

TOSHIBA

Traction and Auxiliary Power Systems



Toshiba Application

Commuter Train
High-Speed Train
Locomotive
Tram



Traction Converter Product Line-up 1/2

Application	Electric System	Output Power (Continuous)	Cooling Method	Characteristics/Features	Page No.
Commuter Train	600 V DC	120 kW*1 x 4	Natural cooling	Unit of Control: 1C1M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 400 V AC - 198 A	5, 6
	750 V DC	135 kW x 4	Natural cooling	Unit of Control: 1C2M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 550 V AC - 360 A	2
		170 kW*1 x 4	Natural cooling	Unit of Control: 1C2M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 440 V AC - 260 A	1
		135 kW x 4	Natural cooling	Unit of Control: 1C2M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 495 V AC - 700 A	3
	1500 V DC	140 kW*1 x 4	Natural cooling	Unit of Control: 1C1M x 4 Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 990 V AC - 153 A	7
		175 kW*1 x 4	Natural cooling	Unit of Control: 1C2M or 1C4M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 940 V AC - 132 A	8
		175 kW*1 x 4	Natural cooling	Unit of Control: 1C1M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 990 V AC - 252 A	11
		140 kW*1 x 4	Natural cooling	Unit of Control: 1C4M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1100 V AC - 413 A	10

*1: Rating is 1 hour

Traction Converter Product Line-up 2/2

Application	Electric System	Output Power (Continuous)	Cooling Method	Characteristics/Features	Page No.
Commuter Train	3000 V DC	210 kW x 4	Forced air cooling	Unit of Control: 1C4M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 2300 V AC - 268 A	15
	25 kV AC – 60 Hz	200 kW x 4	Natural cooling	Unit of Control: 1C4M Circuit configuration: 3 Level, single phase, voltage type VVVF Converter + 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1370 V AC - 412 A	17
Cruise Train	Diesel Electric Hybrid (600V)	130kW*1 x 4	Water cooling	Unit of Control: 1C1M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 450 V AC - 215 A	18
	Diesel Electric 1500 V DC 20,000 V AC – 50Hz/60Hz 25,000 V AC – 50Hz	140kW*1 x 4	Natural cooling	Unit of Control: 1C4M Circuit configuration: 2 level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1100 V AC - 372 A	19
High-Speed Train	25 kV AC – 60 Hz	285 kW x 4	Forced air cooling	Unit of Control: 1C4M Circuit configuration: 3 level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1850 V AC - 448	20
Locomotive	20 kV AC – 50 Hz 25 kV AC – 50 Hz	565kW*1 x	Forced air cooling	Unit of Control: 1C2M Circuit configuration: 3 Level, single phase, voltage type VVVF Converter + 3 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1550 V AC - 1100 A	22
	25 kV AC – 50 Hz	1250 kW x 3	Water cooling	Unit of Control: 1C1M Circuit configuration: 2 Level, single phase, voltage type VVVF Converter + 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 2150 V AC - 390 A	23
	25 kV AC – 50 Hz	1430 kW x 2	Water cooling	Circuit Configuration: 2 Level, single phase, voltage type PWM Converter + 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 1780 V AC - 552 A	24
Tram	750 V DC	140 kW x 2	Forced air cooling	Unit of Control: 1C2M Circuit configuration: 2 Level, 3 phase, voltage type VVVF Inverter Output Rating: 3 phase - 550 V AC - 412 A	26

*1: Rating is 1 hour

