

**Insulation coordination**

Parameter	Symbol	Unit	Value	Comment
Rms voltage for AC insulation test, 50 Hz, 1 min	$U_d$	kV	6	
Impulse withstand voltage 1.2/50 $\mu$ s	$\hat{U}_w$	kV	23	
Insulation resistance	$R_{IS}$	M $\Omega$	200	measured at 500 V DC
Comparative tracking index	$CTI$		600	
Application example			2000 V CAT III, PD2	Reinforced insulation, non uniform field according to EN 50178, IEC 61010
Application example			4000 V CAT III, PD2	Basic insulation, non uniform field according to EN 50178, IEC 61010
Case material	-	-	V0 according to UL 94	
Clearance and creepage	See dimensions drawing on page 7			

**Environmental and mechanical characteristics**

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Ambient operating temperature	$T_A$	$^{\circ}$ C	-40		85	
Ambient storage temperature	$T_S$	$^{\circ}$ C	-50		90	
Mass	$m$	g		1500		

## Electrical data

At  $T_A = 25\text{ °C}$ ,  $\pm U_C = \pm 24\text{ V}$ ,  $R_M = 1\ \Omega$ , unless otherwise noted.

Lines with a \* in the conditions column apply over the  $-40 \dots 85\text{ °C}$  ambient temperature range.

Parameter	Symbol	Unit	Min	Typ	Max	Conditions
Primary nominal rms current	$I_{PN}$	A			2000	*
Primary current, measuring range	$I_{PM}$	A	-3000		3000	*
Measuring resistance	$R_M$	$\Omega$	0			* Max value of $R_M$ is given in figure 1
Secondary nominal rms current	$I_{SN}$	A			0.4	*
Resistance of secondary winding	$R_S$	$\Omega$			18.6	$R_S(T_A) = R_S \times (1 + 0.004 \times (T_A + \Delta\text{temp} - 25))$ Estimated temperature increase @ $I_{PN}$ is $\Delta\text{temp} = 15\text{ °C}$
Secondary current	$I_S$	A	-0.6		0.6	*
Number of secondary turns	$N_S$			5000		
Theoretical sensitivity	$G_{th}$	mA/A		0.2		
Supply voltage	$\pm U_C$	V	$\pm 14.25$		$\pm 25.2$	*
Current consumption	$I_C$	mA		$42 + I_S$ $48 + I_S$		$\pm U_C = \pm 15\text{ V}$ $\pm U_C = \pm 24\text{ V}$
Offset current, referred to primary	$I_O$	A	-1		1	
Temperature variation of $I_O$ , referred to primary	$I_{OT}$	A	-1		1	*
Magnetic offset current, referred to primary	$I_{OM}$	A		$\pm 1$		After $3 \times I_{PN}$
Sensitivity error	$\epsilon_G$	%	-0.15		0.15	*
Linearity error	$\epsilon_L$	% of $I_{PN}$	-0.1		0.1	*
Overall accuracy at $I_{PN}$	$X_G$	% of $I_{PN}$	-0.2 -0.3		0.2 0.3	* 25 ... 70 ... 85 °C -40 ... 85 °C
Output rms noise current referred to primary	$I_{no}$	mA		90		1 Hz to 20 kHz (see figure 4)
Reaction time @ 10 % of $I_{PN}$	$t_{fa}$	$\mu\text{s}$		< 0.5		0 to 1 kA, 200 A/ $\mu\text{s}$
Step response time to 90 % of $I_{PN}$	$t_r$	$\mu\text{s}$		< 0.5		0 to 1 kA, 200 A/ $\mu\text{s}$
Frequency bandwidth	$BW$	kHz		150		-3 dB, small signal bandwidth

## Definition of typical, minimum and maximum values

Minimum and maximum values for specified limiting and safety conditions have to be understood as such as well as values shown in "typical" graphs.

On the other hand, measured values are part of a statistical distribution that can be specified by an interval with upper and lower limits and a probability for measured values to lie within this interval.

Unless otherwise stated (e.g. "100 % tested"), the LEM definition for such intervals designated with "min" and "max" is that the probability for values of samples to lie in this interval is 99.73 %.

For a normal (Gaussian) distribution, this corresponds to an interval between -3 sigma and +3 sigma. If "typical" values are not obviously mean or average values, those values are defined to delimit intervals with a probability of 68.27 %, corresponding to an interval between -sigma and +sigma for a normal distribution.

Typical, minimum and maximum values are determined during the initial characterization of the product.