Symbol	Typ	Titel
B	**Sektion**	**SECTION B — PERFORMING OPERATIONS; TRANSPORTING**
B60	**Untersektion**	**TRANSPORTING**
B60	**Klasse**	**VEHICLES IN GENERAL**
B60L	**Unterklasse**	**ELECTRIC EQUIPMENT OR PROPULSION OF ELECTRICALLY-PROPELLED VEHICLES; MAGNETIC SUSPENSION OR LEVITATION FOR VEHICLES; ELECTRODYNAMIC BRAKE SYSTEMS FOR VEHICLES, IN GENERAL (electric coupling devices combined with mechanical couplings of vehicles B60D 1/62; electric heating for vehicles B60H; arrangements or mounting of electrical propulsion units in vehicles B60K 1/00; arrangements or mounting of electric gearing in vehicles B60K 17/12, B60K 17/14; auxiliary drives on vehicles B60K 25/00; arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general B60Q; vehicle brake control systems in general B60T; preventing wheel slip by reducing power in rail vehicles B61C; railway track circuits in general B61L; lighting in general F21, H05B; switches in general H01H; coupling devices for electric connections in general H01R; dynamo-electric machines H02K; electric converters H02M; starting, controlling, braking of electric machines or converters in general H02P; electric heating in general H05B) [4]**
B60L 1/00	**Hauptgruppe**	**Supplying electric power to auxiliary equipment of vehicles (circuit arrangements for charging batteries H02J 7/00) [6]**
B60L 1/02	1-Punkt Untergruppe	. to electric heating circuits
B60L 1/04	2-Punkt Untergruppe	. . fed by the power supply line
B60L 1/06	3-Punkt Untergruppe	. . . using only one supply
B60L 1/08	4-Punkt Untergruppe	. . . . Methods or devices for control or regulation
B60L 1/10	3-Punkt Untergruppe	. . . with provision for using different supplies
B60L 1/12	4-Punkt Untergruppe	. . . . Methods or devices for control or regulation
B60L 1/14	1-Punkt Untergruppe	. to electric lighting circuits
B60L 1/16	2-Punkt Untergruppe	. . fed by the power supply line
B60L 3/00	**Hauptgruppe**	**Electric devices on electrically-propelled vehicles for safety purposes; Monitoring operating variables, e.g. speed, deceleration, power consumption (measuring in general G01)**
B60L 3/02	1-Punkt Untergruppe	. Dead-man's devices
B60L 3/04	1-Punkt Untergruppe	. Cutting-off the power supply under fault conditions (protective devices or circuit arrangements in general H01H, H02H)
B60L 3/06	1-Punkt Untergruppe	. Limiting the traction current under mechanical- overload conditions
B60L 3/08	1-Punkt Untergruppe	. Means for preventing excessive speed of the vehicle
B60L 3/10	1-Punkt Untergruppe	. Indicating wheel slip
B60L 3/12	1-Punkt Untergruppe	. Recording operating variables
B60L 5/00	**Hauptgruppe**	**Current-collectors for power supply lines of electrically-propelled vehicles (current-collectors in general H01R 41/00)**
B60L 5/02	1-Punkt Untergruppe	. with ice-removing device
B60L 5/04	1-Punkt Untergruppe	. using rollers or sliding shoes in contact with trolley wire (B60L 5/40 takes precedence)
B60L 5/06	2-Punkt Untergruppe	. . Structure of the rollers or their carrying means

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

Symbol	Typ	Titel
B60L 7/22	1-Punkt Untergruppe	. Dynamic electric resistor braking, combined with dynamic electric regenerative braking
B60L 7/24	1-Punkt Untergruppe	. with additional mechanical or electromagnetic braking (electromagnetic brakes F16D 65/34)
B60L 7/26	2-Punkt Untergruppe	. . Controlling the braking effect
B60L 7/28	1-Punkt Untergruppe	. Eddy-current braking
B60L 8/00	**Hauptgruppe**	**Electric propulsion with power supply from force of nature, e.g. sun, wind [5]**
B60L 9/00	**Hauptgruppe**	**Electric propulsion with power supply external to vehicle (B60L 8/00, B60L 13/00 take precedence) [5, 6]**
B60L 9/02	1-Punkt Untergruppe	. using dc motors
B60L 9/04	2-Punkt Untergruppe	. . fed from dc supply lines
B60L 9/06	3-Punkt Untergruppe	. . . with conversion by metadyne
B60L 9/08	2-Punkt Untergruppe	. . fed from ac supply lines
B60L 9/10	3-Punkt Untergruppe	. . . with rotary converters
B60L 9/12	3-Punkt Untergruppe	. . . with static converters
B60L 9/14	2-Punkt Untergruppe	. . fed from different kinds of power supply lines
B60L 9/16	1-Punkt Untergruppe	. using ac induction motors
B60L 9/18	2-Punkt Untergruppe	. . fed from dc supply lines
B60L 9/20	3-Punkt Untergruppe	. . . single-phase motors
B60L 9/22	3-Punkt Untergruppe	. . . polyphase motors
B60L 9/24	2-Punkt Untergruppe	. . fed from ac supply lines
B60L 9/26	3-Punkt Untergruppe	. . . single-phase motors
B60L 9/28	3-Punkt Untergruppe	. . . polyphase motors
B60L 9/30	2-Punkt Untergruppe	. . fed from different kinds of power supply lines
B60L 9/32	1-Punkt Untergruppe	. using ac brush-displacement motors
B60L 11/00	***Hauptgruppe***	***Electric propulsion with power supplied within the vehicle (B60L 8/00 , B60L 13/00 take precedence ; arrangement or mounting of plural diverse prime-movers for mutual or common propulsion B60K 6/00 ; control systems specially adapted for hybrid vehicles B60W 20/00) [5, 6, 2006.01]***
B60L 11/02	1-Punkt Untergruppe	. using engine-driven generators
B60L 11/04	2-Punkt Untergruppe	. . using dc generators and motors
B60L 11/06	2-Punkt Untergruppe	. . using ac generators and dc motors
B60L 11/08	2-Punkt Untergruppe	. . using ac generators and motors
B60L 11/10	2-Punkt Untergruppe	. . using dc generators and ac motors
B60L 11/12	2-Punkt Untergruppe	. . with additional electric power supply, e.g. accumulator
B60L 11/14	2-Punkt Untergruppe	. . with provision for direct mechanical propulsion
B60L 11/16	1-Punkt Untergruppe	. using power stored mechanically, e.g. in flywheel

Symbol	Typ	Titel
B60L 11/18	1-Punkt Untergruppe	. using power supplied from primary cells, secondary cells, or fuel cells
B60L 13/00	**Hauptgruppe**	**Electric propulsion for monorail vehicles, suspension vehicles or rack railways; Magnetic suspension or levitation for vehicles (electromagnetics per seH01F 7/06; linear motors per se H02K 41/00) [4, 6]**
B60L 13/03	1-Punkt Untergruppe	. Electric propulsion by linear motors [6]
B60L 13/04	1-Punkt Untergruppe	. Magnetic suspension or levitation for vehicles [4]
B60L 13/06	2-Punkt Untergruppe	. . Means to sense or control vehicle position or attitude with respect to railway [4]
B60L 13/08	3-Punkt Untergruppe	. . . for the lateral position [4]
B60L 13/10	1-Punkt Untergruppe	. Combination of electric propulsion and magnetic suspension or levitation [4]
B60L 15/00	**Hauptgruppe**	**Methods, circuits, or devices for controlling the traction-motor speed of electrically-propelled vehicles**
B60L 15/02	1-Punkt Untergruppe	. characterised by the form of the current used in the control circuit
B60L 15/04	2-Punkt Untergruppe	. . using dc
B60L 15/06	2-Punkt Untergruppe	. . using substantially-sinusoidal ac
B60L 15/08	2-Punkt Untergruppe	. . using pulses
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)
B60L 15/12	2-Punkt Untergruppe	. . with circuits controlled by relays or contactors
B60L 15/14	2-Punkt Untergruppe	. . with main controller driven by a servomotor (B60L 15/18 takes precedence)
B60L 15/16	2-Punkt Untergruppe	. . with main controller driven through a ratchet mechanism (B60L 15/18 takes precedence)
B60L 15/18	2-Punkt Untergruppe	. . without contact-making and breaking, e.g. using a transductor
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
B60L 15/22	2-Punkt Untergruppe	. . with sequential operation of interdependent switches, e.g. relays, contactors, programme drum
B60L 15/24	2-Punkt Untergruppe	. . with main controller driven by a servomotor (B60L 15/28 takes precedence)
B60L 15/26	2-Punkt Untergruppe	. . with main controller driven through a ratchet mechanism (B60L 15/28 takes precedence)
B60L 15/28	2-Punkt Untergruppe	. . without contact-making and breaking, e.g. using a transductor
B60L 15/30	2-Punkt Untergruppe	. . with means to change-over to human control
B60L 15/32	1-Punkt Untergruppe	. Control or regulation of multiple-unit electrically-propelled vehicles
B60L 15/34	2-Punkt Untergruppe	. . with human control of a setting device
B60L 15/36	3-Punkt Untergruppe	. . . with automatic control superimposed, e.g. to prevent excessive motor current
B60L 15/38	2-Punkt Untergruppe	. . with automatic control
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)
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)