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High Frequency Current Shunts for the PPA Series

HF01A to HF500

HF01A / HF003 / HF006 / HF020

HF200

HF100

HF500

The HF series shunts provide an accurate current sensing solution for many wideband power measurement applications up to 500Arms, the shunts are supplied with a 2m safety BNC lead.

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

While the HF series was primarily designed for use with the PPA series power analyzers from N4L that provide exceptional wideband accuracy, dynamic range and common mode rejection, the HF series can be used as a precise current sensing device for other equipment.

Model	Nominal Resistance	Phase Error	Continuous Current	PPA typical* min Current	Input Connector
HF500	0.2mΩ ± 0.1%	0.1º / kHz	500Arms	0.5Arms	M16 bolt/lug
HF200	0.5mΩ ± 0.1%	0.1º / kHz	200Arms	0.2Arms	M10 bolt
HF100	1mΩ ± 0.1%	0.05º / kHz	100Arms	0.1Arms	M10 bolt
HF020	10mΩ ± 0.1%	0.01º / kHz	20Arms	10mArms	4mm socket
HF006	100mΩ ± 0.1%	0.002º / kHz	6Arms	1mArms	4mm socket
HF003	470mΩ ± 0.1%	0.001º / kHz	3Arms	0.2mArms	4mm socket
HF01A	1 Ohm	0.001º / kHz	1.5Arms	0.1mArms	4mm socket

Permitted Crest Factor*:	10 (e.g. repetitive peak current for HF100 is 1000Apk)
Maximum peak current:	Single peak current with ≤ 100uS duration is 2 x Apk (e.g. single peak current for HF100 is 2000Apk ≤ 100uS)
Nominal inductance:	< 1nH
Minimum current*:	Based on use with a PPA analyzer ext. input and CF of ≤ 3
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, HF100 + HF200 supplied with protective boot for M10 bolt

*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.