



## 3 - S1g SEARCH Gap GREY

### ■ Description

Searches the left and right gap border out of the grey intensity image. The gap is normally visible as a dark vertical band with more or less sharp edges.

The rectangle of the ROI (**R**egion **O**f **I**nterest) is cut in small horizontal stripes. In each stripe a left and right gap border position is searched. The average over all positions gives the final position for the left and for the right border position.

### ■ Icon



3 S1g SEARCH Gap GREY

Detect edge position left and right in grey image.

### ■ Parameters

Filter Groups of 3 S1g SEARCH Gap GREY



G10 Gap Detection

#### G10 Gap detection

Filters of  
G10 Gap Detection



01.1 Height of Stripe



02 Mean value of stripe intensity



04 Search gap left/right




04.1 Search threshold left edge




04.2 Search threshold right edge



05 Eliminate gap Outliers




Attributes of  
 01.1 Height of Stripe




Number

Parameter	Comment
Number	Height of horizontal stripes over the grey image ROI. [Pixel]



Attributes of  
 02 Mean value of stripe intensity



Verbosity level
 

None

Filter length
 
 N Pixel

Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter length	The brightness values of every stripe are filtered for calculating the gradient. [Pixel]



Attributes of  
 04 Search gap left/right



Verbosity level
 

None

Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.



**Attributes of**  
**04.1 Search threshold left edge**

Number

Parameter	Comment
Number	<p>Checking the filtered brightness in a stripe to the left side, starting at the minimum, the search algorithm stops as soon as the value is reached and sets the "Found edge position".</p> <p>The measured value depends on the "Filter length". The higher the filter value the smaller the brightness changes.</p> <p>[Greylevel]</p>

**Attributes of**  
**04.2 Search threshold right edge**

Number

Parameter	Comment
Number	<p>Checking the filtered brightness in a stripe to the right side, starting at the minimum, the search algorithm stops as soon as the value is reached and sets the "Found edge position".</p> <p>The measured value depends on the "Filter length". The higher the filter value the smaller the brightness changes.</p> <p>[Greylevel]</p>

**Attributes of**  
**05 Eliminate gap Outliers**

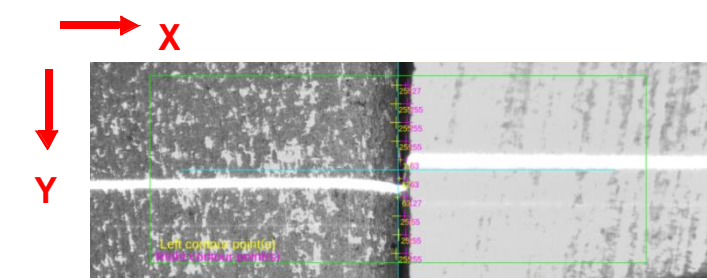
Verbosity level

Variance factor

Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Variance factor	<p>Eliminates outliers in the found contour points by comparison with the mean position of all contour points.</p> <p>[Pixel]</p>

**Verbosity example:**

The defined features are searched in every stripe. At the position where the feature best fits (yellow and magenta crosses/numbers), the gap position is set as average over all found points.






■ **Measured values for plotter**

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■ **Subgraphs interface**

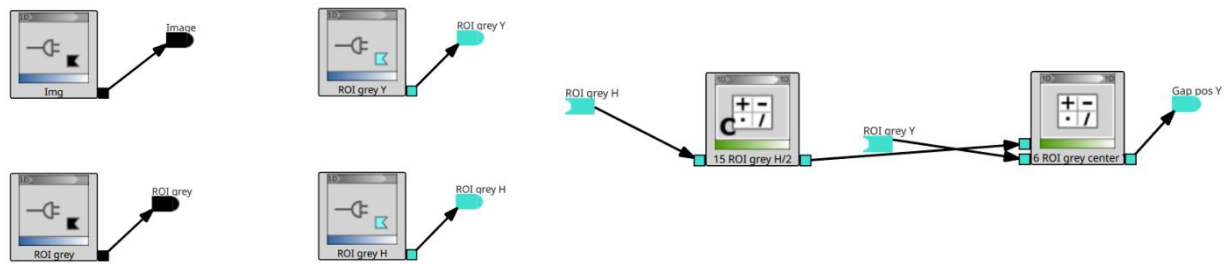
IN bridges

OUT bridges

 <b>image</b>	Img ROI grey	 <b>value</b>	Gap pos X left / right grey Gap pos Y left / right grey Contour left / right ImageSize NumberSlices
 <b>value</b>	ROI grey Y ROI grey H		



## ■ Graph block diagram



### G10 Gap Detection

