



VIBROCONTROL 6000[®] - Digital system for analogue vibration measurement

Digital systems such as VIBROCONTROL 6000[®] often display higher peak-to-peak values than comparable analogue instruments.

In the latter, the peak value is calculated using a network of diodes, resistances and capacitors. These resistance-capacitor combinations have a load/discharge constant. The measurement takes a little longer, but is less sensitive to high frequency signals.

A digital system captures the peak value quickly and reliably, including high frequency signals. There are situations where a slower measurement corresponding to the analogue technology is actually desirable, e.g. when the particular measurement setup itself provokes high frequency interfering signals that do not belong to the vibrational behaviour of the machine.

In order to take this into consideration and to meet these customer requirements, the VIBROCONTROL 6000[®] can be configured to calculate peak (pk) and peak-peak (pk-pk) values in two different ways; the detector of the measurement can be set to “pk/pk-analogue (slow)” or “pk/pk-pk (fast)”. The former configuration “simulates” an analogue acquisition of the peak value.

The discharge constant of “pk/pk-pk analog (slow)” is 4,000 ms; the discharge constant of “pk/pk-pk analogue (fast)” is 1,000 ms. The appropriate configuration depends on the characteristics of the vibration signal being measured.

1 BP	
Measurement	
Measurement:	1 BP
Description:	Broadband Vibration
Lower Cut-Off Frequency:	10.00 Hz
Upper Cut-Off Frequency:	1.00 kHz
Measurement Unit:	µm
Detector:	pk
Averaging time:	rms
Display: pk	
Full-scale upper limit:	Pk anaog (slow)
Full-scale lower limit:	Pk anaog (fast)
Upper	
Danger High:	PP analog (slow)
Enable:	PP analog (fast)
Trip Multiply Value:	Smax
Delay:	Max (X,Y) rms
Fail-Safe:	Max (X,Y) Pk
Hysteresis:	Max (X,Y) PP
Trip Override:	10 µm
Alert High:	No <input type="checkbox"/>
Enable:	125 µm <input checked="" type="checkbox"/>
Trip Multiply Value:	1
Delay:	0 s