

Insulation coordination

Parameter	Symbol	Unit	Value	Comment
Rms voltage for AC insulation test, 50 Hz, 1 min	U_d	kV	4.3	Between primary (completely filling the hole) and secondary
Impulse withstand voltage 1.2/50 μ s	\hat{U}_w	kV	7.8	
Partial discharge extinction rms voltage @ 10 pC	U_e	kV	1.8	
Clearance (pri. - sec.)	d_{Cl}	mm	8	Shortest distance through air
Creepage distance (pri. - sec.)	d_{Cp}	mm	8	Shortest path along device body
Case material flammability	-	--	V0	According to UL 94
Application example	-		600 V CAT III PD2	Reinforced insulation according to EN 50178
Application example	-		300 V CAT III PD2	Reinforced insulation according to EN 61010-1
Application example	-		600 V CAT IV PD2	Basic insulation according to EN 61010-1
Application example	-		1000 V CAT III PD2	Basic insulation according to EN 61010-1
Application example	-			According to UL 508

Environmental and mechanical characteristics

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Ambient operating temperature	T_A	°C	-10	25	55	
Ambient storage temperature	T_S	°C	-30		90	
Relative humidity (non-condensing)	RH	%	0		85	
Altitude above sea level		m			2000	
Surrounding temperature according to UL		°C			70	
Mass	m	g		81		

Electrical data ATO-10-B225-D10

 At $T_A = 25\text{ °C}$, $R_{br} = 100\text{ k}\Omega$, unless otherwise noted.

Parameter	Symbol	Unit	Min	Value	Max	Comment
Rated burden	R_{br}	k Ω	100			
Rated primary current	I_{Pr}	A		10		
Rated extended primary current	I_{ePr}	A		12		120 % of I_{Pr}
Rated short-time thermal current	I_{th}	kA			0.6	¹⁾ at 50 Hz; 60 x I_{Pr} (1 s)
Rated dynamic current	I_{dyn}	kA			1.5	at 50 Hz; 2.5 x I_{th}
Rated transformation ratio	k_{ra}	A/V		44.44		
Rated secondary voltage	U_{Sr}	mV		225		
Rated frequency	f_r	Hz		50/60		

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Frequency bandwidth (-3 dB)	BW	kHz	1.5			²⁾ Short circuit condition (no load).
Phase displacement	$\Delta\varphi$	°	-1		1	³⁾ (-10 °C ... 55 °C) Detail page 14
Temperature coefficient of I_{out}	TCI_{out}	ppm/k			80	
Ratio error	ε	%	-1		1	³⁾ (-10 °C ... 55 °C) Detail page 14
Linearity error	ε_L	%	-0.1		0.1	
Influence of external conductor	ε_{ext}	%		0.3		

- Notes:**
- ¹⁾ No test conducted given that is the worst case (load = 100 k Ω i.e short circuit on the output) the peak dissipated power remains low.
 - ²⁾ Frequency bandwidth and phase shift modeling schematic can be provided on request.
 - ³⁾ Considering a primary conductor of at least $\varnothing 9\text{ mm}$ perpendicular to the current transformer. All our **LEMcity** transducers class I are tested at 5 %, 20 % 100 % and 120 % of I_{Pr} to be according to IEC61869-2 table 201.