ASSET DATA DICTIONARY DEFINITION DOCUMENT (AD4)
L7463 – 25kV INSULATORS

Learning Legacy Document

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1 Introduction

Not Applicable

1.1 Asset Details

Class Code:	L7463
Class Name:	25kV Insulators
Class Lineage:	Construction Products>Services>Electric power and lighting products>Distribution devices>25kV Insulators

1.2 Description

Insulators are used in electrical equipment to support and separate electrical conductors without allowing current through themselves. The insulator is used to prevent conductivity from the Overhead Catenary System (OCS) in open route and Rigid Overhead Conductor (ROC) in tunnels, to the support structure and other equipment.

1.3 Related Functions

All information on the configuration of asset classes (L-Class) to functions is contained within the latest revision of the Asset Data Dictionary Master Configuration document (eB ref: CRL1-XRL-Z3-ADDSD-CR001-50186)

2 Asset Tag Identification Rules

Assets will be identified as required by the Asset Identification Standard (CRL1-XRL-O6-STD-CR001-00031), in the following format:

<LCS Code>-<Function Code>-<Incremental number to ensure uniqueness>

e.g. C125-TSP-12345

Information and guidance on the standard naming convention for all asset classes is contained within the latest revision of the Asset Naming Convention Document (eB ref: CRL1-XR1-Z3-ADDSD-CR001-50413).

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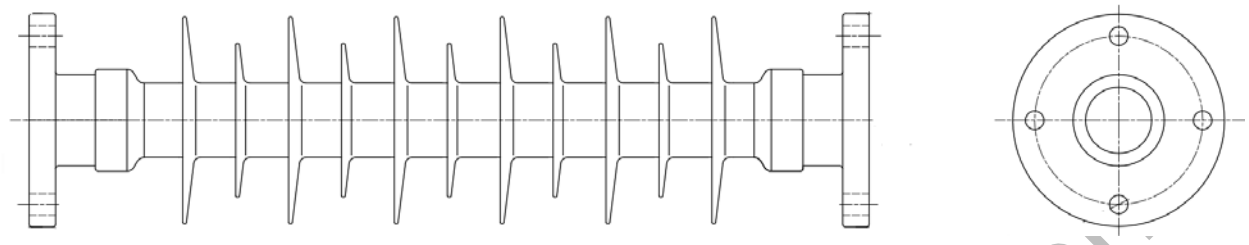
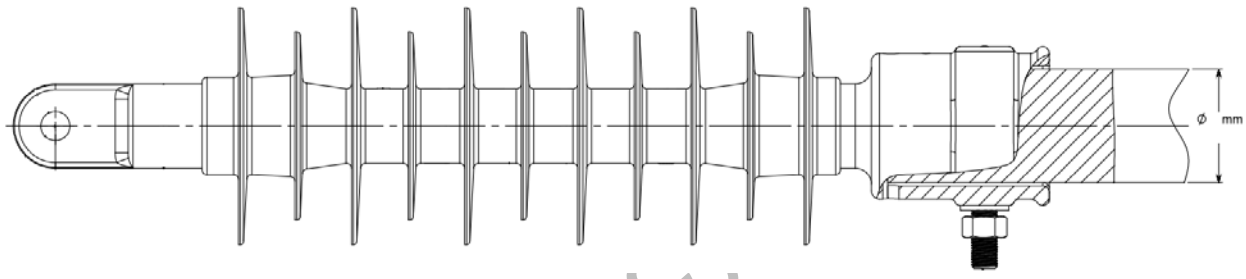
2.1 Example Images

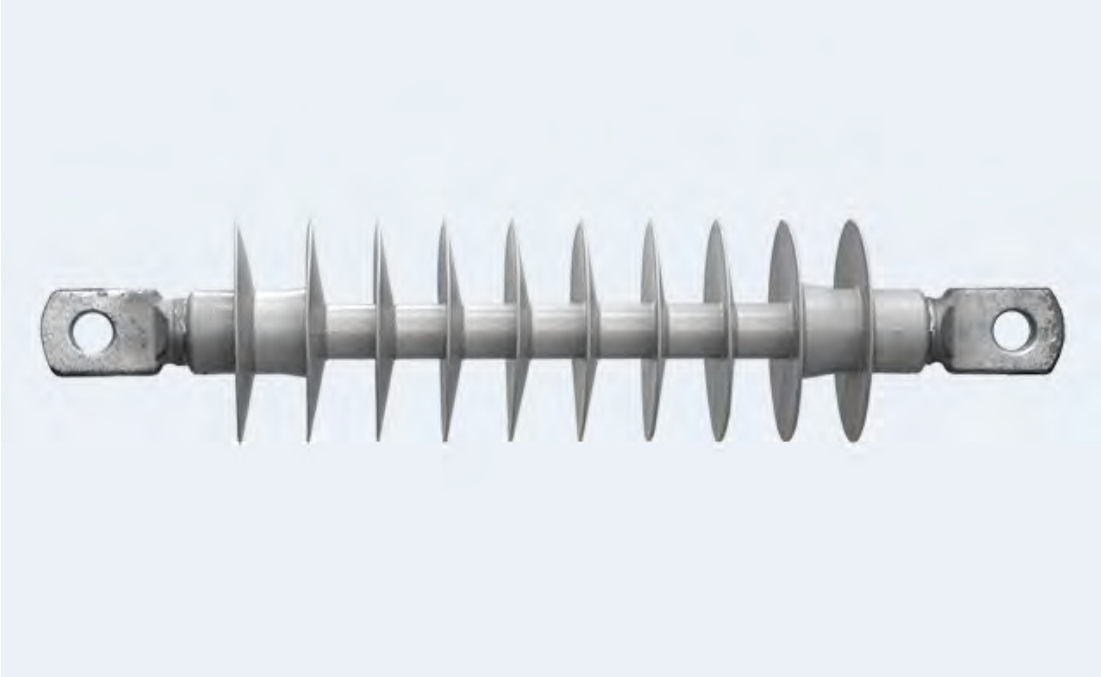
Example of Stand Off Insulator



Example of Cantilever Top Tube Insulator



Typical Insulator Photo



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3 Attributes

3.1 Generic Attributes

All Classes of assets will have a set of Generic Attributes for which data is collected without exception. Full details relating to these assets can be found at:

AD4 – Generic Attributes CRL1-XRL-Z3-ADDSD-CR001-50069

3.2 Class Specific Attributes

Below is a table of the further specific attributes which are associated with this asset class.

Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
Length (Millimetres)	Millimetres	NU	0		Overall length of Insulator
Specified Mechanical Load - Tension (kN)	kN	NU	0		Specified Mechanical Load (SCL) for Tension
Specified Mechanical Load - Bending (Nm)	Nm	NU	0		Specified Mechanical Load (SCL) for Bending
Additional Load Characteristics		CH			State any other load characteristics including the value
Insulator Type		PD		OCS Cantilever Top Tube OCS Cantilever Strut Tube OCS Anchor OCS Catenary Wire OCS Contact Wire In-running OCS Stand Off ROC Tunnel Support - Type 1 ROC Tunnel Support - Type 2 ROC Anchor	Type of Insulator.

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Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
Meterage (Metres)	Metres	NU	0		Meterage (Chainage) location of asset. To be populated only when the asset is located on track.
LRS Code		PD		C.EB C.EB.CRW5 C.EB.CR1 C.EB.CR7 C.EB.TBC C.WB C.WB.CRW9 C.WB.CRW6 C.WB.CR2 C.WB.CR5 C.WB.TBA C.WB.TBB CNE.EB CNE.WB CSE.EB CSE.EB.CR11 CSE.WB CSE.EB.CR13 CSE.WB.CR15 Non Track	The Crossrail Linear Referencing Standard code (CRL1-XRL-O6-STD-CR001-00026) where the asset is located. When the asset is not located on track then non track should be selected. The LRS codes are as follows: C.EB - Central Section Eastbound C.EB.CRW5 - Crossover between W5 and W4 Points C.EB.CR1 - Crossover between C1 and C4 Points C.EB.CR7 - Crossover between C7 and C8 Points C.EB.TBC - Turnback C C.WB - Central Section Westbound C.WB.CRW9 - Crossover between W9 and W8 Points C.WB.CRW6 - Crossover between W6 and W3 Points C.WB.CR2 - Crossover between C2 and C3 Points C.WB.CR5 - Crossover between C5 and C6 Points C.WB.TBA - Turnback A C.WB.TBB - Turnback B CNE.EB - Central Section North East Spur Eastbound CNE.WB - Central Section North East Spur Westbound CSE.EB - Central Section South East Spur Eastbound CSE.EB.CR11 - Crossover between C11 and C12 Points CSE.WB - Central Section South East Spur Westbound CSE.EB.CR13 - Crossover between C13 and C14 Points CSE.WB.CR15 - Crossover between C15 and C16 Points Non Track - Non Track Assets

pd = Predefined List (Listed Values Only)
nu = Numeric (dp and number format can be stipulated)
ch = Free text (Max 255 Characters)
da = Date (dd-mm-yyyy)
me = Memo (Free text 1GB Limit)

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4 Performance Data

This section is to be used to specify the performance data to be gathered from this Class of asset when in operation. To be populated once the performance measures have been agreed with the Infrastructure Managers.

5 Labelling

Each Insulator will have a unique identification number on it given by the manufacturer. This number shall be recorded as an attribute and therefore an asset or equipment label is not required.

6 Other Information

The characteristics of a 25kV Isolator are:-

- Creepage distance – 1100mm
- Highest permanent voltage – 27.5kV
- Rated frequency – 50Hz
- Basic impulse level dry withstand – 250kV
- Power frequency wet withstand during one minute – 95kV

7 Reference Material

- Asset Data Dictionary Master Configuration document - CRL1-XRL-Z3-ADDSD-CR001-50186
- Asset Identification Standard - CRL1-XRL-O6-STD-CR001-00031
- AD4 – Generic Attributes - CRL1-XRL-Z3-ADDSD-CR001-50069
- <ADD OTHER REFERENCE DOCUMENTS HERE>

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8 Crossrail Technical Approvals

Name	Role	Date
Louise Moore	Electrification Asset Engineer	08/12/2015

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