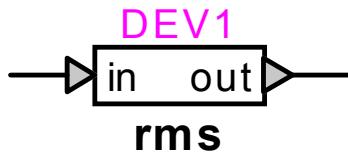


# Meter : RMS



|                     |   |
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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  $1/\text{freq}$ .

### 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  $1/\text{freq}$ .

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

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