Meter : RMS

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1 Description

This device calculates the RMS value of the input signal over a sliding time window of period equal to *1/freq* .

1.1 Pins

This meter has two pins:

pin	*type*	*description*	*units*
in	input pin	input signal	any
out	output pin	RMS over past period	same as in

1.2 Parameters

The following parameter must be defined:

parameter	*description*	*units*
freq	base frequency of the probed signal	Hz

1.3 Input

The input pin may be connected to any control signal.

1.4 Output

The value of the output is the RMS value of the input signal over a sliding time window of period equal to *1/freq* .

$$\mathrm{out}(t) = \sqrt{\frac{1}{\mathrm{period}} \cdot \int_{t-\mathrm{period}}^{t} \mathrm{in}^2(t) \cdot dt} \qquad (1)$$

The calculated value includes the contributions of all harmonics present in the input signal.