TELCON

Hall Effect Current Sensors
Current Transformers
&
Toroidal Cores



SPECIALITY MAGNETIC COMPONENTS

Qualified to ISO 9001:2008

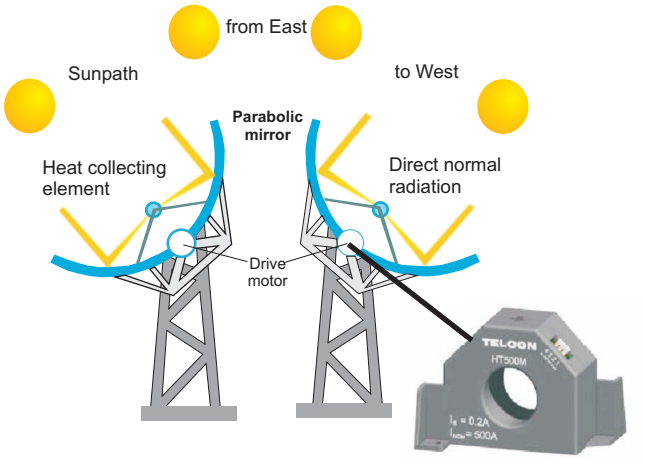
1 INTRODUCTION

Telcon was established in 1864 to manufacture and lay a telegraph cable connecting England and America. In 1924 Telcon invented and patented 'MUMETAL®' high permeability Nickel Iron alloys.
Today this famous company is still producing high permeability magnetic cores along with the design and production of Closed and Open Loop Hall Effect Current Sensors.

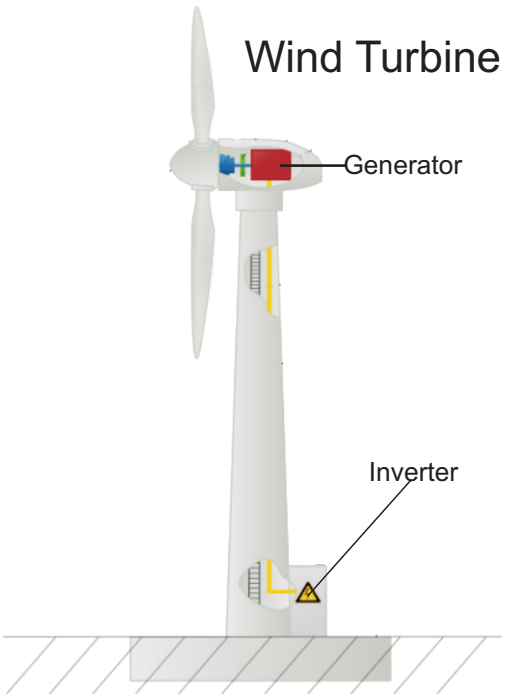
Hall effect current sensors are widely used in a variety of applications requiring an accurate, fast response signal proportional to the primary current being measured. Products are available in a range of configurations covering primary currents up to 3000A, providing complete galvanic isolation between the primary current and the output.

Telcon is constantly reviewing applications and changing industry needs and providing innovative solutions. For example, Telcon have already supplied a wide range of products for use in Renewable Energy applications, including custom products for customers specific needs.

Renewable Energy Applications



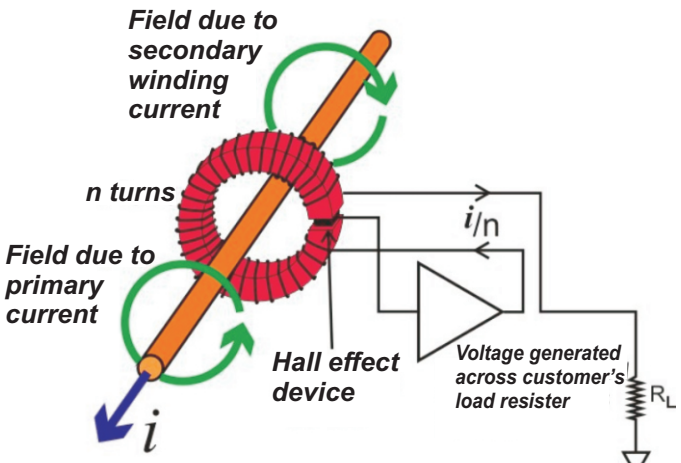
Solar tracking



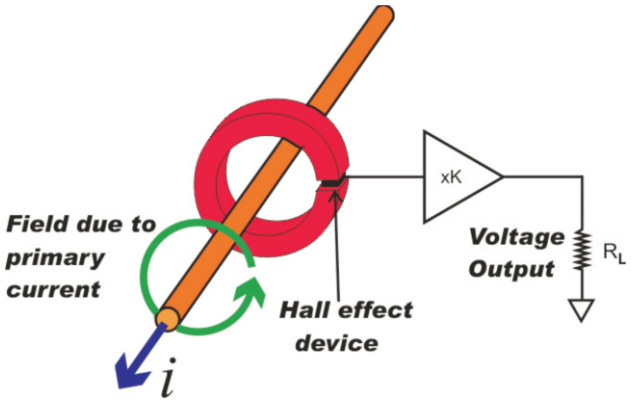
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TELCON HALL EFFECT CURRENT SENSORS

2 OPERATING PRINCIPLE



Closed Loop



Open Loop

3 APPLICATIONS

Variable speed drives
Welding & Plasma Cutting
Electric Vehicles
Wind Energy
Fuel Cells

UPS
Process control & monitoring
Photovoltaic systems
Solar Tracking
Precision power supplies

4 FEATURES

High Accuracy
Primary/Secondary isolation
AC/DC pulse current measurement

Ease of installation
Wide dynamic range
Proven track record

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TELCON HALL EFFECT CURRENT SENSORS

5 CLOSED LOOP RANGE

HTP Range - PCB Mounting





Our HTP range of products are PCB mounted units covering the range from 10A to 230A.The HTP50 range is designed for use with a cable for the primary current, but busbars are available up to 150A for PCB primary current connection.
The HTPxxNP, HTPxxCPT and HTPxxM ranges all have PCB primary current connections as standard in various formats.





HTP - PCB Mounting - Single Supply



The HTP25MSV, HTP50MSV and HTP50SV are additions to the standard range and are designed for unidirectional current measurement and require a single +15V power supply.

HTPLP - PCB Mounting - Low Profile



The HTP50LP is a development of the HTPxxNP range but intended for applications requiring a low unit height. The HTP50LP is only 11.3mm high off the PCB. Performance is similar to the standard HTPxxNP range.

HTPMLx Range - PCB Mounting - +5V Supply

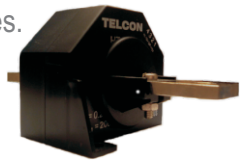


The HTPxxMLV and HTPxxMLR covers the range 10A to 50A and operate from a single +5V supply. Both types provide a voltage output centred on 2.5V. The HTPxxMLR has an additional 2.5V reference voltage output for use by the customer.

HTM Range - Panel Mounted



The HTx00M range are panel mounted units covering the range 200A to 1000A in two sizes. Industry standard connectors are offered but Fast-on or cable terminations are also available. Bus-bars and clamps are available as extras for this range.



HT Range - Panel Mounted



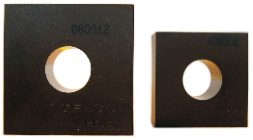
The HT range were the original Telcon panel mounted Hall Effect Current Sensors covering the range 100A to 300A. These are not recommended for new designs but are still available.

TELCON HALL EFFECT CURRENT SENSORS

Hall Element & Coil Assembly - PCB Mounted



The HES range of panel mounted units cover the range from 25A to 500A and consist of the coil and Hall element only where the user includes the active circuitry on their PCB. All units are designed for primary current cable and are available for vertical mounting (up to 100A) and horizontal mounting (25A to 500A).



Hall Element & Coil Assembly - PCB Mounted



The HESQ range available for 50A and 100A are a development of the HES range designed for PCB primary current connection and low PCB space requirement.



6 OPEN LOOP RANGE

HOB & HOY Ranges - PCB Mounted



The HOB and HOY ranges are designed for PCB mounting. The HOY range is available up to 50A and has PCB primary current connection, while the HOB range for primary current cables are available up to 400A



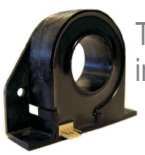
HOQ & HOS Ranges - Panel Mounted



The HOQ and HOS ranges up to 600A are for panel or PCB mounting and use with a primary current cable. The output terminations are to a industry standard connector. The HOS-N is a variant of the HOS for PCB mounting only.



HOL & HOT Ranges - Panel Mounted



The HOL and HOT ranges up to 1500A are for panel mounting only. The output terminations are to a industry standard connector.



7 DC SIGNAL ISOLATORS

DCVT Range - DC Voltage Transformers





The DCVT range of self-powered units provides an isolated DC voltage output for a DC voltage input. The DCVT5U, DCVT5S and DCVT8HV have basic 25V:10V ratio, expandable by the insertion of resistance in series with the input. The DCVT5x types are proof stress tested to 6kV and the DCVT8HV to 10kV. The DCVT5S has an electrostatic screen between input and output while the DCVT6U offers 10V:10V transformation. All units are for unipolar operation and are panel mounted.

MDTx Range - Isolating Amplifiers



The MDTx range of DIN rail mounting isolating amplifiers offers a variety of input/output combinations. Units require a power supply on the output side only and are proof stress tested to 6kV, 12kV proof stress is also an option for some types. Units are available with inputs from 50mV to 1200V. Standard MDTZ units offer ±10V output, MDTY units ±10mA and MDTC units 4-20mA or 0-20mA for nominal input, but other ranges may be available. Compatible power supply units are also available.

8 TOROIDAL CORES

Telcon high permeability strip wound toroidal cores are manufactured to the highest international standards, in a range of alloys and sizes developed to meet the most stringent specifications, and are used in a variety of applications.

Core manufacturing, including winding and heat treatment, is carried out and controlled using processes and machines specially developed by Telcon.

Telcon cores conform to the appropriate standard specifications and every core supplied is individually tested and guaranteed. Certificates of Conformity are available, upon request, for all despatches.

Alloys available for cores

Mumetal® *type*	Mumetal, Mumetal+
Supermumetal® *type*	Super Mumetal, Super Mumetal 150, Super Mumetal 200
Radiometal *type*	Radiometal 4550, SuperRadiometal
Square Loop *type*	HCR



Strip Thickness

Cores are wound with the appropriate strip thickness from 0.013mm to 0.10mm to obtain optimum performance (0.20mm may be available in certain materials only.) For 50Hz to 400Hz use, 0.10mm is typical and for higher frequency applications 0.05mm, 0.025mm and 0.013mm are used as required.

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We supply into global markets on six continents.
The factories are situated on two sites located close to international transport hubs

Products

CLOSED LOOP HALL EFFECT CURRENT SENSORS

PCB Mount Integral Primary 7 to 50A
PCB Mount through-hole 25 to 225A
Panel Mount 100 to 1000A
Hall Element Assemblies 25 to 500A
Custom Designed Modules 5 to 2500A

OPEN LOOP HALL EFFECT CURRENT SENSORS

PCB Mount Integral Primary 5 to 100A
PCB Mount through-hole 25 to 600A
Panel Mount 25 to 3000A
Custom Designed Modules 5 to 3000A

CURRENT & VOLTAGE TRANSFORMERS

Power frequency current transformers
DC Voltage isolating transformers
Isolating amplifiers

INDUCTORS & CHOKES

Toroidal chokes
RFI suppression chokes

TOROIDAL CORES

High permeability cores
Ultra high permeability NiFe cores
RFI suppression cores
Bobbin Cores

CUSTOM DESIGNED PRODUCTS

Innovative custom designed products
utilising new developments in materials & processes

Markets

Europe
North America
South America
Asia
Australasia
Africa

Overseas Representation

Australia
Belgium
Brazil
Czech Republic
Finland
Germany
Holland
Italy
India
Korea
Malaysia
Spain
Switzerland
Sweden
UK
USA

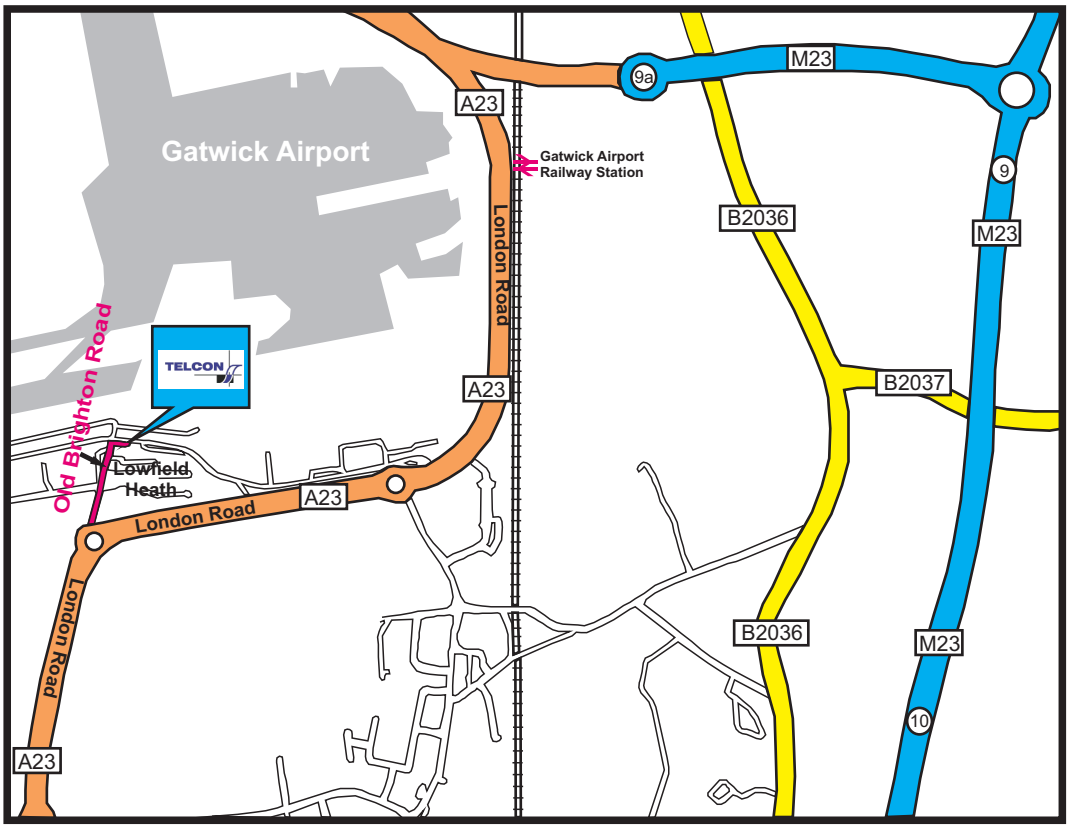
TELCON

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 range described in this brochure represent only a small part of the comprehensive products 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 sales team who will be able to advise on all aspects of current and voltage measurement for control applications.



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