

ENGINEERING CIRCULAR NO.: 01 / 2026

Ref. No: KUT/700-12/2 JLD.1 (2)

IMPLEMENTATION OF NEW CABLE COLOUR CODING FOR ELECTRICAL INSTALLATIONS IN SARAWAK



**MINISTRY OF UTILITY AND TELECOMMUNICATION SARAWAK
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1.0 AUTHORITY

- 1.1 In exercise of the powers conferred by Rule 110 (b) of the Electricity Rules, 1999, made under the Electricity Ordinance [Cap. 50], the Director of Electricity Supply issue this Engineering Circular to prescribe the implementation of the new cable colour coding requirements for electrical installations in Sarawak.
- 1.2 This Engineering Circular shall be referred to as the **"Engineering Circular on the Implementation of New Cable Colour Coding for Electrical Installations in Sarawak"**.

2.0 BACKGROUND

- 2.1 The Energy Commission of Malaysia, vide its Circular dated 15 May 2026, has issued a directive on the transition towards a revised standardised cable colour coding system for electrical installations under its regulatory jurisdiction.
- 2.2 The Ministry of Utility and Telecommunication, through the Electrical Inspectorate Unit (EIU), Sarawak, recognises the importance of ensuring technical harmonisation with applicable national standards and prevailing industry practices adopted in Malaysia, particularly in relation to electrical installation safety, consistency, and reliability.

3.0 PURPOSE

- 3.1 This Engineering Circular establishes the policy requirement for the adoption of a harmonised cable colour coding system for electrical wiring installations in Sarawak.
- 3.2 This Engineering Circular aims to ensure:
 - a. Alignment with national standards and regulatory intent;
 - b. Consistency in conductor identification;
 - c. Enhanced electrical safety and operational clarity; and
 - d. Improved compliance within the electrical industry

4.0 POLICY STATEMENT

- 4.1 All electrical wiring installations in Sarawak shall comply with the new cable colour coding requirements as specified in **Appendix A** of this Engineering Circular.
- 4.2 This requirement shall apply to:

- i. All new installations;
- ii. Extension works;
- iii. Alteration works; and
- iv. Upgrading or refurbishment works.

4.3 Existing electrical installations are not required to be modified solely for the purpose of adopting the new cable colour coding system. However, where maintenance, alteration, extension, or upgrading works are carried out, the new cable colour coding requirements shall be implemented where reasonably practicable.

5.0 IMPLEMENTATION PERIOD

5.1 The implementation of the new cable colour coding system shall be carried out in accordance with the following timeline:

No.	Effective Date	Requirement / Status
1.	Until 31st December 2028	Transition Period: Existing and new cable colour coding systems may be permitted for new installations, additions, extensions, and modifications, subject to proper identification and labelling requirements.
2.	From 1st January 2029	Full Compliance: All new electrical wiring installations, extensions, alterations, and modifications shall comply with the new cable colour coding system.

Table 1: Implementation Timeline for the New Cable Colour Coding System

5.2 During the transition period, all electrical contractors, competent persons, and relevant stakeholders are encouraged to adopt the new cable colour coding system to facilitate smooth implementation and industry readiness.

6.0 TECHNICAL REQUIREMENTS

6.1 The technical requirements relating to cable colour identification, conductor labelling, and warning signage shall be as specified in **Appendix A**.

6.2 Appendix A shall form an integral part of this Engineering Circular and shall have the same effect as the provisions contained herein.

7.0 EFFECTIVE DATE

7.1 This Engineering Circular shall take effect from the date of issuance by the Director of Electricity Supply.

8.0 AMENDMENT

- 8.1 The Electrical Inspectorate Unit (EIU) reserves the right to review, amend, or issue supplementary requirements relating to this Engineering Circular from time to time.



DIRECTOR OF ELECTRICITY SUPPLY
Ministry of Utility and Telecommunication Sarawak
Electrical Inspectorate Unit

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APPENDIX A

TECHNICAL GUIDELINES ON THE IMPLEMENTATION OF THE NEW CABLE COLOUR CODING REQUIREMENTS FOR ELECTRICAL INSTALLATIONS IN SARAWAK

A1.0 SCOPE

- i. This Appendix specifies the technical requirements for conductor colour identification, labelling, and warning notices applicable to electrical installations in Sarawak in accordance with IEC 60445.
- ii. The requirements specified herein shall be read together with the provisions of the Engineering Circular on the Implementation of New Cable Colour Coding Requirements for Electrical Installations in Sarawak.

A2.0 CABLE COLOUR CODING SYSTEM

- i. The cable colour coding system shall comply with IEC 60445 and the provisions of this Engineering Circular.
- ii. The transition from the existing colour coding system to the new colour coding system shall be as follows.

SUPPLY SYSTEM	EXISTING COLOUR CODE	NEW COLOUR CODE
Three-Phase System	Red, Yellow, Blue	Brown, Black, Grey
Neutral	Black	Blue
Single-Phase System	Red	Brown
Protective Earth (PE)	Green / Green-Yellow	Green / Green-Yellow

Table A1: Comparison Between Existing and New Cable Colour Coding System

A3.0 CABLE LABELLING REQUIREMENTS

- i. Where new colour-coded conductors are installed in existing systems, all new conductors shall be clearly and permanently identified using durable labels.
- ii. The labelling shall clearly indicate conductor identification to prevent confusion between existing and newly installed wiring systems.

- iii. Labels for L1, L2, L3, and N shall be:
 - a) Durable;
 - b) Clearly visible;
 - c) Resistant to environmental conditions; and
 - d) Suitable for long-term use.
- iv. Recommended labelling arrangements are illustrated in Figures A1 to A3.

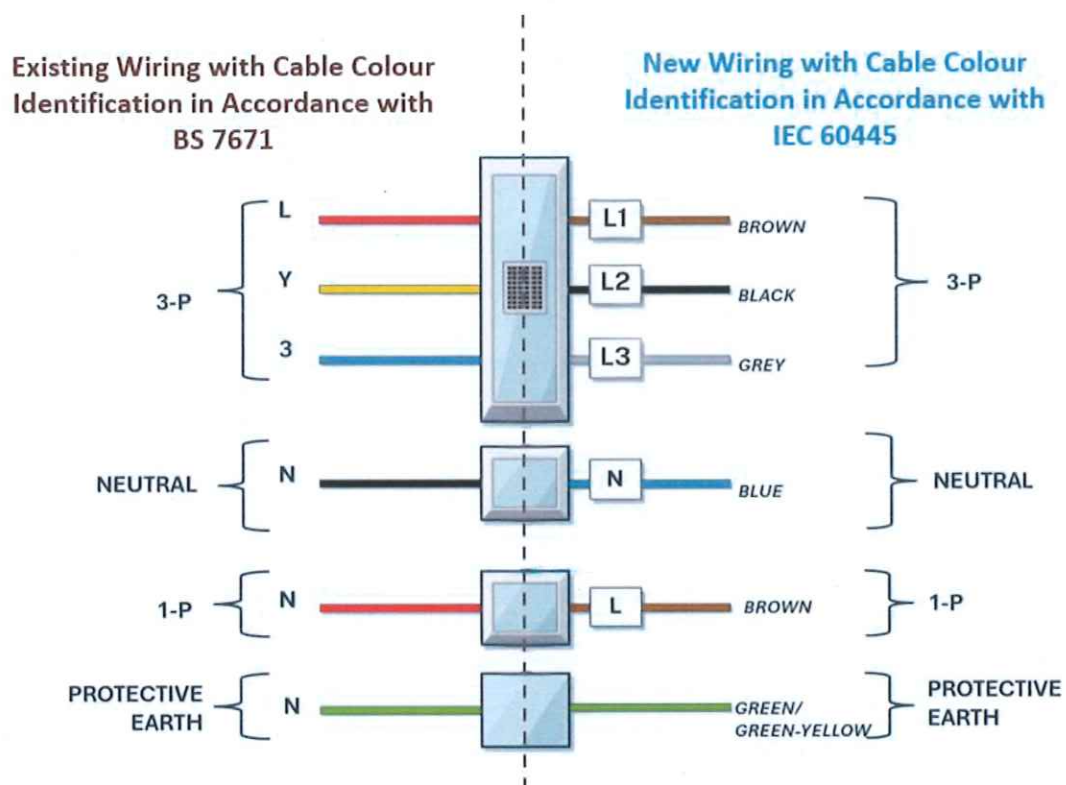


Figure A1: Labelling approach for new wiring system in existing installations

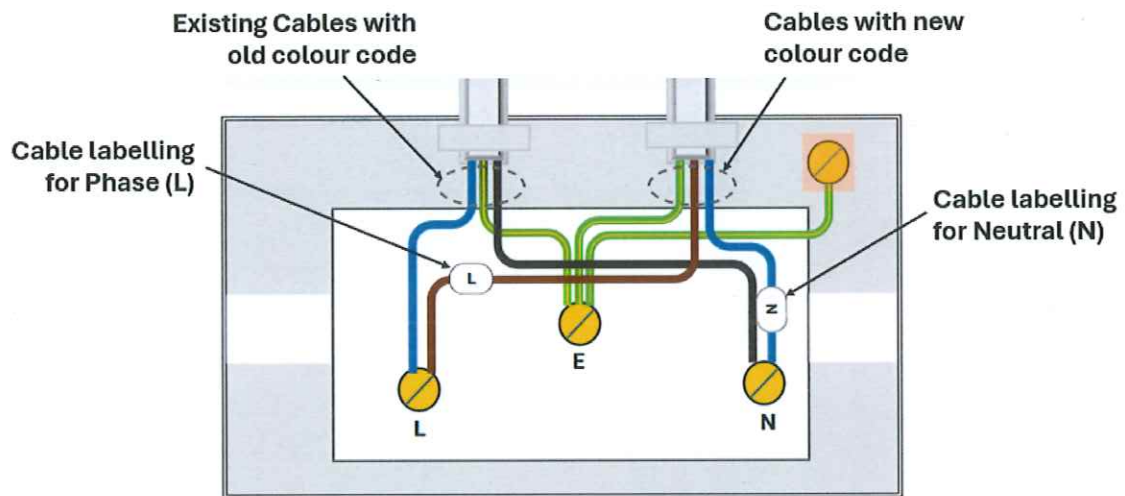


Figure A2: Application of L and N labelling for single-phase conductors (phase and neutral) with the new colour coding in existing installations

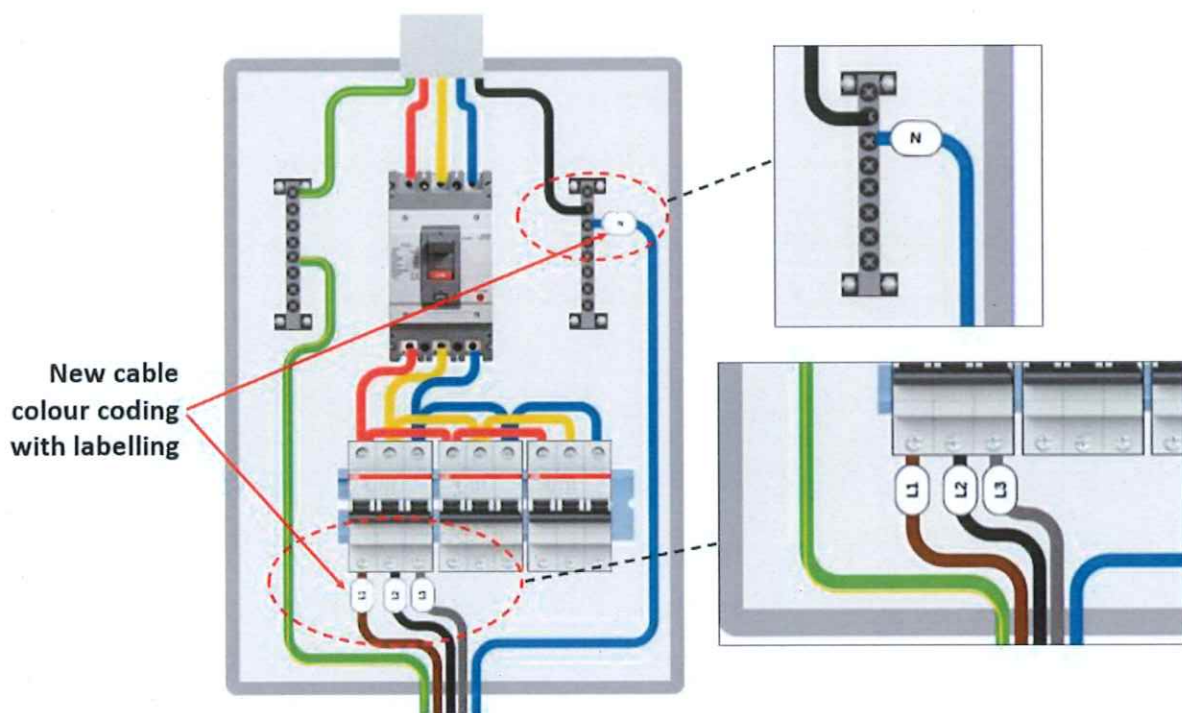


Figure A3: Application of L1, L2, L3, and N labelling for three-phase conductors (phase and neutral) with the new colour coding in existing installations

A4.0 WARNING NOTICE REQUIREMENTS

- i. Where both existing and new colour coding systems are present within the same electrical installation, a warning notice shall be displayed at the distribution board or other suitable visible locations.
- ii. The warning notice shall provide clear information to personnel involved in operation, inspection, testing, and maintenance activities.
- iii. The recommended warning notice format is shown in Figure A4.
- iv. The warning notice shall have:
 - a) Black lettering; and
 - b) Yellow background colour (recommended colour reference: #EED202).



Figure A4: Warning sign (recommended size: 8cm x 12cm)

A5.0 GENERAL COMPLIANCE

- i. All electrical installations shall ensure proper conductor identification to prevent misinterpretation during operation, inspection, testing, and maintenance activities.
- ii. Compliance with the requirements specified in this Appendix is mandatory under this Engineering Circular.

END OF APPENDIX A