# Address—geocode latitude, degrees minutes seconds Xd{d}{mm}{ss}{.ss}

## Exported from METEOR (AIHW's Metadata Online Registry)

# Address—geocode latitude, degrees minutes seconds Xd{d}{mm}{ss}{.ss}

## Identifying and definitional attributes

| | |
|---|---|
| **Metadata item type:** | Data Element |
| **Short name:** | Geocode latitude sexagismal |
| **Synonymous names:** | Latitude |
| **METEOR identifier:** | 469923 |
| **Registration status:** | Community Services (retired), Standard 10/04/2013 |
| | Disability, Standard 13/08/2015 |
| **Definition:** | The geographic latitude of an address point on the earth, measured in degrees, minutes and seconds north or south of the equator. |
| **Data Element Concept:** | Address—geocode latitude |
| **Value Domain:** | Latitude degrees minutes seconds Xd{d}{mm}{ss}{.ss} |

## Value domain attributes

### Representational attributes

| | |
|---|---|
| **Representation class:** | Identifier |
| **Data type:** | Geospatial |
| **Format:** | Xd{d}{mm}{ss}{.ss} |
| **Maximum character length:** | 9 |
| **Unit of measure:** | Degree Minute Second |

### Collection and usage attributes

| | |
|---|---|
| **Guide for use:** | The 'X' in the latitude format symbolises the designator symbol "+" or "-" and should be placed prior to the first number. Latitudes north of the equator are positive and shall be designated by use of the plus sign (+), latitudes south of the equator are negative and shall be designated by use of the minus sign (-). The equator shall be designated by use of the plus sign (+). |
| | The 'd' should be used to represent the degrees as a one or two digit number. The 'm' should be used to represent minutes as a two digit number (i.e. a place holding zero should be used for minute values under 10 for clarity). The 's' should be used to represent seconds (before the decimal) and decimal seconds (after the decimal), as a two digit number (i.e. a place holding zero should be used for second and decimal second values under 10 for clarity). Zero may also be a valid value, such as where there is no minute value but there is a second value. |
| | As a minimum the designator and a one digit representation for degrees must be populated. The remaining brackets are optional, however, if seconds or decimal seconds are to be used the preceeding values must also be populated (i.e. seconds cannot be populated without minutes being populated, and decimal seconds cannot be populated without a seconds value). |
| | Usage example: a traditional degrees, minutes & seconds representation for latitude of -40° 09' 09.05" should be represed as a string format -400909.05 (Note: this is not a decimal representation, but a concatenation of the degree, minute, second and decimal second values). |
| **Comments:** | The ISO 6709 standard recommends leading zeroes for degree values less than 100, however this has not been implemented in the METeOR standard, in accordance with METeOR business rules. |

## Source and reference attributes

**Origin:** Standards Australia/Standards New Zealand 2008. AS/NZS ISO6709:2008—Standard representation of latitude, longitude and altitude for geographic point locations. Sydney/Wellington: Standards Australia/Standards NZ.

# Data element attributes

## Collection and usage attributes

**Comments:** Geographical coordinates (latitudes and longitudes) are the universal system for defining spatial position. A set of geographic coordinates on a datum is complete and unique, worldwide.

Positions of geographic features can be defined in space by a set of coordinates. In order for coordinates to be unique, the coordinate reference system needs to be fully defined.

A coordinate reference system is realised by a reference frame, which comprises a datum and a coordinate system.

Latitude can also be expressed in decimal degrees (e.g. -40.090905), see METeOR for this related item. A conversion to decimal degrees from the degrees, minutes and seconds format can be calculated with the following formula: Decimal Degrees = Degrees + ((Minutes / 60) + (Seconds / 3600)). (REF: https://www2.landgate.wa.gov.au/slip/portal/home/Graticule.html)

Example: DMS: -75° 59' 32.483" converts to -75.992356389 decimal degrees (rounded up to 9 decimal places).

## Source and reference attributes

**Submitting organisation:** Australian Institute of Health and Welfare

**Origin:** Standards Australia/Standards New Zealand 2008. AS/NZS ISO6709:2008—Standard representation of latitude, longitude and altitude for geographic point locations. Sydney/Wellington: Standards Australia/Standards NZ.

## Relational attributes

**Related metadata references:**
See also Address—geocode latitude, decimal degrees XN[N][.N(9)]
Community Services (retired), Standard 06/02/2012
Disability, Standard 13/08/2015
Health!, Standard 05/10/2016
Housing assistance, Standard 01/05/2013

See also Address—geocode longitude, decimal degrees XN[NN][.N(9)]
Community Services (retired), Standard 06/02/2012
Disability, Standard 13/08/2015
Health!, Standard 05/10/2016
Housing assistance, Standard 01/05/2013

See also Address—geocode longitude, degrees minutes seconds Xd[dd]{mm}{ss}{.ss}
Community Services (retired), Standard 10/04/2013
Disability, Standard 13/08/2015

**Implementation in Data Set Specifications:**
Address details data dictionary
Community Services (retired), Standard 06/02/2012
Disability, Standard 13/08/2015