TABLE I EPO-RSAC NEURAL NETWORK ARCHITECTURE AND PARAMETERS FOR IEEE-118 SYSTEM

Variable scope	name	Parameter	Configuration
Main	Actor	Number of neurons	(118, 64, 256, 256, 64, 120(mu)) (118, 64, 256, 256, 64, 120(std))
		Activation function	ReLU
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
	Critic_qr1	Number of neurons	(238, 64, 256, 256, 64, 1)
		Activation function	ReLU
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
	Critic_qr2	Number of neurons	(238, 64, 256, 256, 64, 1)
		Activation function	ReLU
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
	Critic_qc	Number of neurons	(238, 64, 256, 256, 64, 1)
		Activation function	ReLU
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
	Critic_var	Number of neurons	(238, 64, 256, 256, 64, 1)
		Activation function	ReLU
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
	Replay buffer	Size of replay	24000
		Batch size	256
Target	Actor	Number of neurons	(118, 64, 256, 256, 64, 120(mu)) (118, 64, 256, 256, 64, 120(std))
		Soft update rate	0.995
	Critic_qr1	Number of neurons	(238, 64, 256, 256, 64, 1)
		Soft update rate	0.995
	Critic_qr2	Number of neurons	(238, 64, 256, 256, 64, 1)
		Soft update rate	0.995
	Critic_qc	Number of neurons	(238, 64, 256, 256, 64, 1)
		Soft update rate	0.995
	Critic_var	Number of neurons	(238, 64, 256, 256, 64, 1)
		Soft update rate	0.995
Entropy temperature	Soft α	Size of weight	1
		initializer	0
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)
Cost weight	Soft κ	Size of weight	2
		initializer	0
		Optimizer	Adam
		Learning rate	1~4000 (1e-3), 4001~10000 (1e-4)

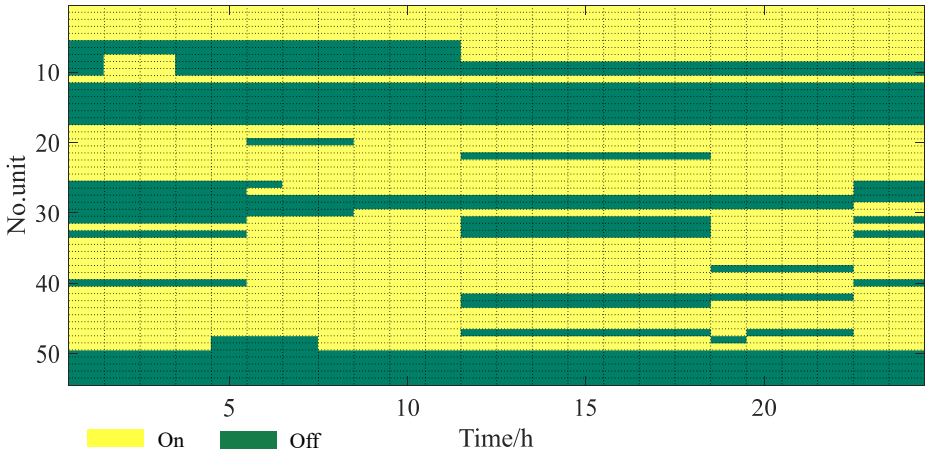

Fig. 1: Commitment decisions formulated by EPO-RSAC for IEEE118 bus system