

# CALCSTATFUNC

## CALCSTATFUNC action

### Function

Evaluation of a statistical archive function on demand.

### Declaration

```
CALCSTATFUNC archIdent, timeFromIdent_TmA, timeToIdent_TmA,  
statFuncIdent_Int, validPercIdent_Int, paramIdent, retValueIdent,  
statusIdent_Int [,archivInstance_Int]
```

### Parameters

archIdent	in	<a href="#">Reference to one value of historical value</a> or <a href="#">reference</a> to object, values of which have been archived.  <b>Warning:</b> If the parameter is the reference to an object archived several times, there is not specified which one of the historical objects is to be used.
timeFromIdent_TmA	in	<a href="#">Identifier</a> of <i>AbsTime</i> type - interval beginning.
timeToIdent_TmA	in	<a href="#">Identifier</a> of <i>AbsTime</i> type - interval end.
statFuncIdent	in	<a href="#">Identifier</a> of <i>Int</i> type - statistical function type.
validPercIdent	in	<a href="#">Identifier</a> of <i>Int</i> type - validation criteria.
paramIdent	in	<a href="#">Identifier</a> of <i>Int</i> or <i>Real</i> types - parameter for some types of functions.
retValueIdent	out	<a href="#">Identifier</a> for calculation result.
statusIdent	out	Calculation (action) success.
archivInstance_Int	in	Optional identifier of <i>Int</i> type - identification of <a href="#">archive instance</a> . If the parameter is not defined, the value 0 will replace it.

### Description

The action executes calculation of the statistical function given by the parameter *statFuncIdent\_Int* on the values represented by the historical value *archIdent* within the time interval given by the parameter *timeFromIdent\_TmA* and *timeToIdent\_TmA*. After successful execution of the action, the parameter *retValueIdent* contains a result value of the calculation. The parameter *statusIdent\_Int* gets one of the following values:

- `_ERR_TRANS_ABORT`
- `_ERR_TRANS_ERROR`
- `_ERR_TRANS_IGNORED`
- `_ERR_NO_ERROR`

Set of implemented functions is equal with the functions, which may be configured for [statistical archive](#) (except the *FILTER* and *EACOA* functions). For the individual functions, there are predefined [local constants](#) in ESL.

The parameter *validPercIdent\_Int* represents [Validation criteria](#) used during the evaluation of the statistical function. It can get values within 1 .. 100 (the error `ERR_RANGE_ERROR` occurs if the condition is broken).

For some statistical function, it is required to enter the parameter *paramIdent* according to the table:

Statistical function	Parameter description								
<code>_STAT_F_INTEGRAL</code>	<a href="#">Integral time units</a> . For individual types, there are also established predefined local variables according to the table: <table><tr><th>Constant</th><th>Description</th></tr><tr><td><code>_INTEGRAL_HOURLUNIT</code></td><td>Hour integral</td></tr><tr><td><code>_INTEGRAL_MINUNIT</code></td><td>Minute integral</td></tr><tr><td><code>_INTEGRAL_SECUNIT</code></td><td>Second integral</td></tr></table>	Constant	Description	<code>_INTEGRAL_HOURLUNIT</code>	Hour integral	<code>_INTEGRAL_MINUNIT</code>	Minute integral	<code>_INTEGRAL_SECUNIT</code>	Second integral
Constant	Description								
<code>_INTEGRAL_HOURLUNIT</code>	Hour integral								
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<code>_INTEGRAL_SECUNIT</code>	Second integral								

_STAT_F_GE_TIME _STAT_F_GT_TIME _STAT_F_LE_TIME _STAT_F_LT_TIME _STAT_F_ADDITION_P ARAM _STAT_F_INCREMENT _PARAM _STAT_F_DELTA_P AM	<a href="#">Compare value</a>
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For the other statistical archive functions, the parameter *paramIdent* is not being evaluated.

Value of parameter *archiveInstance\_Int* defines the instance of archive which executes the request. If the parameter is not defined (or the value is 0), the active instance of archive will execute the request.

### Example

```

TIME _bt
TIME _et
REAL _retValue
INT _retCode

_bt := %StrToTime("8:01:00 16-10-2003")
_et := %StrToTime("8:02:00 16-10-2003")

CALCSTATFUNC H.ArchObj, _bt, _et, _STAT_F_SUM, 100, 0, _retValue,
_retCode

IF _retCode = _ERR_NO_ERROR THEN
; calculation done
ELSE
; an error occurred
ENDIF

```

### Note

Using the action **CALCSTATFUNC** does not allow to evaluate the *FILTER* and *ECOAVG* [statistical functions](#).



#### Related pages:

[Script actions](#)