

### 1. Features :

<ul style="list-style-type: none"> <li>■ 12 Pin SIL Package</li> </ul>	
<ul style="list-style-type: none"> <li>■ Low Ripple and Noise</li> </ul>	
<ul style="list-style-type: none"> <li>■ Input / Output Isolation 500 Vdc</li> </ul>	
<ul style="list-style-type: none"> <li>■ 100 % Burn-In</li> </ul>	
<ul style="list-style-type: none"> <li>■ Input Filter with Internal Capacitor</li> </ul>	
<ul style="list-style-type: none"> <li>■ Custom Design Available</li> </ul>	

### 2. Absolute maximum ratings :

( Exceeding these values may damage the module. These are not continuous operating ratings )

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Absolute Voltage Range	5V Input Model	-0.7	5	7.5	Vdc
	12V Input Model	-0.7	12	15	
	24V Input Model	-0.7	24	30	
Max. Output power		---	---	2	W
Output Short circuit duration		---	---	1.0	Second
Operating temperature	Output Full Load	-40	---	+85	°C
Storage temperature		-55	---	+105	

### 3. Nominal Input / Output Electrical Specifications :

( Specifications typical at Ta = +25°C , nominal input voltage, rated output current unless otherwise noted )

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Voltage Range	5V Input Model	4.5	5	5.5	Vdc
	12V Input Model	10.8	12	13.2	
	24V Input Model	21.6	24	26.4	
Output Voltage Accuracy	Nominal Input	---	---	± 5.0	%
Voltage Balance (Dual Outputs )		---	---	± 1.0	
Switching Frequency		---	80	---	KHz
Temperature Coefficient		---	± 0.01	± 0.02	% / °C
Isolation Voltage	60 Seconds / 0.5mA	500	---	---	Vdc
Isolation Resistance	500 Vdc	1000	---	---	MΩ
Isolation Capacitance	1 KHz / 250 mV rms	---	60	---	pF
Max. Line Regulation (Per 1.0 % change in input change)		---	---	1.3	%

### 4. Single Selection Guide :

#### 4.1. Non-Regulated - 500Vdc Isolation – Single Output

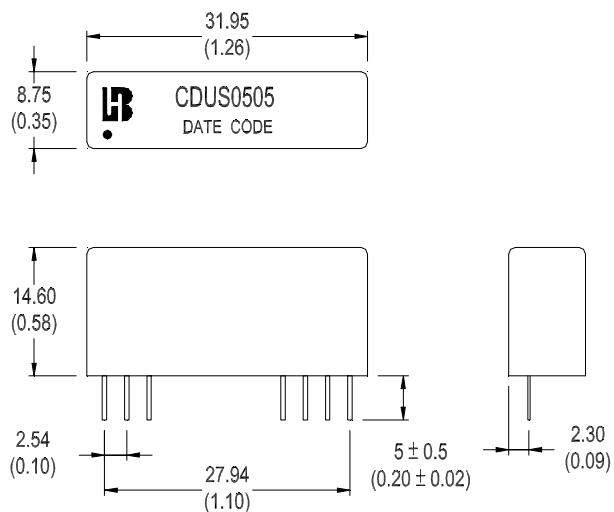
( Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted )

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CDUS0505	5	5.0	360	30	468	60	± 8	77
CDUS0509		9.0	200	30	456	90	± 8	79
CDUS0512		12.0	150	28	450	100	± 8	80
CDUS0515		15.0	120	28	444	120	± 8	81
CDUS1205	12	5.0	360	18	192	60	± 8	78
CDUS1212		12.0	150	18	188	100	± 8	80
CDUS1215		15.0	120	18	185	120	± 8	81
CDUS2405	24	5.0	360	5	97	60	± 8	77
CDUS2412		12.0	150	4	94	100	± 8	80
CDUS2415		15.0	120	4	93	120	± 8	81
CDUSxxxx								

Notes :

1. CDUSxxxx is for Customer Design.
2. Load regulation is for output current change from 20 % to 100 % Max. Load.

### Mechanical Dimension :



Units : mm ( inch )  
Tolerance : .xx ± 0.25  
( ± 0.01 )

Pin	500Vdc - Single
1	+Vin
2	NC
3	Vo (-)
4	
5	
6	---
7	
8	
9	NC
10	Vo (-)
11	Vo (+)
12	-Vin

Note : " --- " means Omitted

### 4.2. Regulated - 500Vdc Isolation – Single Output

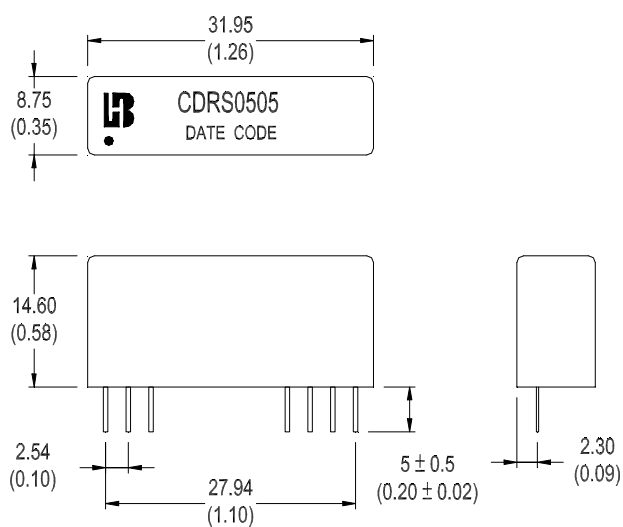
( Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted )

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CDRS0505	5	5.0	360	30	581	50	± 0.5	62
CDRS0509		9.0	200	30	571	60	± 0.5	63
CDRS0512		12.0	150	28	563	70	± 0.5	64
CDRS0515		15.0	120	28	563	90	± 0.5	64
CDRS1205	12	5.0	360	18	238	50	± 0.5	63
CDRS1212		12.0	150	18	234	70	± 0.5	64
CDRS1215		15.0	120	18	234	90	± 0.5	64
CDRS2405	24	5.0	360	5	119	50	± 0.5	63
CDRS2412		12.0	150	5	117	70	± 0.5	64
CDRS2415		15.0	120	5	117	90	± 0.5	64
CDRSxxxx								

Notes :

1. CDRSxxxx is for Customer Design.
2. Load regulation is for output current change from 0 % to 100 % Max. Load.

### Mechanical Dimension :



Units : mm ( inch )  
Tolerance : .xx ± 0.25  
( ± 0.01 )

Pin	500Vdc - Single
1	+Vin
2	NC
3	Vo (-)
4	---
5	
6	
7	
8	---
9	
10	Vo (-)
11	Vo (+)
12	-Vin

Note : " --- " means Omitted

### 4. Dual Selection Guide :

#### 4.1 Non-Regulated - 500Vdc Isolation – Dual Output

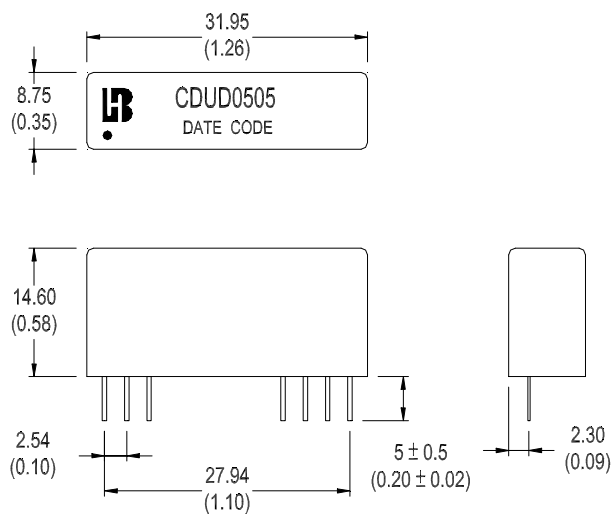
( Specifications typical at Ta = +25 °C , Nominal input voltage, Rated output current unless otherwise noted )

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CDUD0505	5	± 5.0	± 180	30	474	75	± 8	76
CDUD0509		± 9.0	± 100	30	462	75	± 8	78
CDUD0512		± 12.0	± 75	28	456	75	± 8	79
CDUD0515		± 15.0	± 60	28	450	75	± 8	80
CDUD1205	12	± 5.0	± 180	20	195	75	± 8	77
CDUD1212		± 12.0	± 75	20	190	75	± 8	79
CDUD1215		± 15.0	± 60	20	188	75	± 8	80
CDUD2405	24	± 5.0	± 180	5	99	75	± 8	76
CDUD2412		± 12.0	± 75	4	95	75	± 8	79
CDUD2415		± 15.0	± 60	4	94	75	± 8	80
CDUDxxxx								

Notes :

1. CDUDxxxx is for Customer Design.
2. Load regulation is for output current change from 20 % to 100 % Max. Load.

#### Mechanical Dimension :



Units : mm ( inch )

Tolerance : .xx ± 0.25

( ± 0.01 )

Pin	500Vdc - Dual
1	+Vin
2	Vo (-)
3	Common
4	---
5	
6	
7	
8	NC
9	
10	Common
11	Vo (+)
12	-Vin

Note : " --- " means Omitted

### 4.2 Regulated - 500Vdc Isolation – Dual Output

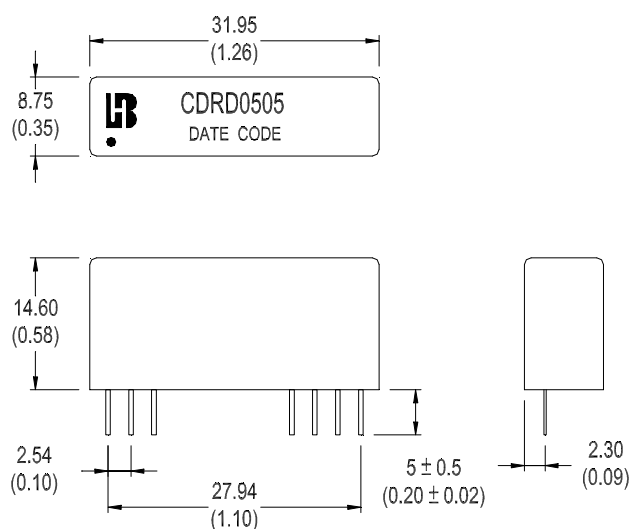
( Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted )

Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%) Typ.
CDRD0505	5	± 5.0	± 180	30	590	50	± 0.5	61
CDRD0509		± 9.0	± 100	30	581	50	± 0.5	62
CDRD0512		± 12.0	± 75	28	571	50	± 0.5	63
CDRD0515		± 15.0	± 60	28	571	50	± 0.5	63
CDRD1205	12	± 5.0	± 180	20	242	50	± 0.5	62
CDRD1212		± 12.0	± 75	20	238	50	± 0.5	63
CDRD1215		± 15.0	± 60	20	238	50	± 0.5	63
CDRD2405	24	± 5.0	± 180	5	121	50	± 0.5	62
CDRD2412		± 12.0	± 75	4	119	50	± 0.5	63
CDRD2415		± 15.0	± 60	4	119	50	± 0.5	63
CDRDxxxx								

Notes :

1. CDRDxxxx is for Customer Design.
2. Load regulation is for output current change from 0 % to 100 % Max. Load.

### Mechanical Dimension :



Units : mm ( inch )  
Tolerance : .xx ± 0.25  
( ± 0.01 )

Pin	500Vdc - Dual
1	+Vin
2	Vo (-)
3	Common
4	---
5	
6	
7	---
8	
9	NC
10	Common
11	Vo (+)
12	-Vin

Note : " --- " means Omitted