

MP and EL Industry Current Sensors

Utilisation

Sensors to measure d.c., a.c. or pulsating currents with a galvanic insulation between primary and secondary circuits.

Type MP25P1: the rating (from 5 to 25A) is determined via a combination of the primary connections (see table: "Arrangement of primary terminals and related characteristics").

Technical data

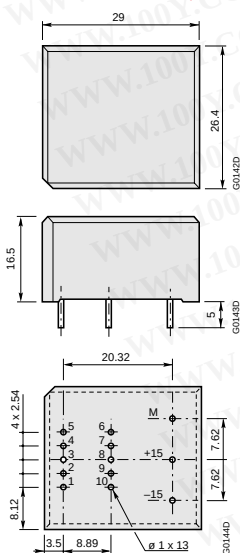
			Without primary bus bar	-	EL25P1	EL50P1	EL55P2	EL100P2
			With primary bus bar	MP25P1	EL25P1BB	EL50P1BB	EL55P2BB	EL100P2BB
Nominal primary current		A r.m.s.	See data page 11	25	50	50	100	
Measuring range	@ ±15V (±5%)	A peak	±55	±80	±80	±145		
Max. measuring resistance	@ I _p max & ±15V (±5%)	Ω	216	142	78	93	29	
Min. measuring resistance	@ I _{pN} & ±15V (±5%) & 70°C	Ω	100	100	75	10	20	
Min. measuring resistance	@ I _{pN} & ±12V (±5%) & 70°C	Ω	0	0	15	0	0	
Turn number			See data page 11	1000	1000	2000	2000	
Secondary current at I _{pN}		mA	25	50	25	50		
Rms accuracy at I _{pN}	-20 ... +70°C, sinus 50Hz	%	≤±0.5	≤±0.5	≤±0.5	≤±0.5		
Offset current	@ +25°C	mA	≤±0.1	≤±0.2	≤±0.2	≤±0.2		
Linearity		%	≤0.1	≤0.1	≤0.1	≤0.1		
Thermal drift coefficient	-20 ... +70°C	μA/°C	7	7	7	7		
Delay time		μs	≤0.1	≤0.1	≤0.1	≤0.1		
di/dt correctly followed		A / μs	≤100	≤200	≤200	≤150	≤150	
Bandwidth	-1dB	kHz	≤150	≤200	≤200	≤150	≤150	
Max. no-load consumption current	@ ±15V (±5%)	mA	≤18	≤20	≤20	≤20	≤20	
Secondary resistance	@ +70°C	Ω	≤96	≤63	≤63	≤188	≤126	
Dielectric strength Primary/Secondary	50 Hz, 1 min	kV	2.5	3	3	3	3	
Supply voltage	±5%	V dc	±12 ... ±15	±12 ... ±15	±12 ... ±15	±12 ... ±15	±12 ... ±15	
Voltage drop		V	≤3	≤3	≤3	≤3	≤3	
Mass (EL type)		kg	-	0.020	0.020	0.020	0.020	
Mass (MP and EL...BB types)		kg	0.027	0.027	0.027	0.027	0.027	
Operating temperature		°C	-20 ... +70	-20 ... +70	-20 ... +70	-20 ... +70	-20 ... +70	
Storage temperature		°C	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	

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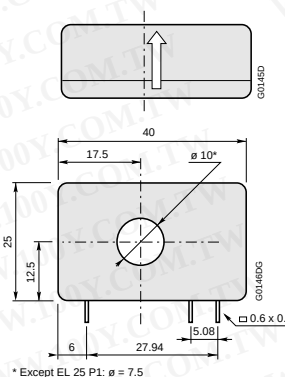
MP25P1 : Arrangement of primary terminals and related characteristics

Nominal primary current (A r.m.s.)	Measuring range @ $\pm 15V$ ($\pm 5\%$) (A peak)	Secondary current at I_{pr} (mA)	Turn ratio (N_s/N_p)	Primary resistance ($m\Omega$)	Primary pin connections
25	± 36	25	1/1000	0.3	
12	± 18	24	2/1000	1.1	
8	± 12	24	3/1000	2.5	
6	± 9	24	4/1000	4.4	
5	± 7	25	5/1000	6.3	

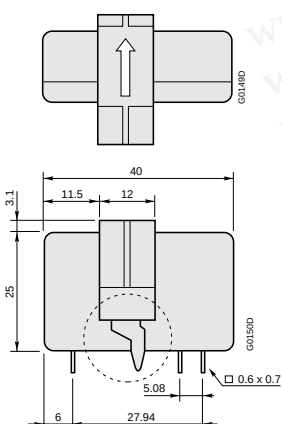
Dimensions (in mm)



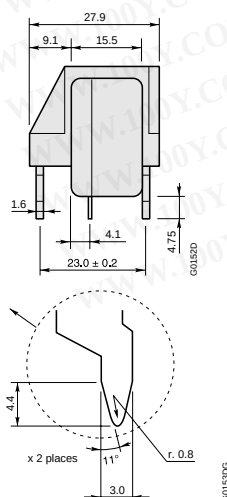
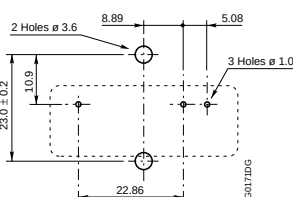
MP current sensors



EL current sensors



EL...BB current sensors



EL...BB: PCB layout

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)