Mariadb--Data type

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# Data type

## Numeric type

### Alias

|  |  |  |  |
| --- | --- | --- | --- |
| BOOL | BOOLEAN | TINYINT(1) |  |
| INT | INTEGER | INT4 |  |
| INT1 | TINYINT |  |  |
| INT2 | TINYINT(2) |  |  |
| INT3 | MEDUIMINT(3) |  |  |
| INT8 | BIGINT |  |  |
| DEC | DECIMAL | NUMERIC | FIXED |
| FLOAT |  |  |  |
| DOUBLE | DOUBLE PRECISION | REAL |  |
| BIT |  |  |  |

### Ref

[Numeric Data Type Overview - MariaDB Knowledge Base](https://mariadb.com/kb/en/numeric-data-type-overview/)

## Date and time type

### Comparison

|  |  |  |  |
| --- | --- | --- | --- |
| item | format | | |
|  | Displayed format | Acceptable  format | Delimiter acceptable? |
| YEAR | YYYY | YYYY | No |
| DATE | YYYY-MM-DD | ‘YYYY-MM-DD' | Yes |
| YYYYMMDD |
| ‘YYYY-MM/DD’ |
| ‘YY-MM-DD'  (if leading is NOT neccessary) |
| YYMMDD  (if leading is NOT neccessary) |
| ‘YY/MM/DD’  (if leading is NOT neccessary) |
| ‘YY:MM!DD’  (if leading is NOT neccessary) |
| TIME | 'HH:MM:SS.ffffff' | ‘HH:II:SS’ | Yes |
| ‘H:II:S’  (if leading is NOT neccessary)  ‘H:I:S’  (if leading is NOT neccessary) |
| ‘HHIISS’ |
| TIMESTAMP | ‘YYYY-MM-DD HH:MM:SS.ffffff’ | Similar to TIME | Yes |
| DATATIME | YYYY-MM-DD HH:MM:SS.ffffff | ‘YYYY-MM-DDTHH:II:SS’ | Yes |
| ‘YYYY/MM/DD\n\t HH+II+SS’ |
| ‘YYYY/MM\\DD\n\t HH+II-SS' |
| ‘YYYY-MM-DD HH:II:SS‘ |
| ‘YYYY-MM-DD HH:II:S‘  (if leading S in SS is NOT neccessary) |

|  |  |  |  |
| --- | --- | --- | --- |
| item | Supported range | | |
|  | Lower bound | Upper bound | |
| YEAR | 1000 | 9999 | |
| DATE | ‘1000-01-01' | ‘9999-12-31' | |
| TIME | '-838:59:59.999999' | '838:59:59.999999' | |
| TIMESTAMP | '1970-01-01 00:00:01' (UTC) | <= MariaDB 11.3 and  32-bit platforms | '2038-01-19 03:14:07' (UTC) |
| MariaDB 11.5,  and  64-bit platforms | '2106-02-07 06:28:15’ (UTC) |
| DATATIME | ‘1000-01-01 00:00:00.000000’ | ‘9999-12-31 23:59:59.999999’ | |

### Date and time literal

#### year with two digits

The year part in DATE and DATETIME literals is determined as follows:

* 70 to 99 = 1970 to 1999
* 00 to 69 = 2000 to 2069

#### microsecond

DATETIME and TIME literals can have an optional microseconds part. For both string and numeric forms, it is expressed as a decimal part. Up to 6 decimal digits are allowed.

Format

'HH:II:SS.ff'  
HHIISS.ffffff

Examples

###### Example1

They are equivalent.

'12:30:00.123456'  
123000.123456

### Ref

For YEAR,

[YEAR - MariaDB Knowledge Base](https://mariadb.com/kb/en/year/)

For DATE,

[DATE - MariaDB Knowledge Base](https://mariadb.com/kb/en/date/)

For TIME,

[TIME - MariaDB Knowledge Base](https://mariadb.com/kb/en/time/)

For TIMESTAMP,

[TIMESTAMP - MariaDB Knowledge Base](https://mariadb.com/kb/en/timestamp/)

For DATETIME,

[DATETIME - MariaDB Knowledge Base](https://mariadb.com/kb/en/datetime/)

For date and time literals,

[Date and Time Literals - MariaDB Knowledge Base](https://mariadb.com/kb/en/date-and-time-literals/)

# Symbol

Y stands for year.

M stands for month.

D stands for day.

H stands for hour.

I stands for minute.

S stands for second.

YY refers two-digit year.

YYYY refers four-digit year.

and so on.