

DATETIME Function

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Generates a Datetime value from the following inputs of Integer type: year, month, day, hour, minute, and second.

- Source values can be Integer literals or column references to values that can be inferred as Integers.
- If any of the source values are invalid or out of range, a missing value is returned.
- This function must be nested within another function that accepts date values, such as `DATEFORMAT`, as arguments. See the example below.

Wrangle vs. SQL: This function is part of Wrangle, a proprietary data transformation language. Wrangle is not SQL. For more information, see *Wrangle Language*.

Basic Usage

Integer literal values:

```
dateformat(datetime(2015,02,15, 2, 4, 0), 'yyyy-MM-dd:HH:mm:ss')
```

Output: Returns the formatted date value: 2015-02-15:02:04:00.

Column reference values:

```
dateformat(datetime(myYear, myMonth, myDay, myHour, myMin, mySec), 'MMM yyyy - HH:MM:SS')
```

Output: Generates date values where:

- `MMM` = short value for `myMonth`
- `yyyy` = value from `myYear`
- `HH` = value from `myHour`
- `MM` = value from `myMin`
- `SS` = value from `mySec`

Syntax and Arguments

```
dateformat(datetime(year_integer_col, month_integer_col, day_integer_col, hour_integer_col, minute_integer_col, second_integer_col), 'date_format_string')
```

Argument	Required?	Data Type	Description
year_integer_col	Y	integer	Name of column or Integer literal representing the year value to apply to the function
month_integer_col	Y	integer	Name of column or Integer literal representing the month value to apply to the function
day_integer_col	Y	integer	Name of column or Integer literal representing the day value to apply to the function
hour_integer_col	Y	integer	Name of column or Integer literal representing the hour value to apply to the function
minute_integer_col	Y	integer	Name of column or Integer literal representing the minute value to apply to the function
second_integer_col	Y	integer	Name of column or Integer literal representing the day second to apply to the function
date_format_string	Y	string	String literal identifying the date format to apply to the value

For more information on syntax standards, see *Language Documentation Syntax Notes*.

year_integer_col

Integer literal or name of the column containing integer values for the year.

- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (literal or column reference)	2015

month_integer_col

Integer literal or name of the column containing integer values for the month.

- Values must be 1 or more, with a maximum value of 12.
- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (literal or column reference)	4

day_integer_col

Integer literal or name of the column containing integer values for the day.

- Values must be 1 or more, with a maximum value for any month of 31.
- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value

Yes	Integer (literal or column reference)	26
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hour_integer_col

Integer literal or name of the column containing integer values for the hour.

- Values must be 0 or more, with a maximum value for any hour of 23.
- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (literal or column reference)	21

minute_integer_col

Integer literal or name of the column containing integer values for the minute.

- Values must be 0 or more, with a maximum value for any minute of 59.
- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (literal or column reference)	04

second_integer_col

Integer literal or name of the column containing integer values for the second.

- Values must be 0 or more, with a maximum value for any second of 59.
- Missing values for this function in the source data result in missing values in the output.
- Multiple columns and wildcards are not supported.

Usage Notes:

Required?	Data Type	Example Value
Yes	Integer (literal or column reference)	15

date_format_string

For more information on supported data formatting strings, see *Supported Data Types*.

For more information, see *DATEFORMAT Function*.

Examples

Tip: For additional examples, see *Common Tasks*.

Example - date and time functions

This example illustrates how the DATE and TIME functions operate. Both functions require that their outputs be formatted properly using the DATEFORMAT function.

- DATE - Generates valid Datetime values from three integer inputs: year, month, and day. See *DATE Function*.
- TIME - Generates valid Datetime values from three integer inputs: hour, minute, and second. See *TIME Function*.
- DATETIME - Generates valid Datetime values from six integer inputs: year, month, day, hour, minute, and second. See *DATETIME Function*.
- DATEFORMAT - Formats valid Datetime values according to the provided formatting string. See *DATEFORMAT Function*.

Source:

year	month	day	hour	minute	second
2016	10	11	2	3	0
2015	11	20	15	22	30
2014	12	25	18	30	45

Transformation:

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	DATEFORMAT(DATE (year, month, day), 'yyyy-MM-dd')
Parameter: New column name	'fctn_date'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	DATEFORMAT(TIME (hour, minute, second), 'HH-mm-ss')
Parameter: New column name	'fctn_time'

Transformation Name	New formula
Parameter: Formula type	Single row formula
Parameter: Formula	DATEFORMAT(DATETIME (year, month, day, hour, minute, second), 'yyyy-MM-dd-HH:mm:ss')
Parameter: New column name	'fctn_datetime'

Results:

NOTE: All inputs must be inferred as Integer type and must be valid values for the specified input. For example, month values must be integers between 1 and 12, inclusive.

year	month	day	hour	minute	second	fctn_date	fctn_time	fctn_datetime
2016	10	11	2	3	0	2016-10-11	02-03-00	2016-10-11-02:03:00
2015	11	20	15	22	30	2015-11-20	15-22-30	2015-11-20-15:22:30
2014	12	25	18	30	45	2014-12-25	18-30-45	2014-12-25-18:30:45

You can apply other date and time functions to the generated columns. For an example, see *YEAR Function*.