INPUT SIGNALS DESCRIPTION

nº	SIGNAL	DESCRIPTION	RANGE	UNIT	TYPE
1	EngineRotation	Current Engine Rotation Frequency	0-10000	RPM	UINT32
2	VehicleVelocity	Current Vehicle Velocity	0-400	km/h	DOUBLE
3	GearNumber	Current Gear	0-7	-	UINT8
4	PedalAngle	Driver's Engine Pedal Request	0-100	%	UINT8
5	BrakePedal	Driver's Brake Pedal Request	0-100	%	UINT8
6	BatteryVoltage	Battery Voltage	0-60*	V	DOUBLE
7	BatteryCurrent	Battery Current	-100-100	A	DOUBLE
8	TorqueRequest	Electric helper for combustion engine	-1000-1000	N.m	DOUBLE

*values above refference would classify the system as high voltage

OUTPUT SIGNALS DESCRIPTION

nº	SIGNAL	DESCRIPTION	RANGE	UNIT	TYPE
1	BsgRotation	Current Electric Machine Rotation Frequency	0-10000	RPM	UINT32
2	BsgVoltage	Current Electric Machine Voltage	0-60*	V	DOUBLE
3	BsgCurrent	Current Electric Machine Current	-100-100	A	DOUBLE
4					
5					
6					
7					
8					

INSTRUCTIONS AND OBSERVATIONS:
-To visualize the regenerative function, the brake input must have any value in the range other than zero; to visualize the other operation modes, the brake signal must be set to zero;

-In order to visualize the TORQUE ASSISTANCE mode, it is necessary to set a value to the engine pedal signal and a value to the initial rotation of the engine, which must be done it the unit delay block inside the ICE subsystem; Also, the "key" signal, must be set to zero and the auxiliar rpm signal must be set to any value other than zero, which would indicate the need for the start/stop function;
-In order to visualize the Start/stop function, it is enough to set the engine pedal value to any value other than zero, which would indicate the requirement of torque, and the auxiliar rpm signal to zero, which would indicate that the vehicle is in a stationary position;

-In order to visualize the starter function, the key signal must be set to one and the auxiliar rpm signal must be set to zero. This indicates that the vehicle has been turned on and there is a requirement of torque;

-Values such as vehicle mass, vehicle initial speed (defined inside the integral block), tire radius, and the values inside the lookup tables are considered to be adjustable to better represent the scenario in which the BSG is going to be applied.

-Values that can be used for reference are listed in the signals description, which can be seen above and in the document Signals Sheet

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