

Data Product Specification of PANSA Obstacle Data Sets



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| Version: | 1.2 |
| This version | https://www.ais.pansa.pl/en/publications/obstacle-data-sets/ |
| Latest version | NIL |
| Published | 2024-06-13 |
| Language | English |
| Extent of the data product | <ol style="list-style-type: none">1. Area 1 Obstacle Data Set: FIR EPWW;2. Area 2 Obstacle Data Sets: Penetrations of the aerodrome Obstacle Limitation Surfaces (OLS) of the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY. |
| Topic category | Transportation |
| Keywords | Obstacles |

Overview of the data product

The Polish Obstacle Data Set is not a full data set as it contains only the Area 1 Obstacle data set and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) for the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY. It is not a full initial data set.

The descriptions and requirements of the Areas 1, 2 (a-d), 3 and 4 obstacles can be found in ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition as well as in EUROCONTROL TOD Manual, Edition 3.0.

Area 1 and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) are collected and published according to ICAO Annex 15, 16th Edition requirements.

Obstacle data is not provided for Areas: 2a, 2b, 2c, 2d, Area 3 and Area 4.

History of changes to the DPS

| Version | Date | Reason for change | Changed sections |
|---------|------------|----------------------|------------------------|
| 1.0 | 2022-01-27 | Creation of document | All |
| 1.1 | 2022-05-19 | Content changes | Logo on the cover page |
| 1.2 | 2024-06-13 | Content changes | Reference system |
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| 1. Specification scope | |
|---------------------------------------|---|
| Title | PANSA Obstacle Data Sets for Area 1 (FIR EPWW) and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) |
| This version | https://www.ais.pansa.pl/en/publications/obstacle-data-sets/ |
| Latest version | NIL |
| Published | 2022-01-27 |
| Updated | In accordance with AIRAC cycle |
| Language | English |
| Contact | Aeronautical Information Service 02-147 Warszawa, ul. Wieżowa 8 AIS HQ: +48-22-574-5625, fax: +48-22-574-5619 e-mail: ais.poland@pansa.pl |
| Web location | https://ais.pansa.pl |
| Format | AIXM 5.1 |
| Maintenance | The data product specification is updated regularly and reviewed at least once every year. |
| Handling restrictions | Unrestricted |
| Terms and definitions | See ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition |
| Abbreviations | Electronic Terrain and Obstacle Data For additional abbreviations, see ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition |
| 2. Data product Identification | |
| Official title | PANSA Obstacle Data Sets for Area 1 and Area 2. Area 2 data sets contain only obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS); These are not full initial data sets. |
| ID | EP_OBS_DS_FULL_%AIRAC_DATE%_AIRAC.xml EP_OBS_DS_UPD_DELTA_%AIRAC_DATE%_AIRAC.xml |
| Abstract | Obstacle data set for Area 1. Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS); these are not full initial data sets. Area 1 and Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) are collected and published according to ICAO Annex 15, 16th Edition requirements. Obstacle data is not provided for Area 2a, 2b, 2c, 2d, Area 3 and Area 4. |
| Purpose | The purpose of the data product is to provide obstacle data for air navigation applications. ICAO PANS-AIM, Chapter 5.3.3.2 provides possible uses of the data. It is the responsibility of the users to determine if the data product meets their needs. |
| Topic category | Transportation |
| Keywords | Vector |
| Spatial representation | Points |
| Spatial resolution | Not applicable |

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| Supplemental information | <i>NIL</i> |
| Restrictions | <p>Use limitations: For aviation operational use only.</p> <p>Access restrictions: For subscribers only, order form available under link: https://www.ais.pansa.pl/form/order/orderform_en.htm</p> <p>Usage restrictions: Please see disclaimer: https://www.ais.pansa.pl/en/about-ais/disclaimer</p> <p>Legal protection of AIS publications: https://www.ais.pansa.pl/en/publications/legal-protection-of-ais-publications</p> <p>Security restrictions: After downloading the data, please check attached CRC32 and MD5 checksums.</p> |

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| Extent | <p>FIR EPWW: Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) of the following aerodromes: EPBY, EPGD, EPKK, EPKT, EPLB, EPLL, EPMO, EPPO, EPRA, EPRZ, EPSC, EPSY.</p> |
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3. Data content and structure

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| Application schema | https://aixm.aero/ |
| Feature catalogue | See Appendix 1 |

4. Reference system

General scope

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| Spatial reference system | <p>Horizontal reference system: WGS-84 (EPSG: 4326)</p> <p>Vertical reference system: Kronstadt-86 (OTHER:PLKRON86NH) or Amsterdam (OTHER:PLEVRF2007NH)</p> |
| Temporal reference system | Gregorian Calendar, UTC. |

5. Data quality requirements

General scope

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| Requirement 1 | <p>Data quality element: Assurance (Integrity).</p> <p>Data quality measure: The horizontal and vertical position integrity are classified as “essential”. The procedures for processing obstacles have been setup to meet the integrity requirements.</p> |
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| Requirement 2 | Data quality element: Traceability Data quality measure: All actions over the obstacle objects are traced and saved in the metadata. Metadata is available on request. |
| Requirement 3 | Data quality element: Timeliness Data quality measure: Timeliness is assured by providing the start and end time position of all obstacles. |
| Requirement 4 | Data quality element: Completeness Data quality measure: The content of the data set was checked by visual inspection. |
| Area 1 | |
| Requirement 1 | Data quality element: Horizontal accuracy Data quality measure: The horizontal accuracy is 50 m at 90% confidence level. |
| Requirement 2 | Data quality element: Vertical accuracy Data quality measure: The vertical accuracy is 30 m at 90% confidence level. |
| Requirement 3 | Data quality element: Horizontal position resolution Data quality measure: The horizontal position resolution is expressed in degrees, minutes, seconds and decimal seconds with 2 decimal places (DDMMSS.ss), commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements. |
| Requirement 4 | Data quality element: Vertical position resolution Data quality measure: The vertical position resolution is 0.01 ft, commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements. |
| Area 2 data sets of obstacles penetrating the aerodrome Obstacle Limitation Surfaces (OLS) | |
| Requirement 1 | Data quality element: Horizontal accuracy Data quality measure: The horizontal accuracy is 5 m at 90% confidence level. |
| Requirement 2 | Data quality element: Vertical accuracy Data quality measure: The vertical accuracy is 3 m at 90% confidence level. |
| Requirement 3 | Data quality element: Horizontal position resolution Data quality measure: The horizontal position resolution is expressed in degrees, minutes, seconds and decimal seconds with 2 decimal places (DDMMSS.ss), commensurate with the |

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| | accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements. |
| Requirement 4 | Data quality element: Vertical position resolution Data quality measure: The vertical position resolution is 0.01 ft, commensurate with the accuracy requirements. The resolution is sufficient to guarantee the accuracy requirements. |
| Area 3 | |
| No data available | |
| Area 4 | |
| No data available | |
| 6. Data capture | |
| Description | Obstacle data capture rules are based on: <ul style="list-style-type: none"> - Commission Implementing Regulation (EU) 2020/469 - Regulation of the Minister of Infrastructure of 12 January 2021 on aviation obstacles, obstacle limiting surfaces and hazardous devices (Journal of Laws of the Republic of Poland 2021 item 264) - EUROCONTROL Terrain and Obstacle Data Manual v. 3.0, edition date: 04/05/2021, document reference: EUROCONTROL-GUID-158 - EUROCONTROL Specification for the Origination of Aeronautical Data (DO) - Volume 1 - EUROCONTROL Specification for the Origination of Aeronautical Data (DO) - Volume 2 Obstacle coverage areas have been created according to ICAO Annex 15, 16th Edition and PANS-AIM, 1st Edition. |
| Guide | NIL |
| Inclusion criteria | Obstacles must have a minimal height of 100 m above ground level to be included in the Area 1 obstacle dataset. Obstacles must penetrate the aerodrome Obstacle Limitation Surfaces (OLS) to be included in the Area 2 data sets. |
| Data acquisition and processing | The data was captured and processed by terrestrial survey. |
| 7. Data maintenance | |
| General scope | |
| Description | The data set will be updated every AIRAC cycle. Changes between AIRAC dates will be delivered in AIXM 5.1 PERMDELTA .xml file. |
| Frequency | Continually |
| User defined | Not applicable |

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| 8. Data portrayal | |
| Portrayal rules | <i>Not applicable</i> |
| 9. Data product delivery | |
| General scope | |
| Format name | Aeronautical Information Exchange Model |
| Format version | 5.1 |
| Format specification | https://aixm.aero/ |
| File structure | http://www.aixm.aero/schema/5.1/AIXM_Features.xsd |
| Language | English |
| Character set | UTF-8 |
| 10. Metadata | |
| Specification | <p>The metadata is included in the data set as described in Commission implementing regulation (EU) 2020/469 AIS.TR.340. The following metadata is provided:</p> <ul style="list-style-type: none"> • name of the organisations or entities providing the data set; • the date and time when the data set was provided; • the validity of the data set; and • any limitations on the use of the data set. |
| Encoding | <p>Title: ISO 19139:2007, Geographic information – Metadata – XML schema implementation</p> <p>Date: 2007</p> |
| 11. Additional information | |
| General scope | |
| Additional information | <i>Not applicable</i> |

Appendix 1. PANSO Obstacle Data Sets available attributes

| Feature |
|---------------------------------|
| Latitude |
| Longitude |
| Height |
| Height Uom |
| Elevation |
| Elevation Uom |
| Vertical Accuracy |
| Vertical Accuracy Uom |
| Horizontal Accuracy |
| Horizontal Accuracy Uom |
| Obstacle Identifier |
| Location |
| Local language obstacle type |
| Lighting |
| Horizontal reference system |
| Marking |
| Obstacle type |
| Data originator identifier |
| Horizontal confidence level |
| Horizontal confidence level UOM |
| Horizontal resolution |
| Horizontal resolution UOM |
| Horizontal extent |
| Horizontal extent Uom |
| Vertical confidence level |
| Vertical confidence level UOM |
| Vertical resolution |
| Vertical resolution UOM |
| Geometry type |
| Integrity |
| Elevation reference |