

# DTL



## Description

An operand of data type DTL has a length of 12 bytes and stores date and time information in a predefined structure.

The following table shows the properties of data type DTL:

| Length (bytes) | Format   | Value range  | Example of value input      |
|----------------|--|--|-----------------------------|
| 12             | Date and time<br>(Year-Month-Day-Hour:Minute:Second.Nanoseconds) | Min.:<br>DTL#1970-01-01-00:00:00.0<br>Max.:<br>DTL#2262-04-11-23:47:16.854775807 | DTL#2008-12-16-20:30:20.250 |

The structure of data type DTL consists of several components each of which can contain a different data type and range of values. The data type of a specified value must match the data type of the corresponding components.

### Note

#### Invalid monitor value of DTL tags in hexadecimal format

If the monitor value of the DTL tags is represented in hexadecimal format, this can be because one of the values (YEAR, MONTH, DAY, etc.) is invalid. For example, this is the case if a value > 24 was specified at the HOUR tag.

The following table shows the structure components of data type DTL and their properties:

| Byte | Component  | Data type | Value range   |
|------|------------|-----------|---|
| 0    | Year       | UINT      | 1970 to 2262  |
| 1    |            |           |   |
| 2    | Month      | USINT     | 1 to 12   |
| 3    | Day        | USINT     | 1 to 31   |
| 4    | Weekday    | USINT     | 1(Sunday) to 7(Saturday)<br>The weekday is not considered in the value entry. |
| 5    | Hour       | USINT     | 0 to 23   |
| 6    | Minute     | USINT     | 0 to 59   |
| 7    | Second     | USINT     | 0 to 59   |
| 8    | Nanosecond | UDINT     | 0 to 999999999  |
| 9    |            |           |   |
| 10   |            |           |   |
| 11   |            |           |   |

## See also

**Overview of the valid data types**

**Basics of constants**

**Data type conversion for S7-1200 (S7-1200)**