

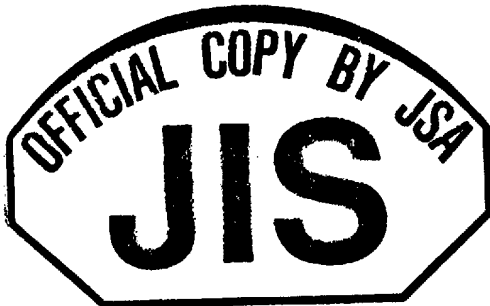
# JIS

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## JAPANESE INDUSTRIAL STANDARD

Back-up Lamp Switches for Automobiles

**JIS** D 5810-1974  
(Reaffirmed: 1983)



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J I S

## Back-up Lamp Switches for Automobiles

D 5810-1974

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1. Scope

This Japanese Industrial Standard specifies mechanical switches which open and close the circuit for back-up lamp of automobile depending upon the operation of shift lever of transmission, hereinafter referred to as the "switches".

2. Classification and Symbol

Switches are classified and symbolized according to the type, nominal voltage, circuit and ambient temperature as given in Table 1.

Table 1

| Class   | Type                                         | Symbol | Nominal voltage | ( <sup>1</sup> )<br>Circuit | Maximum load | Ambient temperature( <sup>2</sup> ) |                                      |  |
|---------|----------------------------------------------|--------|-----------------|-----------------------------|--------------|-------------------------------------|--------------------------------------|--|
| Class 1 | Attached to trans-<br>mission                | 1 A    | 12 V            | OFF                         | 60 W         | General use<br>-30 to 90°C          |                                      |  |
|         |                                              | 1 AN   |                 | ON                          |              |                                     |                                      |  |
|         |                                              | 1 B    | 24 V            | OFF                         |              |                                     |                                      |  |
|         |                                              | 1 BN   |                 | ON                          |              |                                     |                                      |  |
| Class 2 |                                              | 2 A    | 12 V            | OFF                         |              |                                     | High temperature use<br>-30 to 120°C |  |
|         |                                              | 2 AN   |                 | ON                          |              |                                     |                                      |  |
|         |                                              | 2 B    | 24 V            | OFF                         |              |                                     |                                      |  |
|         |                                              | 2 BN   |                 | ON                          |              |                                     |                                      |  |
| Class 3 | Attached to shift<br>lever link<br>mechanism | 3 A    | 12 V            | OFF                         |              |                                     | General use<br>-30 to 80°C           |  |
|         |                                              | 3 AN   |                 | ON                          |              |                                     |                                      |  |
|         |                                              | 3 B    | 24 V            | OFF                         |              |                                     |                                      |  |
|         |                                              | 3 BN   |                 | ON                          |              |                                     |                                      |  |
| Class 4 |                                              | 4 A    | 12 V            | OFF                         |              |                                     | High temperature use<br>-30 to 110°C |  |
|         |                                              | 4 AN   |                 | ON                          |              |                                     |                                      |  |
|         |                                              | 4 B    | 24 V            | OFF                         |              |                                     |                                      |  |
|         |                                              | 4 BN   |                 | ON                          |              |                                     |                                      |  |

Notes (<sup>1</sup>) The condition of circuit when push rod is not pressed.

(<sup>2</sup>) The ambient temperature means the exposure temperature of 5.4.

Applicable Standards: See page 9.

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### 3. Construction

3.1 Construction in General Switches shall be so constructed that they are handled as simply as possible, are robust and do not cause loosening at every part during in service.

3.2 Operating Mechanism The switch shall be mechanically linked with a transmission or shift lever link, and so structured that its electric circuit becomes ON (back-up lamp goes on) when its push rod stays in the specified ON stroke and the electric circuit becomes OFF (back-up lamp goes off) when the rod exceeds the said stroke (see Attached Figure).

When the push rod has OFF stroke ON and OFF of the electric circuit are reversed.

3.3 Dimension The principal dimensions of switches shall be as given in Attached Figure.

3.4 Robustness of Terminal The terminals shall be so structured that neither detrimental deformation, loosening of terminal fixture, nor abnormality on each part occurs when a static force of 5 kgf(49.033 N) is applied to the terminal for 1 min, in the direction of connection for terminals directly mounted on the switch body, or in the direction of lead wire for switches with lead wires.

3.5 Robustness of Mounted Switch Case The switch shall be so structured that no abnormality occurs on the mounting part and other parts when a vertical static force (IV) of 5 kgf(49.033 N) is applied to the end of case (see Attached Figure) while the switch is mounted as in normal service, for 1 min.

### 4. Material and Metal Coating

The materials and metal coating for principal parts of switch shall, as a rule, be as given in Table 2.

The metal coating shall be as specified in JIS D 0201.

Table 2

| Part name  | Material                                             | Metal coating                                                                         |
|------------|------------------------------------------------------|---------------------------------------------------------------------------------------|
| Case       | Mild steel or zinc alloy                             | MFZn 5 for mild steel                                                                 |
| Contact    | Copper or copper alloy, silver or silver alloy       | —                                                                                     |
| Push rod   | Mild steel, heat and shock resistant synthetic resin | MFZn 5 for mild steel                                                                 |
| Insulation | Heat and shock resistant synthetic resin             | —                                                                                     |
| Spring     | Piano wire, hard drawn steel wire or stainless wire  | MFZn 5 for piano wire or hard drawn steel wire exposed to outside under mounted state |
| Terminal   | Copper or copper alloy                               | —                                                                                     |

Remark: In the case of MFZn 5, the chromating of B or C shall be made.