ASSET DATA DICTIONARY DEFINITION DOCUMENT (AD4)
L7172 - Valves

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1 Introduction

1.1 Asset Details

Class Code: L7172

Class Name: Valves

Class Lineage: Construction Products>Services>Supply-storage-distribution of liquids and gases>Valves

1.2 Description

A Valve is a device that controls the flow or pressure of liquids. The Valve can stop or allow the flow of the substance within the distribution system or pipe work. Examples include Check Valve, Gate valve, Isolation valve, etc.

Flow control switches may be used in, water supply and heating & cooling systems.

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. CR076-BAF-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

Typical Mist Fire Suppression Flow Switch.

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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
Actuated		PD		Yes No	Is the valve actuated
Back Pressure		PD		N/a 1 2 3 4	Pressure opposing the desired flow of a fluid in a pipe
Back siphonage		PD		N/a 1 2 3 4 5	Occurs as a result of low supply pressure: could be caused by break in flow or negative pressure of flow

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Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
Coupling Connection Method		PD		Push Fit Glued Welded Brazed Soldered Threaded	Connection method of device to pipe work
Duty Flow (Litres/Sec)	Litres/Sec	NU	2		Maximum flow capacity of device
Inlet Diameter (Millimetres)	Millimetres	NU	0		The diameter of the Inlet connection
Input Voltage (Volts)	Volts	NU	0		Input voltage to the valve if powered
Outlet Diameter (Millimetres)	Millimetres	NU	0		The diameter of the Outlet connection
Pressure Drop (Kilopascals)	Kilopascals	NU	2		The difference in pressure between two points of a fluid carrying network
System		PD		Chilled water Potable water Boosted Water Station Fire Main Tunnel Fire Main Run-around Coil Hot Water Fire Suppression	What system does the valve form part of
Valve Purpose		PD		Control Isolation Safety Discharge	What is the purpose of the valve

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Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
Valve Type		PD		Flow Switch Monitored Motor Rise Non Monitored Pyro stop Solenoid Pressure Control Pressure Relief Clack Deluge Stop Antisurge Flap Flap & Float Antisurge	The Type of valve
Valve Material		PD		Aluminium Carbon Fibre Glass Reinforced Plastic High Pressure PolyEthylene Polyethylene Polypropylene Polyvinylchloride Reclaimed Rubber Steel Bronze	The primary material used in the construction of the valve e.g. metal, plastic
Effluent Type		PD		Foul/sewage Non-Foul	Foul/sewage – Includes water from toilets, sinks and baths but does not include surface water unless it has been in contact with foul water Non-Foul – Surface water and other drainage not contaminated by sewage or chemically contaminated water

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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

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

6 Other Information

Not Applicable

7 Reference Material

- Asset Data Dictionary Master Configuration - CRL1-XRL-Z3-ADDSD-CR001-50186
- Asset Identification Standard - CRL1-XRL-O6-STD-CR001-00031
- AD4 – Generic Attributes - CRL1-XRL-Z3-ADDSD-CR001-50069
- Asset Naming Convention Document - CRL1-XR1-Z3-ADDSD-CR001-50413

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8 Crossrail Technical Approvals

Name	Role	Date
[redacted]	Lead Mechanical & Electrical Plant (MEP) Engineer	19-Sep-2014

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