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# Millennium Range

## HALL EFFECT CURRENT TRANSFORMERS

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SPECIALITY MAGNETIC COMPONENTS

# Millennium Range

## HALL EFFECT CURRENT TRANSFORMERS

### INTRODUCTION

Closed loop Hall Effect Current Transformers are firmly established as the preferred current measuring component in applications requiring high accuracy coupled with wide dynamic range.

The Telcon MILLENNIUM range has been designed to cover current measurement from 10A to 50A with reduced PCB foot-print and 200A to 500A with panel-mounted units. Standard frequency bandwidth (-1dB) is dc to 25kHz for the units rated up to 50A and dc to 75kHz for the 200A to 500A devices.

The range meets market demand for reduced PCB space, high accuracy with low zero offset current; while retaining the proven reliability of closed-loop Hall effect technology.

### DESCRIPTION

The MILLENNIUM range comprise a family of product options as shown in the summary tables below. Low current units are PCB mounting with integral primary winding and are suitable for measuring reversing currents (except the HTPxxMSV).

The 'MLx' devices are powered from a single +5V supply with output centred on +2.5V. A +2.5V reference output is provided on the HTPxxMLR.

### LOW CURRENT RANGE PRODUCT OPTIONS

Generic Product	Key Feature	Supply Voltage	Nominal Full Scale Current Range				
			10A	12A	18A	25A	50A
HTP50M	Current output	±15V	HTP10M	HTP12M	HTP18M	HTP25M	HTP50M
HTP50MSV	Unidirectional output	+15V	HTP10MSV	HTP12MSV	HTP18MSV	HTP25MSV	HTP50MSV
HTP50MLV	Voltage output	+5V	HTP10MLV	HTP12MLV	HTP18MLV	HTP25MLV	HTP50MLV
HTP50MLC	Current output	+5V	HTP10MLC	HTP12MLC	HTP18MLC	HTP25MLC	HTP50MLC
HTP50MLR	Voltage output Internal 2.5V reference	+5V	HTP10MLR	HTP12MLR	HTP18MLR	HTP25MLR	HTP50MLR

### HIGH CURRENT RANGE OPTIONS

Generic Product	Key Feature	Supply Voltage	Nominal Full Scale Current Range		
			200A	300A	500A
HT200M	Panel Mounted	±15V	HT200M		
HT300M	Panel Mounted	±15V		HT300M	
HT500M	Panel Mounted	±15V			HT500M

## PCB MOUNTING

The HTPxxMxx range of Hall effect Current Transformers are fully PCB mounting with integral primary turns, producing a range of transformation ratios and full scale current ratings in a single physical package size ( 27.0mm x 13.0mm x 21.5mm high ). The basic specifications are given below.

Generic Product Type	HTP50M					HTP50MSV				
	HTP10M	HTP12M	HTP18M	HTP25M	HTP50M	HTP10MSV	HTP12MSV	HTP18MSV	HTP25MSV	HTP50MSV
Nominal Primary Current	10A	12A	18A	25A	50A	10A	12A	18A	25A	50A
Supply Voltage	±15V, ±5%					+15V, ±5%				
Linearity Limit	±15A	±18A	±27A	±38A	±75A	15A	18A	27A	38A	75A
Transformation Ratio	200:1	250:1	333:1	500:1	1000:1	200:1	250:1	333:1	500:1	1000:1
Bandwidth ( -1dB )	dc to 25kHz					dc to 25kHz				
Proof Stress Voltage	3.25kV ac rms for 1 minute					3.25kV ac rms for 1 minute				

Generic Product Type	HTP50MLV					HTP50MLC				
	HTP10MLV	HTP12MLV	HTP18MLV	HTP25MLV	HTP50MLV	HTP10MLC	HTP12MLC	HTP18MLC	HTP25MLC	HTP50MLC
Nominal Primary Current	10A	12A	18A	25A	50A	10A	12A	18A	25A	50A
Supply Voltage	+5V, ±5%					+5V, ±5%				
Linearity Limit	±15A	±18A	±27A	±38A	±75A	±15A	±18A	±27A	±38A	±75A
Transformation Ratio *	100mV/A	80mV/A	60mV/A	40mV/A	20mV/A	100µA/A	80µA/A	60µA/A	40µA/A	20µA/A
Bandwidth ( -1dB )	dc to 25kHz					dc to 25kHz				
Proof Stress Voltage	3.25kV ac rms for 1 minute					3.25kV ac rms for 1 minute				

\* with respect to 2.5V external reference

Generic Product Type	HTP50MLR				
	HTP10MLR	HTP12MLR	HTP18MLR	HTP25MLR	HTP50MLR
Nominal Primary Current	10A	12A	18A	25A	50A
Supply Voltage	+5V, ±5%				
Linearity Limit	±15A	±18A	±27A	±38A	±75A
Transformation Ratio *	100mV/A	80mV/A	60mV/A	40mV/A	20mV/A
Bandwidth ( -1dB )	dc to 25kHz				
Proof Stress Voltage	3.25kV ac rms for 1 minute				

\* with respect to 2.5V internal reference

## PANEL MOUNTING

The HTx00M range of Hall effect Current Transformers are designed for panel mounting. The primary circuit passes through the bore. Power supply and output connections are made via a 4-pin Molex-type connector.

Generic Product	HT200M	HT300M	HT500M
Nominal Primary Current	200A	300A	500A
Supply Voltage	±15V, ±5%		
Linearity Limit	±500A	±800A	±800A
Transformation Ratio	2000:1	2500:1	2000:1
Bandwidth ( -1dB )	dc to 75kHz		
Proof Stress Voltage	7kV ac rms for 1 minute		



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## OTHER PRODUCTS

At the heart of our operations is a powerful and innovative design team able to take advantage of new developments in materials and processes.

The ranges described in this data sheet represent only a small part of the comprehensive product offered by the Company. Many products result from collaboration with users to meet the demands of a critical new application.

For comprehensive technical performance data, availability of custom designed specials, and other products in the range, please contact our Product Managers who will be able to advise on all aspects of current and voltage measurement for control applications.

