

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

Version 1.0

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

Parameters:

pi	Required. Lamppost ID. Maximum 8 characters.
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[For the list of pi, please refer to the static dataset provided by OGCIO]

- Smart Lampposts Data Inside Compartments Sensors Location Database
https://www.ogcio.gov.hk/en/our_work/strategies/smart_lampposts/smart_lamppost_s_data_inside_compartments_sensors_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/ogcio/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/ogcio/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/ogcio/smacs>

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

3.2 API

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

BODY.COMMON.C1.RH	Relative humidity inside lamppost compartment 1	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC)
BODY.COMMON.C2.T0	Temperature inside lamppost compartment 2	Data type: String Unit: °C Resolution : 0.1 °C Example: “19.8” (“////” if fail QC)
BODY.COMMON.C2.RH	Relative humidity inside lamppost compartment 2	Data type: String Unit: % Resolution: 0.1 % Example: “93.1” (“////” if fail QC)
BODY.COMMON.C3.T0	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)
BODY.COMMON.C3.RH	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)
BODY.COMMON.C4.T0	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)

BODY.COMMON.C4.RH	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)
BODY.COMMON.TS	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.