

EDM Automated Alarm Limit Functions

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Typical Applications

- Automated Production Test
- Wind Turbine Conditioning Monitoring
- Rotating Machine Monitoring
- Construction Noise
- Cooling Fan Vibration Monitoring
- Airport Noise
- Highway Tunnel, Railway Tunnel Vibration



What Can be Measured with a Spider System

Vibrations with alarm limits

- Time blocks
- Long recording signals
- RMS or peak levels
- Harmonics level
- Power spectra
- FRF (Frequency response function)
- Phase measurement
- Various sound levels with alarm limits
 - Temperature, humidity, voltage, strain gage



Spider-80X Module



Front View: 8 input channels with control buttons

Back View: Power, Ethernet connector, GND, RS-485, reset button





Automated Schedule and Limiting Test

- Automated limit test function allows the Spider-80X to conduct automated limit checking for time or frequency signals.
- Test Signals: time block signals, auto spectrum, frequency response function, octave spectrum.
- Limit Signals: user defined upper or low limit signals. For spectra signal the spectrum type will also be assigned. Limit signals will be bound to testing signals. Maximum segments of each limit signal: 64; Maximum number of limit signals: 64.
- Testing Schedule: automatically control the test duration and automates the operation. Multiple testing schedules can be developed and one is executed at a time. Testing schedule event entries: loop/lend-loop, run duration, hold, limit check on, limit check off, start recording, stop recording, save signals, turn signal source on and turn signal source off.
- Testing Log and Summary Report: a log file is automatically created for each run of the schedule to record up to 1024 major events. A summary report is provided for the limiting check status for the last schedule run.
- Limit Check Alarm Events: beep, screen flashing, add event to testing log, send message to host PC, save signals, and send emails or text messages.



Define the Event Action Rules for Alarm Limits

🕝 Test Configurations for Randoms [VCS(Random)] ? X			
Event Action Rules «		Event List	
Shakar Daramatarr	Add a User Event Edit Event Nam	ne Remove Event	
Shaker Parameters	Event Name	Action Rules	
Test Parameters	Save Signal Event	Save Signals to Internal Flash	
Pre-Test Parameters	Flash Screen and Beep	Flash Screen and Beep	
TestProfile	Receive Digital Input #08	None	
RMS Limits	Receive Digital Input #07	None	
Run Schedule	Receive Digital Input #06	None	
Limit Changels	Receive Digital Input #05	None	
Limit Charmes	Receive Digital Input #03	None	
Event Action Rules	Receive Digital Input #02	None	
Miscellaneous	Receive Digital Input #01	None	
	Monitor Channel Lost	Flash Screen and Beep	
	Limit Channel Lost	Pause Test	
	External PowerLost	Flash Screen and Beep	
	Control Channel Lost	Pause Test	
	Control Channel Overloaded	Flash Screen and Beep	
	Output Reaches to Maximum	Pause Test	
	Liser Pressed Stop	Flash Screen and Been	
	Action Bulanfar Calanted Super		
	Name:	Add Action - Edit Action Remove Action	
	1		
	Load from Library Causta Lib		
	Save to LID	i di y	
		<u>OK</u> <u>C</u> ance	

 Customize response to every test event
Create user-defined events and activate them from the test schedule



How Customized Event Strings work?





EDM: Setup the Measurement

Measured signals may include:

- Time recording signals
- Octave spectra
- Sound level measurement
- Auto-power spectra
- RMS, Peak measurement
- Time blocks



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🛯 🏧 Time Stream PTx[t] A Ch2[t] 🗠 Ch3[t] 1 Ch4[t] Octave TimeTrace(Ch1)[f] TimeTrace(Ch2)[f] TimeTrace(Ch3)[f] TimeTrace(Ch4)[f] 📐 OCT(Ch1) A OCT(Ch2) 📐 OCT(Ch3) 🗄 📐 OCT(Ch4) Sound Level Meter SLMTimeTrace(Ch1)[t] SLMTimeTrace(Ch2)[t] SLMTimeTrace(Ch3)[t] A SLMTimeTrace(Ch4)[t] A SLMValues(Ch1) 🖾 dBHistogram(Ch1) A SLMValues(Ch2) ABHistogram(Ch2) 📐 SLMValues(Ch3) 🖾 dBHistogram(Ch3) A SLMValues(Ch4) ¹ 📥 dBHistogram(Ch4) Time Blocks Block(PTx)[t] Block(Ch2)[t] Block(Ch3)[t] Block(Ch4)[t] Auto-Power Spectra APS(PTx)[f] 📐 APS(Ch2)[f] APS(Ch3)[f] APS(Ch4)[f]



EDM: Set the Alarm Limits

- Set up the alarm limits for measurement signals
 - High alarm or low alarm
 - With break points
 - Check the value over the range with percentage





EDM: Customize the Event Strings

Event strings will be shown in the runlog of the EDM Cloud.

The user can also apply a filter to search for the keywords of all history events.

Emails can be sent based on the key words in the event strings.



Runlog	Runlog Event Strings			
The customizable strings for the events will be shown in the runlog when event arises.				
Runlog Event Strings Macros				
	Runlog Event	Message String		
	RMS High	RMS High		
	RMS Low	RMS Low		
	Abort Check	Abort Check		
	Control Loop	Control Loop		
	Start the Test	Start the Test		
	Stop the Test	Stop the Test		
	Max Drive Reached	Max Drive Reached		
	Pretest Finished	Pretest Finished		
	Pretest Failed	Pretest Failed		
	Increase Max Drive	Increase Max Drive		
	Decrease Max Drive	Decrease Max Drive		
Restore to Manufacturing Settings Report OK Cancel				