Newtons4th Ltd
office@newtons4th.com
www.newtons4th.com

High Frequency Current Shunts for the PSM Series

HFR010 HFR100 HFR470 HF01R

The HFR series shunts provide an accurate current sensing solution for many wideband impedance measurement applications.

Utilising an innovative design that is unique to N4L, each shunt will maintain its specified resistance over a frequency range from DC to 1MHz without exhibiting the phase shift normally associated with resistive shunts.

While the HF series was primarily designed for use with the PSM17xx and PSM35xx Frequency Response Analyzers to provide an accurate high frequency impedance measurement solution, they can be used as a precise current sensing device for many measuring instruments.

Model	Nominal Resistance	Continuous Current	Nominal Inductance	Phase Error
HFR010	10mΩ ± 0.1%	20A rms	< 1nH	0.01º / kHz
HFR100	100mΩ ± 0.1%	6A rms	< 1nH	0.002º / kHz
HFR470	470mΩ ± 0.1%	3A rms	< 1nH	0.001º / kHz
HF01R	1Ω ± 0.1%	1A rms	< 1nH	0.001º / kHz

Permitted Crest Factor*:	10 (e.g. repetitive peak current for HFR470 is 30Apk)
Maximum peak current:	Single peak current with ≤ 100uS duration is 2 x Apk (e.g. single peak current for HFR470 is 60Apk ≤ 100uS)
Nominal inductance:	< 1nH
Output connector:	Safety BNC – Non isolated with non inverted polarity (Output is at line potential therefore safety BNC to BNC leads must be used for instrument connection)
Protection rating:	600V Cat II

*Crest Factor = Peak/RMS

SAFETY WARNING: This note must be read in full. Any operations on live conductors can be dangerous. The operator is expected to be fully aware of all necessary electrical safety regulations and procedures, taking responsibility for safe operation. Users must ensure that the equipment is at all times in its original safe conditions.