

FAMOS 6.0

OPTIONAL EXTENSIONS

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Class counting kit

Rainflow

ClsOffRainflowInit1	Rainflow-analysis: initialisation for a Rainflow-count.
ClsOffRainflowInit2	Rainflow-analysis: continued initialisation for a Rainflow-count.
ClsOffRainflowInit3	Rainflow-analysis: continued initialisation for a Rainflow-count.
ClsOffRainflow-FeedSamples	Rainflow-analysis: supplies additional values to a Rainflow-matrix.
ClsOffRainflow-FeedResidue	Rainflow-analysis: an already computed residue is tallied into the current matrix.
ClsOffRainflow-FeedMatrix	Rainflow-analysis: the current matrix is augmented by the values in SV_Matrix.
ClsOffRainflow-FeedDiscontinuity	Rainflow-analysis: inserts a discontinuity.
ClsOffRainflow-SetMatrix	Rainflow-analysis: replaces the current matrix with a new one.
ClsOffRainflow-GetMatrix	Rainflow-analysis: returns the current matrix.
ClsOffRainflow-ClearResidue	Rainflow-analysis: empties the current residue.
ClsOffRainflow-GetResidue	Rainflow-analysis: returns the current residue.
ClsOffRainflow-GetResidueMtx	Rainflow-analysis: returns the current residue in matrix format.
ClsOffRainflow-AddResidue	Rainflow-analysis: tallies the current residue's values into the current matrix and empties the residue.
ClsOffRainflow-ClearMatrix	Rainflow-analysis: sets the current matrix to zero.
KlsRFlow	Rain-Flow-Verfahren

Extract

ClsOffFromRainflow-GetLevelCrossing	Rainflow-analysis: a level crossing count is performed based on the current matrix and residue.
ClsOffFromRainflow-GetRangePair	Rainflow-analysis: a range-pair count is performed based on the current matrix and residue.

ClsOffFromRainflow-GetZeroCrossingPeak	Rainflow-analysis: a zero crossing peak count is performed based on the current matrix and residue.
ClsOffFromRainflow-GetPeak	Rainflow-analysis: a peak count is performed based on the current matrix and residue.
ClsOffFromRainflow-GetMinMaxPeak	Rainflow-analysis: a peak distribution analysis is performed based on the current matrix and residue.
ClsOffFromRainflow-GetReconstruction	The current Rainflow-matrix and residue are used to reconstruct a time-based waveform which represents a load similar to that of the original signal.

General

ClsOffTM	Implements imc TrueMax procedure.
ClsOffMatrixSum-1Triangle	In a square matrix, the values in each pair of diagonally opposite cells are aggregated in the respective cells on one side of the matrix diagonal, leaving the other side's respective cells empty.
ClsOffMatrixSumLines	Determines the vector of a matrix' row aggregate values or column aggregate values.

Counting (per DIN/IEC 45667)

ClsLvlCr	Level-crossing procedure
ClsMaxSt	Maximum-value storage procedure
ClsRFlow	Rain-Flow-method
ClsRMean	Range/ mean procedure
ClsRngPr	Range-pair procedure
ClsRange	Range counting procedure
ClsPeak1	Peaks Method 1
ClsPeak2	Peaks Method 2
ClsPeak3	Peaks Method 3
ClsPkSmp	Peak/ sample method
ClsSampl	Sampling method
ClsSmSmp	Sample/ sample method
ClsTAtLv	Time-at-level method
ClsOff2Channel-Histogram	Computation of mutual density, 2D-histogram
ClsOffRevolutions-Histogram	Rainflow-analysis: the amount of axle spins is counted on the basis of one channel
ClsOffRevolutions-Matrix	The amount of axle spins is counted on the basis of one channel and of rpm values.

Spectral analysis

1-Channel

AmpSpectrumRMS	Magnitude spectrum (determined as RMS (root-mean-square) values) with a moving window and linear averaging.
AmpSpectrumRMS_exp	Magnitude spectrum (determined as RMS (root-mean-square) values) with a moving window and exponential averaging.
AmpSpectrumRMS_1	An averaged magnitude spectrum is returned (determined as RMS (root-mean-square) values).
AmpSpectrumPeak	Magnitude spectrum (determined as peak values or magnitudes) with a moving window and linear averaging.
AmpSpectrumPeak_exp	Magnitude spectrum (determined as peak values or magnitudes) with a moving window and exponential averaging.
AmpSpectrumPeak_1	An averaged magnitude spectrum is computed (determined as peak values or magnitudes).
ComplexSpectrum	Complex spectrum (determined as RMS (root-mean-square) values) using a moving window and linear averaging.
ComplexSpectrum_exp	Complex spectrum (determined as RMS (root-mean-square) values) using a moving window and exponential averaging.
ComplexSpectrum_1	A mean complex spectrum is calculated (determined as RMS (root-mean-square) values).
PowerDS	Density Spectrum with a floating window and linear averaging.
PowerDS_exp	Power Density Spectrum with a moving window and exponential averaging.
PowerDS_1	An averaged power density spectrum is determined.
PowerSpectrum	Power spectrum with a moving window and linear averaging.
PowerSpectrum_exp	Power spectrum with a moving window and exponential averaging. The square of the RMS-spectrum.
PowerSpectrum_1	An averaged power spectrum is computed.
PowerCepstrum	The cepstrum is calculated using a moving window and linear averaging.
PowerCepstrum_exp	The cepstrum is calculated using a moving window and exponential averaging.
PowerCepstrum_1	Calculates a mean cepstrum.

2-Channel

CrossPowerDS	Cross Power Density spectrum, using a moving window and linear averaging.
CrossPowerDS_exp	Cross Power Density using a moving window and exponential averaging.
CrossPowerDS_1	A mean cross power density is calculated.
CrossPowerNorm	Normalized cross power density spectrum using a moving window and linear averaging.
CrossPowerNorm_1	Calculates a mean normalized cross power spectrum, using a moving window and linear averaging.
Coherence	Coherence
FrequencyResponse	Transfer function FRF

Filter

PhaseContinuous	The course of a signal phase is made continuous. 360 ° skips are removed
FilterAnalog	A waveform is processed with a filter whose analog coefficients must be supplied to the transfer function.
VibrationFilter	Filtering for the evaluation of vibrations

Acoustics

LoudnessLevel	loudness or sound level according DIN 45631 or ISO 532, of thirds spectrum
LoudnessSpectrum	loudness-spectrum-pattern according DIN 45631 or ISO 532, of thirds spectrum
ZoomSpectrumChirpZ	Zoom-spectrum according Chirp-Z-transformation

Miscellaneous

DFTSpectrum	DFT (Discrete Fourier-Transformation) with any number of points
CFCFilter	CFC-Filter according SAE J211/1
ShockResponseSpectrum	Shock Response Spectrum, SRS.
TransposeMatrix	A matrix (a segmented waveform) is transposed. In other words, the rows and columns exchange places.

Order tracking analysis

General

OtrOrderSpectrum	Order spectrum referenced to rotation speed
OtrRpmOrder	Order lines referenced to rotation speed

Filtering for order tracking analysis

OtrTrackingLowPass	Tracking low-pass
OtrTrackingBandPass	Tracking band-pass
OtrTrackingBandStop	Tracking band-stop
OtrTrackingExpoRms	Tracking moving RMS

Plotting over rotation speed and angle

OtrResampleAAF	Sampling over rotation angle, with anti-aliasing
OtrResample	Sampling over rotation angle
OtrRpmPresentation	Plot of a signal over rotation speed
OtrRpmPresentVector	Plot of a vector series over rotation speed
OtrRpmPresentFast	Plot of a vector series over rotation speed for fast run-ups

FFT-analysis

OtrRpmSpectrum	FFT-spectrum referenced to rotation speed
OtrRpmThirds	1/3-octave analysis referenced to rotation speed
OtrOrderSpecFromFFT	Order spectrum from frequency spectrum
OtrRpmSpectrumFast	Frequency spectrum referenced to rotation speed for fast run-ups

Tools

OtrTachoMode	Sets tachometer signal type (e.g. Pulse)
OtrTachoToSpeed	Rotation speed from tachometer signal
OtrTachoToDist	Rotation angle from tachometer signal
OtrEncoderRevs01	Smooths time-based encoder signal
OtrFreqLine	Magnitude and phase of a sinusoidal oscillation

Video player

General functions

VpVideoLoad	Loads the specified video-file.
VpVideoClose	Closes the currently open video-file.
VpGetState	Returns a number describing the Video-Player's status.
VpGetStateText	Returns a text which describes the current Video-Player status.
VpGetErrorText	Returns the error text corresponding to the error code transferred.

Playback control

VpPlay	Plays the open video-file from the current position.
VpPlaySync	Plays the video up until the position specified.
VpPause	Halts the video-file at the current position.
VpContinue	Continues playback of video-file from the current position.
VpStop	Halts the video-file and sets it back to the beginning.
VpSingleStep	Displays frame which follows the current frame.
VpBackStep	Displays frame which precedes the current frame.
VpGetPosFrames	Returns the position number of the currently displayed frame.
VpSetPosFrames	Displays the frame having the specified position number.
VpGetPosSeconds	Returns the position of the currently displayed frame in terms of time (seconds).
VpSetPosSeconds	Displays the frame which corresponds to the specified time.
VpGetPlayRate	Returns the playback speed of the currently loaded video file.
VpSetPlayRate	Sets the playback speed to the specified value.

File-Information

VpGetFileName	Returns the name and path of the currently loaded video-file.
VpGetLengthFrames	Returns the number of frames in the currently loaded video-file.
VpGetLengthSeconds	Returns the length of the currently loaded video-file in seconds.
VpGetRecordRate	Returns the playback speed of the currently loaded video-file in frames per second.
VpSetRecordRate	Sets the recording speed for the currently loaded video-file in frames per second.
VpGetXOffset	Returns the time offset of the currently loaded video in seconds.
VpSetXOffset	Sets the time offset of the currently loaded video-file, in seconds.
VpGetAbsStartTime	Returns the date and time at which the currently loaded video-file was created.
VpSetAbsStartTime	Sets the creation date and time of the currently loaded video-file.

Link with the curve window

VpSetLink	Establishes a link to an existing curve window or to the FAMOS Date Editor.
VpDelLink	Dissolves a link to a curve window.
VpLinkExists	Determines whether a link exists to a curve window or to the FAMOS Data Editor.

ASAM-ODS-Kit

Sessions

OdsSessionCreate	Sets up a connection to an ODS data source (ODS-server).
OdsSessionClose	Closes the connection to an ODS-server.
OdsSessionSelect	Switches to a different session

Instance-elements general

OdsIEListByAsamPath	Determines the instance element for a given ASAM path.
OdsIEListByType	Determines all instance elements of a given type. The search can be limited by specifying a name pattern (using wild-card symbols).
OdsIEListChildren	Determines the direct child-instances (descendants) of an instance element.
OdsIECreateElement	Creates a new instance element
OdsIEDeleteElement	Deletes an instance element
OdsIEBuildVarName	A valid FAMOS variable name is derived from an instance element's ASAM-path.

Instance-elements attributes

OdsIEGetAttribute	Inquires the value of an instance element's numerical attribute.
OdsIEGetAttributeTxt	Requests the contents (as text) of an instance element attribute.
OdsIEGetAttributes	Requests all of an instance element's attributes
OdsIESetAttribute	Changes an instance element's numeric attribute.
OdsIESetAttributeTxt	Changes the content (text) of an instance element's attribute.
OdsIEAddAttribute	Adds a numeric instance attribute.
OdsIEAddAttributeTxt	Adds an instance attribute (text).
OdsIERemoveAttribute	Deletes an instance attribute
OdsIEGetPropertyTxt	Queries pre-defined properties of an instance element.

Instance-elements measurements

OdsIEGetMeasurement	The channels contained in a measurement are read out and converted to a FAMOS data group.
OdsIEGetChannel	For a given measurement quantity, the measured data are read out and converted to a FAMOS data set.
OdsIEImportData	Adds measured data to the ODS data storage

Plug-in

OdsPluginSessionConnect	The session currently displayed by the ODS plug-in becomes the kit's new active session.
OdsPluginListSellItems	Determines which instance elements in the ODS plug-in's active session are selected.

Tools

OdsInitialize	Initialization of the ODS-system. The necessary parameters for the (re-)initialization of the CORBA runtime environment are defined.
OdsGetlastErrorTxt	Requests the error description of the ODS function error which occurred most recently.
OdsGetLastErrorCode	Requests the error code of the ODS function error which occurred most recently.