vector		
$\hat{\mathbf{t}} = R(-90°) \cdot \hat{\mathbf{n}}$	Tangent vector		