Electrical data

At T_A = 25 °C, $\pm U_C$ = ±15 V, unless otherwise noted.
Lines with a * in the comment column apply over the −40 … 85 °C ambient temperature range.

Parameter	Symbol	Unit	Min	Typ	Max		Comment
Primary continuous direct current	$I_{PN\,DC}$	A	−200		200	*	
Primary nominal rms current	I_{PN}	A			200	*	
Primary current, measuring range	I_{PM}	A	−283		283	*	Peak limit
Measuring resistance over supply voltage range	R_M	Ω	0		20		See graph page 5
Secondary current	I_S	mA	−283		283	*	Peak limit
Secondary nominal rms current	I_{SN}	mA			200	*	
Conversion ratio	K_N			1:1000		*	
Resistance of secondary winding	R_S	Ω		20			
Overload capability [1]	$\hat{I}_P$	A	−1000		1000		@ pulse of 100 ms
Supply voltage DC	U_C	V	±14.25	±15	±15.75	*	
Current consumption	I_C	mA		65	71		Add I_S for total current consumption
				70	78	*	
Output rms noise current 0 … 10 Hz [2]	I_{no}	ppm			0.1		
Output rms noise current 0 … 100 Hz [2]					0.5		
Output rms noise current 0 … 1 kHz [2]					1.5		
Output rms noise current 0 … 10 kHz [2]					6		
Output rms noise current 0 … 50 kHz [2]					15		
Re-injected rms noise on primary bus bar		µV			5		0 … 50 kHz
Electrical offset current + self magnetization + effect of earth magnetic field [2]	I_{OE}	ppm		±45	±100		
				±100	±190	*	
Offset stability [2]		ppm/month			1		
Linearity error [2]	ε_L	ppm		±1	±3		@ $\pm I_{PN\,DC}$ range
				±4	±11	*	
Step response time to 90 % of $I_{PN\,DC}$	t_r	µs			1		d*i*/d*t* of 100 A/µs
d*i*/d*t* accurately followed	d*i*/d*t*	A/µs		100			
Frequency bandwidth (±1 dB)	*BW*	kHz		400			Small-signal bandwidth, 0.5 % of $I_{PN\,DC}$
Frequency bandwidth (±3 dB)	*BW*	kHz		1000			Small-signal bandwidth, 0.5 % of $I_{PN\,DC}$

Notes: [1] Single pulse only, not AC. The transducer may require a few seconds to return to normal operation when autoreset system is running
[2] All ppm figures refer to full-scale which corresponds to a secondary nominal rms current (I_{SN}) of 200 mA.

Overload protection - Electrical specification - Status

The overload occurs when the primary current I_P exceeds a trip level such that the fluxgate detector becomes completely saturated and, consequently, the transducer will switch from normal operation to overload mode.
This trip level is guaranteed to be greater than 110 % of I_{PM} and its actual value depends on operating conditions such as temperature and measuring resistance.
When this happens, the transducer will automatically begin to sweep in order to lock on the primary current again.

The overload conditions will be:

- The secondary current I_S generated is a low frequency signal between −283 mA and 283 mA.
- The signal V_{out} (operation status between pin 3 and 8 of the D-sub connector) switches to V+ or GND depending on how it is wired. In other words, the output transistor is switched off (i.e., no current from collector to emitter). See the status port wiring below.
- The green LED indicator (normal operation status) turns off.

The measuring can resume when the primary current returns in the measuring range between $-I_{PM}$ and $+I_{PM}$. Then the signal V_{out} switches to V+ or GND and the green LED indicator (normal operation status) is again lit.

TO ENSURE A SAFE RECOVERY FROM SATURATION, THE MAXIMUM BURDEN RESISTOR ALLOWED IS 15 Ω.

Status/Interlock port wiring