

## ECLA EUROPEAN CLASSIFICATION

### H02G

**INSTALLATION OF ELECTRIC CABLES OR LINES, OR OF COMBINED OPTICAL AND ELECTRIC CABLES OR LINES** (distribution points incorporating switches H02B; guiding telephone cords [H04M1/15](#); cable ducts or mountings for telephone or telegraph exchange installations [H04Q1/06](#)) [C9703]

#### Notes

1. 1. This subclass covers installation of communication cables or lines, including those comprising a combination of optical and electrical conductors, or of lightning conductors as well as installation of power cables or lines.
2. 2. This subclass does not cover installation of purely optical cables, which is covered by groups [N: [G02B6/44C](#)], [G02B6/46](#).
3. 3. In this subclass, the following expression is used with the meaning indicated:
  - "electric cable" includes cables comprising optical conductors, e.g. fibres, in combination with electrical conductors.

#### [N: **Notes**

[N1207]In this subclass it is desirable to add indexing codes of group [T02G200/00](#) whenever appropriate  
]

### H02G1/00

**Methods or apparatus specially adapted for installing, maintaining, repairing or dismantling electric cables or lines**

#### H02G1/00A

- . [N: for cutting cables or wires, or splicing]

#### H02G1/02

- . for overhead lines or cables

#### H02G1/04

- . . for mounting or stretching (wire stretchers in general [B25B25/00](#))

#### H02G1/06

- . for laying cables, e.g. laying apparatus on vehicle (combined with trench digging or back-filling machines or dredgers [E02F5/00](#))

#### H02G1/08

- . . through tubing or conduit, e.g. rod or draw wire for pushing or pulling [N: (inserting electrical cables into tubes using wallbores [E21B17/20D](#); for optical cables [G02B6/44C](#))] [C0202]

#### H02G1/08B

- . . . [N: using pulling means at cable ends, e.g. pulling eyes or anchors]

#### H02G1/08C

- . . . [N: using lines, e.g. needles, rods or tapes]

#### H02G1/08D

- . . . [N: using portable tools]

#### H02G1/08E

- . . . [N: using fluid as pulling means, e.g. liquid, pressurised gas or suction means] [C0202]

#### H02G1/08F

- . . . [N: using pulling devices movable inside conduits]

#### H02G1/10

- . . in or under water

#### H02G1/12

- . for removing insulation or armouring from cables, e.g. from the end thereof (pliers in general [B25B](#); cutters in general [B26B](#))

H02G1/12B	. .	[N: by cutting and withdrawing insulation]
H02G1/12B2	. . .	[N: Hand-held tools]
H02G1/12B2B	. . . .	[N: the cutting element not rotating about the wire or cable (making longitudinal and transverse or helical cut <a href="#">H02G1/12B2D</a> )]
H02G1/12B2B2	. . . . .	[N: making a transverse cut]
H02G1/12B2B2B	. . . . .	[N: using wire or cable clamping means]
H02G1/12B2B2C	. . . . .	[N: not using wire or cable clamping means]
H02G1/12B2B4	. . . . .	[N: making a longitudinal cut]
H02G1/12B2C	. . . .	[N: the cutting element rotating about the wire or cable (making longitudinal and transverse or helical cut <a href="#">H02G1/12B2D</a> )]
H02G1/12B2C2	. . . . .	[N: making a transverse cut]
H02G1/12B2C4	. . . . .	[N: making a helical cut]
H02G1/12B2D	. . . .	[N: the cutting element making a longitudinal, and a transverse or a helical cut]
H02G1/12B2D4	. . . . .	[N: using a swivelling cutting element]
H02G1/12B2D8	. . . . .	[N: the tool being of the plier type]
H02G1/12B2G	. . . . .	[N: Features relating to cutting elements]
H02G1/12B2G4	. . . . .	[N: the cutting element being a disc or a circular saw]
H02G1/12B2G6	. . . . .	[N: the cutting element being a stack of blades]
H02G1/12B2G8	. . . . .	[N: the cutting element being a wire or filament]
H02G1/12B2G10	. . . . .	[N: the cutting element being of tubular construction]
H02G1/12B4	. . .	[N: Machines]
H02G1/12B4B	. . . .	[N: the cutting element not rotating about the wire or cable (making longitudinal and transverse or helical cut <a href="#">H02G1/12B4D</a> )] [C1112]
H02G1/12B4B2	. . . . .	[N: making a transverse cut]
H02G1/12B4B2B	. . . . .	[N: using wire or cable-clamping means]
H02G1/12B4B2C	. . . . .	[N: not using wire or cable-clamping means]
H02G1/12B4B4	. . . . .	[N: making a longitudinal cut]
H02G1/12B4C	. . . .	[N: the cutting element rotating about the wire or cable (making longitudinal and transverse or helical cut <a href="#">H02G1/12B4D</a> )] [C1112]
H02G1/12B4D	. . . .	[N: the cutting element making a longitudinal in combination with a transverse or a helical cut] [N1112]
H02G1/12B4G	. . . . .	[N: Features relating to cutting elements]
H02G1/12C	. .	[N: by pushing backwards insulation]
H02G1/12D	. .	[N: by applying heat]
H02G1/12D2	. . .	[N: using heated blades]
H02G1/12D6	. . .	[N: using radiant energy, e.g. a laser beam]
H02G1/12D8	. . .	[N: removing metallic shields]
H02G1/12E	. .	[N: by friction, e.g. abrading, grinding, brushing]
H02G1/12F	. .	[N: by means of a solvent]
H02G1/12G	. .	[N: by means of a cryogenic fluid]
H02G1/12H	. .	[N: Devices for dismantling twisted filaments]
H02G1/12I	. .	[N: Devices for splitting and dismantling flat cables]
H02G1/12R	. .	[N: Removing armouring from cables]

- H02G1/14 . for joining or terminating cables ([joining electric conductors H01R43/00](#))
- H02G1/14B . . [N: Moulds]

- H02G1/16 . for repairing insulation or armouring of cables

**H02G3/00** **Installations of electric cables or lines in or on buildings, equivalent structures or vehicles** ([installations of bus-bars H02G5/00](#); [overhead installations H02G7/00](#); [installations in or on the ground H02G9/00](#); [channels or vertical ducts for receiving utility lines E04F17/08](#); [wiring of electric apparatus in general H05K](#))

- H02G3/02 . Details
- H02G3/03 . . Cooling
- H02G3/04 . . Protective tubings or conduits [N: or channels or other supports] ([pipes or tubings in general F16L](#))
- H02G3/04A . . . [N: Details thereof ([installation or suspension of conduit channels and other supports H02G3/26B](#))]
- H02G3/04A2 . . . . [N: Heat or fire protective means ([for fire in electric circuits A62C3/16](#))]
- H02G3/04A3 . . . . [N: Covers or lids; Their fastenings]
- H02G3/04D . . . . [N: Plinths ([borders for use between floor or ceiling and wall E04F19/04](#))]
- H02G3/04E . . . . [N: Wall trunking]
- H02G3/04F . . . . [N: Channels]
- H02G3/04F1 . . . . [N: formed by wire or analogous netting]
- H02G3/04F2 . . . . [N: provided with perforations or slots permitting introduction or exit of wires]
- H02G3/04G . . . . [N: Ladders or other supports]
- H02G3/04H . . . . [N: Tubings, i.e. having a closed section]
- H02G3/04H1 . . . . [N: Corrugated]
- H02G3/04H2 . . . . [N: formed by a succession of articulated units]
- H02G3/04H3 . . . . [N: with a circular cross-section ([H02G3/04H1](#), [H02G3/04H2](#) take precedence)]
- H02G3/04H4 . . . . [N: with a non-circular cross-section ([H02G3/04H1](#), [H02G3/04H2](#) take precedence)]
- H02G3/04K . . . . [N: Service poles]
- H02G3/06 . . Joints for connecting lengths of protective tubing [N: or channels], to each other or to casings, e.g. to distribution boxes; Ensuring electrical continuity in the joint
- H02G3/06B . . . . [N: Joints for connecting non cylindrical conduits, e.g. channels]
- H02G3/06C . . . . [N: Joints for connecting tubing to casing]
- H02G3/06C1 . . . . [N: with means for preventing disengagement of conductors]
- H02G3/06C1B . . . . . [N: with means urging the conductors to follow a non-straight line]
- H02G3/06C1D . . . . . [N: with means distorted around the conductors]
- H02G3/06C1F . . . . . [N: with means biting into the conductor-insulation, e.g. teeth-like elements or gripping fingers ([H02G3/06C1S](#), [H02G3/06C1T](#) take precedence)]
- H02G3/06C1G . . . . . [N: with means constricting the conductor-insulation ([H02G3/06C1F](#), [H02G3/06C1S](#), [H02G3/06C1T](#) take precedence)]
- H02G3/06C1H . . . . . [N: with means clamping the armour of the conductor ([H02G3/06C1S](#), [H02G3/06C1T](#) take precedence)]

H02G3/06C1S	. . . . .	[N: with bolts operating in a direction parallel to the conductors]
H02G3/06C1T	. . . . .	[N: with bolts operating in a direction transverse to the conductors]
H02G3/06C2	. . . . .	[N: Fixing tubing to casing by auxiliary means co-operating with indentations of the tubing, e.g. with tubing-convolutions]
H02G3/08	. . . . .	Distribution boxes; Connection or junction boxes ( <a href="#">cable terminations H02G15/02</a> )
H02G3/08B	. . . . .	[N: Bases, casings or covers]
H02G3/08B1	. . . . .	[N: Inlets]
H02G3/08B1K	. . . . .	[N: including knock-out or tear-out sections]
H02G3/08C	. . . . .	[N: Assembled boxes]
H02G3/08D	. . . . .	[N: Dustproof, splashproof, drip-proof, waterproof, or flameproof casings or inlets]
H02G3/10	. . . . .	for surface mounting on a wall
H02G3/10G	. . . . .	[N: in association with a plinth, channel, raceway or similar]
H02G3/12	. . . . .	for flush mounting
H02G3/12D	. . . . .	[N: in plain walls]
H02G3/12F	. . . . .	[N: in thin walls]
H02G3/12F2	. . . . .	[N: with supporting bar extending between two separate studs of a wall frame]
H02G3/12F4	. . . . .	[N: with supporting means for mounting on a single wall stud]
H02G3/12G	. . . . .	[N: in plinths, channels, raceways or similar]
H02G3/14	. . . . .	Fastening of cover or lid to box
H02G3/16	. . . . .	structurally associated with support for line-connecting terminals within the box ( <a href="#">terminals H01R9/00</a> )
H02G3/18	. . . . .	providing line outlets
H02G3/18B	. . . . .	[N: Floor outlets and access cups]
H02G3/20	. . . . .	Ceiling roses [N: or other lighting sets]
H02G3/22	. . . . .	Arrangements for leading cables or lines through walls, floors, or ceilings, e.g. into building ( <a href="#">devices for use where pipes, cables or protective tubing pass through walls or partitions F16L5/00</a> ; <a href="#">lead-in or lead-through insulators H01B17/26</a> ; <a href="#">insulating tubes or sleeves H01B17/58</a> )
H02G3/24	. . . . .	[N: IPC6] Installation of lines or cables on walls, ceilings or floors by means of insulators ( <a href="#">insulators H01B17/00</a> ) [C0802]
H02G3/26	. . . . .	[N: IPC6] Installations of cables, lines, or separate protective tubing therefor directly on or in walls, ceilings, or floors ( <a href="#">by means of insulators H02G3/24</a> ; <a href="#">supports for pipes, cables or protective tubing F16L3/00</a> ; <a href="#">hose-clips F16L33/02</a> ) [C0802]
H02G3/26B	. . . . .	[N: Installation, e.g. suspension, of conduit channels or other supports]
H02G3/26C	. . . . .	[N: Mounting by adhesive material]
H02G3/28	. . . . .	[N: IPC6] Installations of cables, lines, or separate protective tubing therefor in conduits or ducts pre-established in walls, ceilings or floors [C0802]
H02G3/28C	. . . . .	[N: in ceilings] [N9610]
H02G3/28F	. . . . .	[N: in floors] [N9610]
H02G3/28F2	. . . . .	[N: in modular floors, e.g. access floors] [N9610]
H02G3/28W	. . . . .	[N: in walls] [N9610]

- H02G3/28W2 . . . [N: in modular walls, e.g. wall panels] [N9610]
- H02G3/30 . Installations of cables or lines on walls, floors or ceilings (support for pipes, cables or protective tubing [F16L3/00](#); hose clips [F16L33/02](#)) [N0101]
- H02G3/30A . . [N: Mounting by adhesive material] [N0101]
- H02G3/32 . . using mounting clamps [N0101]
- H02G3/34 . . using separate protective tubing [N0101]
- H02G3/36 . Installation of cables or lines in walls, floors or ceilings (3/22 takes precedence) [N0101]
- H02G3/38 . . the cables or lines being installed in preestablished conduits or ducts [N0101]
- H02G3/38C . . . [N: in ceilings] [N0101]
- H02G3/38F . . . [N: in floors] [N0101]
- H02G3/38F2 . . . . [N: in modular floors, e.g. access floors] [N0101]
- H02G3/38W . . . . [N: in walls] [N0101]
- H02G3/38W2 . . . . [N: in modular walls, e.g. wall panels] [N0101]
- H02G3/40 . . . using separate protective tubing in the conduits or ducts [N0101]

#### **H02G5/00 Installations of bus-bars**

- H02G5/00B . [N: Joints between bus-bars for compensating thermal expansion]
- H02G5/00C . [N: Laminated bus-bars]
- H02G5/00D . [N: Butt joining of bus-bars by means of a common bolt, e.g. splice joint (electrically conductive connections characterised by contacting members [H01R4/58](#))] [N0105]
- H02G5/02 . Open installations
- H02G5/02B . . [N: Supporting structures] [N0001]
- H02G5/04 . Partially-enclosed installations, e.g. in ducts and adapted for sliding or rolling current collection (non-rotary current collectors [H01R41/00](#))
- H02G5/06 . Totally-enclosed installations, e.g. in metal casings
- H02G5/06A . . [N: Tubular casings ([H02G5/06B](#) takes precedence)]
- H02G5/06B . . [N: filled with oil or gas]
- H02G5/06B2 . . . [N: Particle traps (gettering in vacuum switches [H01H 33/66E1](#); in discharge or vacuum tubes [H01J7/18](#), [H01J19/70](#))]
- H02G5/06C . . [N: Devices for maintaining distance between conductor and enclosure] [N0007]
- H02G5/06C1 . . . [N: being part of the junction between two enclosures] [N0007]
- H02G5/08 . . Connection boxes therefor
- H02G5/10 . Cooling

#### **H02G7/00 Overhead installations of electric lines or cables** (installations of bus-bars [H02G5/00](#); trolley wires or contact lines for electric railways [B60M](#); fastening conductors to insulators [H01B17/00](#), e.g. [H01B17/06](#), [H01B17/16](#), [H01B17/22](#); protection against abnormal electric conditions [H01H](#); hook contacts for temporary connections to overhead lines [H01R11/14](#))

- H02G7/02 . Devices for adjusting or maintaining mechanical tension, e.g. take-up device
- H02G7/04 . Arrangements or devices for relieving mechanical tension
- H02G7/05 . Suspension arrangements or devices for electric cables or lines
- H02G7/05B . . [N: Suspension clamps and clips for electric overhead lines not suspended to a supporting wire]
- H02G7/05B3 . . . [N: Dead-end clamps]
- H02G7/06 . Suspensions for lines or cables along a separate supporting wire, e.g. S-hook
- H02G7/08 . . Members clamped to the supporting wire or to the line or cable
- H02G7/10 . . Flexible members or lashings wrapped around both the supporting wire and the line or cable
- H02G7/12 . Devices for maintaining distance between parallel conductors, e.g. spacer
- H02G7/12B . . [N: Damping spacers]
- H02G7/14 . Arrangements or devices for damping mechanical oscillations of lines, e.g. for reducing production of sound [N: (damping spacers [H02G7/12B](#))]
- H02G7/16 . Devices for removing snow or ice from lines or cables ([from insulators H01B17/52](#))
- H02G7/18 . Devices affording mechanical protection in the event of breakage of a line or cable, e.g. net for catching broken lines
- H02G7/20 . Spatial arrangements or dispositions of lines or cables on poles, posts, or towers ([construction of poles, posts or towers E04H12/22](#))
- H02G7/20C . . [N: Installation of electric cables, extending along a pole]
- H02G7/22 . Arrangements of earthing wires suspended between mastheads
- H02G9/00** **Installations of electric cables or lines in or on the ground or water** ([cathodic protection C23F13/02](#); [detection of buried cables G01V](#))
- H02G9/02 . laid directly in or on the ground, river-bed or sea-bottom; Coverings therefor, e.g. tile
- H02G9/02B . . [N: Coverings therefor, e.g. tile]
- H02G9/04 . in surface ducts; Ducts or covers therefor
- H02G9/06 . in underground tubes or conduits; Tubes or conduits therefor
- H02G9/06B . . [N: Longitudinally split tubes or conduits therefor]
- H02G9/08 . in tunnels
- H02G9/10 . in cable chambers, e.g. in manhole, in handhole ([building aspects of cable chambers Section E, e.g. E04H5/06](#))
- H02G9/12 . supported on or from floats, e.g. in water ([floating cables H01B7/12](#))
- H02G11/00** **Arrangements of electric cables or lines between relatively-movable parts** ([N:

oring means for coiled material specially adapted for repeatedly paying-out and re-storing length of material for particular purposes [B65H75/34](#); current collectors [H01R](#); [N: winding-up telephone cord [H04M1/15](#)]

- H02G11/00B . [N: using gravity-loaded or spring-loaded loop]
- H02G11/00C . [N: using extensible carrier for the cable, e.g. self-coiling spring (**extensible conductors or cables** [H01B7/06](#))]
- H02G11/02 . using take-up reel or drum

**H02G13/00**      **Installations of lightning conductors; Fastening thereof to supporting structure** (indicating, counting or recording lightning strokes G01; lightning arrestors [H01C7/12](#), [H01C8/04](#), [H01G9/18](#), H01T; earth plates, pins or other contacts H01R)

[N: **WARNING**  
[N1207]Groups [H02G13/20](#) to [H02G13/80](#) do not correspond to former or current IPC groups. Concordance ECLA : IPC for these groups is as follows: - [H02G13/20](#) - [H02G13/80](#) : [H02G13/00](#)  
]

- H02G13/20 . [N: Active discharge triggering] [N1204]
- H02G13/40 . [N: Connection to earth] [N1204]
- H02G13/60 . [N: Detecting; Measuring; Sensing; Testing; Simulating] [N1204]
- H02G13/80 . [N: Discharge by conduction or dissipation, e.g. rods, arresters, spark gaps] [N1204]

**H02G15/00**      **Cable fittings**

- H02G15/00F . [N: Filling materials, e.g. solid or fluid insulation]
- H02G15/007 . Devices for relieving mechanical stress
- H02G15/013 . Sealing means for cable inlets (inlets for cables filled with, or surrounded by, gas or oil [H02G15/32](#))
- H02G15/02 . Cable terminations (for gas- or oil-filled cables [H02G15/22](#))
- H02G15/02D . . [N: for coaxial cables or hollow conductors (**connections between HF conductors** [H01P1/04](#); **plug and socket connections per se** [H01R24/38](#))] [C1203]
- H02G15/04 . . Cable-end sealings
- H02G15/04B . . . [N: with end caps, e.g. sleeve closed at one end] [N9507]
- H02G15/04B1 . . . . [N: with bores or protruding portions allowing passage of cable conductors] [N9507]
- H02G15/06 . . Cable terminating boxes, frames, or other structures (**terminal blocks** [H01R9/00](#))
- H02G15/064 . . . with devices for relieving electrical stress
- H02G15/068 . . . . connected to the cable shield only ([H02G15/072](#) takes precedence)
- H02G15/072 . . . . of the condenser type

- H02G15/076 . . . for multi-conductor cables
- H02G15/08 . Cable junctions (for gas- or oil-filled cables [H02G15/24](#); disconnectible junctions, electrical connections [H01R](#))
- H02G15/08D . . [N: for coaxial cables or hollow conductors (plug and socket connections between HF conductors [H01P1/04](#); plug and socket connections per se [H01R24/38](#))] [C1203]
- H02G15/10 . . protected by boxes, e.g. by distribution, connection or junction boxes (terminal blocks [H01R9/00](#); [N: distribution boxes per se [H02G3/08](#)]) [C1203]
- H02G15/103 . . . with devices for relieving electrical stress
- H02G15/105 . . . . connected to the cable shield only ([H02G15/107](#) takes precedence)
- H02G15/105B . . . . . [N: with cross-bonding of cable shields] [N9804]
- H02G15/107 . . . . of the condenser type
- H02G15/113 . . . Boxes split longitudinally in main cable direction
- H02G15/115 . . . Boxes split perpendicularly to main cable direction
- H02G15/117 . . . for multiconductor cables
- H02G15/12 . . . for incorporating transformers, loading coils or amplifiers
- H02G15/14 . . . . specially adapted for submarine cables
- H02G15/16 . . . structurally associated with support for line-connecting terminals within the box
- H02G15/18 . . protected by sleeves, e.g. for communication cable (two-part covers [H01G15/10](#); [N: preforms having internal stresses [B29C61/00](#)])
- H02G15/18B . . . [N: Heat shrinkable sleeves (insulation of electrical connections using a heat shrinking insulating sleeve [H01R4/72](#))]
- H02G15/18B1 . . . . [N: Wraparound or slotted sleeves]
- H02G15/18E . . . [N: held in expanded condition in radial direction prior to installation] [N9812]
- H02G15/18E1 . . . . [N: on a removable hollow core, e.g. a tube] [N9812]
- H02G15/18E1B . . . . . [N: formed of helically wound strip with adjacent windings, which are removable by applying a pulling force to a strip end] [N9812]
- H02G15/184 . . . with devices for relieving electrical stress
- H02G15/188 . . . . connected to a cable shield only
- H02G15/192 . . . with support means for ends of the sleeves
- H02G15/196 . . . having lapped insulation
- H02G15/20 . Cable fittings for cables filled with or surrounded by gas or oil ([H02G15/34](#) takes precedence)
- H02G15/20E . . [N: for coaxial cables]
- H02G15/22 . . Cable terminations
- H02G15/23 . . . Cable-end sealings
- H02G15/24 . . Cable junctions
- H02G15/25 . . . Stop junctions
- H02G15/26 . . Expansion vessels; Locking heads; Auxiliary pipe-lines
- H02G15/28 . . structurally associated with devices for indicating the presence or location of non-electric faults (combined with electric protective means [H02H](#))
- H02G15/30 . . with devices for relieving electrical stress
- H02G15/32 . . Cable inlets
- H02G15/34 . Cable fittings for cryogenic cables [N: (superconductive cables per se [H01B12/00](#))]

C1203]