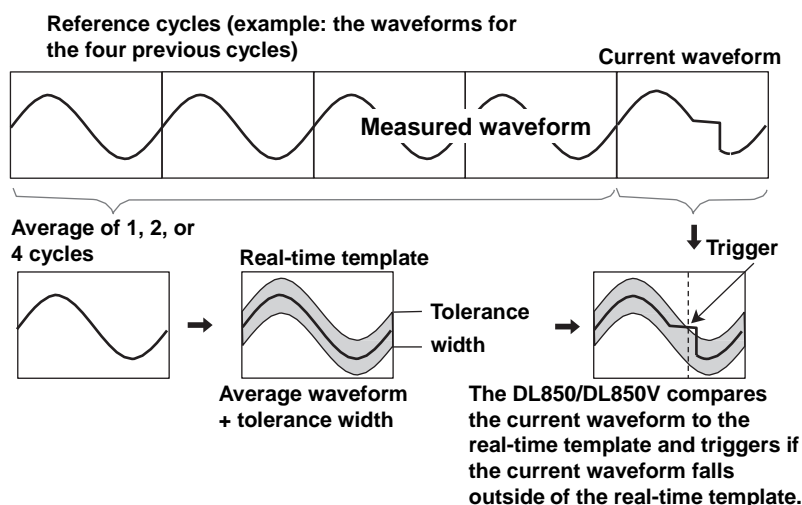


## Wave Window Trigger (Enhanced)

The DL850/DL850V creates real-time templates (Wave Window) using a number of cycles directly preceding the current waveforms. The DL850/DL850V compares the current waveforms to the real-time templates and triggers if one of the current waveforms falls outside of its real-time template.



### Trigger Source

You can select the trigger sources from CH1 to CH16. The modules that you can use as sources for the Wave Window trigger are listed below. You cannot use other modules or temperature-measurement channels as sources.

701250 (HS10M12)	701251 (HS1M16)	701255 (NONISO_10M12)	701260 (HV (with RMS))
701261 (UNIVERSAL) (only voltage measurement)	701262 (UNIVERSAL (AAF)) (only voltage measurement)		
701270 (STRAIN_NDIS)	701271 (STRAIN_DSUB)	701275 (ACCL/VOLT)	720210 (HS100M12)

### Template Channels (Condition)

Select which trigger sources to use to make real-time templates. The DL850/DL850V triggers if the condition of even one of the channels is met.

ON	Use
OFF	Don't use

### Tolerance Width (Width)

To create a real-time template for a channel, set the distance from the averaged waveform (of 1, 2, or 4 cycles before the current waveform) that will be tolerated. The range within which you can set the distance varies depending on the type of signal being measured.

Signal Type	Selectable Range	Default	Resolution
Voltage	0.01 × the voltage scale to 10 × the voltage scale	0.01 div	
Strain	1 μSTR to (measurement range) × 2 or 0.0005 mV/V to (measurement range) × 2	1 μSTR 0.0005 mV/V	Same as the trigger level resolution ► <a href="#">See here.</a>
Acceleration	0.01 Unit to (Unit/div) × 10	10 mUnit	

For example, when Width is set to 2 V, the tolerance width is ±1 V around the averaged waveform.

### Cycle Frequency (Cycle Frequency)

Set the trigger source frequency. If the actual frequency is within  $\pm 10\%$  of the specified value, it is automatically tracked.

Selectable range: 40 to 1000 Hz. The default setting is 50 Hz.

Resolution: 0.1 Hz

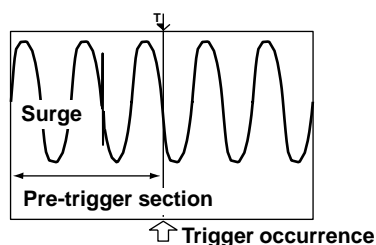
### Reference Cycles (Reference Cycle)

Select how many waveforms before the current waveform are used to create the real-time templates. When the sample rate is 500 kS/s and the number of channels used to make real-time templates is 9 or more, you can only set the number of cycles to 2. Even if you select 4 cycles, only two are used.

1	One previous waveform is used.
2	Two previous waveforms are used.
4	Four previous waveforms are used.



If a surge or other abnormal waveform occurs in the reference cycle, the abnormal waveform will be included in the averaged waveform, so the DL850/DL850V will trigger on the next normal waveform. This may make it appear as if the trigger has been delayed by a few cycles.



When you use the wave window trigger, we recommend that you set a pre-trigger length that is longer than the reference cycle so that you can observe waveform abnormalities that occur in the reference cycle.

### Sync Channel (Sync. Ch)

Select the channel used to detect the points at which waveform comparison for the wave window trigger starts and stops. Select the synchronization channel by selecting Auto or a channel from CH1 to CH16 that has a module that the wave window trigger can be used with.

#### Auto

Of the modules that the wave window trigger can be used with, the module with the smallest number is automatically selected.

Level for detecting the start and end points: The center of the amplitude of the sync-channel signal measured for 0.5 seconds after the start of waveform acquisition.

Detection hysteresis: Same as the edge trigger hysteresis [See here.](#)

#### CH1 to CH16

Select a channel whose module can be used with the wave window trigger. If triggering does not function properly when you select Auto, you can specify an appropriate channel.

For the selected channel, you need to set the level for detecting the start and end points and set the detection hysteresis.

### Level for Detecting the Start and End Points (Level) and Detection Hysteresis (Hysteresis)

If you set the sync channel to a channel from CH1 to CH16, you need to set the level for detecting the start and end points and set the detection hysteresis. These items are the same as the trigger level [See here.](#)

[See here.](#) and hysteresis  
of the simple trigger.

### Trigger Hold-Off (Hold Off), Trigger Position (Position), Trigger Delay (Delay)

These items are the same as trigger hold-off [See here.](#) , trigger position [See here.](#) , and trigger

▶ [See here.](#) delay of the simple trigger.

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#### Operating Conditions of the Wave Window Trigger

You can use the wave window trigger with the following waveforms and settings. You cannot use the wave window trigger when the record length is 25 kpoint or less and the time axis setting is shorter than 10 ms/div.

Waveforms	AC waveforms and triangular waveforms between 40 kHz and 1 kHz. (The trigger cannot be used with rectangular waveforms, such as inverter waveforms, or waveforms with fast rising edges.)
Sample rate	10 kS/s to 500 kS/s
Acquisition mode	Normal
Trigger mode	Normal, Single, Single(N) When the trigger mode is Auto or Auto Level, it is difficult for the wave window trigger to occur.
Dual capture feature	OFF

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