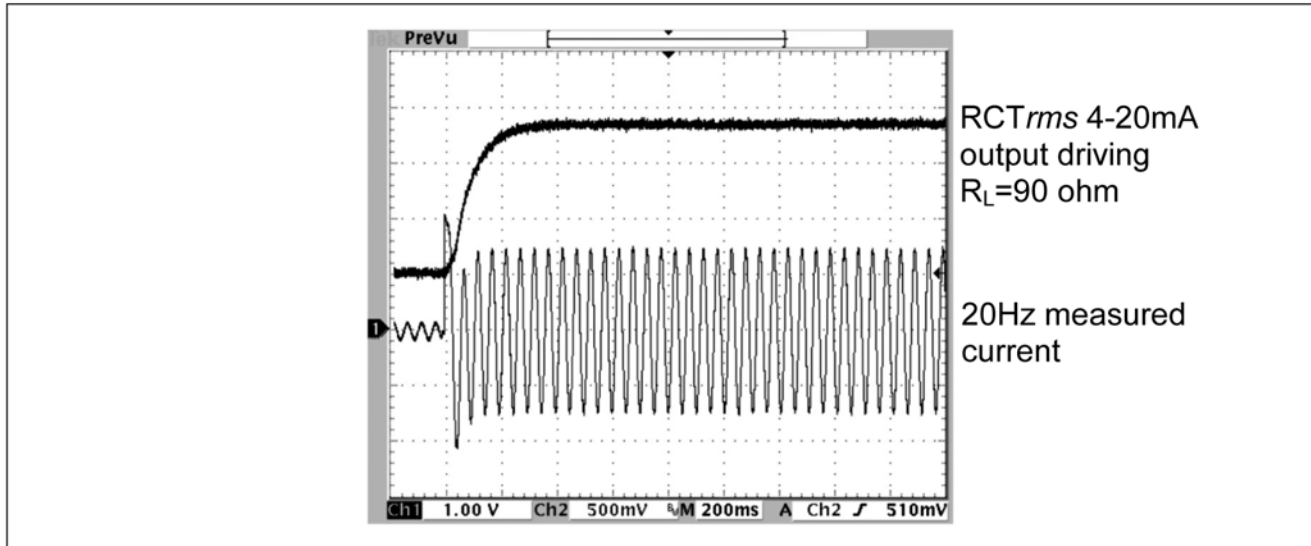


## RCTrms Response time

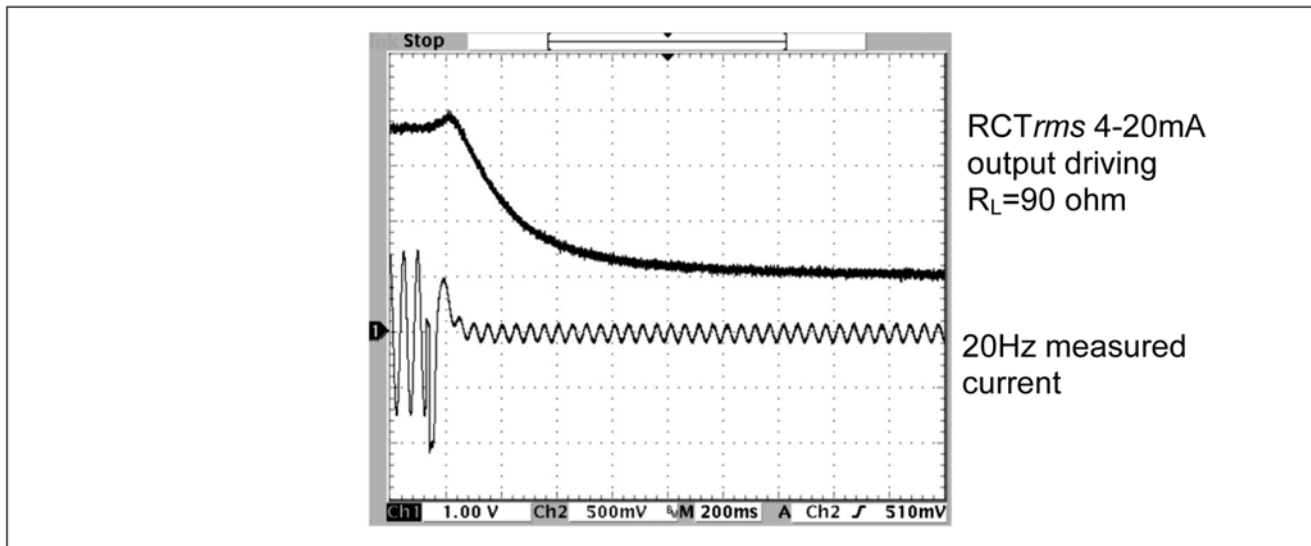
The response time of the RCTrms is time it takes the output of the transducer to settle given a change in magnitude of the measured current.

The figure below show the response of an RCTrms/2 with rated current of 250Arms. Initially the RCTrms/2 is measuring a 20Hz, 25Arms (10% full-scale) sinusoidal current, this is 'instantaneously' increased to 250Arms (100% full-scale) and the response of the transducer is recorded.



10% to 100% rising edge  
Response time to settle to within1% 400ms

The figure below show the response of an RCTrms/2 measuring a current decreased from 250Arms (100% full-scale) to 25Arms (10% full-scale). This represents the 'worst case' for response time and is the value quoted on the datasheet. For smaller changes in current the response will be faster.



100% to 10% falling edge  
Response time to settle to within1% 1000ms

It is possible to program the RCTrms to have a significantly faster response time than that quoted on the datasheet. The compromise being, that for a faster response time the low frequency bandwidth is reduced and the error when measuring waveforms with a high crest factor, will increase.

**If you are interested in the RCTrms but require a faster response time please contact Powertek to discuss your requirement.**

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