

Symbol	Typ	Titel
B	Sektion	PERFORMING OPERATIONS; TRANSPORTING
B60	Untersektion	TRANSPORTING
B60	Klasse	VEHICLES IN GENERAL
B60L	Unterkategorie	PROPELLION OF ELECTRICALLY-PROPELLED VEHICLES (arrangements or mounting of electrical propulsion units or of plural diverse prime-movers for mutual or common propulsion in vehicles B60K 1/00, B60K 6/20; arrangements or mounting of electrical gearing in vehicles B60K 17/12, B60K 17/14; preventing wheel slip by reducing power in rail vehicles B61C 15/08; dynamo-electric machines H02K; control or regulation of electric motors H02P); SUPPLYING ELECTRIC POWER FOR AUXILIARY EQUIPMENT OF ELECTRICALLY-PROPELLED VEHICLES (electric coupling devices combined with mechanical couplings of vehicles B60D 1/64; electric heating for vehicles B60H 1/00); ELECTRODYNAMIC BRAKE SYSTEMS FOR VEHICLES IN GENERAL (control or regulation of electric motors H02P); MAGNETIC SUSPENSION OR LEVITATION FOR VEHICLES; MONITORING OPERATING VARIABLES OF ELECTRICALLY-PROPELLED VEHICLES; ELECTRIC SAFETY DEVICES FOR ELECTRICALLY-PROPELLED VEHICLES [4]
B60L 1/00	Hauptgruppe	Supplying electric power to auxiliary equipment of electrically-propelled vehicles (arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general B60Q) [1, 6, 2006.01]
B60L 1/02	1-Punkt Untergruppe	. to electric heating circuits [1, 2006.01]
B60L 1/04	2-Punkt Untergruppe	.. fed by the power supply line [1, 2006.01]
B60L 1/06	3-Punkt Untergruppe	... using only one supply [1, 2006.01]
B60L 1/08	4-Punkt Untergruppe Methods or devices for control or regulation [1, 2006.01]
B60L 1/10	3-Punkt Untergruppe with provision for using different supplies [1, 2006.01]
B60L 1/12	4-Punkt Untergruppe Methods or devices for control or regulation [1, 2006.01]
B60L 1/14	1-Punkt Untergruppe	. to electric lighting circuits [1, 2006.01]
B60L 1/16	2-Punkt Untergruppe	.. fed by the power supply line [1, 2006.01]
B60L 3/00	Hauptgruppe	Electric devices on electrically-propelled vehicles for safety purposes; Monitoring operating variables, e.g. speed, deceleration, power consumption [1, 2006.01]
B60L 3/02	1-Punkt Untergruppe	. Dead-man's devices [1, 2006.01]
B60L 3/04	1-Punkt Untergruppe	. Cutting-off the power supply under fault conditions [1, 2006.01]
B60L 3/06	1-Punkt Untergruppe	. Limiting the traction current under mechanical- overload conditions [1, 2006.01]
B60L 3/08	1-Punkt Untergruppe	. Means for preventing excessive speed of the vehicle [1, 2006.01]
B60L 3/10	1-Punkt Untergruppe	. Indicating wheel slip [1, 2006.01]
B60L 3/12	1-Punkt Untergruppe	. Recording operating variables [1, 2006.01]
B60L 5/00	Hauptgruppe	Current-collectors for power supply lines of electrically-propelled vehicles [1, 2006.01]
B60L 5/02	1-Punkt Untergruppe	. with ice-removing device [1, 2006.01]
B60L 5/04	1-Punkt Untergruppe	. using rollers or sliding shoes in contact with trolley wire (B60L 5/40 takes precedence) [1, 2006.01]
B60L 5/06	2-Punkt Untergruppe	.. Structure of the rollers or their carrying means [1, 2006.01]
B60L 5/08	2-Punkt Untergruppe	.. Structure of the sliding shoes or their carrying means [1, 2006.01]

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B60L 5/10	2-Punkt Untergruppe	... Devices preventing the collector from jumping off [1, 2006.01]
B60L 5/12	2-Punkt Untergruppe	... Structural features of poles or their bases [1, 2006.01]
B60L 5/14	3-Punkt Untergruppe	... Devices for automatic lowering of a jumped-off collector [1, 2006.01]
B60L 5/16	3-Punkt Untergruppe	... Devices for lifting and resetting the collector (B60L 5/34 takes precedence) [1, 2006.01]
B60L 5/18	1-Punkt Untergruppe	. using bow-type collectors in contact with trolley wire [1, 2006.01]
B60L 5/19	2-Punkt Untergruppe	... using arrangements for effecting collector movement transverse to the direction of vehicle motion [3, 2006.01]
B60L 5/20	2-Punkt Untergruppe	... Details of contact bow [1, 2006.01]
B60L 5/22	2-Punkt Untergruppe	... Supporting means for the contact bow [1, 2006.01]
B60L 5/24	3-Punkt Untergruppe	... Pantographs [1, 2006.01]
B60L 5/26	3-Punkt Untergruppe	... Half-pantographs, e.g. using counter-rocking beams [1, 2006.01]
B60L 5/28	3-Punkt Untergruppe	... Devices for lifting and resetting the collector [1, 2006.01]
B60L 5/30	4-Punkt Untergruppe using springs [1, 2006.01]
B60L 5/32	4-Punkt Untergruppe using fluid pressure [1, 2006.01]
B60L 5/34	1-Punkt Untergruppe	. with devices to enable one vehicle to pass another one using the same power supply line [1, 2006.01]
B60L 5/36	1-Punkt Untergruppe	. with means for collecting current simultaneously from more than one conductor, e.g. from more than one phase [1, 2006.01]
B60L 5/38	1-Punkt Untergruppe	. for collecting current from conductor rails (B60L 5/40 takes precedence) [1, 2006.01]
B60L 5/39	2-Punkt Untergruppe	... from third rail [3, 2006.01]
B60L 5/40	1-Punkt Untergruppe	. for collecting current from lines in slotted conduits [1, 2006.01]
B60L 5/42	1-Punkt Untergruppe	. for collecting current from individual contact pieces connected to the power supply line [1, 2006.01]
B60L 7/00	Hauptgruppe	Electrodynamic brake systems for vehicles in general [1, 4, 2006.01]
B60L 7/02	1-Punkt Untergruppe	. Dynamic electric resistor braking (B60L 7/22 takes precedence) [1, 2006.01]
B60L 7/04	2-Punkt Untergruppe	... for vehicles propelled by dc motors [1, 2006.01]
B60L 7/06	2-Punkt Untergruppe	... for vehicles propelled by ac motors [1, 2006.01]
B60L 7/08	2-Punkt Untergruppe	... Controlling the braking effect (B60L 7/04, B60L 7/06 take precedence) [1, 2006.01]
B60L 7/10	1-Punkt Untergruppe	. Dynamic electric regenerative braking (B60L 7/22 takes precedence) [1, 2006.01]
B60L 7/12	2-Punkt Untergruppe	... for vehicles propelled by dc motors [1, 2006.01]
B60L 7/14	2-Punkt Untergruppe	... for vehicles propelled by ac motors [1, 2006.01]
B60L 7/16	2-Punkt Untergruppe	... for vehicles comprising converters between the power source and the motor [1, 2006.01]
B60L 7/18	2-Punkt Untergruppe	... Controlling the braking effect (B60L 7/12, B60L 7/14, B60L 7/16 take precedence) [1, 2006.01]
B60L 7/20	1-Punkt Untergruppe	. Braking by supplying regenerated power to the prime mover of vehicles comprising engine-driven generators [1, 2006.01]
B60L 7/22	1-Punkt Untergruppe	. Dynamic electric resistor braking, combined with dynamic electric regenerative braking [1, 2006.01]

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B60L 7/24	1-Punkt Untergruppe	. with additional mechanical or electromagnetic braking [1, 2006.01]
B60L 7/26	2-Punkt Untergruppe	... Controlling the braking effect [1, 2006.01]
B60L 7/28	1-Punkt Untergruppe	. Eddy-current braking [1, 2006.01]
B60L 8/00	Hauptgruppe	Electric propulsion with power supply from force of nature, e.g. sun, wind [5, 2006.01]
B60L 9/00	Hauptgruppe	Electric propulsion with power supply external to vehicle (B60L 8/00, B60L 13/00 take precedence) [1, 5, 6, 2006.01]
B60L 9/02	1-Punkt Untergruppe	. using dc motors [1, 2006.01]
B60L 9/04	2-Punkt Untergruppe	... fed from dc supply lines [1, 2006.01]
B60L 9/06	3-Punkt Untergruppe	... with conversion by metadyne [1, 2006.01]
B60L 9/08	2-Punkt Untergruppe	... fed from ac supply lines [1, 2006.01]
B60L 9/10	3-Punkt Untergruppe	... with rotary converters [1, 2006.01]
B60L 9/12	3-Punkt Untergruppe	... with static converters [1, 2006.01]
B60L 9/14	2-Punkt Untergruppe	... fed from different kinds of power supply lines [1, 2006.01]
B60L 9/16	1-Punkt Untergruppe	. using ac induction motors [1, 2006.01]
B60L 9/18	2-Punkt Untergruppe	... fed from dc supply lines [1, 2006.01]
B60L 9/20	3-Punkt Untergruppe	... single-phase motors [1, 2006.01]
B60L 9/22	3-Punkt Untergruppe	... polyphase motors [1, 2006.01]
B60L 9/24	2-Punkt Untergruppe	... fed from ac supply lines [1, 2006.01]
B60L 9/26	3-Punkt Untergruppe	... single-phase motors [1, 2006.01]
B60L 9/28	3-Punkt Untergruppe	... polyphase motors [1, 2006.01]
B60L 9/30	2-Punkt Untergruppe	... fed from different kinds of power supply lines [1, 2006.01]
B60L 9/32	1-Punkt Untergruppe	. using ac brush-displacement motors [1, 2006.01]
B60L 11/00	Hauptgruppe	Electric propulsion with power supplied within the vehicle (B60L 8/00, B60L 13/00 take precedence; arrangements or mounting of prime-movers consisting of electric motors and internal combustion engines for mutual or common propulsion B60K 6/20) [1, 5, 6, 2006.01]
B60L 11/02	1-Punkt Untergruppe	. using engine-driven generators [1, 2006.01]
B60L 11/04	2-Punkt Untergruppe	... using dc generators and motors [1, 2006.01]
B60L 11/06	2-Punkt Untergruppe	... using ac generators and dc motors [1, 2006.01]
B60L 11/08	2-Punkt Untergruppe	... using ac generators and motors [1, 2006.01]
B60L 11/10	2-Punkt Untergruppe	... using dc generators and ac motors [1, 2006.01]
B60L 11/12	2-Punkt Untergruppe	... with additional electric power supply, e.g. accumulator [1, 2006.01]
B60L 11/14	2-Punkt Untergruppe	... with provision for direct mechanical propulsion [1, 2006.01]
B60L 11/16	1-Punkt Untergruppe	. using power stored mechanically, e.g. in flywheel [1, 2006.01]
B60L 11/18	1-Punkt Untergruppe	. using power supplied from primary cells, secondary cells, or fuel cells [1, 2006.01]
B60L 13/00	Hauptgruppe	Electric propulsion for monorail vehicles, suspension vehicles or rack railways; Magnetic

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suspension or levitation for vehicles [1, 4, 6, 2006.01]		
B60L 13/03	1-Punkt Untergruppe	. Electric propulsion by linear motors [6, 2006.01]
B60L 13/04	1-Punkt Untergruppe	. Magnetic suspension or levitation for vehicles [4, 2006.01]
B60L 13/06	2-Punkt Untergruppe	... Means to sense or control vehicle position or attitude with respect to railway [4, 2006.01]
B60L 13/08	3-Punkt Untergruppe	... for the lateral position [4, 2006.01]
B60L 13/10	1-Punkt Untergruppe	. Combination of electric propulsion and magnetic suspension or levitation [4, 2006.01]
B60L 15/00	Hauptgruppe	Methods, circuits or devices for controlling the propulsion of electrically-propelled vehicles, e.g. their traction-motor speed, to achieve a desired performance; Adaptation of control equipment on electrically-propelled vehicles for remote actuation from a stationary place, from alternative parts of the vehicle or from alternative vehicles of the same vehicle train [1, 2006.01]
B60L 15/02	1-Punkt Untergruppe	. characterised by the form of the current used in the control circuit [1, 2006.01]
B60L 15/04	2-Punkt Untergruppe	... using dc [1, 2006.01]
B60L 15/06	2-Punkt Untergruppe	... using substantially-sinusoidal ac [1, 2006.01]
B60L 15/08	2-Punkt Untergruppe	... using pulses [1, 2006.01]
B60L 15/10	1-Punkt Untergruppe	. for automatic control superimposed on human control to limit the acceleration of the vehicle, e.g. to prevent excessive motor current (electric devices for safety purposes B60L 3/00) [1, 2006.01]
B60L 15/12	2-Punkt Untergruppe	... with circuits controlled by relays or contactors [1, 2006.01]
B60L 15/14	2-Punkt Untergruppe	... with main controller driven by a servomotor (B60L 15/18 takes precedence) [1, 2006.01]
B60L 15/16	2-Punkt Untergruppe	... with main controller driven through a ratchet mechanism (B60L 15/18 takes precedence) [1, 2006.01]
B60L 15/18	2-Punkt Untergruppe	... without contact-making and breaking, e.g. using a transductor [1, 2006.01]
B60L 15/20	1-Punkt Untergruppe	. for control of the vehicle or its driving motor to achieve a desired performance, e.g. speed, torque, programmed variation of speed [1, 2006.01]
B60L 15/22	2-Punkt Untergruppe	... with sequential operation of interdependent switches, e.g. relays, contactors, programme drum [1, 2006.01]
B60L 15/24	2-Punkt Untergruppe	... with main controller driven by a servomotor (B60L 15/28 takes precedence) [1, 2006.01]
B60L 15/26	2-Punkt Untergruppe	... with main controller driven through a ratchet mechanism (B60L 15/28 takes precedence) [1, 2006.01]
B60L 15/28	2-Punkt Untergruppe	... without contact-making and breaking, e.g. using a transductor [1, 2006.01]
B60L 15/30	2-Punkt Untergruppe	... with means to change-over to human control [1, 2006.01]
B60L 15/32	1-Punkt Untergruppe	. Control or regulation of multiple-unit electrically-propelled vehicles [1, 2006.01]
B60L 15/34	2-Punkt Untergruppe	... with human control of a setting device [1, 2006.01]
B60L 15/36	3-Punkt Untergruppe	... with automatic control superimposed, e.g. to prevent excessive motor current [1, 2006.01]
B60L 15/38	2-Punkt Untergruppe	... with automatic control [1, 2006.01]
B60L 15/40	1-Punkt Untergruppe	. Adaptation of control equipment on vehicle for remote actuation from a stationary place (devices along the route for controlling devices on rail vehicles B61L 3/00; central rail-traffic control systems B61L 27/00) [1, 2006.01]
B60L 15/42	1-Punkt Untergruppe	. Adaptation of control equipment on vehicle for actuation from alternative parts of the vehicle or from alternative vehicles of the same vehicle train (B60L 15/32 takes precedence) [1, 2006.01]