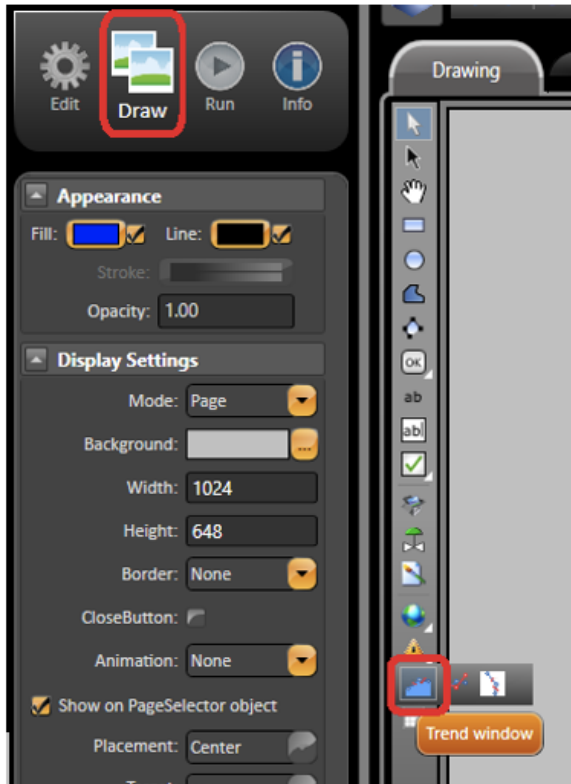


Trend Settings

Introduction

The Trend Window object is included in the version 2014.2 or newer. You can find the Trend Window object in the Draw section in the Drawing toolbar. See the image below for the exact location.



Select the Trend object, and draw in the display. Double-click the object to open the TrendWindow configuration dialog. The trend is able to work with only the Trend Window configuration dialog. However, if you need some advanced requirement, you can create two templates, TrendChart and TrendPen, with some trend properties. See the supported properties named below. Then, bind the main tags of those templates to the Trend Window object. When you change the members, the trend properties changes in Runtime.



TrendChart Template Members

Name	Type	Description
AllowRuntimeSettings	Digital	Enable to change the trend settings in Runtime. E.g.: AllowRuntimeSettings = true
BackZoom	Digital	Enable the back zoom. E.g.: BackZoom = false
CanBackZoom	Digital	Check if there is back zoom in the current trend view. E.g.: CanBackZoom = false
CanNextZoom	Digital	Check if there is next zoom in the current trend view. E.g.: CanNextZoom = false
ChartArea	Rectangle*	Get the trend chart area. E.g.: ChartArea = Rectangle *Create a rectangle template with top, bottom, left, right, width, and height.

CursorBrush	Text	Color of the primary cursor. E.g.: CursorBrush = "#FF0000FF"
CursorOutput	DateTime	Current X axis value for the primary cursor. E.g.: CursorOutput = "15/01/2019 11:30:00.000"
CursorOutputTooltip	Digital	Enable the primary cursor output tooltip. E.g.: CursorOutputTooltip = true
CursorPosition	Double	Position of the primary cursor related to the trend object area (percentage 0-100). E.g.: CursorPosition = 100
Duration	Text	Duration time of the X axis. E.g.: Duration = "1m"
EnableMouseActions	Digital	Enable the mouse actions in the trend object. E.g.: EnableMouseActions = true
EnableMouseCursorConnection	Digital	Connect the mouse with the primary cursor. E.g.: EnableMouseCursorConnection = false
EnableYLabelsStackPensMode	Digital	Enables YLabels subdivisions view. E.g.: EnableYLabelsStackPensMode = 1
EnablePrimaryCursorAfterMouseClicked	Digital	Enable to show the primary cursor after clicking the mouse. E.g.: EnablePrimaryCursorAfterMouseClicked = false
EnableSecondaryCursorAfterMouseClicked	Digital	Enable to show the secondary cursor after clicking the mouse. E.g.: EnableSecondaryCursorAfterMouseClicked = false
EnableYScaleForEachPen	Digital	Enable individual pen scale for the Y axis. E.g.: EnableYScaleForEachPen = true
ExpandedMargin	Text	Margin for the trend object when expanded. E.g.: ExpandedMargin = "0,100,0,200"
GridLinesBrush	Text	Color of the grid line. E.g.: GridLinesBrush = "#FF0000FF"

HighlightPens	Digital	<p>Enable to highlight the pens when the mouse is over the pen label in the legend.</p> <p>E.g.: HighlightPens = true</p>
IntervalBetweenCursors	TimeSpan	<p>Interval value between the primary and secondary cursors.</p> <p>E.g.: IntervalBetweenCursors = "00:10:00"</p>
IsExpanded	Digital	<p>Check if the current trend is expanded.</p> <p>E.g.: IsExpanded = false</p>
LabelsBrush	Text	<p>Color of the labels.</p> <p>E.g.: LabelsBrush = "#FFFF00FF"</p>
LimitBrush	Text	<p>This property fill the limit with the color choosed in Hexadecimal format.</p> <p>To make it works you have to set the "LimitMaxValue" and/or "LimitMinValue".</p> <p>E.g.: LimitBrush = "#FFFF00FF";</p>
LimitFillOpacity	Double	<p>This property defines the limit opacity. The number go from 0.0 to 1.0. By default it is 0.</p> <p>To make it works you have to set the "LimitMaxValue" and/or "LimitMinValue".</p> <p>E.g.: LimitFillOpacity = 0.5</p>
LimitMaxValue	Double	<p>This property will make appear a maximum horizontal line.</p> <p>To make it works you have to choose the color using the property "LimitBrush".</p> <p>E.g.: LimitMaxValue = 85</p>
LimitMinValue	Double	<p>This property will make appear a minimum horizontal line.</p> <p>To make it works you have to choose the color using the property "LimitBrush".</p> <p>E.g.: LimitMinValue = 22</p>
MarkerTooltip	Digital	<p>Show the tooltip when the mouse is over the markers.</p> <p>E.g.: MarkerTooltip = false</p>
MergeSameYScales	Digital	<p>Merger the same scaling values of the Y axis.</p> <p>E.g.: MergeSameYScales = true</p>
NavigationControls	Digital	<p>Show the navigation controls in the bottom of the trend object.</p> <p>E.g.: NavigationControls = false</p>

NextZoom	Digital	<p>Enable the next zoom.</p> <p>E.g.: NextZoom = false</p>
OnlyZoomXAxis	Digital	<p>Enable zoom only in the X axis.</p> <p>E.g.: OnlyZoomXAxis = false</p>
Orientation	Integer	<p>Orientation of the trend drawing.</p> <p>0 - Horizontal</p> <p>1- Vertical, Top to Bottom</p> <p>2- Vertical, Bottom To Top</p> <p>E.g.: Orientation = 0</p>
Paused	Digital	<p>Pause the plotting of the trend object.</p> <p>E.g.: Paused = false</p>
SecondaryCursorBrush	Text	<p>Color of the secondary cursor.</p> <p>E.g.: SecondaryCursorBrush = "#FFFF00FF"</p>
SecondaryCursorOutput	DateTime	<p>Current X axis value for the secondary cursor.</p> <p>E.g.: SecondaryCursorOutput = "15/01/2019 11:30:00.000"</p>
SecondaryCursorOutputTooltip	Digital	<p>Enable the secondary cursor output tooltip.</p> <p>E.g.: SecondaryCursorOutputTooltip = false</p>
SecondaryCursorPosition	Double	<p>Position of the secondary cursor related to the trend object area (percentage 0-100).</p> <p>E.g.: SecondaryCursorPosition = 0</p>
SecondaryVerticalCursor	Digital	<p>Enable the secondary vertical cursor.</p> <p>E.g.: SecondaryVerticalCursor = false</p>
ShowAlarms	Digital	<p>Enable to show the alarm values in the trend chart area.</p> <p>E.g.: ShowAlarms = true</p>
ShowDuration	Integer	<p>Enable to show the duration value in the vertical cursors.</p> <p>E.g.: ShowDuration = 0</p>
ShowNoteDetails	Digital	<p>Enable to show the note details in the trend chart area.</p> <p>E.g.: ShowNoteDetails = false</p>

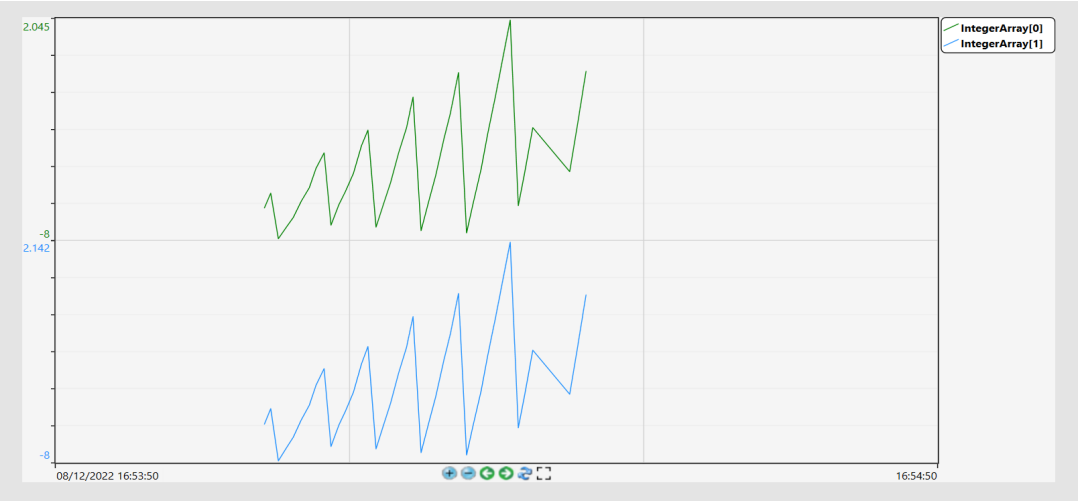
ShowPrimaryCursorCloseButton	Digital	Show the close button in the primary cursor. E.g.: ShowPrimaryCursorCloseButton = false
ShowPrimaryCursorValues	Digital	Show the pens value in the primary cursor. E.g.: ShowPrimaryCursorValues = false
ShowRangeEvents	Digital	Enable to show the range events in the trend chart area. E.g.: ShowRangeEvents = true
ShowRefreshButton	Digital	Enable to show the refresh button over the trend object. E.g.: ShowRefreshButton = false
ShowSecondaryCursorCloseButton	Digital	Show the close button in the secondary cursor. E.g.: ShowSecondaryCursorCloseButton = false
ShowSecondaryCursorValues	Digital	Show the pens value in the secondary cursor. E.g.: ShowSecondaryCursorValues = false
ShowTagNotes	Digital	Enable to show the tag notes in the trend chart area. E.g.: ShowTagNotes = true
ShowTimeNotes	Digital	Enable to show the time notes in the trend chart area. E.g.: ShowTimeNotes = true
ShowXValueNotes	Digital	Enable to show X axis values in the trend chart area. E.g.: ShowXValueNotes = true
StackPens	Digital	Enable the stack pens for Y axis. E.g.: StackPens = false
StartDateTime	DateTime	Start date time of X axis. E.g.: StartDateTime = "15/01/2019 9:00:0.000"
TimeBeforeNow	TimeSpan	Time value before the current time. E.g.: TimeBeforeNow = "02:00:00"
VerticalCursor	Digital	Enable to show the primary vertical cursor. E.g.: VerticalCursor = true

WindowBrush	Text	Color of the trend background window. E.g.: WindowBrush = "#FFFF00FF"
XEndValue	DateTime	End value for the X axis. E.g.: XEndValue = "15/01/2019 11:00:0.000"
XGridLines	Text	Number of the grid lines for the X axis. E.g.: XGridLines = "4"
XLabelDegrees	Double	Skew degree of the labels in the X axis. E.g.: XLabelDegrees = 0
XLabelFormat	Text	Format of the labels in the X axis. E.g.: XLabelFormat = "dd/MM/yy HH:mm:ss"
XLabels	Text	Number of the labels in the X axis. E.g.: XLabels = "2"
XLabelsEditable	Digital	Enable the X labels for editing. E.g.: XLabelsEditable = false
XPadding	Double	Space from the trend bottom to starting the chart area. E.g.: XPadding = 0
XStartValue	DateTime	Start value for the X axis. E.g.: "15/01/2019 9:00:0.000"
YGridLines	Text	Number of the grid lines for the Y axis. E.g.: YGridLines = "5"
YLabelFormat	Text	Format of the labels in the Y axis. E.g.: YLabelFormat = "N1"
YLabels	Text	Number of the labels in the Y axis. E.g.: YLabels = "3"
YLabelsEditable	Digital	Enable the Y labels for editing. E.g.: YLabelsEditable = true

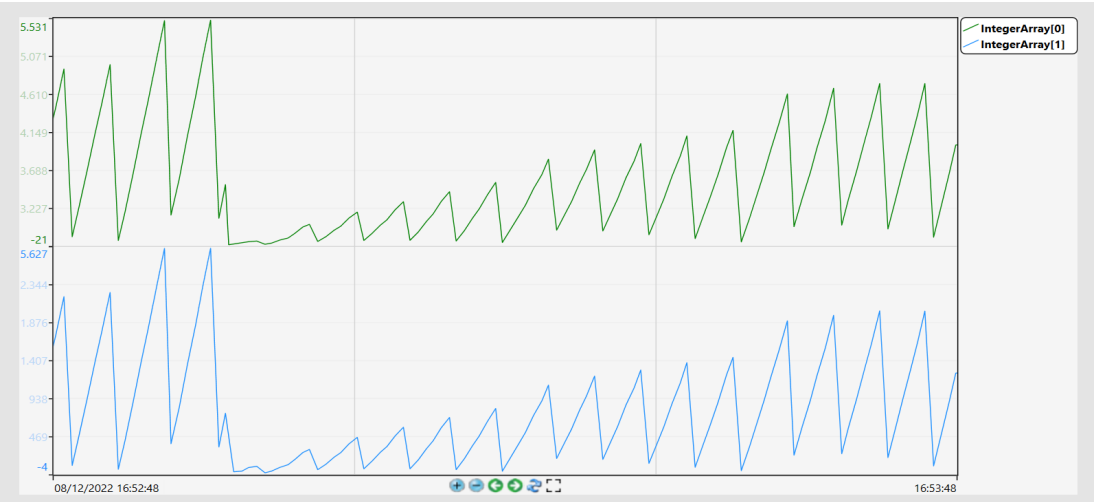
YMaxValue	Double	Maximum value for the Y axis. E.g.: YMaxValue = 100
YMinValue	Double	Minimum value for the Y axis. E.g.: YMinValue = 0
YPadding	Double	Starting position of the chart area from the trend left side. E.g.: YPadding = 0

StackPens Details

When more than one tag is being measured and the StackPens property is set to "true", the chart will turn into a stack chart-like visualization by dividing it in as many portions as measured tags. See image below for an example. Mouse over the image to see the property used.



Also, you can set the EnableYLabelsStackPensMode property to show YLabels subdivisions. See an example below. Mouse over the image to see the property used.



TrendPen Template Members

Name	Type	Description
Auto	Digital	Auto scaling for the Min. and Max. of the Y axis. E.g.: Auto = false
CursorValue	Double	Pen value at the intersection with the primary cursor. E.g.: CursorValue = 42.10
FilterLevel	Integer	Set the filter level. E.g.: FilterLevel = 40
HorizontalOffset	TimeSpan	Offset time at the X axis. E.g.: HorizontalOffset = "05:00:00"
MaxValue	Double	Maximum value for the Y axis. E.g.: MaxValue = 100
MinValue	Double	Minimum value for the Y axis. E.g.: MinValue = 0
PenColor	Text*	Color of the pen. E.g.: PenColor = "#FFFF0000" *In the datagrid you can use the Cell Editor as Color type.
PenLabel	Text	Label of the pen. (<i>ReadWrite</i>) E.g.: PenLabel = "Tag1" PenLabel = "" "" get the Description or Comment or TagName
PenLabelOutput	Text	Label to show in the legend object. (<i>Only Read</i>) E.g.: PenLabelOutput = "Tag1"

PenSettings	Text	<p>Settings of the pen as LineColor, LineStroke, FillArea, Marker.*</p> <p>E.g.: Stroke=#FF0070C0;Fill=#FF0070C0; Marker=5;StrokeDashCap=Round; StrokeEndLineCap=Flat;StrokeThickness=3</p> <p>*When used in the datagrid object, it uses unique UI.</p>
PenUnits	Text	<p>Show the Tag Unit.</p> <p>E.g.: PenUnits = "ft"</p>
PenValue	Double	<p>Current value for the pen tag.</p> <p>E.g.: PenValue = 55.3</p>
PIAF	Text	<p>Show the OSISoft PI points related with the pen.</p> <p>E.g.: PIAF.Tag.Tag1</p>
SecondaryCursorValue	Double	<p>Pen value at the intersection with secondary cursor.</p> <p>E.g.: CursorValue = 42.10</p>
ShowHighlighted	Digital	<p>Enable to show the pen as highlighted</p> <p>E.g.: ShowHighlighted = true</p>
SPCEnabled	Digital	<p>Show the SPC lines values in the trend chart. The SPC needs to be configured in the SPC Settings.</p> <p>E.g.: SPCEnabled = true</p>
SPCMaxValue	Double	<p>Show the SPC Maximum value when enabled in the SPC Settings.</p> <p>E.g.: SPCMaxValue = 100.00</p>
SPCMeanValue	Double	<p>Show the SPC Mean value when enabled in the SPC Settings.</p> <p>E.g.: SPCMeanValue = 43.45</p>
SPCMedianValue	Double	<p>Show the SPC Median value when enabled in the SPC Settings.</p> <p>E.g.: SPCMedianValue = 43</p>
SPCMinValue	Double	<p>Show the SPC Minimum value when enabled in the SPC Settings.</p> <p>E.g.: SPCMinValue = 0</p>

SPCSettings	Text	<p>Configure the SPC with the options Minimum , Maximum, Mean, Median, Sum, DeviationPlus, and DeviationLess.*</p> <p>E.g.: PCMinVisible=true; SPCMinLine.Stroke=#FFFFDEAD; SPCSigmaPlusVisible=true; SPCSigmaPlusLine.Stroke=#FFFFDEAD;</p> <p>*When used in the datagrid object, it uses unique UI.</p>
SPCSigmaMinusValue	Double	<p>Show the SPC Sigma Minus value when enabled in the SPC Settings.</p> <p>E.g.: SPCSigmaMinusValue = -10.90</p>
SPCSigmaPlusValue	Double	<p>Show the SPC Sigma Plus value when enabled in the SPC Settings.</p> <p>E.g.: SPCSigmaPlusValue = 97.82</p>
SPCSumValue	Double	<p>Show the SPC Sum value when enabled in the SPC Settings.</p> <p>E.g.: SPCSumValue = 50133</p>
TagName	Text	<p>Tag name related with the pen.</p> <p>E.g.: TagName = "Tag1"</p>
Visible	Digital	<p>Enable the pen visibility.</p> <p>E.g.: Visible = true</p>