

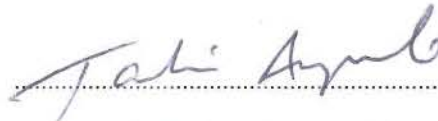
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| Ref:             | NR/L2/SIGELP/27422        |
| Issue:           | 1                         |
| Date:            | 6 <sup>th</sup> June 2015 |
| Compliance date: | 6 <sup>th</sup> June 2015 |

## Level 2

# Product Specification – Cable Glands for use in Class II Based Signalling Power Distribution Systems

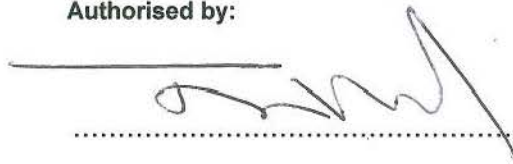
### Endorsement and Authorisation

Endorsed by:



Tahir Ayub, Working Group Chair

Authorised by:

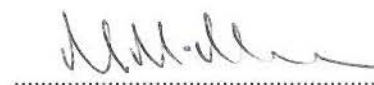


Jeremy Morling, Signalling Steering Group Chair



Richard Stainton, Electrical Power, Steering Group Chair

Accepted for issue by:



Mick McManus, National Standards Manager

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## User information

This Network Rail standard contains colour-coding according to the following Red–Amber–Green classification.

### Red requirements – No variations, could stop the railway

- **Red requirements shall** always be complied with and achieved.
- Red requirements shall be presented in a red box **with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of red requirements lies with the Professional Head/Standard Owner.
- Red requirements are monitored for compliance.
- Corrective actions shall be enforced if variations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

### Amber requirements – Controlled variations, approved risk analysis and mitigation

- **Amber requirements shall** be complied with unless variation has been approved in advance.
- Amber requirements shall be presented with an amber sidebar **and with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of these requirements lies with the Professional Head/Standard Owner, or their nominated Delegated Authority.
- Amber requirements are monitored for compliance.
- Variations **may** be permitted. Variations are approved by the Standard Owner or through existing Delegated Authority arrangements.
- Corrective actions shall be enforced if **non-approved** variations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

### Green – Guidance

- Guidance is based on good practice. Guidance represents supporting information to help achieve **Red** and **Amber** requirements.
- Guidance shall be presented with a dotted green sidebar **and with the word “should” (usually in notes) or as a direct instruction**.
- Guidance is **not mandatory** and is not monitored for compliance.
- Alternative solutions may be used. Alternative solutions do not need to be formally approved.
- Decisions made by a competent person to use alternative solutions should be backed up by appropriate evidence or documentation.

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## Issue record

| Issue | Date       | Comments    |
|-------|------------|-------------|
| 1     | 06/06/2015 | First issue |

## Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 06/06/2015.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

## Reference documentation

|                           |                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BS 4607-1                 | Non-metallic conduit fittings for electrical installations                                                                                                                                        |
| BS 5467:1997+A3:2008      | Electric cables. Thermosetting insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V                                                                                              |
| Directive 2002/95/EC      | Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) |
| IEC EN 60529              | Degrees of protection provided by enclosures (IP Code).                                                                                                                                           |
| IEC EN 61386              | Conduit systems for cable management                                                                                                                                                              |
| IEC EN 61386-1            | Conduit systems for cable management. General requirements                                                                                                                                        |
| ISO 180                   | Izod Impact Testing                                                                                                                                                                               |
| ISO 527                   | Determination of Tensile Properties                                                                                                                                                               |
| NR/L2/SIGELP/27410        | Specification for Class II Based Signalling Power Distribution Systems                                                                                                                            |
| NR/L2/SIGELP/27421        | Product Specification – Flexible Conduits for Class II Based Signalling Power Distribution Systems                                                                                                |
| Regulation (EC) 1907/2006 | Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)                                                                                            |
| RT/E/PS/00005             | Railway Signalling Cable (also referred to as NR/L2/SIG/00005 and NR/PS/SIG/00005)                                                                                                                |