



Rujukan Fail : ( 70 ) dlm.PKR(L) 2/1/90

Tarikh : 28 Jun 2024

**SEMUA PENGILANG/PEMBEKAL BAHAN/BARANGAN SURGE PROTECTIVE DEVICE (SPD)**

Tuan,

**PERKARA: PEMAKLUMAN BERKENAAN PINDAAN TERHADAP SPESIFIKASI BAGI BAHAN/BARANGAN SURGE PROTECTIVE DEVICE (SPD)**

Dengan hormatnya perkara di atas adalah dirujuk.

- Adalah dimaklumkan bahawa Cawangan Kejuruteraan Elektrik telah membuat pindaan terhadap spesifikasi JKR L-S1: *Specification For Low Voltage Internal Electrical Installation, Section 7.0 Surge Protective Device (Version June 2024)* dan mula berkuatkuasa pada 24 Jun 2024.
- Oleh yang demikian, Jawatankuasa Kelulusan Bahan, Cawangan Kejuruteraan Elektrik Bil. 6/2024 telah membuat ketetapan pendaftaran bahan/barangan SPD sedia ada yang tidak memenuhi ketetapan spesifikasi baharu ini akan **ditamatkan pendaftaran EMAL pada 15 Jun 2025**.
- Sehubungan itu, pihak pengilang/pembekal adalah dijemput untuk membuat permohonan pendaftaran baharu bagi bahan/barangan SPD yang selaras dengan spesifikasi JKR L-S1: *Specification For Low Voltage Internal Electrical Installation, Section 7.0 Surge Protective Device (Version June 2024)*. Bersama ini disertakan spesifikasi pindaan tersebut untuk rujukan dan tindakan selanjutnya pihak tuan/puan.
- Sila hubungi pegawai pejabat ini Ir. Muhammad Zamri bin Ramli ([mzamrir@jkr.gov.my](mailto:mzamrir@jkr.gov.my)) 03-26189914 untuk maklumat lanjut. Perhatian dan kerjasama tuan/puan berhubung perkara ini adalah dihargai.

Sekian, terima kasih.

“MALAYSIA MADANI”

“BERKHIDMAT UNTUK NEGARA”

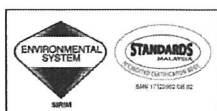
Saya yang menjalankan amanah,

(Ir. NOOR ASHIKIN BINTI MD. TAMIMI)

Pengarah Perkhidmatan Pakar  
Cawangan Kejuruteraan Elektrik  
b.p. Ketua Pengarah Kerja Raya  
Ibu Pejabat JKR Malaysia, Kuala Lumpur.



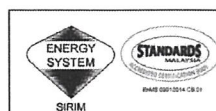
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CERT. NO.: QMS 03597



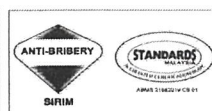
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CERT. NO.: EnMS 00111



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|  | <b>SPECIFICATION FOR LOW VOLTAGE<br/>INTERNAL<br/>ELECTRICAL INSTALLATION<br/>(L-S1)</b> | <b>CKE.LS.01.01.(04).2017</b><br><b>Date Issued: April 1999</b> |
|   |  | <b>Revision: 3</b>  |
|   |  | <b>Date: June 2024</b>  |
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## 7.0 SURGE PROTECTIVE DEVICES

- 7.1 The surge protective device (SPD) shall be one-port type compatible with the 230/400 V, 3 phase, 4 wire, 50 Hz and with the neutral solidly earthed. The SPDs shall be of the type complying with MS IEC 61643-11, IEC 61643-12, IEC 62305-4 and IEC 60364-5-53.
- 7.2 The SPD shall be of voltage limiting type with metal oxide varistors (MOVs), or voltage switching type with gas discharge tube (GDT)/spark gap, or combination type with MOVs and GDT/spark gap.
- 7.3 The maximum continuous operating voltage (Uc) of SPDs shall be of minimum 275 V for SPDs connected between L-N, whereas for SPDs connected between N-E shall be a minimum of 255 V. In the case where the MOVs are used, the SPD shall be equipped with disconnecter.
- 7.4 SPDs protection against short-circuits shall be provided by fuses. The fuse shall be selected according to the recommended ratings given in the manufacturer's SPD manual instructions. The fuse shall be installed on the live conductors.
- 7.5 The size of connecting conductors shall be as recommended by the SPD's manufacturer. The connecting conductors shall be kept as short as possible, preferably not exceeding 500 mm and shall be tightly bound together throughout the whole length with heavy duty black nylon cable-ties.
- 7.6 The SPD shall be equipped with visual indicator showing the protection status. If required, the SPD shall be equipped with auxiliary contacts for remote monitoring of the protection status.
- 7.7 The label shall be of laminated plastic with red lettering engraved on a white background. The label with words as stated below shall be fastened externally on the front door of the SPD compartment.

### AMARAN

1. Pemasangan ini dilindungi oleh Surge Protective Device (SPD).
2. SPD tidak lagi berfungsi apabila *indicator* menunjukkan warna merah atau tidak menyala.
3. Sila buat pemeriksaan pada SPD secara berkala.
4. Sila hubungi 'orang kompeten' untuk penggantian SPD.
5. Sila pastikan fuis dalam keadaan baik.

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7.8 The SPD shall be installed according to the location category as shown in Table 7A.

Table 7A : Characteristics of Surge Protective Device According to Location Category

| Location Category   | Class of Test | Impulse Current, $I_{imp}$ (kA)  | Nominal Discharge Current, $I_n$ (kA) | Maximum Discharge Current, $I_{max}$ (kA) | Open Circuit Voltage, $U_{oc}$ (kV) | Voltage Protection Level, $U_p$ (kV) |
|---|---------------|----------------------------------|---------------------------------------|---|-------------------------------------|--------------------------------------|
| MSB   | Class I       | L-N $\geq 12.5$<br>N-E $\geq 50$ |                                       |   |                                     | $\leq 2$                             |
| MSB   | Class II      |                                  | $\geq 20$                             | $\geq 65$                                 |                                     | $\leq 2$                             |
| SSB<br>(SSB receiving supply from outside the building)       | Class II      |                                  | $\geq 20$                             | $\geq 65$                                 |                                     | $\leq 2$                             |
| SSB<br>(SSB receiving supply from MSB in the same building)   | Class II      |                                  | $\geq 10$                             | $\geq 40$                                 |                                     | $\leq 1.8$                           |
| DB<br>(DB receiving supply from outside the building)         | Class II      |                                  | $\geq 20$                             | $\geq 40$                                 |                                     | $\leq 1.5$                           |
| DB<br>(DB receiving supply from MSB/SSB in the same building) | Class II      |                                  | $\geq 10$                             | $\geq 40$                                 |                                     | $\leq 1.5$                           |
| DB<br>(DB receiving supply from MSB/SSB in the same building) | Class III     |                                  |                                       |   | $\geq 6$                            | $\leq 1.5$                           |