85.31 - Electric sound or visual signalling apparatus (for example, bells, sirens, indicator panels, burglar or fire alarms), other than those of heading 85.12 or 85.30.

8531.10 - Burglar or fire alarms and similar apparatus

8531.20 - Indicator panels incorporating liquid crystal devices (LCD) or light-emitting diodes (LED)

8531.80 - Other apparatus

8531.90 - Parts

With the **exception** of signalling apparatus used on cycles or motor vehicles (**heading 85.12**) and that for traffic control on roads, railways, etc. (**heading 85.30**), this heading covers all electrical apparatus used for signalling purposes, whether using sound for the transmission of the signal (bells, buzzers, hooters, etc.) or using visual indication (lamps, flaps, illuminated numbers, etc.), and whether operated by hand (e.g., door bells) or automatically (e.g., burglar alarms).

Static signs, even if lit electrically (e.g., lamps, lanterns, illuminated panels, etc.) are not regarded as signalling apparatus. They are therefore not covered by this heading but are classified in their own appropriate headings (**headings 83.10, 94.05,** etc.).

The heading includes, *inter alia* :

(A) **Electric bells, buzzers, door chimes, etc**. The bells consist essentially of an electro-magnetically operated appliance which causes a small hammer to vibrate and strike a bell dome. Buzzers are similar but without the bell dome. Both are used very extensively for domestic purposes (e.g., as door bells), and in offices, hotels, etc. The heading also covers electric door chimes in which one or more metal tubes are struck, emitting a musical note or series of musical notes, and electrically operated church bells, **other than** carillons suitable for playing music (**Chapter 92**).

Electric bells and door chimes are usually designed to be operated from a low tension supply (primary cell or battery), but in certain cases they incorporate a transformer to step down the mains voltage.

(B) **Electric sound signalling apparatus, horns, sirens, etc**. The sound is produced by a vibrating reed, by a rotating disc set in motion electrically or electronic sound generator; they include factory sirens, air raid sirens, ships' sirens, etc.

(C) **Other electrical signalling apparatus** (winking or intermittent lights, etc.) for aircraft, ships, trains or other vehicles (**other than** for cycles or motor vehicles **heading 85.12**), but not radio or radar apparatus of **heading 85.26**.

(D) **Indicator panels and the like**. These are used (e.g., in offices, hotels and factories) for calling personnel, indicating where a certain person or service is required, indicating whether a room is free or not. They include :

(1) **Room indicators**. These are large panels with numbers corresponding to a number of rooms. When a button is pressed in the room concerned the corresponding number is either lit up or exposed by the falling away of a shutter or flap.

(2) **Number indicators**. The signals appear as illuminated figures on the face of a small box; in some apparatus of this kind the calling mechanism is operated by the dial of a telephone. Also clock type indicators in which the numbers are indicated by a hand moving round a dial.

(3) **Office indicators**, for example, those used to indicate whether the occupant of a particular office is free or not. Some types are merely a simple "come in" or "engaged" sign illuminated at will by the occupant of the office.

(4) **Lift indicators**. These indicate, on an illuminated board, where the lift is and whether it is going up or down.

(5) **Engine room telegraph apparatus for ships**.

(6) **Station indicating panels** for showing the times and platforms of trains.

(7) **Indicators for race courses, football stadiums, bowling alleys, etc**.

Certain of these indicator panels, etc., also incorporate bells or other sound signalling devices.

The heading **does not cover** public maps of roads or railways in which a particular place, road, section or route is illuminated on pressing an appropriate button, nor electric advertising signs.

(E) **Burglar alarms**. These consist of two parts : a detecting part, and a signalling part (bell, buzzer, visual indicator, etc.) which is set off automatically when the detecting part operates. Burglar alarms operate by various means, e.g. :

(1) **By electrical contacts** which are operated by stepping on a certain part of the floor, opening a door, breaking or touching fine wires, etc.

(2) **By capacitance effects**. These are used often in connection with safes; the safe acts as one plate of a capacitor whose capacitance is affected by the approach of any body, thus upsetting the electrical circuit and setting off the alarm.

(3) **Photoelectric devices**. A ray (often of infra-red light) is focussed on a photoelectric cell; when the ray is interrupted, the change in current in the photoelectric cell circuit sets off the alarm.

(F) **Fire alarms**. Automatic alarms also consist of two parts : a detecting part, and a signalling part (bell, buzzer, visual indicator, etc.). They include :

(1) **Apparatus operated by a fusible product** (wax or special alloy) which melts when the temperature rises above a certain point, thus allowing electrical contacts to close and set off the alarm.

(2) **Apparatus based on the expansion of a bi-metal strip, liquid or gas** - expansion beyond a certain point operating the alarm. In one type, the expansion of a gas forces a piston to move in a cylinder; a valve is incorporated so that a slow expansion does not set off the alarm, but only a sudden expansion due to a sudden rise in temperature.

(3) **Apparatus based on the variation in the electrical resistance** of an element subjected to a change in temperature.

(4) **Apparatus based on photoelectric cells**. A ray of light is focussed on the cell and, if obscured to a predetermined extent by smoke, operates the alarm. Similar apparatus fitted with a graduated indicator or a recording system fall in **Chapter 90**.

In addition to the automatic fire alarms, the heading also covers non-automatic alarms, such as are mounted in streets, for calling the fire brigade.

(G) **Electric vapour or gas alarms**, consisting of a detector and a sound or visual alarm, to warn of the presence of hazardous gaseous mixtures (e.g., natural gas, methane).

(H) **Flame alarms** (flame detectors) incorporating a photoelectric cell which operates the alarm through a relay when the flame lights or goes out. Detectors not incorporating electric sound or visual alarm devices are classified in **heading 85.36**.

PARTS

Subject to the general provisions regarding the classification of parts (see the General Explanatory Note to Section XVI), parts of the goods of this heading are also classified here.

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The heading also **excludes** :

(a) Switches and switch-panels, whether or not incorporating simple indicating lights (**heading 85.36** or **85.37**).

(b) Fire alarms incorporating smoke detectors containing a radioactive substance (**heading 90.22**).

(c) LCD monitors or television receivers (**heading 85.28**).