

List of MQL5 Functions

All MQL5 functions in alphabetical order.

Function	Action	Section
AccountInfoDouble	Returns a value of double type of the corresponding account property	Account Information
AccountInfoInteger	Returns a value of integer type (bool, int or long) of the corresponding account property	Account Information
AccountInfoString	Returns a value string type corresponding account property	Account Information
acos	Returns the arc cosine of x in radians	Math Functions
Alert	Displays a message in a separate window	Common Functions
ArrayBsearch	Searches for a specified value in a multidimensional numeric array sorted ascending	Array Functions
ArrayCompare	Returns the result of comparing two arrays of simple types or custom structures without complex objects	Array Functions
ArrayCopy	Copies one array into another	Array Functions
ArrayFill	Fills an array with the specified value	Array Functions
ArrayFree	Frees up buffer of any dynamic array and sets the size of the zero dimension in 0.	Array Functions
ArrayGetAsSeries	Checks direction of array indexing	Array Functions
ArrayInitialize	Sets all elements of a numeric array into a single value	Array Functions
ArrayIsDynamic	Checks whether an array is dynamic	Array Functions
ArrayIsSeries	Checks whether an array is a timeseries	Array Functions

Function	Action	Section
ArrayMaximum	Searches for the largest element in the first dimension of a multidimensional numeric array	Array Functions
ArrayMinimum	Searches for the lowest element in the first dimension of a multidimensional numeric array	Array Functions
ArrayRange	Returns the number of elements in the specified dimension of the array	Array Functions
ArrayResize	Sets the new size in the first dimension of the array	Array Functions
ArraySetAsSeries	Sets the direction of array indexing	Array Functions
ArraySize	Returns the number of elements in the array	Array Functions
ArraySort	Sorting of numeric arrays by the first dimension	Array Functions
ArrayPrint	Prints an array of a simple type or a simple structure into journal	Array Functions
ArrayInsert	Inserts the specified number of elements from a source array to a receiving one starting from a specified index	Array Functions
ArrayRemove	Removes the specified number of elements from the array starting with a specified index	Array Functions
ArrayReverse	Reverses the specified number of elements in the array starting with a specified index	Array Functions
ArraySwap	Swaps the contents of two dynamic arrays of the same type	Array Functions
asin	Returns the arc sine of x in radians	Math Functions
atan	Returns the arc tangent of x in radians	Math Functions
Bars	Returns the number of bars the history for a specified symbol and period	Timeseries and Indicators Access

Function	Action	Section
BarsCalculated	Returns the number of calculated data in an indicator buffer or -1 in the case of error (data hasn't been calculated yet)	Timeseries and Indicators Access
CalendarCountryById	Get a country description by its ID	Economic Calendar
CalendarEventById	Get an event description by its ID	Economic Calendar
CalendarValueById	Get an event value description by its ID	Economic Calendar
CalendarCountries	Get the array of country names available in the calendar	Economic Calendar
CalendarEventByCountry	Get the array of descriptions of all events available in the calendar by a specified country code	Economic Calendar
CalendarEventByCurrency	Get the array of descriptions of all events available in the calendar by a specified currency	Economic Calendar
CalendarValueHistoryByEvent	Get the array of values for all events in a specified time range by an event ID	Economic Calendar
CalendarValueHistory	Get the array of values for all events in a specified time range with the ability to sort by country and/or currency	Economic Calendar
CalendarValueLastByEvent	Get the array of event values by its ID since the calendar database status with a specified change_id	Economic Calendar
CalendarValueLast	Get the array of values for all events with the ability to sort by country and/or currency since the calendar database status with a specified change_id	Economic Calendar
ceil	Returns integer numeric value closest from above	Math Functions
CharArrayToString	Converting symbol code (ansi) into one-symbol array	Conversion Functions
ChartApplyTemplate	Applies a specific template from a specified file to the chart	Chart Operations
ChartClose	Closes the specified chart	Chart Operations

Function	Action	Section
ChartFirst	Returns the ID of the first chart of the client terminal	Chart Operations
ChartGetDouble	Returns the double value property of the specified chart	Chart Operations
ChartGetInteger	Returns the integer value property of the specified chart	Chart Operations
ChartGetString	Returns the string value property of the specified chart	Chart Operations
ChartID	Returns the ID of the current chart	Chart Operations
ChartIndicatorAdd	Adds an indicator with the specified handle into a specified chart window	Chart Operations
ChartIndicatorDelete	Removes an indicator with a specified name from the specified chart window	Chart Operations
ChartIndicatorGet	Returns the handle of the indicator with the specified short name in the specified chart window	Chart Operations
ChartIndicatorName	Returns the short name of the indicator by the number in the indicators list on the specified chart window	Chart Operations
ChartIndicatorsTotal	Returns the number of all indicators applied to the specified chart window.	Chart Operations
ChartNavigate	Performs shift of the specified chart by the specified number of bars relative to the specified position in the chart	Chart Operations
ChartNext	Returns the chart ID of the chart next to the specified one	Chart Operations
ChartOpen	Opens a new chart with the specified symbol and period	Chart Operations
CharToString	Converting a symbol code into a one-character string	Conversion Functions
ChartPeriod	Returns the period value of the specified chart	Chart Operations
ChartPriceOnDropped	Returns the price coordinate of the chart point, the Expert Advisor or script has been dropped to	Chart Operations

Function	Action	Section
ChartRedraw	Calls a forced redrawing of a specified chart	Chart Operations
ChartSaveTemplate	Saves current chart settings in a template with a specified name	Chart Operations
ChartScreenShot	Provides a screenshot of the chart of its current state in a GIF, PNG or BMP format depending on specified extension	Chart Operations
ChartSetDouble	Sets the double value for a corresponding property of the specified chart	Chart Operations
ChartSetInteger	Sets the integer value (datetime, int, color, bool or char) for a corresponding property of the specified chart	Chart Operations
ChartSetString	Sets the string value for a corresponding property of the specified chart	Chart Operations
ChartSetSymbolPeriod	Changes the symbol value and a period of the specified chart	Chart Operations
ChartSymbol	Returns the symbol name of the specified chart	Chart Operations
ChartTimeOnDropped	Returns the time coordinate of the chart point, the Expert Advisor or script has been dropped to	Chart Operations
ChartTimePriceToXY	Converts the coordinates of a chart from the time/price representation to the X and Y coordinates	Chart Operations
ChartWindowFind	Returns the number of a subwindow where an indicator is drawn	Chart Operations
ChartWindowOnDropped	Returns the number (index) of the chart subwindow, the Expert Advisor or script has been dropped to	Chart Operations
ChartXOnDropped	Returns the X coordinate of the chart point, the Expert Advisor or script has been dropped to	Chart Operations
ChartXYToTimePrice	Converts the X and Y coordinates on a chart to the time and price values	Chart Operations

Function	Action	Section
ChartYOnDropped	Returns the Y coordinate of the chart point, the Expert Advisor or script has been dropped to	Chart Operations
CheckPointer	Returns the type of the object pointer	Common Functions
CLBufferCreate	Creates an OpenCL buffer	Working with OpenCL
CLBufferFree	Deletes an OpenCL buffer	Working with OpenCL
CLBufferRead	Reads an OpenCL buffer into an array	Working with OpenCL
CLBufferWrite	Writes an array into an OpenCL buffer	Working with OpenCL
CLContextCreate	Creates an OpenCL context	Working with OpenCL
CLContextFree	Removes an OpenCL context	Working with OpenCL
CLExecute	Runs an OpenCL program	Working with OpenCL
CLGetDeviceInfo	Receives device property from OpenCL driver	Working with OpenCL
CLGetInfoInteger	Returns the value of an integer property for an OpenCL object or device	Working with OpenCL
CLHandleType	Returns the type of an OpenCL handle as a value of the ENUM_OPENCL_HANDLE_TYPE enumeration	Working with OpenCL
CLKernelCreate	Creates an OpenCL start function	Working with OpenCL
CLKernelFree	Removes an OpenCL start function	Working with OpenCL
CLProgramCreate	Creates an OpenCL program from a source code	Working with OpenCL
CLProgramFree	Removes an OpenCL program	Working with OpenCL
CLSetKernelArg	Sets a parameter for the OpenCL function	Working with OpenCL
CLSetKernelArgMem	Sets an OpenCL buffer as a parameter of the OpenCL function	Working with OpenCL
ColorToARGB	Converting color type to uint type to receive ARGB representation of the color.	Conversion Functions

Function	Action	Section
ColorToString	Converting color value into string as "R,G,B"	Conversion Functions
Comment	Outputs a comment in the left top corner of the chart	Common Functions
CopyBuffer	Gets data of a specified buffer from a specified indicator into an array	Timeseries and Indicators Access
CopyClose	Gets history data on bar closing price for a specified symbol and period into an array	Timeseries and Indicators Access
CopyHigh	Gets history data on maximal bar price for a specified symbol and period into an array	Timeseries and Indicators Access
CopyLow	Gets history data on minimal bar price for a specified symbol and period into an array	Timeseries and Indicators Access
CopyOpen	Gets history data on bar opening price for a specified symbol and period into an array	Timeseries and Indicators Access
CopyRates	Gets history data of the Rates structure for a specified symbol and period into an array	Timeseries and Indicators Access
CopyRealVolume	Gets history data on trade volumes for a specified symbol and period into an array	Timeseries and Indicators Access
CopySpread	Gets history data on spreads for a specified symbol and period into an array	Timeseries and Indicators Access
CopyTicks	Gets ticks accumulated by the terminal for the current working session into an array	Timeseries and Indicators Access
CopyTickVolume	Gets history data on tick volumes for a specified symbol and period into an array	Timeseries and Indicators Access
CopyTime	Gets history data on bar opening time for a specified symbol and period into an array	Timeseries and Indicators Access

Function	Action	Section
cos	Returns the cosine of a number	Math Functions
CryptDecode	Performs the inverse transformation of the data from array	Common Functions
CryptEncode	Transforms the data from array with the specified method	Common Functions
CustomSymbolCreate	Create a custom symbol with the specified name in the specified group	Custom Symbols
CustomSymbolDelete	Delete a custom symbol with the specified name	Custom Symbols
CustomSymbolSetInteger	Set the integer type property value for a custom symbol	Custom Symbols
CustomSymbolSetDouble	Set the real type property value for a custom symbol	Custom Symbols
CustomSymbolSetString	Set the string type property value for a custom symbol	Custom Symbols
CustomSymbolSetMarginRate	Set the margin rates depending on the order type and direction for a custom symbol	Custom Symbols
CustomSymbolSetSessionQuote	Set the start and end time of the specified quotation session for the specified symbol and week day	Custom Symbols
CustomSymbolSetSessionTrade	Set the start and end time of the specified trading session for the specified symbol and week day	Custom Symbols
CustomRatesDelete	Delete all bars from the price history of the custom symbol in the specified time interval	Custom Symbols
CustomRatesReplace	Fully replace the price history of the custom symbol within the specified time interval with the data from the MqlRates type array	Custom Symbols
CustomRatesUpdate	Add missing bars to the custom symbol history and replace existing data with the ones from the MqlRates type array	Custom Symbols
CustomTicksAdd	Adds data from an array of the MqlTick type to the price history of a custom symbol. The custom symbol must be	Custom Symbols

Function	Action	Section
	selected in the Market Watch window	
CustomTicksDelete	Delete all ticks from the price history of the custom symbol in the specified time interval	Custom Symbols
CustomTicksReplace	Fully replace the price history of the custom symbol within the specified time interval with the data from the MqlTick type array	Custom Symbols
CustomBookAdd	Passes the status of the Depth of Market for a custom symbol	Custom Symbols
DatabaseOpen	Opens or creates a database in a specified file	Working with databases
DatabaseClose	Closes a database	Working with databases
DatabaseImport	Imports data from a file into a table	Working with databases
DatabaseExport	Exports a table or an SQL request execution result to a CSV file	Working with databases
DatabasePrint	Prints a table or an SQL request execution result in the Experts journal	Working with databases
DatabaseTableExists	Checks the presence of the table in a database	Working with databases
DatabaseExecute	Executes a request to a specified database	Working with databases
DatabasePrepare	Creates a handle of a request, which can then be executed using DatabaseRead()	Working with databases
DatabaseReset	Resets a request, like after calling DatabasePrepare()	Working with databases
DatabaseBind	Sets a parameter value in a request	Working with databases
DatabaseBindArray	Sets an array as a parameter value	Working with databases

Function	Action	Section
DatabaseRead	Moves to the next entry as a result of a request	Working with databases
DatabaseReadBind	Moves to the next record and reads data into the structure from it	Working with databases
DatabaseFinalize	Removes a request created in DatabasePrepare()	Working with databases
DatabaseTransactionBegin	Starts transaction execution	Working with databases
DatabaseTransactionCommit	Completes transaction execution	Working with databases
DatabaseTransactionRollback	Rolls back transactions	Working with databases
DatabaseColumnsCount	Gets the number of fields in a request	Working with databases
DatabaseColumnName	Gets a field name by index	Working with databases
DatabaseColumnType	Gets a field type by index	Working with databases
DatabaseColumnSize	Gets a field size in bytes	Working with databases
DatabaseColumnText	Gets a field value as a string from the current record	Working with databases
DatabaseColumnInteger	Gets the int type value from the current record	Working with databases
DatabaseColumnLong	Gets the long type value from the current record	Working with databases
DatabaseColumnDouble	Gets the double type value from the current record	Working with databases
DatabaseColumnBlob	Gets a field value as an array from the current record	Working with databases
DebugBreak	Program breakpoint in debugging	Common Functions

Function	Action	Section
Digits	Returns the number of decimal digits determining the accuracy of the price value of the current chart symbol	Checkup
DoubleToString	Converting a numeric value to a text line with a specified accuracy	Conversion Functions
DXContextCreate	Creates a graphic context for rendering frames of a specified size	Working with DirectX
DXContextSetSize	Changes a frame size of a graphic context created in DXContextCreate()	Working with DirectX
DXContextGetSize	Gets a frame size of a graphic context created in DXContextCreate()	Working with DirectX
DXContextClearColor	Sets a specified color to all pixels for the rendering buffer	Working with DirectX
DXContextClearDepth	Clears the depth buffer	Working with DirectX
DXContextGetColors	Gets an image of a specified size and offset from a graphic context	Working with DirectX
DXContextGetDepth	Gets the depth buffer of a rendered frame	Working with DirectX
DXBufferCreate	Creates a buffer of a specified type based on a data array	Working with DirectX
DXTextureCreate	Creates a 2D texture out of a rectangle of a specified size cut from a passed image	Working with DirectX
DXInputCreate	Creates shader inputs	Working with DirectX
DXInputSet	Sets shader inputs	Working with DirectX
DXShaderCreate	Creates a shader of a specified type	Working with DirectX
DXShaderSetLayout	Sets vertex layout for the vertex shader	Working with DirectX
DXShaderInputsSet	Sets shader inputs	Working with DirectX
DXShaderTexturesSet	Sets shader textures	Working with DirectX
DXDraw	Renders the vertices of the vertex buffer set in	Working with DirectX

Function	Action	Section
	DXBufferSet()	
DXDrawIndexed	Renders graphic primitives described by the index buffer from DXBufferSet()	Working with DirectX
DXPrimitiveTopologySet	Sets the type of primitives for rendering using DXDrawIndexed()	Working with DirectX
DXBufferSet	Sets a buffer for the current rendering	Working with DirectX
DXShaderSet	Sets a shader for rendering	Working with DirectX
DXHandleType	Returns a handle type	Working with DirectX
DXRelease	Releases a handle	Working with DirectX
EnumToString	Converting an enumeration value of any type to string	Conversion Functions
EventChartCustom	Generates a custom event for the specified chart	Working with Events
EventKillTimer	Stops the generation of events by the timer in the current chart	Working with Events
EventSetMillisecondTimer	Launches event generator of the high-resolution timer with a period less than 1 second for the current chart	Working with Events
EventSetTimer	Starts the timer event generator with the specified periodicity for the current chart	Working with Events
exp	Returns exponent of a number	Math Functions
ExpertRemove	Stops Expert Advisor and unloads it from the chart	Common Functions
fabs	Returns absolute value (modulus) of the specified numeric value	Math Functions
FileClose	Closes a previously opened file	File Functions
FileCopy	Copies the original file from a local or shared folder to another file	File Functions
FileDelete	Deletes a specified file	File Functions
FileFindClose	Closes search handle	File Function

Function	Action	Section
FileFindFirst	Starts the search of files in a directory in accordance with the specified filter	File Functions
FileFindNext	Continues the search started by the FileFindFirst() function	File Functions
FileFlush	Writes to a disk all data remaining in the input/output file buffer	File Functions
FileGetInteger	Gets an integer property of a file	File Functions
FileIsEnding	Defines the end of a file in the process of reading	File Functions
FileIsExist	Checks the existence of a file	File Functions
FileIsLineEnding	Defines the end of a line in a text file in the process of reading	File Functions
FileMove	Moves or renames a file	File Functions
FileOpen	Opens a file with a specified name and flag	File Functions
FileReadArray	Reads arrays of any type except for string from the file of the BIN type	File Functions
FileReadBool	Reads from the file of the CSV type a string from the current position till a delimiter (or till the end of a text line) and converts the read string to a value of bool type	File Functions
FileReadDatetime	Reads from the file of the CSV type a string of one of the formats: "YYYY.MM.DD HH:MM:SS", "YYYY.MM.DD" or "HH:MM:SS" - and converts it into a datetime value	File Functions
FileReadDouble	Reads a double value from the current position of the file pointer	File Functions
FileReadFloat	Reads a float value from the current position of the file pointer	File Functions
FileReadInteger	Reads int, short or char value from the current position of the file pointer	File Functions

Function	Action	Section
FileReadLong	Reads a long type value from the current position of the file pointer	File Functions
FileReadNumber	Reads from the file of the CSV type a string from the current position till a delimiter (or til the end of a text line) and converts the read string into double value	File Functions
FileReadString	Reads a string from the current position of a file pointer from a file	File Functions
FileReadStruct	Reads the contents from a binary file into a structure passed as a parameter, from the current position of the file pointer	File Functions
FileSeek	Moves the position of the file pointer by a specified number of bytes relative to the specified position	File Functions
FileSize	Returns the size of a corresponding open file	File Functions
FileTell	Returns the current position of the file pointer of a corresponding open file	File Functions
FileWrite	Writes data to a file of CSV or TXT type	File Functions
FileWriteArray	Writes arrays of any type except for string into a file of BIN type	File Functions
FileWriteDouble	Writes value of the double type from the current position of a file pointer into a binary file	File Functions
FileWriteFloat	Writes value of the float type from the current position of a file pointer into a binary file	File Functions
FileWriteInteger	Writes value of the int type from the current position of a file pointer into a binary file	File Functions
FileWriteLong	Writes value of the long type from the current position of a file pointer into a binary file	File Functions
FileWriteString	Writes the value of a string parameter into a BIN or TXT	File Functions

Function	Action	Section
	file starting from the current position of the file pointer	
FileWriteStruct	Writes the contents of a structure passed as a parameter into a binary file, starting from the current position of the file pointer	File Functions
floor	Returns integer numeric value closest from below	Math Functions
fmax	Returns the maximal value of the two numeric values	Math Functions
fmin	Returns the minimal value of the two numeric values	Math Functions
fmod	Returns the real remainder after the division of two numbers	Math Functions
FolderClean	Deletes all files in the specified folder	File Functions
FolderCreate	Creates a folder in the Files directory	File Functions
FolderDelete	Removes a selected directory. If the folder is not empty, then it can't be removed	File Functions
FrameAdd	Adds a frame with data	Working with Optimization Results
FrameFilter	Sets the frame reading filter and moves the pointer to the beginning	Working with Optimization Results
FrameFirst	Moves a pointer of frame reading to the beginning and resets the previously set filter	Working with Optimization Results
FrameInputs	Receives input parameters , on which the frame is formed	Working with Optimization Results
FrameNext	Reads a frame and moves the pointer to the next one	Working with Optimization Results
GetLastError	Returns the last error	Checkup
GetPointer	Returns the object pointer	Common Functions

Function	Action	Section
GetTickCount	Returns the number of milliseconds that have elapsed since the system was started	Common Functions
GlobalVariableCheck	Checks the existence of a global variable with the specified name	Global Variables of the Terminal
GlobalVariableDel	Deletes a global variable	Global Variables of the Terminal
GlobalVariableGet	Returns the value of a global variable	Global Variables of the Terminal
GlobalVariableName	Returns the name of a global variable by its ordinal number in the list of global variables	Global Variables of the Terminal
GlobalVariablesDeleteAll	Deletes global variables with the specified prefix in their names	Global Variables of the Terminal
GlobalVariableSet	Sets the new value to a global variable	Global Variables of the Terminal
GlobalVariableSetOnCondition	Sets the new value of the existing global variable by condition	Global Variables of the Terminal
GlobalVariablesFlush	Forcibly saves contents of all global variables to a disk	Global Variables of the Terminal
GlobalVariablesTotal	Returns the total number of global variables	Global Variables of the Terminal
GlobalVariableTemp	Sets the new value to a global variable, that exists only in the current session of the terminal	Global Variables of the Terminal
GlobalVariableTime	Returns time of the last accessing the global variable	Global Variables of the Terminal
HistoryDealGetDouble	Returns the requested property of a deal in the history (double)	Trade Functions
HistoryDealGetInteger	Returns the requested property of a deal in the history (datetime or int)	Trade Functions
HistoryDealGetString	Returns the requested property of a deal in the history (string)	Trade Functions

Function	Action	Section
HistoryDealGetTicket	Returns a ticket of a corresponding deal in the history	Trade Functions
HistoryDealSelect	Selects a deal in the history for further calling it through appropriate functions	Trade Functions
HistoryDealsTotal	Returns the number of deals in the history	Trade Functions
HistoryOrderGetDouble	Returns the requested property of an order in the history (double)	Trade Functions
HistoryOrderGetInteger	Returns the requested property of an order in the history (datetime or int)	Trade Functions
HistoryOrderGetString	Returns the requested property of an order in the history (string)	Trade Functions
HistoryOrderGetTicket	Return order ticket of a corresponding order in the history	Trade Functions
HistoryOrderSelect	Selects an order in the history for further working with it	Trade Functions
HistoryOrdersTotal	Returns the number of orders in the history	Trade Functions
HistorySelect	Retrieves the history of transactions and orders for the specified period of the server time	Trade Functions
HistorySelectByPosition	Requests the history of deals with a specified position identifier .	Trade Functions
iBars	Returns the number of bars of a corresponding symbol and period, available in history	Timeseries and Indicators Access
iBarShift	Returns the index of the bar corresponding to the specified time	Timeseries and Indicators Access
iClose	Returns the Close price of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iHigh	Returns the High price of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access

Function	Action	Section
iHighest	Returns the index of the highest value found on the corresponding chart (shift relative to the current bar)	Timeseries and Indicators Access
iLow	Returns the Low price of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iLowest	Returns the index of the smallest value found on the corresponding chart (shift relative to the current bar)	Timeseries and Indicators Access
iOpen	Returns the Open price of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iTime	Returns the opening time of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iTickVolume	Returns the tick volume of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iRealVolume	Returns the real volume of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iVolume	Returns the tick volume of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iSpread	Returns the spread value of the bar (indicated by the 'shift' parameter) on the corresponding chart	Timeseries and Indicators Access
iAD	Accumulation/Distribution	Technical Indicators
iADX	Average Directional Index	Technical Indicators
iADXWilder	Average Directional Index by Welles Wilder	Technical Indicators
iAlligator	Alligator	Technical Indicators
iAMA	Adaptive Moving Average	Technical Indicators
iAO	Awesome Oscillator	Technical Indicators

Function	Action	Section
iATR	Average True Range	Technical Indicators
iBands	Bollinger Bands®	Technical Indicators
iBearsPower	Bears Power	Technical Indicators
iBullsPower	Bulls Power	Technical Indicators
iBWMFI	Market Facilitation Index by Bill Williams	Technical Indicators
iCCI	Commodity Channel Index	Technical Indicators
iChaikin	Chaikin Oscillator	Technical Indicators
iCustom	Custom indicator	Technical Indicators
iDEMA	Double Exponential Moving Average	Technical Indicators
iDeMarker	DeMarker	Technical Indicators
iEnvelopes	Envelopes	Technical Indicators
iForce	Force Index	Technical Indicators
iFractals	Fractals	Technical Indicators
iFrAMA	Fractal Adaptive Moving Average	Technical Indicators
iGator	Gator Oscillator	Technical Indicators
iIchimoku	Ichimoku Kinko Hyo	Technical Indicators
iMA	Moving Average	Technical Indicators
iMACD	Moving Averages Convergence-Divergence	Technical Indicators
iMFI	Money Flow Index	Technical Indicators
iMomentum	Momentum	Technical Indicators
IndicatorCreate	Returns the handle to the specified technical indicator created by an array of MqlParam type parameters	Timeseries and Indicators Access

Function	Action	Section
IndicatorParameters	Based on the specified handle, returns the number of input parameters of the indicator, as well as the values and types of the parameters	Timeseries and Indicators Access
IndicatorRelease	Removes an indicator handle and releases the calculation block of the indicator, if it's not used by anyone else	Timeseries and Indicators Access
IndicatorSetDouble	Sets the value of an indicator property of the double type	Custom Indicators
IndicatorSetInteger	Sets the value of an indicator property of the int type	Custom Indicators
IndicatorSetString	Sets the value of an indicator property of the string type	Custom Indicators
IntegerToString	Converting int into a string of preset length	Conversion Functions
iOBV	On Balance Volume	Technical Indicators
iOsMA	Moving Average of Oscillator (MACD histogram)	Technical Indicators
iRSI	Relative Strength Index	Technical Indicators
iRVI	Relative Vigor Index	Technical Indicators
iSAR	Parabolic Stop And Reverse System	Technical Indicators
IsStopped	Returns true, if an mql5 program has been commanded to stop its operation	Checkup
iStdDev	Standard Deviation	Technical Indicators
iStochastic	Stochastic Oscillator	Technical Indicators
iTEMA	Triple Exponential Moving Average	Technical Indicators
iTriX	Triple Exponential Moving Averages Oscillator	Technical Indicators
iVIDyA	Variable Index Dynamic Average	Technical Indicators
iVolumes	Volumes	Technical Indicators
iWPR	Williams' Percent Range	Technical Indicators

Function	Action	Section
log	Returns natural logarithm	Math Functions
log10	Returns the logarithm of a number by base 10	Math Functions
MarketBookAdd	Provides opening of Depth of Market for a selected symbol, and subscribes for receiving notifications of the DOM changes	Market Info
MarketBookGet	Returns a structure array MqlBookInfo containing records of the Depth of Market of a specified symbol	Market Info
MarketBookRelease	Provides closing of Depth of Market for a selected symbol, and cancels the subscription for receiving notifications of the DOM changes	Market Info
MathAbs	Returns absolute value (modulus) of the specified numeric value	Math Functions
MathArccos	Returns the arc cosine of x in radians	Math Functions
MathArcsin	Returns the arc sine of x in radians	Math Functions
MathArctan	Returns the arc tangent of x in radians	Math Functions
MathCeil	Returns integer numeric value closest from above	Math Functions
MathCos	Returns the cosine of a number	Math Functions
MathExp	Returns exponent of a number	Math Functions
MathFloor	Returns integer numeric value closest from below	Math Functions
MathIsValidNumber	Checks the correctness of a real number	Math Functions
MathLog	Returns natural logarithm	Math Functions
MathLog10	Returns the logarithm of a number by base 10	Math Functions
MathMax	Returns the maximal value of the two numeric values	Math Functions
MathMin	Returns the minimal value of the two numeric values	Math Functions

Function	Action	Section
MathMod	Returns the real remainder after the division of two numbers	Math Functions
MathPow	Raises the base to the specified power	Math Functions
MathRand	Returns a pseudorandom value within the range of 0 to 32767	Math Functions
MathRound	Rounds of a value to the nearest integer	Math Functions
MathSin	Returns the sine of a number	Math Functions
MathSqrt	Returns a square root	Math Functions
MathSrand	Sets the starting point for generating a series of pseudorandom integers	Math Functions
MathTan	Returns the tangent of a number	Math Functions
MessageBox	Creates, displays a message box and manages it	Common Functions
MQLInfoInteger	Returns an integer value of a corresponding property of a running mql5 program	Checkup
MQLInfoString	Returns a string value of a corresponding property of a running mql5 program	Checkup
MT5Initialize	Establish a connection with the MetaTrader 5 terminal	MetaTrader for Python
MT5Shutdown	Close the previously established connection to the MetaTrader 5 terminal	MetaTrader for Python
MT5TerminalInfo	Get status and parameters of the connected MetaTrader 5 terminal	MetaTrader for Python
MT5Version	Return the MetaTrader 5 terminal version	MetaTrader for Python
MT5CopyRatesFrom	Get bars from the MetaTrader 5 terminal starting from the specified date	MetaTrader for Python
MT5CopyRatesFromPos	Get bars from the MetaTrader 5 terminal starting from the specified index	MetaTrader for Python
MT5CopyRatesRange	Get bars in the specified date range from the MetaTrader 5 terminal	MetaTrader for Python

Function	Action	Section
MT5CopyTicksFrom	Get ticks from the MetaTrader 5 terminal starting from the specified date	MetaTrader for Python
MT5CopyTicksRange	Get ticks for the specified date range from the MetaTrader 5 terminal	MetaTrader for Python
NormalizeDouble	Rounding of a floating point number to a specified accuracy	Conversion Functions
ObjectCreate	Creates an object of the specified type in a specified chart	Object Functions
ObjectDelete	Removes the object with the specified name from the specified chart (from the specified chart subwindow)	Object Functions
ObjectFind	Searches for an object with the specified ID by the name	Object Functions
ObjectGetDouble	Returns the double value of the corresponding object property	Object Functions
ObjectGetInteger	Returns the integer value of the corresponding object property	Object Functions
ObjectGetString	Returns the string value of the corresponding object property	Object Functions
ObjectGetTimeByValue	Returns the time value for the specified object price value	Object Functions
ObjectGetValueByTime	Returns the price value of an object for the specified time	Object Functions
ObjectMove	Changes the coordinates of the specified object anchor point	Object Functions
ObjectName	Returns the name of an object of the corresponding type in the specified chart (specified chart subwindow)	Object Functions
ObjectsDeleteAll	Removes all objects of the specified type from the specified chart (from the specified chart subwindow)	Object Functions
ObjectSetDouble	Sets the value of the corresponding object property	Object Functions

Function	Action	Section
ObjectSetInteger	Sets the value of the corresponding object property	Object Functions
ObjectSetString	Sets the value of the corresponding object property	Object Functions
ObjectsTotal	Returns the number of objects of the specified type in the specified chart (specified chart subwindow)	Object Functions
OnStart	The function is called when the Start event occurs to perform actions set in the script	Event Handling
OnInit	The function is called in indicators and EAs when the Init event occurs to initialize a launched MQL5 program	Event Handling
OnDeinit	The function is called in indicators and EAs when the Deinit event occurs to de-initialize a launched MQL5 program	Event Handling
OnTick	The function is called in EAs when the NewTick event occurs to handle a new quote	Event Handling
OnCalculate	The function is called in indicators when the Calculate event occurs to handle price data changes	Event Handling
OnTimer	The function is called in indicators and EAs during the Timer periodic event generated by the terminal at fixed time intervals	Event Handling
OnTrade	The function is called in EAs during the Trade event generated at the end of a trading operation on a trade server	Event Handling
OnTradeTransaction	The function is called in EAs when the TradeTransaction event occurs to process a trade request execution results	Event Handling
OnBookEvent	The function is called in EAs when the BookEvent event occurs to process changes in the market depth	Event Handling

Function	Action	Section
OnChartEvent	The function is called in indicators and EAs when the ChartEvent event occurs to process chart changes made by a user or an MQL5 program	Event Handling
OnTester	The function is called in EAs when the Tester event occurs to perform necessary actions after testing an EA on history data	Event Handling
OnTesterInit	The function is called in EAs when the TesterInit event occurs to perform necessary actions before optimization in the strategy tester	Event Handling
OnTesterDeinit	The function is called in EAs when the TesterDeinit event occurs after EA optimization in the strategy tester	Event Handling
OnTesterPass	The function is called in EAs when the TesterPass even occurs to handle an arrival of a new data frame during EA optimization in the strategy tester	Event Handling
OrderCalcMargin	Calculates the margin required for the specified order type, in the deposit currency	Trade Functions
OrderCalcProfit	Calculates the profit based on the parameters passed, in the deposit currency	Trade Functions
OrderCheck	Checks if there are enough funds to execute the required trade operation .	Trade Functions
OrderGetDouble	Returns the requested property of the order (double)	Trade Functions
OrderGetInteger	Returns the requested property of the order (datetime or int)	Trade Functions
OrderGetString	Returns the requested property of the order (string)	Trade Functions
OrderGetTicket	Return the ticket of a corresponding order	Trade Functions
OrderSelect	Selects a order for further working with it	Trade Functions

Function	Action	Section
OrderSend	Sends trade requests to a server	Trade Functions
OrderSendAsync	Asynchronously sends trade requests without waiting for the trade response of the trade server	Trade Functions
OrdersTotal	Returns the number of orders	Trade Functions
ParameterGetRange	Receives data on the values range and the change step for an input variable when optimizing an Expert Advisor in the Strategy Tester	Working with Optimization Results
ParameterSetRange	Specifies the use of input variable when optimizing an Expert Advisor in the Strategy Tester: value, change step, initial and final values	Working with Optimization Results
Period	Returns the current chart timeframe	Checkup
PeriodSeconds	Returns the number of seconds in the period	Common Functions
PlaySound	Plays a sound file	Common Functions
PlotIndexGetInteger	Returns the value of an indicator line property of the integer type	Custom Indicators
PlotIndexSetDouble	Sets the value of an indicator line property of the type double	Custom Indicators
PlotIndexSetInteger	Sets the value of an indicator line property of the int type	Custom Indicators
PlotIndexSetString	Sets the value of an indicator line property of the string type	Custom Indicators
Point	Returns the point size of the current symbol in the quote currency	Checkup
PositionGetDouble	Returns the requested property of an open position (double)	Trade Functions
PositionGetInteger	Returns the requested property of an open position (datetime or int)	Trade Functions
PositionGetString	Returns the requested property of an open position (string)	Trade Functions

Function	Action	Section
PositionGetSymbol	Returns the symbol corresponding to the open position	Trade Functions
PositionGetTicket	Returns the ticket of the position with the specified index in the list of open positions	Trade Functions
PositionSelect	Chooses an open position for further working with it	Trade Functions
PositionSelectByTicket	Selects a position to work with by the ticket number specified in it	Trade Functions
PositionsTotal	Returns the number of open positions	Trade Functions
pow	Raises the base to the specified power	Math Functions
Print	Displays a message in the log	Common Functions
PrintFormat	Formats and prints the sets of symbols and values in a log file in accordance with a preset format	Common Functions
rand	Returns a pseudorandom value within the range of 0 to 32767	Math Functions
ResetLastError	Sets the value of a predetermined variable LastError to zero	Common Functions
ResourceCreate	Creates an image resource based on a data set	Common Functions
ResourceFree	Deletes dynamically created resource (freeing the memory allocated for it)	Common Functions
ResourceReadImage	Reads data from the graphical resource created by ResourceCreate() function or saved in EX5 file during compilation	Common Functions
ResourceSave	Saves a resource into the specified file	Common Functions
round	Rounds of a value to the nearest integer	Math Functions
SendFTP	Sends a file at the address specified in the settings window of the "FTP" tab	Common Functions

Function	Action	Section
SendMail	Sends an email at the address specified in the settings window of the "Email" tab	Common Functions
SendNotification	Sends push notifications to mobile terminals, whose MetaQuotes ID are specified in the "Notifications" tab	Common Functions
SeriesInfoInteger	Returns information about the state of historical data	Timeseries and Indicators Access
SetIndexBuffer	Binds the specified indicator buffer with one-dimensional dynamic array of the double type	Custom Indicators
ShortArrayToString	Copying array part into a string	Conversion Functions
ShortToString	Converting symbol code (unicode) into one-symbol string	Conversion Functions
SignalBaseGetDouble	Returns the value of double type property for selected signal	Trade Signals
SignalBaseGetInteger	Returns the value of integer type property for selected signal	Trade Signals
SignalBaseGetString	Returns the value of string type property for selected signal	Trade Signals
SignalBaseSelect	Selects a signal from signals, available in terminal for further working with it	Trade Signals
SignalBaseTotal	Returns the total amount of signals, available in terminal	Trade Signals
SignalInfoGetDouble	Returns the value of double type property of signal copy settings	Trade Signals
SignalInfoGetInteger	Returns the value of integer type property of signal copy settings	Trade Signals
SignalInfoGetString	Returns the value of string type property of signal copy settings	Trade Signals
SignalInfoSetDouble	Sets the value of double type property of signal copy settings	Trade Signals
SignalInfoSetInteger	Sets the value of integer type property of signal copy	Trade Signals

Function	Action	Section
	settings	
SignalSubscribe	Subscribes to the trading signal	Trade Signals
SignalUnsubscribe	Cancels subscription	Trade Signals
sin	Returns the sine of a number	Math Functions
Sleep	Suspends execution of the current Expert Advisor or script within a specified interval	Common Functions
SocketCreate	Create a socket with specified flags and return its handle	Network Functions
SocketClose	Close a socket	Network Functions
SocketConnect	Connect to the server with timeout control	Network Functions
SocketIsConnected	Checks if the socket is currently connected	Network Functions
SocketIsReadable	Get a number of bytes that can be read from a socket	Network Functions
SocketIsWritable	Check whether data can be written to a socket at the current time	Network Functions
SocketTimeouts	Set timeouts for receiving and sending data for a socket system object	Network Functions
SocketRead	Read data from a socket	Network Functions
SocketSend	Write data to a socket	Network Functions
SocketTlsHandshake	Initiate secure TLS (SSL) connection to a specified host via TLS Handshake protocol	Network Functions
SocketTlsCertificate	Get data on the certificate used to secure network connection	Network Functions
SocketTlsRead	Read data from secure TLS connection	Network Functions
SocketTlsReadAvailable	Read all available data from secure TLS connection	Network Functions
SocketTlsSend	Send data via secure TLS connection	Network Functions

Function	Action	Section
sqrt	Returns a square root	Math Functions
srand	Sets the starting point for generating a series of pseudorandom integers	Math Functions
StringAdd	Adds a string to the end of another string	String Functions
StringBufferLen	Returns the size of buffer allocated for the string	String Functions
StringCompare	Compares two strings and returns 1 if the first string is greater than the second; 0 - if the strings are equal; -1 (minus 1) - if the first string is less than the second one	String Functions
StringConcatenate	Forms a string of parameters passed	String Functions
StringFill	Fills out a specified string by selected symbols	String Functions
StringFind	Search for a substring in a string	String Functions
StringFormat	Converting number into string according to preset format	Conversion Functions
StringGetCharacter	Returns the value of a number located in the specified string position	String Functions
StringInit	Initializes string by specified symbols and provides the specified string length	String Functions
StringLen	Returns the number of symbols in a string	String Functions
StringReplace	Replaces all the found substrings of a string by a set sequence of symbols	String Functions
StringSetCharacter	Returns a copy of a string with a changed value of a symbol in a specified position	String Functions
StringSplit	Gets substrings by a specified separator from the specified string, returns the number of substrings obtained	String Functions
StringSubstr	Extracts a substring from a text string starting from a specified position	String Functions
StringToCharArray	Symbol-wise copying a string converted from Unicode to	Conversion Function

Function	Action	Section
	ANSI, to a selected place of array of uchar type	
StringToColor	Converting "R,G,B" string or string with color name into color type value	Conversion Functions
StringToDouble	Converting a string containing a symbol representation of number into number of double type	Conversion Functions
StringToInteger	Converting a string containing a symbol representation of number into number of int type	Conversion Functions
StringToLower	Transforms all symbols of a selected string to lowercase	String Functions
StringToShortArray	Symbol-wise copying a string to a selected part of array of ushort type	Conversion Functions
StringToTime	Converting a string containing time or date in "yyyy.mm.dd [hh:mi]" format into datetime type	Conversion Functions
StringToUpper	Transforms all symbols of a selected string into capitals	String Functions
StringTrimLeft	Cuts line feed characters, spaces and tabs in the left part of the string	String Functions
StringTrimRight	Cuts line feed characters, spaces and tabs in the right part of the string	String Functions
StructToTime	Converts a variable of MqlDateTime structure type into a datetime value	Date and Time
Symbol	Returns the name of a symbol of the current chart	Checkup
SymbolInfoDouble	Returns the double value of the symbol for the corresponding property	Market Info
SymbolInfoInteger	Returns a value of an integer type (long, datetime, int or bool) of a specified symbol for the corresponding property	Market Info
SymbolInfoMarginRate	Returns the margin rates depending on the order type and direction	Market Info
SymbolInfoSessionQuote	Allows receiving time of beginning and end of the specified quoting sessions for	Market Info

Function	Action	Section
	a specified symbol and day of week.	
SymbolInfoSessionTrade	Allows receiving time of beginning and end of the specified trading sessions for a specified symbol and day of week.	Market Info
SymbolInfoString	Returns a value of the string type of a specified symbol for the corresponding property	Market Info
SymbolInfoTick	Returns the current prices for the specified symbol in a variable of the MqlTick type	Market Info
SymbolsSynchronized	Checks whether data of a selected symbol in the terminal are synchronized with data on the trade server	Market Info
SymbolName	Returns the name of a specified symbol	Market Info
SymbolSelect	Selects a symbol in the Market Watch window or removes a symbol from the window	Market Info
SymbolsTotal	Returns the number of available (selected in Market Watch or all) symbols	Market Info
tan	Returns the tangent of a number	Math Functions
TerminalClose	Commands the terminal to complete operation	Common Functions
TerminalInfoDouble	Returns an double value of a corresponding property of the mql5 program environment	Checkup
TerminalInfoInteger	Returns an integer value of a corresponding property of the mql5 program environment	Checkup
TerminalInfoString	Returns a string value of a corresponding property of the mql5 program environment	Checkup
TesterStatistics	It returns the value of a specified statistic calculated based on testing results	Common Functions
TextGetSize	Returns the string's width and height at the current font settings	Object Functions

Function	Action	Section
TextOut	Transfers the text to the custom array (buffer) designed for creation of a graphical resource	Object Functions
TextSetFont	Sets the font for displaying the text using drawing methods (Arial 20 used by default)	Object Functions
TimeCurrent	Returns the last known server time (time of the last quote receipt) in the datetime format	Date and Time
TimeDaylightSavings	Returns the sign of Daylight Saving Time switch	Date and Time
TimeGMT	Returns GMT in datetime format with the Daylight Saving Time by local time of the computer, where the client terminal is running	Date and Time
TimeGMTOffset	Returns the current difference between GMT time and the local computer time in seconds, taking into account DST switch	Date and Time
TimeLocal	Returns the local computer time in datetime format	Date and Time
TimeToString	Converting a value containing time in seconds elapsed since 01.01.1970 into a string of "yyyy.mm.dd hh:mi" format	Conversion Functions
TimeToStruct	Converts a datetime value into a variable of MqlDateTime structure type	Date and Time
TimeTradeServer	Returns the current calculation time of the trade server	Date and Time
UninitializeReason	Returns the code of the reason for deinitialization	Checkup
WebRequest	Sends HTTP request to the specified server	Common Functions
ZeroMemory	Resets a variable passed to it by reference. The variable can be of any type, except for classes and structures that have constructors.	Common Functions

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