

Functions (Mathematical Data Processing)

Implemented functions

The expression of object of [Eval tag type](#) or [ESL scripts](#) may contain functions defined either directly by typing them from the keyboard or selecting from the list of functions. The [list of functions](#) can be opened after clicking the button **Functions** in the configuration dialog box of [eval tags](#) or in the dialog box for the [configuration of event actions](#).

Types of implemented functions:

- Trigonometric functions
- Mathematical functions
- Date and time manipulation functions
- Character and text string manipulation functions
- Functions evaluating the value flow within a time period
- Functions for definition and analysis of impulsive values
- Special application functions
- Structure variable manipulation functions
- Object value attribute manipulation functions
- System functions
- Other functions

List of implemented functions

Trigonometric functions:

- %ArcCos
- %ArcCot
- %ArcSin
- %ArcTan
- %Cos
- %Cot
- %Sin
- %Tan

Mathematical functions:

- %Abs
- %Div
- %Divl
- %Int
- %Ln
- %Log
- %Mod
- %ModR
- %Power
- %Rnd
- %Round
- %Sqrt
- %Trunc

Date and time manipulation functions:

- %AddIntervalLocal
- %AddIntervalMono
- %AddTime
- %Day
- %Hour
- %GetCurrentTimeZone
- %GetKnownTimeZones
- %GetTimeZone
- %IsValidTimeZone
- %LocalToMonoTime
- %Min
- %ModTime
- %Month
- %MSec
- %NewTime
- %NextMonth
- %NextTime
- %RelTimeToStr
- %Sec

- %StrMonoToTime
- %StrToRelTime
- %StrToRelTimeEx
- %StrToTime
- %StrToTimeEx
- %SubTime
- %SubTimesLocal
- %SubTimesMono
- %TimeFromItems
- %TimeToStr
- %TimeToStrEx
- %TimeToStrMono
- %WeekDay
- %WeekNr
- %WeekOfYear
- %WeekStartTime
- %Year

Character and text string manipulation functions:

- %Asc
- %FindStr
- %GetStrItem
- %GetStrItemCount
- %HeadStr
- %Chr
- %IToStr
- %LeftStr
- %LeftTrim
- %LenStr
- %MD5
- %RemoveDiacritics
- %RelTimeToStr
- %ReplaceStr
- %RToStr
- %RightStr
- %RightTrim
- %RxFind
- %RxReplaceStr
- %StrToInt
- %StrToR
- %StrToRelTime
- %StrToTime
- %SubStr
- %TailStr
- %TimeToStr
- %ToLower
- %ToUpper
- %Trim

Functions evaluating the value flow within a time period:

- %Ave
- %Avex
- %AvgFloat
- %Imp
- %Impt
- %Integral
- %MaxDif
- %MaxImp
- %MaxImpt
- %MaxInteg
- %MaxI
- %MaxR
- %MinI
- %MinR

Functions for definition and analysis of impulsive values:

- %LastImpTime
- %LastImpTimeEnd
- %Pulz
- %PulzB

Special application functions:

- %Bpr
- %EcoAve
- %Eft
- %Es
- %Ew
- %GenD2UID
- %MD5
- %Smv

Structure variable manipulation functions:

- %ColumnAvg
- %ColumnMax
- %ColumnMin
- %ColumnSum
- %GetColDescript
- %GetColName
- %GetColsNr
- %GetItemValue
- %SampleStandardDeviation
- %StructRowStatAvg
- %StructRowStatMax
- %StructRowStatMin
- %StructRowStatSum
- %StructStatAvg
- %StructStatMax
- %StructStatMin
- %StructStatSum

Object value attribute manipulation functions:

- %Case
- %Flag
- %GetValueType
- %NtV
- %NvtV
- %PrevV
- %SaveTimeStamps
- %SetFlags
- %SetFlagsBy
- %SetInvalid
- %SetLimitStatus
- %SetWeak

System functions:

- %DskFreeI
- %DskFreeR
- %FileSize
- %GetComputerName
- %GetD2000Version
- %GetDefaultRegValue
- %GetEnvStr
- %GetInstallDir
- %GetNumberOfProcessors
- %GetRegValue
- %HI_ShellExecute
- %IsTCLEnvironment
- %PerfCounter
- %PerfCounterR
- %SetDefaultRegValue
- %SetEnvStr
- %SetRegValue

Other functions:

- %In

- %IsNull
- B4ToReal32