



AC/DC Current Shunts

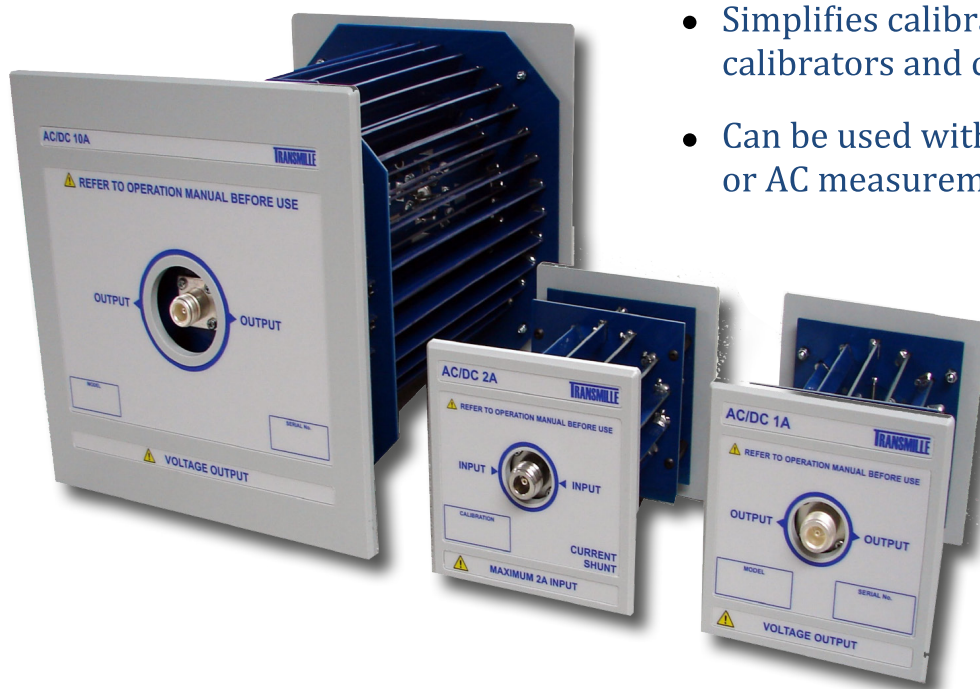
The Transmille AC/DC precision current shunt range consists of a selection of low-inductance coaxial current shunts, this wide range of shunt values enables measuring from 1 mA to 100 Amps. The current shunts are specially designed for laboratory use when making AC or DC current measurements as well as AC/DC current transfer measurements. These shunts help simplify precision AC/DC current measurements.

The physical design and the high quality components used in the current shunts ensure a flat response across a wide range of frequencies. These shunts have also been designed around the principle of low-inductance, low-capacitance and even heat dissipation to ensure high accuracy and stable repeatable measurements.

AC/DC Current Shunts

Product Highlights:

- AC/DC differences as low as 1ppm
- Superior accuracy compared to Wilkinson standard AC/DC resistors, minimising the use of correction factors for frequency response
- Suitable for current measurement from 1mA through to 100A
- Frequency range from DC to 30kHz
- Low inductance & capacitance for flat frequency response
- Simplifies calibration of precision calibrators and current sources
- Can be used with precision multimeters or AC measurement standards



The AC/DC shunts consist of a total of 14 high precision shunts, each with an output value of 0.7V for full scale nominal input. These shunts come in various input values of the following values

Input Value (A)			
0.001A (1mA)	0.1A (100mA)	1A	10A
0.01A (10mA)	0.2A (200mA)	2A	30A
0.02A (20mA)	0.5A (500mA)	5A	50A
0.05A (50mA)			100A

Transmille can also offer custom value current shunts upon request, enabling accurate measurements at any current point required



Each shunt is calibrated by UK's National Physics Laboratory (NPL) to ensure the highest accuracy available. Below are example results for the 1A coaxial shunt calibrated by NPL up to 10kHz

Table 2 AC/DC Difference, PPM							
Applied current (A)	Frequency / Hz						
	23	56	106	1 000	2 000	5 000	10 000
1	-8	5	-8	-4	1	-6	5

The coaxial design offers superior accuracy and low electromagnetic influence, ensuring a linear and predictable frequency response. Each shunt has a type N output connector to ensure low noise when measuring at high frequencies providing easy connections from the shunt to the measuring device.

Each of these shunts can be ordered separately or as a full set of 14 current shunts. The full set is provided in a bespoke transit case to ensure protection during shipment and storage. A low capacitance buffer amplifier for the 1mA shunt is also included. The full set of shunts includes the following:

	Nominal Value (Ohms)
1x 1mA High precision coaxial shunt	714
1x 10mA High precision coaxial shunt	71.4
1x 20mA High precision coaxial shunt	35.7
1x 50mA High precision coaxial shunt	14.28
1x 100mA High precision coaxial shunt	7.14
1x 200mA High precision coaxial shunt	3.57
1x 500mA High precision coaxial shunt	1.42
1x 1A High precision coaxial shunt	0.714
1x 2A High precision coaxial shunt	0.357
1x 5A High precision coaxial shunt	0.142
1x10A High precision coaxial shunt	0.0714
1x 30A High precision coaxial shunt	0.1428
1x 50A High precision coaxial shunt	0.357
1x 100A High precision coaxial shunt	0.00714
Accessories	
1 x Hard Transit Case	
1 x Low Capacitance Buffer Amplifier	

TRANSMILLE
ADVANCED METROLOGY SYSTEMS

AC/DC Current Shunts

