

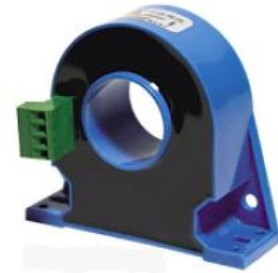
## Panel Mounted, Hall Effect DC Current Transducer

The **HDT-xxAS/A1** Series of panel mounted DC current transducers are designed for application requiring the non-intrusive measurement of a DC current and DC current pulses.

The HDT incorporates a closed loop, Hall Effect current sensor design as the input to a 4 to 20mA transducer output circuit. The Hall Effect current sensor is based upon the principle that a magnetic field applied perpendicular to an electric current will create a proportional Hall voltage perpendicular to the two fields. The technology allows;

- Contactless, non-intrusive current sensing and
- Current sensing of DC current and DC current pulses.

The closed-loop Hall Effect technology features high accuracy with high primary to secondary electrical isolation.



### Features:

- Rated Primary: May be configured for any DC primary current up to 500A.
- Output: 4 to 20mA where
  - 4mA represents a primary current of 0 and
  - 20mA represents the rated primary current.
- Storage Temperature: -40°C to +90°C.
- Supply Voltage:  $\pm 12V \dots 15V (\pm 5\%)$ .
- Supply Consumption: 30mA + secondary output or 50mA maximum.
- Construction:
  - Epoxy encapsulated housing.
  - Case material – Nylon, UL flame retardant rating 94 V-0.
- RoHS compliant.



### Specifications:

- DC current.
- Isolation voltage between Primary and Secondary: 6kV RMS @ 50HZ for 1 minute.
- Load resistance: < 300 Ohms.
- Operating Temperature: -25°C to +85°C.

### Performance:

- Accuracy:  $\pm 1\%$  of  $I_{nominal}$  @ 25°C
- Linearity:  $\leq 0.5\%$
- Response Time:  $\leq 0.35$  Second
- Offset Current (@ +25°C): 4mA  $\pm 0.2$ mA maximum for primary current  $I_n = 0$ .
- Temperature Drift: 0.05%/ °C (-40 °C to +85 °C)

#### Yuanxing Electronics Co., LTD

Sanying Road, Science & Technology Industry Park  
Zhangdian, Zibo, Shandong Province 255095  
P.R.C.  
Telephone: +86-533.381.8450  
[sales@yuanxing.net](mailto:sales@yuanxing.net)

Fax: +86-533.381.8724  
[www.yuanxing.net](http://www.yuanxing.net)

#### T.I. Chen Associates LLC.

1101 N. 5<sup>th</sup> Street  
Tacoma, Washington 98403-1610  
USA  
Telephone: 253.678.2661  
[sales@tichenassociates.com](mailto:sales@tichenassociates.com)

FAX: 206.350.6482  
[www.TIChenAssociates.com](http://www.TIChenAssociates.com)

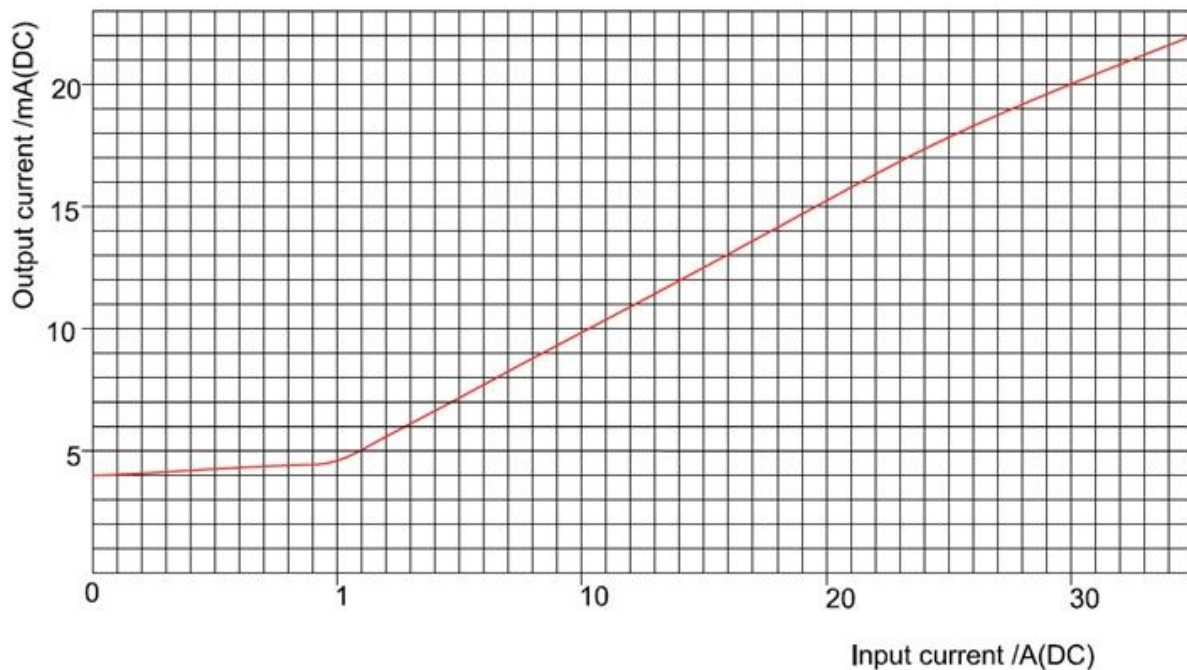
### Configuration Options:

Model	Rated Current (RMS)	Measurement Range
HDT-xxxAS/A1	xxxA	0 to 120% of Rated input current

### Configuration Examples:

HDT-030AS/A1	30A	0 to 36A
HDT-100AS/A1	100A	0 to 120A
HDT-500AS/A1	500A	0 to 560A

### Typical Performance – HDT-030AS/A1:



#### Yuanxing Electronics Co., LTD

Sanying Road, Science & Technology Industry Park  
Zhangdian, Zibo, Shandong Province 255095  
P.R.C.  
Telephone: +86-533.381.8450  
[sales@yuanxing.net](mailto:sales@yuanxing.net)

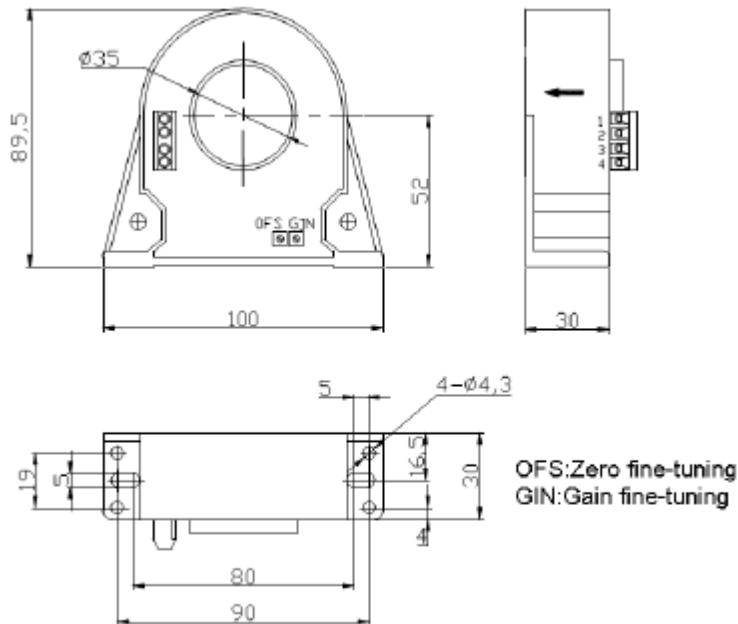
Fax: +86-533.381.8724  
[www.yuanxing.net](http://www.yuanxing.net)

#### T.I. Chen Associates LLC.

1101 N. 5<sup>th</sup> Street  
Tacoma, Washington 98403-1610  
USA  
Telephone: 253.678.2661  
[sales@tichenassociates.com](mailto:sales@tichenassociates.com)

FAX: 206.350.6482  
[www.TIChenAssociates.com](http://www.TIChenAssociates.com)

**Outline Drawing:**



**CONNECTION DEFINITIONS:**

- **Terminal #1:** Power supply input - +12VDC ...+15VDC
- **Terminal #2:** Power supply input - -12VDC ...-15VDC
- **Terminal #3:** Secondary signal out
- **Terminal #4:** Secondary signal ground/ return

**NOTE:** Secondary output is positive when direction of primary flow is from side with terminals to side without terminals.

**Custom Hall Effect current sensor designs** are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to [engineering@tichenassociates.com](mailto:engineering@tichenassociates.com) or the address below.

**Yuanxing Electronics Co., LTD**  
Sanying Road, Science & Technology Industry Park  
Zhangdian, Zibo, Shandong Province 255095  
P.R.C.  
Telephone: +86-533.381.8450  
[sales@yuanxing.net](mailto:sales@yuanxing.net)

Fax: +86-533.381.8724  
[www.yuanxing.net](http://www.yuanxing.net)

**T.I. Chen Associates LLC.**  
1101 N. 5<sup>th</sup> Street  
Tacoma, Washington 98403-1610  
USA  
Telephone: 253.678.2661  
[sales@tichenassociates.com](mailto:sales@tichenassociates.com)

FAX: 206.350.6482  
[www.TIChenAssociates.com](http://www.TIChenAssociates.com)