
Command Reference: subtract()

Subtract One or More Time Series From Another Time Series

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The `subtract()` command subtracts time series of the same interval. The receiving time series will have data values set to its original values minus the data values in the indicated time series. This command replaces the older `subtract()` command, which did not have the flag indicating how to handle missing data.

This command will generate an error if the time series do not have compatible units. If the units are compatible but are not the same (e.g., IN and FT), then the units of the part will be converted to the units of the result before subtraction. Missing data in the parts can be ignored (do not set the result to missing) or can set missing values in the result. The user should consider the implications of ignoring missing data. Time series being subtracted must have the same data interval.

The following dialog is used to edit the command and illustrates the syntax of the command.

Edit subtract() Command

Subtract one or more time series from a time series. The receiving time series is modified.

The time series to be subtracted can be selected using the TS list parameter:

- AllTS - subtract all previous time series.
- SelectedTS - subtract time series selected with `selectTimeSeries()` commands
- SpecifiedTS - subtract time series selected from the list below (* will subtract all previous time series)

Right-click on "Time Series to Subtract" to convert to TEMPTS.

Time series to receive results: 0100501.DWR.DivTotal.Month

TS list: SpecifiedTS

How to get the time series to subtract.

Time series to subtract:

- *
- 0100501.DWR.DivTotal.Month
- 0100503.DWR.DivTotal.Month

Handle missing data how?: IgnoreMissing

Command: pecifiedTS",SubtractTSID="0100503.DWR.DivTotal.Month",HandleMissingHow=IgnoreMissing)

Cancel OK

subtract

subtract() Command Editor

The command syntax is as follows:

```
subtract (param=value,...)
```

Command Parameters

Parameter	Description	Default
TSID	The time series identifier or alias for the time series to receive the result.	None – must be specified.
TSList	Indicates how the list of time series is specified, one of: <ul style="list-style-type: none"> AllTS – all time series prior to the command. SelectedTS – the time series are those selected with the <code>selectTimeSeries()</code> command. SpecifiedTS – the specified list of time series given by the <code>SubtractTSID</code> parameter. 	AllTS
SubtractTSID	If the TSList parameter is SpecifiedTS, provide the list of time series identifiers (or alias) to subtract. Right clicking on a time series allows toggling of the TEMPTS key word. This will cause the time series to subtract to be read and then discarded.	Must be specified if TSList=SpecifiedTS, ignored otherwise.
HandleMissingHow	Indicates how to handle missing data in a time series, one of: <ul style="list-style-type: none"> IgnoreMissing – create a result even if missing data are encountered in one or more time series – this option is not as rigorous as the others SetMissingIfOtherMissing – set the result missing if any of the other time series values is missing SetMissingIfAnyMissing – set the result missing if any time series value involved is missing 	IgnoreMissing

A sample commands file is as follows:

```
# 0100501 - EMPIRE DITCH
0100501.DWR.DivTotal.Month~HydroBase
# 0100503 - RIVERSIDE CANAL
0100503.DWR.DivTotal.Month~HydroBase
subtract(TSID="0100501.DWR.DivTotal.Month",TSList="SpecifiedTS",
SubtractTSID="0100503.DWR.DivTotal.Month",HandleMissingHow=IgnoreMissing)
```