Environment Parameters

Exported from: env.yaml

[Scene Robot Actuators]

actuator	property	value
joints_nl	class_type	isaaclab.actuators.actuator_pd:DelayedPDActuator
	joint_names_expr	['.*_hip_joint', '.*_shoulder_joint']
	effort_limit	60.0
	velocity_limit	20.0
	effort_limit_sim	None
	velocity_limit_sim	None
	stiffness	.*_hip_joint: 100.0
		.*_shoulder_joint: 100.0
	damping	.*_hip_joint: 1.5
		.*_shoulder_joint: 1.5
	armature	.*_hip_joint: 0.01
		.*_shoulder_joint: 0.01
	friction	.*_hip_joint: 0.0
		.*_shoulder_joint: 0.0
	min_delay	0
	max_delay	4

joints_l	class_type	lab.flamingo.tasks.manager_based.locomotion. velocity.actuators.gear_actuator:GearDelayed PDActuator
	joint_names_expr	['.*_leg_joint']
	effort_limit	60.0
	velocity_limit	20.0
	effort_limit_sim	None
	velocity_limit_sim	None
	stiffness	.*_leg_joint: 120.0
	damping	.*_leg_joint: 1.5
	armature	.*_leg_joint: 0.01
	friction	.*_leg_joint: 0.0
	min_delay	0
	max_delay	4
	gear_ratio	-1.5
	gamma	1.0
wheels	class_type	isaaclab.actuators.actuator_pd:DelayedPDAct uator
	joint_names_expr	['.*_wheel_joint']
	effort_limit	36.0
	velocity_limit	50.0
	effort_limit_sim	None
	velocity_limit_sim	None
	stiffness	.*_wheel_joint: 0.0
	damping	.*_wheel_joint: 0.7
	armature	.*_wheel_joint: 0.01
	friction	.*_wheel_joint: 0.0
	min_delay	0
	max_delay	4

[Actions]

action	property	value
hip_joint_pos	class_type	isaaclab.envs.mdp.actions.joint_actions:JointPositionAction
	asset_name	robot
	debug_vis	False
	clip	None
	joint_names	left_hip_joint
		right_hip_joint
	scale	1.0
	offset	0.0
	preserve_order	True
	use_default_offset	False
shoudler_leg_joint_pos	class_type	isaaclab.envs.mdp.actions.joint_actions:JointPositionAction
	asset_name	robot
	debug_vis	False
	clip	None
	joint_names	left_shoulder_joint
		right_shoulder_joint
		left_leg_joint
		right_leg_joint
	scale	1.0
	offset	0.0
	preserve_order	True
	use_default_offset	False

wheel_vel	class_type	isaaclab.envs.mdp.actions.joint_actions:JointVelocityAction
	asset_name	robot
	debug_vis	False
	clip	None
	joint_names	left_wheel_joint
		right_wheel_joint
	scale	20.0
	offset	0.0
	preserve_order	True
	use_default_offset	False

[Rewards]

reward	weight	param
track_lin_vel_xy_exp	2.0	command_name: 'base_velocity'
		std: 0.5
track_ang_vel_z_exp	1.0	command_name: 'base_velocity'
		std: 0.5
lin_vel_z_event	2.5	event_command_name: 'event'
		event_time_range: (0.3, 0.8)
		max_up_vel: 4.0
		up_vel_coef: 20.0
		down_vel_coef: 0.0
		temperature: 2.0
push_ground_event	0.05	event_command_name: 'event'
		event_time_range: (0.3, 0.8)
		asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': '.*_wheel_link', 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		sensor_cfg: {'name': 'contact_forces', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': '.*_wheel_link', 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
leg_retraction_event	2.0	event_command_name: 'event'
		event_time_range: (0.3, 0.8)
		asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}

jump_complete_event	1.0	event_command_name: 'event'
		asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		sensor_cfg: {'name': 'contact_forces', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': '.*_wheel_link', 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
no_jump_penalty	-20.0	event_command_name: 'event'
		event_time_range: (0.3, 0.8)
		min_jump_height: 0.45
		asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
joint_deviation_hip	-10.0	asset_cfg: {'name': 'robot', 'joint_names': ['.*_hip_joint'], 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
dof_pos_limits_hip	-1.0	asset_cfg: {'name': 'robot', 'joint_names': '.*_hip_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
dof_pos_limits_shoulder	-1.0	asset_cfg: {'name': 'robot', 'joint_names': '.*_shoulder_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
dof_pos_limits_leg	-1.0	asset_cfg: {'name': 'robot', 'joint_names': '.*_leg_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}

undesired_contacts	-1.0	sensor_cfg: {'name': 'contact_forces', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, ' fixed_tendon_ids': slice(None, None, None), 'body_names': ['.*_shoulder_link', '.*_leg_link'], 'body_ids': slice(None, None, None), ' object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		threshold: 1.0
joint_applied_torque_li mits	-0.1	asset_cfg: {'name': 'robot', 'joint_names': '.*_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, ' fixed_tendon_ids': slice(None, None, None), 'body_names': None, ' body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), ' preserve_order': False}
shoulder_align_l1	-1.0	asset_cfg: {'name': 'robot', 'joint_names': '.*_shoulder_joint', ' joint_ids': slice(None, None, None), 'fixed_tendon_names': None, ' fixed_tendon_ids': slice(None, None, None), 'body_names': None, ' body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), ' preserve_order': False}
leg_align_l1	-1.0	asset_cfg: {'name': 'robot', 'joint_names': '.*_leg_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, ' fixed_tendon_ids': slice(None, None, None), 'body_names': None, ' body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), ' preserve_order': False}
base_height	-40.0	target_height: 0.36288
		event_command_name: 'event'
		asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, ' fixed_tendon_ids': slice(None, None, None), 'body_names': ' base_link', 'body_ids': slice(None, None, None), ' object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}

[Events]

event	property	value
physics_material	func	lab.flamingo.tasks.manager_based.locomotion.velocity.mdp.events:randomize_rigid_body_material
	params	asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': ['.*_link'], 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		static_friction_range: (0.3, 1.2)
		dynamic_friction_range: (0.3, 0.8)
		restitution_range: (0.0, 0.0)
		num_buckets: 64
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0

randomize_joint_actuator_gains	func	isaaclab.envs.mdp.events:randomize_actuator_gains
	params	asset_cfg: {'name': 'robot', 'joint_names': ['.*hip_joint', '.*shoulder_joint'], 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		stiffness_distribution_params: (0.7, 1.3)
		damping_distribution_params: (0.7, 1.3)
		operation: scale
		distribution: log_uniform
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0
randomize_leg_joint_actuator_gains	func	isaaclab.envs.mdp.events:randomize_actuator_gains
	params	asset_cfg: {'name': 'robot', 'joint_names': '.*leg_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		stiffness_distribution_params: (0.8, 1.3)
		damping_distribution_params: (0.8, 1.3)
		operation: scale
		distribution: log_uniform
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0

randomize_wheel_actuator_gains	func	isaaclab.envs.mdp.events:randomize_actuator_gains
	params	asset_cfg: {'name': 'robot', 'joint_names': '.*wheel_joint', 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': None, 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		stiffness_distribution_params: (0.7, 1.3)
		damping_distribution_params: (0.7, 1.3)
		operation: scale
		distribution: log_uniform
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0
randomize_com_positions	func	lab.flamingo.tasks.manager_based.locomotion.velocity.mdp.events:randomize_com_positions
	params	asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': 'base_link', 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		com_distribution_params: (-0.05, -0.02)
		operation: add
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0

add_base_mass	func	isaaclab.envs.mdp.events:randomize_rigid_body_mass
	params	asset_cfg: {'name': 'robot', 'joint_names': None, 'joint_ids': slice(None, None, None), 'fixed_tendon_names': None, 'fixed_tendon_ids': slice(None, None, None), 'body_names': ['base_link'], 'body_ids': slice(None, None, None), 'object_collection_names': None, 'object_collection_ids': slice(None, None, None), 'preserve_order': False}
		mass_distribution_params: (-0.75, 1.5)
		operation: add
	mode	startup
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0
reset_base	func	lab.flamingo.tasks.manager_based.locomotion.velocity.mdp.events:reset_root_state_uniform
	params	pose_range: {'x': (-0.5, 0.5), 'y': (-0.5, 0.5), 'yaw': (-3.14, 3.14)}
		velocity_range: {'x': (0.0, 0.0), 'y': (0.0, 0.0), 'z': (0.0, 0.0), 'roll': (-0.25, 0.25), 'pitch': (-0.25, 0.25), 'yaw': (-0.0, 0.0)}
	mode	reset
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0
reset_robot_joints	func	lab.flamingo.tasks.manager_based.locomotion.velocity.mdp.events:reset_joints_by_offset
	params	position_range: (-0.1, 0.1)
		velocity_range: (0.0, 0.0)
	mode	reset
	interval_range_s	None
	is_global_time	False
	min_step_count_between_reset	0

push_robot	func	isaaclab.envs.mdp.events:push_by_setting_velocity
	params	velocity_range: {'x': (-1.5, 1.5), 'y': (-1.0, 1.0), 'z': (-1.0, 0.5)}
	mode	interval
	interval_range_s	13.0
		15.0
	is_global_time	False
	min_step_count_between_reset	0