

# **Data Dictionary for Data inside the Compartments of Smart Lampposts**

**Version 2.0**

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Version	Details of Change	Effective Date
1.0	Initial Release	13 Jun 2023
2.0	API syntax updated for OGCIO re-organisation to DPO	25 Jul 2024

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# 1 Introduction

Sensors inside the compartments of smart lampposts report data such as temperature and relative humidity of their respective compartments.

A RESTful API is designed for application developers to retrieve these data collected from the compartments of smart lampposts.

## 2 API

### 2.1 Get data by lamppost ID

By making an API call with lamppost ID, the latest validated data (in 10-minute intervals) of the specified lamppost will be returned.

**HTTP method:** GET

**Resource URL:**

[https://api.data.gov.hk/v1/smart-lamppost/data/odata/smaccs?pi=\[lamppost\\_id\]](https://api.data.gov.hk/v1/smart-lamppost/data/odata/smaccs?pi=[lamppost_id])

**Parameters:**

<b>pi</b>	Required. Lamppost ID. Maximum 8 characters.
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[For the list of pi, please refer to the static dataset provided by DPO]

- Smart Lampposts Data Inside Compartments Sensors Location Database  
[https://www.digitalpolicy.gov.hk/open\\_data/smart\\_lampposts/smart\\_lamppost\\_data\\_inside\\_compartments\\_sensor\\_location.json](https://www.digitalpolicy.gov.hk/open_data/smart_lampposts/smart_lamppost_data_inside_compartments_sensor_location.json)

**Resource Information:**

Response formats	JSON
Requires authentication	NO
Response encoding	UTF-8

**Response Code:**

HTTP code	Definition
200	Success.
400	Bad Request.
500	Internal Server Error.
503	The server is currently unavailable.

**Example Request 1 (Normal request):**

<https://api.data.gov.hk/v1/smart-lamppost/data/opendata/smacs?pi=DF3647>

**Example Response 1 (HTTP 200):**

```
{
  "BD": "COMMON",
  "DI": "10",
  "GI": "00",
  "PI": "DF3647",
  "TS": "1562748177518"
  "BODY": {
    "COMMON": {
      "C1": {"T0": "34.5", "RH": "73.5"},
      "C2": {"T0": "34.8", "RH": "74.3"},
      "C3": {"T0": "34.8", "RH": "73.8"},
      "C4": {"T0": "34.6", "RH": "75.0"},
      "TS": "20220919163357"
    }
  }
}
```

[For the definitions of the JSON field name, please refer to the Data Dictionary]

**Example Request 2 (Normal request with invalid pi):**

<https://api.data.gov.hk/v1/smart-lamppost/data/opendata/smacs?pi=xxxxxx>

**Example Response 2 (HTTP 200):**

```
{"message": "No record found"}
```

**Example Request 3 (Required fields are not provided):**

<https://api.data.gov.hk/v1/smart-lamppost/data/odata/smacc>

**Example Response 3 (HTTP 400):**

```
{"message": "Missing required request parameters: [pi]"}
```

**Example response for HTTP 500 and HTTP 503**

```
{"message": "[Error Message]"}
```

### 3 Data Dictionary

#### 3.1 Smart Lamppost Compartment Data Sensors Location Database

Name	Description	Remarks
<b>LP_PI</b>	Lamppost ID	Data type: String Data format: Maximum 8 characters Example: "DF3647"
<b>LP_LATITUDE</b>	Latitude (Decimal Degree) of lamppost in WGS84 (Reference Frame: ITRF96 (1998:121))	Data type: Numeric Unit: ° Resolution: 0.000001 ° Example: "22.333333"
<b>LP_LONGITUDE</b>	Longitude (Decimal Degree) of lamppost in WGS84 (Reference Frame: ITRF96 (1998:121))	Data type: Numeric Unit: ° Resolution: 0.000001 ° Example: "114.222222"
<b>LP_NORTH</b>	Northing coordinates (HK1980 Grid) of lamppost	Data type: Numeric Unit: m Resolution: 0.1 m Example: "822222.2"
<b>LP_EAST</b>	Easting coordinates (HK1980 Grid) of lamppost	Data type: Numeric Unit: m Resolution: 0.1 m Example: "833333.3"
<b>LP_COMPARTMENT_NUM</b>	Number of Compartments of the lamppost	Data type: Integer Range: 1 - 4 Example: "2"

### 3.2 API

Name	Description	Remarks
<b>BD</b>	HKSAR Government Bureau/Department Code	Data type: String Always “COMMON” for Internal Data Sensor
<b>DI</b>	Device ID	Data type: String Data format: 2 characters Always “10” for Internal Data Sensor
<b>GI</b>	[ Currently not in use ] Reserve for Branch/Division/Section code	[ Currently not in use ] Data type: String Default value: “00”
<b>PI</b>	Lamppost ID	Data type: String Data format: Maximum 8 characters Example: “DF3647”
<b>TS</b>	Date and time when JSON packet is created (up to millisecond)	Data type: String Data format: Unix time stamp Default value: “0”
<b>BODY.COMMON.C1.T0</b>	Temperature inside lamppost compartment 1	Data type: String Unit: °C Resolution : 0.1 °C Example: “19.8” (“////” if fail quality control (QC))

<b>BODY.COMMON.C1.RH</b>	Relative humidity inside lamppost compartment 1	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC)
<b>BODY.COMMON.C2.T0</b>	Temperature inside lamppost compartment 2	Data type: String Unit: °C Resolution : 0.1 °C Example: “19.8” (“////” if fail QC)
<b>BODY.COMMON.C2.RH</b>	Relative humidity inside lamppost compartment 2	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC)
<b>BODY.COMMON.C3.T0</b>	Temperature inside lamppost compartment 3	Data type: String Unit: °C Resolution : 0.1 °C Example: “19.8” (“////” if fail QC, “N.A.” if no such compartment)
<b>BODY.COMMON.C3.RH</b>	Relative humidity inside lamppost compartment 3	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC, “N.A.” if no such compartment)
<b>BODY.COMMON.C4.T0</b>	Temperature inside lamppost compartment 4	Data type: String Unit: °C Resolution : 0.1 °C Example: “19.8” (“////” if fail QC, “N.A.” if no such compartment)

<b>BODY.COMMON.C4.RH</b>	Relative humidity inside lamppost compartment 4	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC, “N.A.” if no such compartment)
<b>BODY.COMMON.TS</b>	The latest of the data measurement times of all compartments of a smart lamppost	Data type: String Data Format: YYYYMMDDHHMMSS (ISO 8601 notation, in Hong Kong Time) Example: “20190506161726”

\*Compartment number counted from the top compartment i.e. compartment 1 is the top compartment.