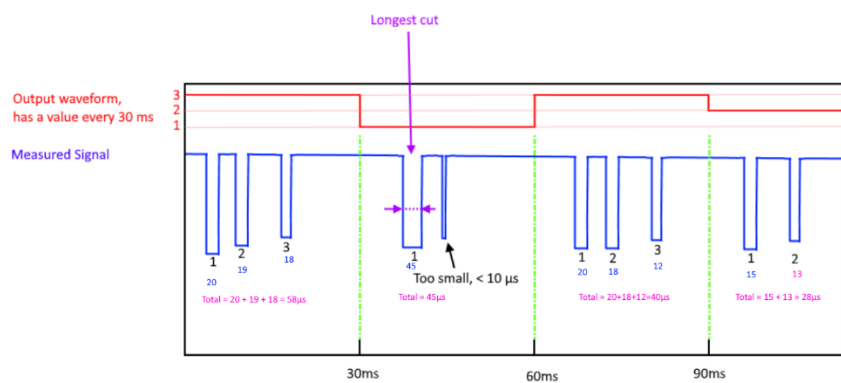


# User Manual

English



## Perception CSI Extension Drop Down Functions

Document version 1.0 – August 2022

*For Perception 8.30 or higher*

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Hottinger Brüel & Kjaer GmbH  
Im Tiefen See 45  
64293 Darmstadt  
Germany  
Tel: +49 6151 80 30  
Fax: +49 6151 8039100  
Email: [info@hbm.com](mailto:info@hbm.com)  
[www.hbm.com/highspeed](http://www.hbm.com/highspeed)

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## 1 Introduction

Welcome to the Perception Drop-down software manual. This document describes how to use the new drop down functions.

The purpose of the software is to add new functions to the Perception post formula database. These functions can be used to get drop down information from an input waveform.

The new functions will be added to the available list of existing functions. They can be found by the category DropDown

The application is based on the Perception **Custom Software Interface (CSI)**.

## 2 Scope

This Perception software extension enables the use of the drop down functions in the post formula database.

Via the new functions the following formulas are available:

- @TotalDropdownTime()
- @TotalDropdownCounts()
- @MaxDropdownWidth()

## 3 Getting Started

### 3.1 Installation

The Perception Drop-down function software is provided as an install file.

***Perception CSI Extended Time marker Table 3.0.20332.1200.exe***

The name of the install file may be different when you have a newer version.

Run this file to install the software and the manual on your PC

This software is **not** a stand-alone program which can be started from the Windows Start menu! It is an integrated part of the Perception software program. Once you start Perception you will see that the new functions are available in the formula database sheet

The manual has also been installed on your PC. It is a PDF file which can be opened via the windows Hottinger Brüel & Kjaer menu.

It is also possible to open the manual at the end of the installation.

If you cannot open this pdf file then you may have to install the Acrobat® Reader®.

### 3.2 Requirements

The Perception Drop-down functions software operates on any PC where Perception 8.30 is running, it might run on future versions of Perception but this is not guaranteed.

The Perception **Drop down functions** software can only be used when the HASP® USB key CSI option has been enabled. You can check it has been enabled by going to the Help About dialog and click **More....**

The "More About Perception" dialog shows which options are enabled.

The CSI option icon looks like:

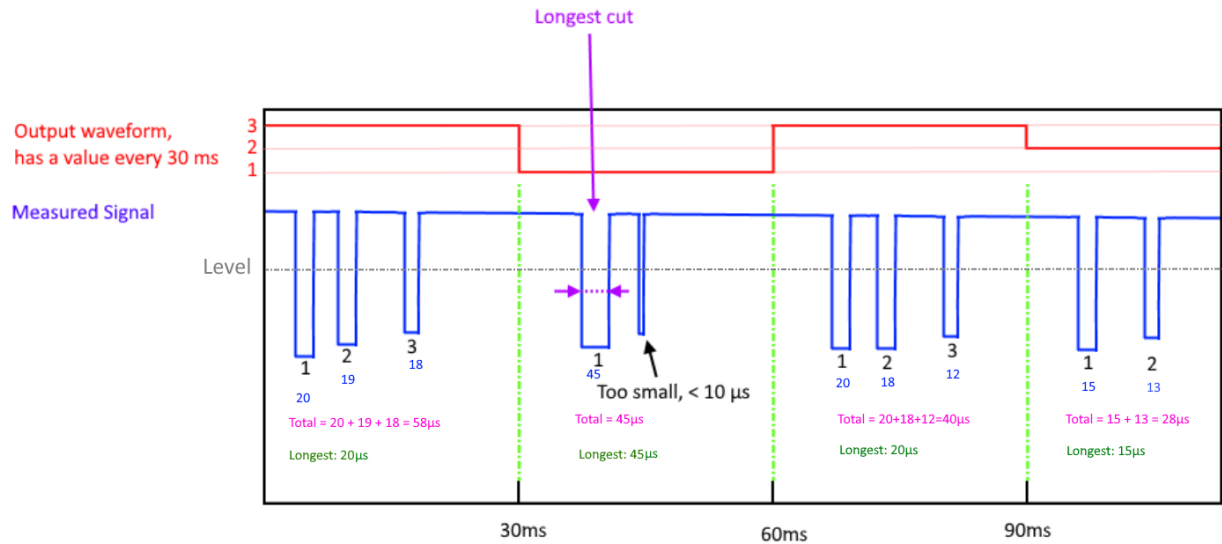


## 4 Application functionality

### 4.1 General

Perception will be extended with three new functions in the post analysis formula sheet. These new functions will be described below.

The measurement signal can look like:



### 4.2 TotalDropDownTime

**@TotalDropDownTime**(waveform: **Signal**; Number: **Level**; Number: **Start**; Number: **End**; Number: **SamplePeriod**; Number: **MinimalWidth**)

Input	Type	Description
<b>Signal</b>	Waveform	Input signal
<b>Level</b>	Number	Optional Level, default is 0
<b>Start</b>	Number	Optional Start time, default beginning of the signal
<b>End</b>	Number	Optional End time, default end of the signal sample period
<b>SamplePeriod</b>	Number	Optional The sample period default 30ms
<b>MinimalWidth</b>	Number	Optional The minimal width for a cut otherwise it will be discarded, default value 10µs

Returns a waveform containing the total amount of dropdown time per chosen interval and rejects small drop downs. The returned waveform contains the purple values per interval.

### 4.3 TotalDropDownCounts

**@TotalDropDownCounts**(waveform: **Signal**; Number: **Level**; Number: **Start**; Number: **End**; Number: **SamplePeriod**; Number: **MinimalWidth**)

Input	Type	Description
<b>Signal</b>	Waveform	Input signal
<b>Level</b>	Number	Optional Level, default is 0
<b>Start</b>	Number	Optional Start time, default beginning of the signal
<b>End</b>	Number	Optional End time, default end of the signal
<b>SamplePeriod</b>	Number	Optional The sample period default 30ms

**MinimalWidth**    Number    Optional    The minimal width for a cut otherwise it will be discarded, default value 10µs

Returns a waveform containing the total number of dropdowns per chosen interval and rejects small drop downs. This is the red curve in the above picture.

#### 4.4 MaxDropdownWidth

@MaxDropdownWidth(waform: **Signal**; Number: **Level**; Number: **Start**; Number: **End**; Number: **SamplePeriod**; Number: **MinimalWidth**)

Input	Type		Description
<b>Signal</b>	Waveform		Input signal
<b>Level</b>	Number	Optional	Level, default is 0
<b>Start</b>	Number	Optional	Start time, default beginning of the signal
<b>End</b>	Number	Optional	End time, default end of the signal
<b>SamplePeriod</b>	Number	Optional	The sample period default 30ms
<b>MinimalWidth</b>	Number	Optional	The minimal width for a cut otherwise it will be discarded, default value 10µs

Returns a waveform containing the time width of the longest dropdown per chosen interval and rejects small drop downs. The returned waveform contains the green values per interval.

Head Office

**Hottinger Brüel & Kjaer GmbH**

Im Tiefen See 45

64293 Darmstadt

Germany

Tel: +49 6151 8030

Email: [info@hbm.com](mailto:info@hbm.com)

France

**Hottinger Bruel & Kjaer France SAS**

46 rue du Champoreux

BP 60076

91540 Mennecy Cedex

Tél: +33 (0)1 69 90 63 70

Fax: +33 (0) 1 69 90 63 80

Email: [info@fr.hbm.com](mailto:info@fr.hbm.com)

UK

**Hottinger Bruel & Kjaer UK Ltd.**

Advanced Manufacturing Park Technology Centre

Brunel Way, Catcliffe, Rotherham

South Yorkshire, S60 5WG

Tel: +44 (0) 114 551 2230

Email: [info@uk.hbm.com](mailto:info@uk.hbm.com)

USA

**HBK Inc. - Marlboro, MA**

19 Bartlett Street

Marlborough, MA 01752, USA

Tel : +1 (800) 578-4260

Email: [info@usa.hbm.com](mailto:info@usa.hbm.com)

PR China

**Hottinger Bruel & Kjaer Co.,Ltd**

106 Heng Shan Road

Suzhou 215009

Jiangsu

Free hotline: 4009003165 (only in China)

Tel: +86 512 682 47776

Sales Email: [hbmchina@hbm.com.cn](mailto:hbmchina@hbm.com.cn)

Support Email: [atsc@hbm.com.cn](mailto:atsc@hbm.com.cn)

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