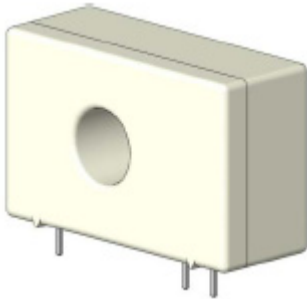


# Current Transducer



## Hall Effect



### Features:

- Highly reliable closed loop hall effect device.
- Compact and light weight.
- Fast response time.
- Excellent linearity of the output voltage over a wide input range.
- Excellent frequency response (> 150 KHz).
- Low power consumption (9 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	TQL100A			
Nominal Input Current	$I_{pn}$	A dc	±100			
Supply Voltage Range	$V_{CC} / V_{EE}$	V	±12 to ±15			
Supply Voltage ±5%			±12	±15		
Consumption Current	$I_{CC}$	mA	15 mA + $I_s$			
Measuring Range	$I_{fs}$	A dc	±100	±120	±100	±150
Maximum Load Resistance	$R_{Mmax}$	Ω	43	15	105	26
Minimum Load Resistance	$R_{Mmin}$		0	0	0	0
Conversion Ratio	$K_N$	-	1:2000			
Secondary Current at $I_{pn}$	$I_s$	mA	50			
Secondary Resistance	$R_{Mmax}$	Ω	126 at 25°C, 130 at 80°C			
Offset Current	$I_{os}$	mA	Within ±0.3 mA at $I_p = 0$ , $T_a = 25^\circ\text{C}$			
Overall Accuracy at $I_{pn}$	-	%	Within ±0.3% of $I_{pn}$			
Linearity	$\rho$		Within ±0.1% of $I_{pn}$			
Response Time (90% $V_{hn}$ )	$T_r$	μs	2 μs Max. at $d I_f / dt = I_{pn} / \mu\text{s}$			
Frequency Bandwidth (-3 dB)	$f_{BW}$	Hz	DC to 150 KHz			

# Current Transducer



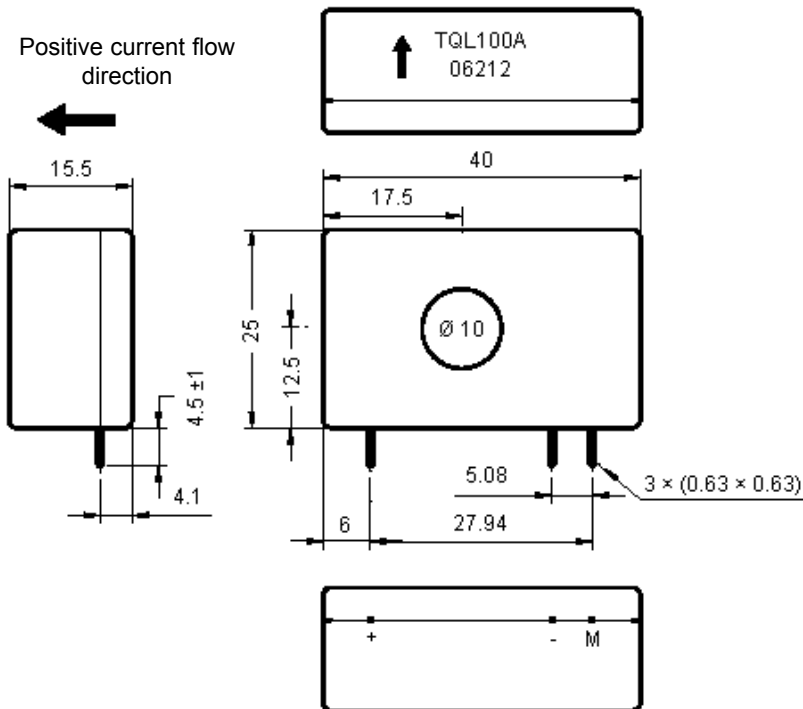
## Hall Effect

### Specification Table

Parameter	Symbol	Unit	TQL100A
Thermal Drift of Output	-	mA	Within $\pm 0.5$ mA $0^{\circ}\text{C}$ to $80^{\circ}\text{C}$
Dielectric Strength	-	V	2.5 KV ac $\times$ 60 s
Isolation Resistance at 1,000 V dc	$R_{IS}$	$M\Omega$	$> 1,000$ M
Operating Temperature	$T_a$	$^{\circ}\text{C}$	$-20^{\circ}\text{C}$ to $80^{\circ}\text{C}$
Storage Temperature	$T_s$		$-20^{\circ}\text{C}$ to $85^{\circ}\text{C}$
Mass	W	g	28 g

### Appearance, Dimensions and Pin Identification

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



Dimensions : Millimetres

Pin Assignment	Description
+	+12 to 15 V
-	-12 to -15 V
M	Measure (connect RL to 0 V Ground)

### Part Number Table

Description	Part Number
Current Transducer	TQL100A

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2011.