

| Symbol | Typ | Titel |
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| F | Sektion | SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING |
| F21 | Untersektion | LIGHTING; HEATING |
| F21 | Klasse | LIGHTING (electric aspects or elements, <u>see</u> section H, e.g. electric light sources H01J, H01K, H05B) |
| F21V | Unterklasse | FUNCTIONAL FEATURES OR DETAILS OF LIGHTING DEVICES OR SYSTEMS THEREOF; STRUCTURAL COMBINATIONS OF LIGHTING DEVICES WITH OTHER ARTICLES, NOT OTHERWISE PROVIDED FOR [1, 7] <u>Details of those parts involved in light emission or distribution (optical elements or systems in general G02B)</u> |
| F21V 1/00 | Hauptgruppe | Shades |
| F21V 1/02 | 1-Punkt Untergruppe | . Frames |
| F21V 1/04 | 2-Punkt Untergruppe | . . rigid (F21V 1/08 takes precedence) |
| F21V 1/06 | 2-Punkt Untergruppe | . . foldable or collapsible |
| F21V 1/08 | 2-Punkt Untergruppe | . . adjustable |
| F21V 1/10 | 1-Punkt Untergruppe | . Rotating shades |
| F21V 1/12 | 1-Punkt Untergruppe | . Composite shades |
| F21V 1/14 | 1-Punkt Untergruppe | . Covers for frames; Frameless shades |
| F21V 1/16 | 2-Punkt Untergruppe | . . characterised by the material |
| F21V 1/18 | 3-Punkt Untergruppe | . . . the material being paper |
| F21V 1/20 | 3-Punkt Untergruppe | . . . the material being glass |
| F21V 1/22 | 3-Punkt Untergruppe | . . . the material being plastics |
| F21V 1/24 | 3-Punkt Untergruppe | . . . the material being metal |
| F21V 1/26 | 1-Punkt Untergruppe | . Manufacturing shades |
| F21V 3/00 | Hauptgruppe | Globes; Bowls; Cover glasses (with refracting properties F21V 5/00; with reflecting properties F21V 7/00) |
| F21V 3/02 | 1-Punkt Untergruppe | . characterised by the shape |
| F21V 3/04 | 1-Punkt Untergruppe | . characterised by the material; characterised by surface treatments or coatings |
| F21V 5/00 | Hauptgruppe | Refractors |
| F21V 5/02 | 1-Punkt Untergruppe | . of prismatic shape (F21V 5/04 takes precedence) |
| F21V 5/04 | 1-Punkt Untergruppe | . of lens shape |
| F21V 5/06 | 1-Punkt Untergruppe | . Hanging lustres for chandeliers |
| F21V 5/08 | 1-Punkt Untergruppe | . producing an asymmetric light distribution [1, 7] |
| F21V 7/00 | Hauptgruppe | Reflectors |
| F21V 7/04 | 1-Punkt Untergruppe | . Optical design (F21V 7/22 takes precedence) [1, 7] |
| F21V 7/05 | 2-Punkt Untergruppe | . . plane [1, 7] |

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| F21V 7/06 | 2-Punkt Untergruppe | . . with parabolic curvature [1, 7] |
| F21V 7/07 | 2-Punkt Untergruppe | . . with hyperbolic curvature [1, 7] |
| F21V 7/08 | 2-Punkt Untergruppe | . . with elliptical curvature [1, 7] |
| F21V 7/09 | 2-Punkt Untergruppe | . . with a combination of different curvatures [1, 7] |
| F21V 7/10 | 1-Punkt Untergruppe | . Construction (F21V 7/22 takes precedence) [1, 7] |
| F21V 7/16 | 2-Punkt Untergruppe | . . with provision for adjusting the curvature [1, 7] |
| F21V 7/18 | 2-Punkt Untergruppe | . . with provision for folding or collapsing [1, 7] |
| F21V 7/20 | 2-Punkt Untergruppe | . . specially adapted for facilitating cooling, e.g. with fins (cooling by other means, e.g. fluid, F21V 29/00) [1, 7] |
| F21V 7/22 | 1-Punkt Untergruppe | . characterised by the material; characterised by surface treatments or coatings |
| F21V 8/00 | Hauptgruppe | Use of light guides, e.g. fibre optic devices, in lighting devices or systems (light guides <u>per se</u>, structural details of arrangements with other optical elements G02B 6/00) [4] |
| F21V 9/00 | Hauptgruppe | Light filters (coloured shades F21V 1/00); Selection of luminescent materials for light screens (luminescent materials <u>per se</u> C09K 11/00; electroluminescent light sources <u>per se</u> H05B 33/00) |
| F21V 9/02 | 1-Punkt Untergruppe | . for simulating daylight (F21V 9/04, F21V 9/06, F21V 9/16 take precedence) |
| F21V 9/04 | 1-Punkt Untergruppe | . for filtering out infra-red radiation (using liquid-filled chambers F21V 9/12) |
| F21V 9/06 | 1-Punkt Untergruppe | . for filtering out ultra-violet radiation (F21V 9/16 takes precedence) |
| F21V 9/08 | 1-Punkt Untergruppe | . for producing coloured light, e.g. monochromatic; for reducing intensity of light (F21V 9/16 takes precedence) |
| F21V 9/10 | 2-Punkt Untergruppe | . . with provision for variation of the colour or intensity (F21V 9/12 takes precedence) |
| F21V 9/12 | 2-Punkt Untergruppe | . . with liquid-filled chambers |
| F21V 9/14 | 1-Punkt Untergruppe | . for producing polarised light |
| F21V 9/16 | 1-Punkt Untergruppe | . Selection of luminescent materials for light screens |
| F21V 11/00 | Hauptgruppe | Screens not covered by groups F21V 1/00, F21V 3/00, F21V 7/00, F21V 9/00 |
| F21V 11/02 | 1-Punkt Untergruppe | . using parallel laminae or strips, e.g. of Venetian-blind type (F21V 11/06 takes precedence) |
| F21V 11/04 | 2-Punkt Untergruppe | . . adjustable |
| F21V 11/06 | 1-Punkt Untergruppe | . using crossed laminae or strips; using lattices or honeycombs |
| F21V 11/08 | 1-Punkt Untergruppe | . using diaphragms containing one or more apertures |
| F21V 11/10 | 2-Punkt Untergruppe | . . of iris type |
| F21V 11/12 | 2-Punkt Untergruppe | . . of slot type |
| F21V 11/14 | 2-Punkt Untergruppe | . . with many small apertures |
| F21V 11/16 | 1-Punkt Untergruppe | . using sheets without apertures, e.g. fixed (F21V 11/02, F21V 11/06 take precedence) |
| F21V 11/18 | 2-Punkt Untergruppe | . . movable, e.g. flaps, slides |
| F21V 13/00 | Hauptgruppe | Producing particular characteristics or distribution of the light emitted by means of a combination of elements specified in two or more of main groups F21V 1/00-F21V 11/00 (by means of a combination of two or more elements covered by a single one of main groups F21V 1/00-F21V |

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| | | 11/00, <u>see</u> the relevant group; changing the characteristics or distribution of the light emitted by adjustment of parts F21V 14/00) [1, 7] |
| F21V 13/02 | 1-Punkt Untergruppe | . Combinations of only two kinds of elements |
| F21V 13/04 | 2-Punkt Untergruppe | . . the elements being reflectors and refractors |
| F21V 13/06 | 3-Punkt Untergruppe | . . . a reflector being rotatable |
| F21V 13/08 | 2-Punkt Untergruppe | . . the elements being reflectors and filters |
| F21V 13/10 | 2-Punkt Untergruppe | . . the elements being reflectors and screens |
| F21V 13/12 | 1-Punkt Untergruppe | . Combinations of only three kinds of elements |
| F21V 13/14 | 2-Punkt Untergruppe | . . the elements being reflectors, refractors, and filters |
| F21V 14/00 | Hauptgruppe | Changing the characteristics or distribution of the light emitted by adjustment of parts (reflectors with provision for adjusting the curvature F21V 7/16; light filters with provision for variation of colour or intensity F21V 9/10; screens using iris-type diaphragms F21V 11/10; adjustable mountings for lighting devices F21V 21/14) [7] |
| F21V 14/02 | 1-Punkt Untergruppe | . by movement of light sources [7] |
| F21V 14/04 | 1-Punkt Untergruppe | . by movement of reflectors [7] |
| F21V 14/06 | 1-Punkt Untergruppe | . by movement of refractors [7] |
| F21V 14/08 | 1-Punkt Untergruppe | . by movement of screens [7] |
| | | <u>Details of those parts not involved in light emission or distribution, e.g. fittings</u> |
| F21V 15/00 | Hauptgruppe | Protecting lighting devices from damage (cooling or heating arrangements F21V 29/00; gas-tight or water-tight arrangements F21V 31/00) |
| F21V 15/01 | 1-Punkt Untergruppe | . Housings, e.g. material or assembling of housing parts (F21V 15/02 takes precedence) [7] |
| F21V 15/015 | 2-Punkt Untergruppe | . . Devices for covering joints between adjacent lighting devices; End coverings [7] |
| F21V 15/02 | 1-Punkt Untergruppe | . Cages |
| F21V 15/04 | 1-Punkt Untergruppe | . Resilient mountings, e.g. shock-absorbers (in general F16F 15/04) |
| F21V 15/06 | 1-Punkt Untergruppe | . Thermal insulation [7] |
| F21V 17/00 | Hauptgruppe | Fastening of component parts of lighting devices, e.g. shades, globes, refractors, reflectors, filters, screens, grids or protective cages (of light sources or light holders F21V 19/00; gas-tight or water-tight arrangements F21V 31/00) |
| F21V 17/02 | 1-Punkt Untergruppe | . with provision for adjustment (F21V 17/04-F21V 17/08 take precedence; changing the characteristics or distribution of the light emitted by adjustment of parts F21V 14/00) [1, 7] |
| F21V 17/04 | 1-Punkt Untergruppe | . onto or by the light source |
| F21V 17/06 | 1-Punkt Untergruppe | . onto or by the lamp holder |
| F21V 17/08 | 1-Punkt Untergruppe | . onto the supporting or suspending arrangements of the lighting device, e.g. power cords, standards [7] |
| F21V 17/10 | 1-Punkt Untergruppe | . characterised by specific fastening means or way of fastening (F21V 17/02-F21V 17/08 take precedence) [7] |
| F21V 17/12 | 2-Punkt Untergruppe | . . by screwing [7] |
| F21V 17/14 | 2-Punkt Untergruppe | . . Bayonet-type fastening [7] |
| F21V 17/16 | 2-Punkt Untergruppe | . . by deformation of parts of the lighting device; Snap action mounting [7] |

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| F21V 17/18 | 2-Punkt Untergruppe | . . Latch-type fastening, e.g. with rotary action [7] |
| F21V 17/20 | 2-Punkt Untergruppe | . . by toggle-action levers [7] |
| F21V 19/00 | Hauptgruppe | Fastening of light sources or lamp holders (fastening electric light source solely by the coupling device H01R 33/00) |
| F21V 19/02 | 1-Punkt Untergruppe | . with provision for adjustment, e.g. for focusing (changing the characteristics or distribution of the light emitted by adjustment of parts F21V 14/00) [1, 7] |
| F21V 19/04 | 1-Punkt Untergruppe | . with provision for changing light source, e.g. turret |
| F21V 19/06 | 1-Punkt Untergruppe | . Fastening incandescent mantles or other incandescent bodies to lamp parts; Suspension devices for incandescent mantles or other incandescent bodies [1, 7] |
| F21V 21/00 | Hauptgruppe | Supporting, suspending, or attaching arrangements for lighting devices (F21V 17/00, F21V 19/00 take precedence; arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general B60Q; stands for supporting apparatus or articles in general F16M 11/00); Hand grips [1, 7] |
| F21V 21/002 | 1-Punkt Untergruppe | . making direct electrical contact, e.g. by piercing (F21V 21/35 takes precedence) [7] |
| F21V 21/005 | 1-Punkt Untergruppe | . for several lighting devices in an end-to-end arrangement, i.e. light tracks [7] |
| F21V 21/008 | 1-Punkt Untergruppe | . Suspending from a cable or suspension line [7] |
| F21V 21/02 | 1-Punkt Untergruppe | . Wall, ceiling, or floor bases; Fixing pendants or arms to the bases (F21V 21/08 takes precedence; bases for movable standing lamps F21V 21/06) |
| F21V 21/03 | 2-Punkt Untergruppe | . . Ceiling bases, e.g. ceiling roses (F21V 21/04 takes precedence) [7] |
| F21V 21/04 | 2-Punkt Untergruppe | . . Recessed bases |
| F21V 21/06 | 1-Punkt Untergruppe | . Bases for movable standing lamps; Fixing standards to the bases (F21V 21/08 takes precedence) |
| F21V 21/08 | 1-Punkt Untergruppe | . Devices for easy attachment to a desired place |
| F21V 21/084 | 2-Punkt Untergruppe | . . Head fittings (for medical purposes A61B 1/06) [7] |
| F21V 21/088 | 2-Punkt Untergruppe | . . Clips; Clamps [7] |
| F21V 21/092 | 2-Punkt Untergruppe | . . Suction devices [7] |
| F21V 21/096 | 2-Punkt Untergruppe | . . Magnetic devices [7] |
| F21V 21/10 | 1-Punkt Untergruppe | . Pendants, arms, or standards; Fixing lighting devices to pendants, arms, or standards (adjustable mounting F21V 21/14; construction of posts not peculiar to use with lighting devices E04H 12/00) |
| F21V 21/104 | 2-Punkt Untergruppe | . . Pendants [7] |
| F21V 21/108 | 2-Punkt Untergruppe | . . Arms [7] |
| F21V 21/112 | 2-Punkt Untergruppe | . . Fixing lighting devices to pendants (F21V 21/002 takes precedence) [7] |
| F21V 21/116 | 2-Punkt Untergruppe | . . Fixing lighting devices to arms or standards (F21V 21/002 takes precedence) [7] |
| F21V 21/12 | 2-Punkt Untergruppe | . . capable of being elongated or shortened by the insertion or removal of intermediate pieces |
| F21V 21/13 | 1-Punkt Untergruppe | . Spring-loaded poles fixed at both ends [7] |
| F21V 21/14 | 1-Punkt Untergruppe | . Adjustable mountings |
| F21V 21/15 | 2-Punkt Untergruppe | . . specially adapted for power operation, e.g. by remote control [7] |
| F21V 21/16 | 2-Punkt Untergruppe | . . using wires or cords |

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| F21V 21/18 | 3-Punkt Untergruppe | . . . operated by springs |
| F21V 21/20 | 3-Punkt Untergruppe | . . . operated by weights |
| F21V 21/22 | 2-Punkt Untergruppe | . . telescopic |
| F21V 21/24 | 2-Punkt Untergruppe | . . Lazy-tongs |
| F21V 21/26 | 2-Punkt Untergruppe | . . Pivoted arms |
| F21V 21/28 | 3-Punkt Untergruppe | . . . adjustable in more than one plane |
| F21V 21/29 | 4-Punkt Untergruppe | employing universal joints |
| F21V 21/30 | 2-Punkt Untergruppe | . . Pivoted housings or frames |
| F21V 21/32 | 2-Punkt Untergruppe | . . Flexible tubes |
| F21V 21/34 | 1-Punkt Untergruppe | . Supporting elements displaceable along a guiding element |
| F21V 21/35 | 2-Punkt Untergruppe | . . with direct electrical contact between the supporting element and electric conductors running along the guiding element [7] |
| F21V 21/36 | 1-Punkt Untergruppe | . Hoisting or lowering devices, e.g. for maintenance (F21V 21/14 takes precedence) |
| F21V 21/38 | 2-Punkt Untergruppe | . . with a cable |
| F21V 21/40 | 1-Punkt Untergruppe | . Hand grips [7] |
| F21V 23/00 | Hauptgruppe | Arrangement of electric circuit elements in or on lighting devices (electric circuits <u>per se</u>H05B 39/00) |
| F21V 23/02 | 1-Punkt Untergruppe | . the elements being transformers or impedances |
| F21V 23/04 | 1-Punkt Untergruppe | . the elements being switches (safety devices F21V 25/00) |
| F21V 23/06 | 1-Punkt Untergruppe | . the elements being coupling devices |
| F21V 25/00 | Hauptgruppe | Safety devices structurally associated with lighting devices (gas-tight or water-tight arrangements F21V 31/00; in general F16P; protective circuit arrangements <u>per se</u>H02H 7/00) |
| F21V 25/02 | 1-Punkt Untergruppe | . coming into action when lighting device is disturbed, dismantled, or broken |
| F21V 25/04 | 2-Punkt Untergruppe | . . breaking the electric circuit |
| F21V 25/06 | 2-Punkt Untergruppe | . . feeding a quenching fluid to the light source |
| F21V 25/08 | 2-Punkt Untergruppe | . . cutting the incandescent filament |
| F21V 25/10 | 1-Punkt Untergruppe | . coming into action when lighting device is over-loaded, e.g. thermal switch |
| F21V 25/12 | 1-Punkt Untergruppe | . Flameproof or explosion-proof arrangements |
| F21V 27/00 | Hauptgruppe | Cable-stowing arrangements structurally associated with lighting devices, e.g. reels (storing lengths of cable in general B65H) |
| F21V 27/02 | 1-Punkt Untergruppe | . Cable inlets [7] |
| F21V 29/00 | Hauptgruppe | Cooling or heating arrangements (air-treatment systems with air-flow over lighting fixtures F24F 3/056; lighting fixtures combined with outlets for air-treatment systems F24F 13/078) [1, 7] |
| F21V 29/02 | 1-Punkt Untergruppe | . Cooling by forcing air over or around the light source (cooling arrangements structurally associated with electric lamps H01J 61/52, H01K 1/58) [7] |
| F21V 31/00 | Hauptgruppe | Gas-tight or water-tight arrangements |

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| F21V 31/03 | 1-Punkt Untergruppe | . with provision for venting [7] |
| F21V 31/04 | 1-Punkt Untergruppe | . Provision of filling media (safety devices F21V 25/00; cooling arrangements F21V 29/00) |
| F21V 33/00 | Hauptgruppe | Structural combinations of lighting devices with other articles, not otherwise provided for [1, 7] |
| F21V 35/00 | Hauptgruppe | Candle holders |
| F21V 36/00 | Hauptgruppe | Arrangements of mantles or other incandescent bodies on burners (attaching to lamp parts F21V 19/06) |
| F21V 36/02 | 1-Punkt Untergruppe | . in ceiling lamps |
| F21V 37/00 | Hauptgruppe | Details of lighting devices employing combustion as light source, not otherwise provided for [1, 7] |
| F21V 37/02 | 1-Punkt Untergruppe | . Special adaptation for protection against draughts [7] |
| F21V 99/00 | Hauptgruppe | <i>Subject matter not provided for in other groups of this subclass [2006.01]</i> |