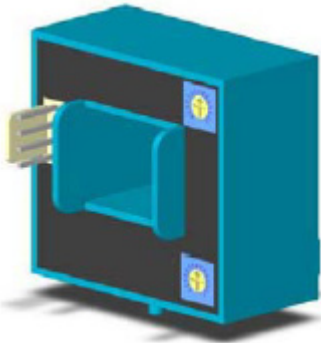


Current Transducer



Hall Effect



Features:

- Highly reliable hall effect device.
- Compact and light weight.
- Fast response time.
- Excellent linearity of the output voltage over a wide input range.
- Excellent frequency response (> 50 KHz).
- Low power consumption (12 mA nominal).
- Capable of measuring both DC and AC, both pulsed and mixed.
- High isolation voltage between the measuring circuit and the current-carrying conductor (2.5 KV ac).
- Extended operating temperature range.
- Flame-Retardant plastic case and silicone encapsulate, using UL classified materials, ensures protection against environmental contaminants and vibration over a wide temperature and humidity range.

Applications

- UPS systems.
- Industrial robots.
- NC tooling machines.
- Elevator controllers.
- Process control devices.
- AC and DC servo systems.
- Motor speed controller.
- Electrical vehicle controllers.
- Inverter-controlled welding machines.
- General and special purpose inverters.
- Power supply for laser processing machines.
- Controller for traction equipment eg. electric trains.
- Other automatic control systems.

Specification Table

Parameter	Symbol	Unit	TMA50A	TMA100A	TMA200A	TMA400A
Nominal Input Current	I_{fn}	A dc	±50	±100	±200	±400
Linear Range	I_{fs}		±150	±300	±600	±900
Nominal Output Voltage	V_{hn}	V	4 V ±1% at $I_f = I_{fn}$ ($R_L = 10\text{ K}\Omega$)			
Offset Voltage	V_{os}	mV	Within ±40 mV at $I_f = 0$, $T_a = 25^\circ\text{C}$			
Output Resistance	R_{OUT}	Ω	< 100 Ω			
Hysteresis Error	V_{oh}	mV	Within ±20 mV at $I_f = I_{fn} \rightarrow 0$			
Supply Voltage	V_{CC} / V_{EE}	V	±15 V ±5%			
Linearity	ρ	%	Within ±1% of I_{fn}			
Consumption Current	I_{CC}	mA	±15 mA Max.			
Response Time (90% V_{hn})	T_r	μs	10 μs at $d I_f / dt = I_{fn} / \mu\text{s}$			
Frequency Bandwidth (-3dB)	f_{BW}	Hz	DC to 50 KHz			
Thermal Drift of Output	-	% / °C	Within ±0.1% / °C at I_{fn}			
Thermal Drift of Zero Current Offset	-	mV / °C	Within ±1.5 mV / °C at I_{fn}			
Dielectric Strength	-	V	2.5 KV ac × 60 s			
Isolation Resistance 1,000 V dc	R_{IS}	M Ω	> 1,000 M Ω			

Current Transducer



Hall Effect

Specification Table

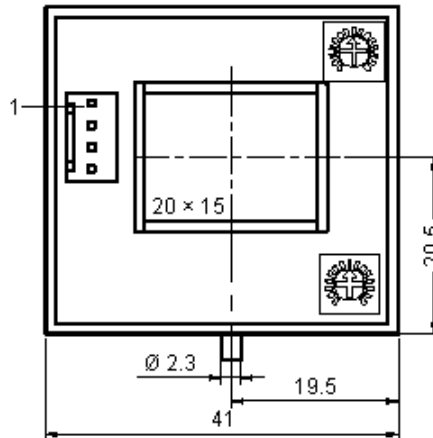
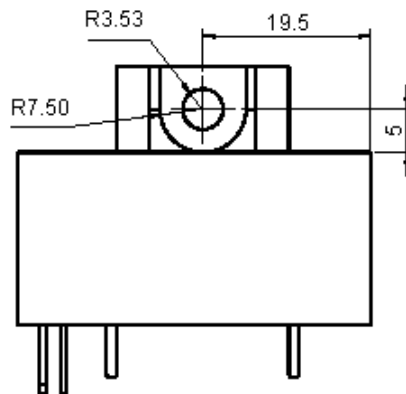
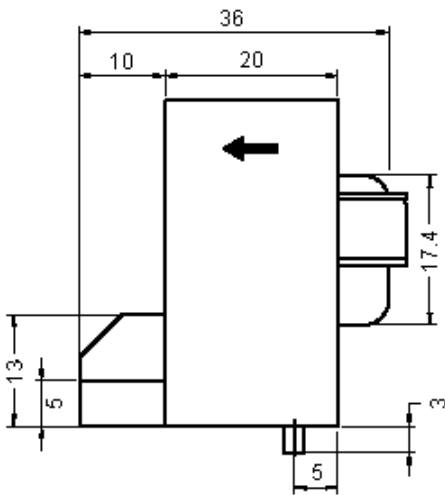
Parameter	Symbol	Unit	TMA50A	TMA100A	TMA200A	TMA400A
Operating Temperature	T_a	°C	-15°C to 80°C			
Storage Temperature	T_s					
Mass	W	g	65 g			

Appearance, Dimensions and Pin Identification

All dimensions in mm ± 0.1 , holes -0 , $+0.2$ except otherwise noted

Pin Assignment	
1	+15 V
2	-15 V
3	V_{OUT}
4	0 V

← Positive current flow direction



Dimensions : Millimetres

Part Number Table

Description	Part Number
Current Transducer	TMA400A
Current Transducer	TMA200A
Current Transducer	TMA50A
Current Transducer	TMA100A

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