



High Frequency Current Shunts for the PPA Series



HF200

HF01A / HF003 / HF006 / HF020



HF100



HF01A to HF500



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	$0.2\text{m}\Omega \pm 0.1\%$	$0.1^\circ / \text{kHz}$	500Arms	0.5Arms	M16 bolt/lug
HF200	$0.5\text{m}\Omega \pm 0.1\%$	$0.1^\circ / \text{kHz}$	200Arms	0.2Arms	M10 bolt
HF100	$1\text{m}\Omega \pm 0.1\%$	$0.05^\circ / \text{kHz}$	100Arms	0.1Arms	M10 bolt
HF020	$10\text{m}\Omega \pm 0.1\%$	$0.01^\circ / \text{kHz}$	20Arms	10mArms	4mm socket
HF006	$100\text{m}\Omega \pm 0.1\%$	$0.002^\circ / \text{kHz}$	6Arms	1mArms	4mm socket
HF003	$470\text{m}\Omega \pm 0.1\%$	$0.001^\circ / \text{kHz}$	3Arms	0.2mArms	4mm socket
HF01A	1 Ohm $\pm 0.1\%$	$0.001^\circ / \text{kHz}$	1.5Arms	0.1mArms	4mm socket

Permitted Crest Factor*: 10 (e.g. repetitive peak current for HF100 is 1000A_{pk})
Maximum peak current: Single peak current with $\leq 100\mu\text{s}$ duration is $2 \times \text{A}_{\text{pk}}$ (e.g. single peak current for HF100 is 2000A_{pk} $\leq 100\mu\text{s}$)

Nominal inductance: $< 1\text{nH}$
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.

