RMS detector
(*RMS*)

The rms detector yields the rms level of the samples measured during the set measurement time.
The ESIB uses the linear display voltage after envelope detection. The linear samples are squared, summed and the sum is divided through the number of samples (= mean of square). In the case of logarithmic display, the logarithm is then formed from the square sum.
The rms detector gives the true power of the signal irrespective of the waveform (CW carrier, modulated carrier, white noise or pulse signal). There is no need for the various waveform correction factors which are required when other detectors are used to measure power.

AC Video detector
(*AC VIDEO*,
with option ESIB-B1 only)

The AC video detector yields the difference (max peak – min peak) of measurement results over a pixel or a result.
For this purpose ESIB uses the linear display voltage after envelope detection. The max peak detector and the min peak detector determine the maximum and minimum levels within a shown measurement point and display it as a common measurement result. For logarithmic representation, the logarithm of the difference is formed. For linear representation, the difference itself is shown. In receiver operation, the AC value determined during the measurement time is shown.
Irrespective of the signal form (CW carrier, modulated carrier, white noise of pulsed signal), the AC video detector always supplies the AC component of the signal.
If during a frequency sweep the dwell time on a certain frequency point is not sufficient, this may lead to incorrect results being displayed.