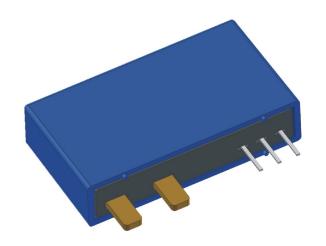


MT series

1MHz High Frequency Current Transducer

Provisional

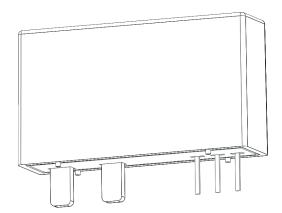




MT series

1MHz High Frequency Current Transducer with +5V Single Supply Voltage

For electronic current detect: DC, AC, pulsed, mixed ..., with a galvanic isolation between primary circuit (high power) and secondary circuit (electronic circuit)



Features

- Ultra high frequency of 1MHz
- Voltage output
- Single supply
- Printed circuit board mounting
- Casing and materials UL-listed

Characteristics

- Very low temperature coefficient of offset
- Very good dv/dt immunity
- Low hysteresis offset voltage
- Short response time
- Reduced height
- Compact design

Applications

- Arc current and corona current
- AC variable speed and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications
- Solar inverter



15

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EN 50178 IEC 60950-1

MT 1501

at T_A = 25 °C, V_C = +5 V_A , unless otherwise noted

	Accuracy–dynamic Perfo	rmance Data	
\mathbf{V}_{out}	Output voltage @ ±Ipn (Ipn=15A)	2.5±0.625*Ip/Ipn	V
\mathbf{V}_{OE}	Electrical offset voltage	< 10	mV
εμ	Linearity error 0.4 % o		% of Ipn
X	Accuracy	1	% of Ipn
\mathbf{X}_{m}	Accuracy at Tamb = 85 °C (max)	< 2	% of Ipn
BW	Frequency bandwidth (-3dB)	DC1	MHz
$T_{v_{\text{out}}}$	Temperature drift of Vout @ Ip=0	< 200	ppm/K
\mathbf{I}_{C}	Current consumption	< 11	mA
\mathbf{V}_{S}	System working voltage (RMS)	< 1000	V
dCp	Creepage distance	9.32	mm
dCI	Clearance distance	9.32	mm
CTI	Comparative Tracking Index (group I)	1000	V

Electrical Data			
\mathbf{I}_{PN}	Primary differential current	15	Α
Io	Measurement range	0~±45	Α
\mathbf{V}_{C}	Supply voltage (±5%)	+5	V
General Data			
	-		
T_{A}	Ambient operating temperature	-40~+85	°C
T _A	Ambient operating temperature Ambient storage temperature	-40~+85 -40~+105	°C

Mass

Standards

m



g

EN 50178 IEC 60950-1

15

MT 2501

at T_A = 25 °C, V_C = +5 V_A , unless otherwise noted

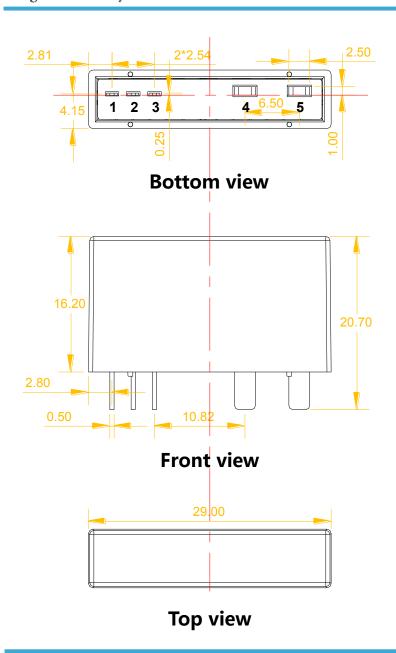
Accuracy-dynamic Performance Data					
\mathbf{V}_{out}	Output voltage @ ±Ipn (Ipn=15A)	2.5±0.625*Ip/Ipn	V	\mathbf{I}_{PN}	
\mathbf{V}_{OE}	Electrical offset voltage	< 10	mV	Io	
ε L	Linearity error	0.4	% of Ipn	\mathbf{V}_{C}	
X	Accuracy	1	% of Ipn		
\mathbf{X}_{m}	Accuracy at Tamb = 85 °C (max)	< 2	% of Ipn		
BW	Frequency bandwidth (-3dB)	DC1	MHz	T _A	А
$T_{V \text{out}}$	Temperature drift of Vout @ Ip=0	< 200	ppm/K	T_{S}	
\mathbf{I}_{C}	Current consumption	< 11	mA	m	
\mathbf{V}_{S}	System working voltage (RMS)	< 1000	V		
dCp	Creepage distance	9.32	mm		
dCI	Clearance distance	9.32	mm		
CTI	Comparative Tracking Index (group I)	1000	V		

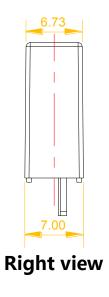
Electrical Data			
\mathbf{I}_{PN}	Primary differential current	25	А
Io	Measurement range	0~±75	А
\mathbf{V}_{C}	Supply voltage (±5%) +5		V
	General Data	a	
TA	Ambient operating temperature	-40~+85	°C
T_{S}	Ambient storage temperature	-40~+105	°C

Mass

Standards







Dimensions in MT series

(In mm. general linear tolerance ±0.1mm)

Mechanical Characteristics

- Primary 3pins 0.5 x 0.25 mm (-0.1mm)
 Pin-out case length 4.5mm
- Two copper pins (4 and 5) with 2.5x1.0mm

Pin Definition		
1	Vout	Sensor Output
2	GND	Power Ground
3	VCC	Supply Voltage +5V
4	IN+	Primary input Current (+)
5	IN -	Primary input Current (-)