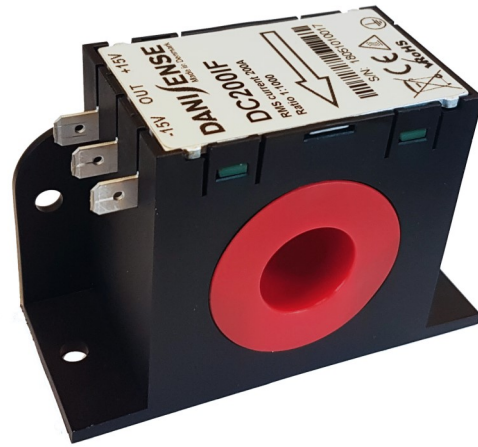


Highly stabilized and precise fluxgate technology based current transducer, re-engineered for cost sensitive, non-intrusive, isolated DC and AC current measurement applications up to 300A



**Features**

- Linearity error maximum 6 ppm
- Offset maximum 5ppm—equivalent to 1.5mA
- Fluxgate, closed loop compensated technology with fixed excitation frequency and second harmonic zero flux detection for enhanced accuracy and stability
- Industry standard 6.3 x 0.8mm faston connection
- Cost focused high performance transducer
- DC and AC current metering with +/-0.1% absolute accuracy up to 5kHz

**Applications:**

- Gradient amplifiers for MRI devices
- Precision power supplies, drives
- Batteries testing and evaluation systems
- Variable speed motor drives

Specification highlights	Symbol	Unit	Min	Typ.	Max
Nominal primary AC current	IPN AC	Arms			200
Nominal primary DC current	IPN DC	A			300
Measuring range	$\hat{I}_{PM}$	A			300
Primary / secondary ratio	n1 : n2		1:1000		1:1000
Linearity error	$\epsilon_L$	Ppm	-6		6
Offset current (including earth field)	$I_{OE}$	Ppm	-5		5
DC-10Hz Overall accuracy @25°C (= $\epsilon_L + I_{OE}$ )	acc $\epsilon$	Ppm	-11		11
AC Maximum gain error from 10Hz to 5kHz	$\epsilon_G$	%			±0.1
Operating temperature range	Ta	°C	-40		+70
Power supply voltages	Uc	V	±14.25		±15.75

## Electrical specifications at Ta=23°C, supply voltage = ± 15V unless otherwise stated

Parameter	Symbol	Unit	Min	Typ.	Max	Comment
Nominal primary AC current	IPN AC	Arms		200		
Nominal primary DC current	IPN DC	A	-300		300	
Measuring range	ÎPM	A	-300		300	
Overload capacity	ÎOL	A	-1500		1500	Non-measured, 100ms
Nominal secondary current	ISN	mA	-300		300	At nominal primary DC current
Primary / secondary ratio				1:1000		
Measuring resistance	RM	Ω	0		20 10	@200A @300A
Linearity error	εL	Ppm	-6		6	
Offset current (including earth field)	IOE	Ppm	-5		5	
Offset temperature coefficient	TCIOE	Ppm/K			3	
Bandwidth	f(-1dB)	kHz	300			Small signal,
Gain error 10Hz – 10kHz kHz -100kHz 100kHz –300kHz	εG	%			0.10% 3.00% 10.0%	% of reading
Phase shift 10Hz – 5kHz 5kHz -100kHz 100kHz –200kHz	θ	°			0.06° 0.4° 2.0°	
Response time to a step current IPN	tr @ 90%	µs		1		di/dt = 100A/µs
Noise 0- 100Hz 0 - 1kHz 0 - 10kHz 0 - 100kHz	RMS Noise	Ppm			0.1 0.2 3.0 8.0	Measured on secondary current
Fluxgate excitation frequency	fExc	kHz		15.6		
Power supply voltages	Uc	V	±14.25		±15.75	
Positive current consumption	Ips	mA	30	31	32	Add Is (if Is is positive)
Negative current consumption	Iins	mA	-31	-32	-33	Add Is (if Is is negative)
Operating temperature range	Ta	°C	-40		+70	
Stability						
Offset stability over time		Ppm/m	-10		+10	ppm refers to ISN

## Isolation specifications

Parameter	Unit	Value
Clearance	mm	9
Creepage distance	mm	10
Comparative tracking index (CTI)	V	> 600
Rms voltage for AC isolation test, 50/60 Hz, 1 min - Between primary and (secondary and shield (GND))	kV	5.7
Impulse withstand voltage (1.2/50 $\mu$ s)	kV	10.4
Rated rms isolation voltage reinforced isolation, overvoltage category III, Pollution degree 2 according to IEC 61010-1 and EN50780	V	300 600

## Absolute maximum ratings

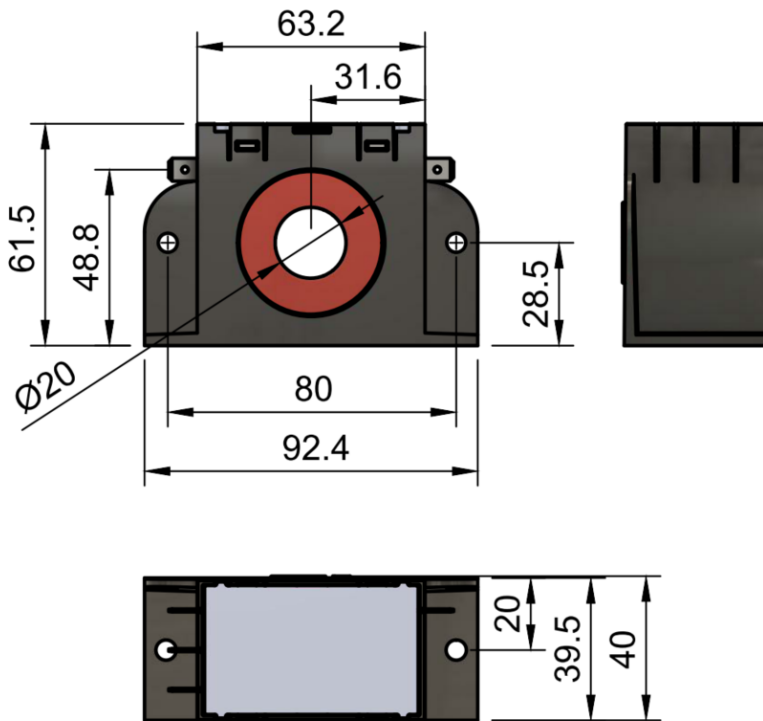
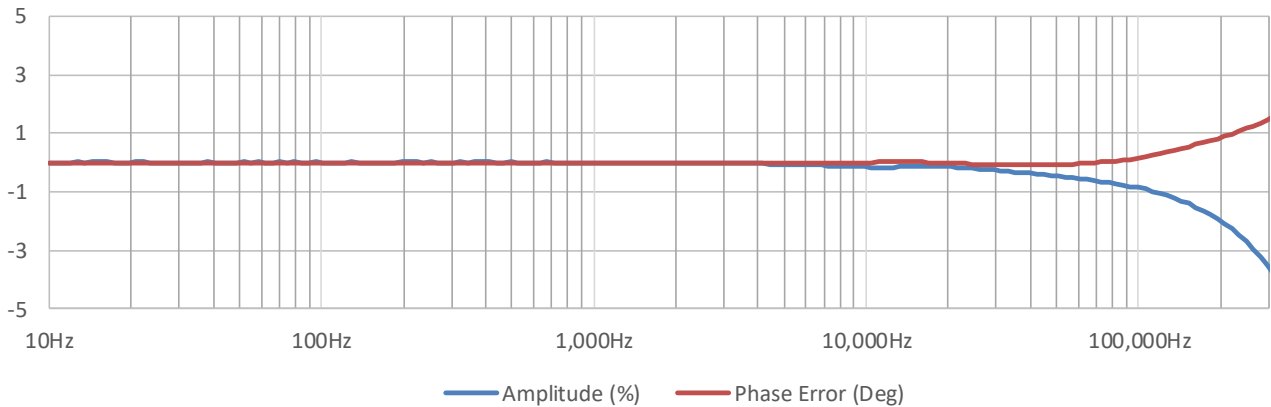
Parameter	Unit	Max	Comment
Primary	kA	1.5	Maximum 100ms
Power supply	V	$\pm$ 16.5	

## Environmental and mechanical characteristics

Parameter	Unit	Min	Typ	Max	Comment
Operating temperature range	$^{\circ}$ C	-40		70	
Storage temperature range	$^{\circ}$ C	-40		85	
Relative humidity	%	20		80	Non-condensing
Mass	kg		0.200		
Connections	4 Industrial faston 6.3 x 0.8mm				
Standards	EN 61326-1 EMC EN 61010-1:2010 Safety				

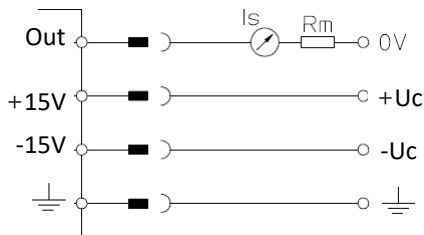
Frequency characteristic

Gain / Phase - Typical



(general tolerance 0.3mm unless

DC200IF connection



CAUTIONS:

- PLEASE IMPERATIVELY RESPECT CONNECTION POLARITIES TO PREVENT DESTRUCTION OF THE TRANSDUCER
- PLEASE ENSURE ADEQUATE CURRENT AND VOLTAGE RATING OF POWER SUPPLIES TO AVOID SATURATION

Positive current direction

Is identified by an arrow on the transducer label

Mounting instructions

- Base plate mounting 2 holes  $\phi$ 5.5
- Side mounting 2 holes  $\phi$ 5.5