Н	Sektion	SECTION H — ELECTRICITY
H05	Klasse	ELECTRIC TECHNIQUES NOT OTHERWISE PROVIDED FOR
Н05В	Unterklasse	ELECTRIC HEATING; ELECTRIC LIGHTING NOT OTHERWISE PROVIDED FOR (apparatus for
		special application, see the relevant places, e.g. A47J, B21J, B21K, C21, C22, C23, F21,
		F24, F27)
		Heating
H05B 1/00	Hauptgruppe	Details of electric heating devices
H05B 1/02	1-Punkt Untergruppe	. Automatic switching arrangements specially adapted to heating apparatus (control of temperature in general G05D 23/00; thermally-actuated switches H01H 37/00)
H05B 3/00	Hauptgruppe	Ohmic-resistance heating
H05B 3/02	1-Punkt Untergruppe	. Details
H05B 3/03	2-Punkt Untergruppe	Electrodes (electrothermic treatment of ores C22B 4/00) [2]
H05B 3/04	2-Punkt Untergruppe	Waterproof or air-tight seals for heaters
H05B 3/06	2-Punkt Untergruppe	Heater elements structurally combined with coupling elements or with holders
H05B 3/08	3-Punkt Untergruppe	having electric connections specially adapted for high temperatures
H05B 3/10	1-Punkt Untergruppe	. Heating elements characterised by the composition or nature of the materials or by the arrangement of the
		conductor (compositions <u>per se</u> , <u>see</u> the relevant subclasses)
H05B 3/12	2-Punkt Untergruppe	characterised by the composition or nature of the conductive material
H05B 3/14	3-Punkt Untergruppe	the material being non-metallic
H05B 3/16	2-Punkt Untergruppe	the conductor being mounted on an insulating base
H05B 3/18	2-Punkt Untergruppe	the conductor being embedded in an insulating material
H05B 3/20	1-Punkt Untergruppe	. Heating elements having extended surface area substantially in a two-dimensional plane, e.g. plate-heater ( H05B 3/62, H05B 3/68, H05B 3/78, H05B 3/84 take precedence) [5]
H05B 3/22	2-Punkt Untergruppe	non-flexible
H05B 3/24	3-Punkt Untergruppe	heating conductor being self-supporting
H05B 3/26	3-Punkt Untergruppe	heating conductor mounted on insulating base
H05B 3/28	3-Punkt Untergruppe	heating conductor embedded in insulating material
H05B 3/30	4-Punkt Untergruppe	on or between metallic plates
H05B 3/32	3-Punkt Untergruppe	heating conductor mounted on insulators on a metallic frame
H05B 3/34	2-Punkt Untergruppe	flexible, e.g. heating nets or webs
H05B 3/36	3-Punkt Untergruppe	heating conductor embedded in insulating material
H05B 3/38	4-Punkt Untergruppe	Powder conductors
H05B 3/40	1-Punkt Untergruppe	. Heating elements having the shape of rods or tubes (H05B 3/62, H05B 3/68, H05B 3/78 take precedence)
H05B 3/42	2-Punkt Untergruppe	non-flexible

Symbol	Тур	Titel
H05B 3/44	3-Punkt Untergruppe	heating conductor arranged within rods or tubes of insulating material
H05B 3/46	3-Punkt Untergruppe	heating conductor mounted on insulating base
H05B 3/48	3-Punkt Untergruppe	heating conductor embedded in insulating material
H05B 3/50	4-Punkt Untergruppe	heating conductor arranged in metal tubes, the radiating surface having heat-conducting fins
H05B 3/52	4-Punkt Untergruppe	Apparatus or processes for filling or compressing insulating material in tubes
H05B 3/54	2-Punkt Untergruppe	flexible
H05B 3/56	3-Punkt Untergruppe	Heating cables
H05B 3/58	3-Punkt Untergruppe	Heating hoses; Heating collars
H05B 3/60	1-Punkt Untergruppe	. Heating arrangements wherein the heating current flows through granular, powdered or fluid material, e.g. for salt-bath furnace, electrolytic heating (H05B 3/38 takes precedence)
H05B 3/62	1-Punkt Untergruppe	. Heating elements specially adapted for furnaces (H05B 3/60 takes precedence; arrangements of such elements in furnaces F27, e.g. F27D 11/00)
H05B 3/64	2-Punkt Untergruppe	using ribbon, rod, or wire heater
H05B 3/66	2-Punkt Untergruppe	Supports or mountings for heaters on or in the wall or roof
H05B 3/68	1-Punkt Untergruppe	. Heating arrangements specially adapted for cooking plates or analogous hot-plates
H05B 3/70	2-Punkt Untergruppe	Plates of cast metal
H05B 3/72	2-Punkt Untergruppe	Plates of sheet metal
H05B 3/74	2-Punkt Untergruppe	Non-metallic plates
H05B 3/76	2-Punkt Untergruppe	Plates with spirally-wound heating tubes
H05B 3/78	1-Punkt Untergruppe	. Heating arrangements specially adapted for immersion heating
H05B 3/80	2-Punkt Untergruppe	Portable immersion heaters
H05B 3/82	2-Punkt Untergruppe	Fixedly-mounted immersion heaters
H05B 3/84	1-Punkt Untergruppe	. Heating arrangements specially adapted for transparent or reflecting areas, e.g. for demisting or de-icing windows, mirrors or vehicle windshields [5]
H05B 3/86	2-Punkt Untergruppe	the heating conductors being embedded in the transparent or reflecting material [5]
H05B 6/00	Hauptgruppe	Heating by electric, magnetic, or electromagnetic fields (for therapeutic purposes A61N 5/00; joining of preformed parts by heating of plastics or substances in a plastic state B29C 65/02) [3]
H05B 6/02	1-Punkt Untergruppe	. Induction heating [3]
H05B 6/04	2-Punkt Untergruppe	Sources of current [3]
H05B 6/06	2-Punkt Untergruppe	Control, e.g. of temperature, of power [3]
H05B 6/08	3-Punkt Untergruppe	using compensating or balancing arrangements [3]
H05B 6/10	2-Punkt Untergruppe	Induction heating apparatus, other than furnaces, for specific applications [3]
H05B 6/12	3-Punkt Untergruppe	Cooking devices [3]
H05B 6/14	3-Punkt Untergruppe	Tools, e.g. nozzles, rollers, calenders [3]

Symbol	Тур	Titel
H05B 6/16	2-Punkt Untergruppe	Furnaces having endless cores (H05B 6/34 takes precedence) [3]
H05B 6/18	3-Punkt Untergruppe	having melting basin [3]
H05B 6/20	3-Punkt Untergruppe	having melting channel only [3]
H05B 6/22	2-Punkt Untergruppe	Furnaces without an endless core (H05B 6/34 takes precedence) [3]
H05B 6/24	3-Punkt Untergruppe	Crucible furnaces (H05B 6/30 takes precedence) [3]
H05B 6/26	4-Punkt Untergruppe	using vacuum or particular gas atmosphere [3]
H05B 6/28	4-Punkt Untergruppe	Protective systems [3]
H05B 6/30	3-Punkt Untergruppe	Arrangements for remelting or zone melting [3]
H05B 6/32	3-Punkt Untergruppe	Arrangements for simultaneous levitation and heating [3]
H05B 6/34	2-Punkt Untergruppe	Arrangements for circulation of melts [3]
H05B 6/36	2-Punkt Untergruppe	Coil arrangements [3]
H05B 6/38	3-Punkt Untergruppe	specially adapted for fitting into hollow spaces of workpieces [3]
H05B 6/40	3-Punkt Untergruppe	Establishing desired heat distribution, e.g. to heat particular parts of workpieces [3]
H05B 6/42	3-Punkt Untergruppe	Cooling of coils [3]
H05B 6/44	3-Punkt Untergruppe	having more than one coil or coil segment [3]
H05B 6/46	1-Punkt Untergruppe	. Dielectric heating (H05B 6/64 take precedence) [3]
H05B 6/48	2-Punkt Untergruppe	Circuits [3]
H05B 6/50	3-Punkt Untergruppe	for monitoring or control [3]
H05B 6/52	2-Punkt Untergruppe	Feed lines [3]
H05B 6/54	2-Punkt Untergruppe	Electrodes [3]
H05B 6/56	3-Punkt Untergruppe	Rolling electrodes [3]
H05B 6/58	3-Punkt Untergruppe	"sewing machine" type [3]
H05B 6/60	2-Punkt Untergruppe	Arrangements for continuous movement of material [3]
H05B 6/62	2-Punkt Untergruppe	Apparatus for specific applications [3]
H05B 6/64	1-Punkt Untergruppe	. Heating using microwaves [3]
H05B 6/66	2-Punkt Untergruppe	Circuits [3]
H05B 6/68	3-Punkt Untergruppe	for monitoring or control [3]
H05B 6/70	2-Punkt Untergruppe	Feed lines [3]
H05B 6/72	2-Punkt Untergruppe	Radiators or aerials [3]
H05B 6/74	2-Punkt Untergruppe	Mode transformers or mode stirrers [3]
H05B 6/76	2-Punkt Untergruppe	Prevention of microwave leakage, e.g. door sealings [3]
H05B 6/78	2-Punkt Untergruppe	Arrangements for continuous movement of material [3]

Symbol	Тур	Titel
H05B 6/80	2-Punkt Untergruppe	Apparatus for specific applications (stoves or ranges F24C 7/02) [3]
H05B 7/00	Hauptgruppe	Heating by electric discharge (electron beam or ion beam tubes for localised treatment of objects H01J 37/30; plasma torches H05H $1/26$ )
H05B 7/02	1-Punkt Untergruppe	. Details
H05B 7/06	2-Punkt Untergruppe	Electrodes
H05B 7/07	3-Punkt Untergruppe	designed to melt in use [2]
H05B 7/08	3-Punkt Untergruppe	non-consumable [2]
H05B 7/085	4-Punkt Untergruppe	mainly consisting of carbon [2]
H05B 7/09	5-Punkt Untergruppe	Self-baking electrodes [2]
H05B 7/10	2-Punkt Untergruppe	Mountings, supports, terminals, or arrangements for feeding or guiding electrodes [2]
H05B 7/101	3-Punkt Untergruppe	Mountings, supports, or terminals at head of electrode, i.e. at the end remote from the arc [2]
H05B 7/102	4-Punkt Untergruppe	specially adapted for consumable electrodes [2]
H05B 7/103	3-Punkt Untergruppe	Mountings, supports, or terminals with jaws (H05B 7/101 takes precedence) [2]
H05B 7/105	4-Punkt Untergruppe	comprising more than two jaws equally spaced along circumference, e.g. ring holders [2]
H05B 7/107	3-Punkt Untergruppe	specially adapted for self-baking electrodes [2]
H05B 7/109	3-Punkt Untergruppe	Feeding arrangements (H05B 7/107 takes precedence; where the electrode movement is a part of a closed loop for automatic control of power H05B 7/148) [2]
H05B 7/11	2-Punkt Untergruppe	Arrangements for conducting current to the electrode terminals (non-insulated conductors or conductive bodies in general H01B 5/00; insulated conductors or cables in general H01B 7/00) [2]
H05B 7/12	2-Punkt Untergruppe	Arrangements for cooling, sealing, or protecting electrodes [2]
H05B 7/14	2-Punkt Untergruppe	Arrangements or methods for connecting successive electrode sections [2]
H05B 7/144	2-Punkt Untergruppe	Power supplies specially adapted for heating by electric discharge; Automatic control of power, e.g. by positioning of electrodes (circuit arrangements for supplying electric power in general H02J) [2]
H05B 7/148	3-Punkt Untergruppe	Automatic control of power (electrode feeding arrangements H05B 7/109; automatic feeding or moving of electrodes for spot or seam welding or cutting B23K 9/12; disposition of electrodes in or on furnaces F27D 11/10; control of position in general G05D 3/00; regulating electric characteristics of arcs in general G05F 1/02; regulating electric power in general G05F 1/66) [2]
H05B 7/152	4-Punkt Untergruppe	by electromechanical means for positioning of electrodes [2]
H05B 7/156	4-Punkt Untergruppe	by hydraulic or pneumatic means for positioning of electrodes [2]
H05B 7/16	1-Punkt Untergruppe	. Heating by glow discharge
H05B 7/18	1-Punkt Untergruppe	. Heating by arc discharge
H05B 7/20	2-Punkt Untergruppe	. Direct heating by arc discharge, i.e. where at least one end of the arc directly acts on the material to be heated, including additional resistance heating by arc current flowing through the material to be heated [2]
H05B 7/22	2-Punkt Untergruppe	Indirect heating by arc discharge [2]
H05B 11/00	Hauptgruppe	Heating by combined application of processes covered by two or more of groups H05B 3/00-H05B 7/00 (H05B 7/20 takes precedence)
		Lighting
H05B 31/00	Hauptgruppe	Electric arc lamps (regulating electric characteristics of arcs G05F 1/02; with non-consumable

Symbol	Тур	Titel
		electrodes H01J 61/00)
H05B 31/02	1-Punkt Untergruppe	. Details
H05B 31/04	2-Punkt Untergruppe	Housings
H05B 31/06	2-Punkt Untergruppe	Electrodes
H05B 31/08	3-Punkt Untergruppe	Carbon electrodes
H05B 31/10	4-Punkt Untergruppe	Cored carbon electrodes
H05B 31/12	4-Punkt Untergruppe	Beck-effect electrodes
H05B 31/14	3-Punkt Untergruppe	Metal electrodes
H05B 31/16	3-Punkt Untergruppe	Apparatus or processes specially adapted for manufacturing electrodes
H05B 31/18	2-Punkt Untergruppe	Mountings for electrodes; Electrode feeding devices
H05B 31/20	3-Punkt Untergruppe	Mechanical arrangements for feeding electrodes
H05B 31/22	3-Punkt Untergruppe	Electromagnetic arrangements for feeding electrodes
H05B 31/24	2-Punkt Untergruppe	Cooling arrangements
H05B 31/26	2-Punkt Untergruppe	Influencing the shape of arc discharge by gas blowing devices
H05B 31/28	2-Punkt Untergruppe	Influencing the shape of arc discharge by magnetic means
H05B 31/30	2-Punkt Untergruppe	Starting; Igniting
H05B 31/32	2-Punkt Untergruppe	Switching-off
H05B 31/34	2-Punkt Untergruppe	Indicating consumption of electrodes
H05B 31/36	1-Punkt Untergruppe	. having two electrodes in line
H05B 31/38	2-Punkt Untergruppe	specially adapted for ac
H05B 31/40	1-Punkt Untergruppe	. having two electrodes at an angle
H05B 31/42	2-Punkt Untergruppe	specially adapted for ac
H05B 31/44	1-Punkt Untergruppe	. having two parallel electrodes
H05B 31/46	2-Punkt Untergruppe	specially adapted for ac
H05B 31/48	1-Punkt Untergruppe	. having more than two electrodes
H05B 31/50	2-Punkt Untergruppe	specially adapted for ac
H05B 31/52	3-Punkt Untergruppe	electrodes energised from different phases of the supply
H05B 33/00	Hauptgruppe	Electroluminescent light sources (discharge lamps H01J 61/00-H01J 65/00; semi-conductor devices with at least one particular jump barrier or surface barrier specially adapted for light emission H01L 27/15, H01L 33/00; organic light emitting devices H01L 27/32, H01L 51/50;
		lasers H01S 3/00 , H01S 5/00 ; compositions <u>per se</u> , <u>see</u> the relevant subclasses ) [1, 2006.01]
H05B 33/02	1-Punkt Untergruppe	. Details
H05B 33/04	2-Punkt Untergruppe	Sealing arrangements
H05B 33/06	2-Punkt Untergruppe	Electrode terminals

Symbol	Тур	Titel
H05B 33/08	2-Punkt Untergruppe	Circuit arrangements not adapted to a particular application
H05B 33/10	1-Punkt Untergruppe	. Apparatus or processes specially adapted to the manufacture of electroluminescent light sources
H05B 33/12	1-Punkt Untergruppe	. Light sources with substantially two-dimensional radiating surfaces
H05B 33/14	2-Punkt Untergruppe	characterised by the chemical or physical composition or the arrangement of the electroluminescent material
H05B 33/18	2-Punkt Untergruppe	characterised by the nature or concentration of the activator
H05B 33/20	2-Punkt Untergruppe	characterised by the chemical or physical composition or the arrangement of the material in which the electroluminescent material is embedded
H05B 33/22	2-Punkt Untergruppe	characterised by the chemical or physical composition or the arrangement of auxiliary dielectric or reflective layers
H05B 33/24	3-Punkt Untergruppe	of metallic reflective layers (H05B 33/26 takes precedence)
H05B 33/26	2-Punkt Untergruppe	characterised by the composition or arrangement of the conductive material used as an electrode
H05B 33/28	3-Punkt Untergruppe	of translucent electrodes
H05B 35/00	Hauptgruppe	Electric light sources using a combination of different types of light generation
H05B 37/00	Hauptgruppe	Circuit arrangements for electric light sources in general
H05B 37/02	1-Punkt Untergruppe	. Controlling
H05B 37/03	1-Punkt Untergruppe	. Detecting lamp failure
H05B 37/04	2-Punkt Untergruppe	Circuits providing for substitution of the light source in case of its failure
H05B 39/00	Hauptgruppe	Circuit arrangements or apparatus for operating incandescent light sources and not adapted to a
		particular application
H05B 39/02	1-Punkt Untergruppe	particular application  . Switching-on, e.g. with predetermined rate of increase of lighting current
H05B 39/02 H05B 39/04	1-Punkt Untergruppe 1-Punkt Untergruppe	
	J	. Switching-on, e.g. with predetermined rate of increase of lighting current
H05B 39/04	1-Punkt Untergruppe	. Switching-on, e.g. with predetermined rate of increase of lighting current . Controlling
H05B 39/04 H05B 39/06	1-Punkt Untergruppe 2-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 39/10	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 39/10 H05B 41/00	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe Hauptgruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> </ul> Circuit arrangements or apparatus for igniting or operating discharge lamps
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 39/10 H05B 41/00	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe Hauptgruppe 1-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> <li>Circuit arrangements or apparatus for igniting or operating discharge lamps</li> <li>Details</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 41/00 H05B 41/02 H05B 41/04	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe Hauptgruppe 1-Punkt Untergruppe 2-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> <li>Circuit arrangements or apparatus for igniting or operating discharge lamps</li> <li>Details</li> <li>Starting switches</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 39/10 H05B 41/00 H05B 41/02 H05B 41/04 H05B 41/06	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe Hauptgruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> <li>Circuit arrangements or apparatus for igniting or operating discharge lamps</li> <li>Details</li> <li>Starting switches</li> <li>thermal only</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 41/00 H05B 41/02 H05B 41/04 H05B 41/06 H05B 41/08	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe	<ul> <li>Switching-on, e.g. with predetermined rate of increase of lighting current</li> <li>Controlling</li> <li>Switching arrangements, e.g. from series operation to parallel operation</li> <li>by shifting phase of trigger voltage applied to gas-filled controlling tubes</li> <li>in which the lamp is fed by pulses</li> <li>Circuits providing for substitution of the light source in case of its failure</li> <li>Circuit arrangements or apparatus for igniting or operating discharge lamps</li> <li>Details</li> <li>Starting switches</li> <li>thermal only</li> <li>heated by glow discharge</li> </ul>
H05B 39/04 H05B 39/06 H05B 39/08 H05B 39/09 H05B 41/00 H05B 41/02 H05B 41/04 H05B 41/06 H05B 41/08 H05B 41/10	1-Punkt Untergruppe 2-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 1-Punkt Untergruppe Hauptgruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe	. Switching-on, e.g. with predetermined rate of increase of lighting current  . Controlling  Switching arrangements, e.g. from series operation to parallel operation  by shifting phase of trigger voltage applied to gas-filled controlling tubes  . in which the lamp is fed by pulses  . Circuits providing for substitution of the light source in case of its failure  Circuit arrangements or apparatus for igniting or operating discharge lamps  . Details  Starting switches  thermal only  heated by glow discharge  magnetic only

Symbol	Тур	Titel
H05B 41/18	3-Punkt Untergruppe	having a starting switch
H05B 41/19	4-Punkt Untergruppe	for lamps having an auxiliary starting electrode
H05B 41/20	3-Punkt Untergruppe	having no starting switch
H05B 41/22	4-Punkt Untergruppe	for lamps having an auxiliary starting electrode
H05B 41/23	4-Punkt Untergruppe	for lamps not having an auxiliary starting electrode
H05B 41/231	5-Punkt Untergruppe	for high-pressure lamps
H05B 41/232	5-Punkt Untergruppe	for low-pressure lamps
H05B 41/233	6-Punkt Untergruppe	using resonance circuitry
H05B 41/234	6-Punkt Untergruppe	to eliminate stroboscopic effects, e.g. feeding two lamps with different phases
H05B 41/24	2-Punkt Untergruppe	in which the lamp is fed by high-frequency ac (H05B 41/26 takes precedence)
H05B 41/26	2-Punkt Untergruppe	in which the lamp is fed by power derived from dc by means of a converter, e.g. by high-voltage dc
H05B 41/28	3-Punkt Untergruppe	using static converters
H05B 41/282	4-Punkt Untergruppe	with semiconductor devices (H05B 41/288, H05B 41/295 take precedence) [7]
H05B 41/285	5-Punkt Untergruppe	Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/288	4-Punkt Untergruppe	with semiconductor devices and specially adapted for lamps without preheating electrodes, e.g. for high-intensity discharge lamps, high-pressure mercury or sodium lamps or low-pressure sodium lamps [7]
H05B 41/292	5-Punkt Untergruppe	Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/295	4-Punkt Untergruppe	with semiconductor devices and specially adapted for lamps with preheating electrodes, e.g. for fluorescent lamps [7]
H05B 41/298	5-Punkt Untergruppe	Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/30	2-Punkt Untergruppe	in which the lamp is fed by pulses, e.g. flash lamp
H05B 41/32	3-Punkt Untergruppe	for single flash operation
H05B 41/34	3-Punkt Untergruppe	to provide a sequence of flashes
H05B 41/36	2-Punkt Untergruppe	Controlling
H05B 41/38	3-Punkt Untergruppe	Controlling the intensity of light
H05B 41/39	4-Punkt Untergruppe	continuously
H05B 41/391	5-Punkt Untergruppe	using saturable magnetic devices
H05B 41/392	5-Punkt Untergruppe	using semiconductor devices, e.g. thyristor
H05B 41/40	4-Punkt Untergruppe	discontinuously
H05B 41/42	5-Punkt Untergruppe	in two steps only
H05B 41/44	3-Punkt Untergruppe	for providing special optical effects, e.g. progressive motion of light
H05B 41/46	2-Punkt Untergruppe	Circuits providing for substitution in case of failure of the lamp
H05B 43/00	Hauptgruppe	Circuit arrangements for light sources, not otherwise provided for (H05B 37/00 takes precedence)

IPC 2006.01

H05B 43/00

Symbol Typ Titel

H05B 43/02 1-Punkt Untergruppe . for light sources using a charge of combustible material