TDK·Lambda



- Compact Footprint/Low Profile
- Through Hole or SMT Versions
- 5V, 12V, 24V & 48V Inputs
- 3.3 to 30V[1] Single, ±12 to 15V Dual Outputs
- Output Voltage Adjustment
- Input - Output Isolation
- RoHS Compliant
- 5 Year Warranty

CC-E Series

Compact, 1.5W to 10W Single & Dual DC-DC Converters

Key Market Segments & Applications

Telecommunications

Instrumentation

Datacom

CC-E Features and Benefits

Features	Benefits
• Compact	• Less PCB Area Used
• Self Contained	• Requires No External Components
• Multiple Input Voltage configurations	• Easier System Configuration
• Open Frame (no potting)	• Lighter in Weight, Suitable for Surface Mount (R Version)

Specifications

Nominal Output Voltage	V	**3.3V**	**5V**	**12/15V**	**±12/15 (24/30)[1]**
DC Input	V	5V: 4.5-9.0V, 12V: 9-18V, 24V: 18-36V, 48V: 36-76V			
Efficiency	%	71 to 90% model dependant			
Output Voltage Tolerance	%	1.5-10W: ±3%, 15-25W: ±5%			
Output Adjustment (via trim pin)	V	3.15-3.6V	4.75-6.0V	11.4-15V	22.8 - 30V
Line Regulation	mV	20		40	80
Load Regulation	mV	40		100	600[2]
Temperature Coefficient	%	<± 0.02%/°C			
Preload	-	No preload required			
Output Ripple (typ./max.BW 50MHz)	mV	40/120		30/120	
Overcurrent Protection	-	Output current limiting with automatic recovery			
Overvoltage Protection	-	No			
Remote On/ Off	-	CC1R5, 3, 6, & 10: RC terminal open, output is OFF; RC terminal to -Vin (0-0.4V), output is ON			
Operating Temp.- Convection	°C	-40°C to +85°C, derates linearly to 40% load from +50°C to +85°C			
Operating Temp.- Forced Air	°C	-40°C to +85°C with 1m/s air full load			
Storage Temperature	°C	-40°C to +85°C			
Humidity (non Condensing)	-	95% RH max.(maximum wet-bulb temperature: +38°C)			
Isolation Voltage	-	500VAC 1 min. Input to output, input to case, output to case			
Isolation Resistance	Ω	Input to output, input to case, output to case: 50MOhm min. (500VDC)			
Shock	m/s²	980m/s² (100G) 6ms (6 directions, each 3 times)			
Vibration (non Operating)	-	10 to 55Hz (sweep for 15min) 1.52mm constant, 3 directions X, Y, Z each 2 hours			
Safety Agency Certifications	-	IEC/EN/UL/CSA60950-1, IEC/EN/UL/CSA62368-1 and CE Mark			
Weight	g	CC1R5: 3.2, CC3: 4.5, CC6: 5.8, CC10:10.0			
Size (L x W x H) (Through Hole & SMD package)	mm	CC1R5: 16.51 x 16.61 x 8.51; CC3: 22.86 x 16.61 x 8.51; CC6: 22.86 x 21.11 x 8.51			
		CC10: 35.56 x 22.61 x 8.51			
		CC3: SIP type 27.69 x 9.19 x 17.91			
Warranty	yrs	5			

Notes:

1. For 24V/30V output - connect across +Vout & -Vout and leave "common out" pin not connected. 2. Based upon equal load current from both outputs.
3. For 15V output connect trim to -Vout. 4. See Installation Manual for full specifications, test methods of parameters and application notes.

Model Selector

Output Voltage (V)	Output Current (A)	Output Power (W)	5V Input	12V Input	24V Input	48V Input
Single Outputs						
3.3	0.4	1.5	CC1R5-0503SF-E	CC1R5-1203SF-E	CC1R5-2403SF-E	CC1R5-4803SF-E
3.3	0.8	3	CC3-0503SF-E	CC3-1203SF-E	CC3-2403SF-E	CC3-4803SF-E
3.3	1.2	6	CC6-0503SF-E	CC6-1203SF-E	CC6-2403SF-E	CC6-4803SF-E
3.3	2.5	10	CC10-0503SF-E	CC10-1203SF-E	CC10-2403SF-E	CC10-4803SF-E
5	0.3	1.5	CC1R5-0505SF-E	CC1R5-1205SF-E	CC1R5-2405SF-E	CC1R5-4805SF-E
5	0.6	3	CC3-0505SF-E	CC3-1205SF-E	CC3-2405SF-E	CC3-4805SF-E
5	1.0	5	CC6-0505SF-E	-	-	-
5	1.2	6	-	CC6-1205SF-E	CC6-2405SF-E	CC6-4805SF-E
5	2.0	10	CC10-0505SF-E	CC10-1205SF-E	CC10-2405SF-E	CC10-4805SF-E
12(15)	0.125(0.1)	1.5	CC1R5-0512SF-E	CC1R5-1212SF-E	CC1R5-2412SF-E	CC1R5-4812SF-E
12(15)	0.25(0.2)	3	CC3-0512SF-E	CC3-1212SF-E	CC3-2412SF-E	CC3-4812SF-E
12(15)	0.5(0.4)	6	CC6-0512SF-E	CC6-1212SF-E	CC6-2412SF-E	CC6-4812SF-E
12(15)	0.8(0.64)	10	CC10-0512SF-E	-	-	-
12(15)	1.0(0.8)	10	-	CC10-1212SF-E	CC10-2412SF-E	CC10-4812SF-E
Dual Outputs						
±12 (15)[3]	0.06(0.05)	1.5	CC1R5-0512DF-E	CC1R5-1212DF-E	CC1R5-2412DF-E	CC1R5-4812DF-E
±12 (15)[3]	0.125(0.1)	3	CC3-0512DF-E	CC3-1212DF-E	CC3-2412DF-E	CC3-4812DF-E
±12 (15)[3]	0.25(0.2)	6	CC6-0512DF-E	CC6-1212DF-E	CC6-2412DF-E	CC6-4812DF-E
±12 (15)[3]	0.4(0.32)	10	CC10-0512DF-E	-	-	-
±12 (15)[3]	0.45(0.36)	10	-	CC10-1212DF-E	CC10-2412DF-E	CC10-4812DF-E

Options

Version	Description
F-E	Through hole mounting (DIP)
R-E	Surface mount (SMD)
S-E	Through hole mounting (SIP) **(SIP option available for CC3 only)**

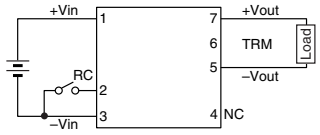
Pinout (CC1R5, 3, 6, and 10)

Pin	Single	Dual
1	+Vin	+Vin
2	RC	RC
3	-Vin	-Vin
4	NC	-Vout
5	-Vout	Common out
6	TRM	TRM
7	+Vout	+Vout

Pin Out Diagrams CC-E Series

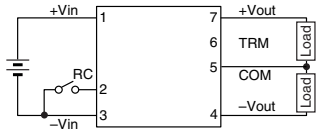
CONNECTIONS

CC1R5-□□□□S□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	NC
No.5	–Vout
No.6	TRM
No.7	+Vout

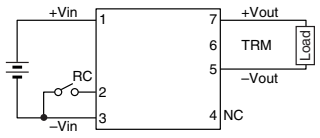
CC1R5-□□□□D□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	–Vout
No.5	Common out
No.6	TRM
No.7	+Vout

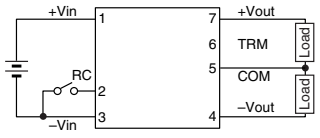
CONNECTIONS

CC3-□□□□S□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	NC
No.5	–Vout
No.6	TRM
No.7	+Vout

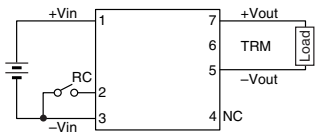
CC3-□□□□D□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	–Vout
No.5	Common out
No.6	TRM
No.7	+Vout

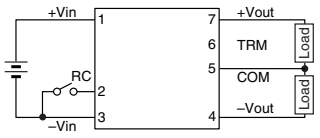
CONNECTIONS

CC6-□□□□S□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	NC
No.5	–Vout
No.6	TRM
No.7	+Vout

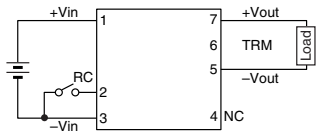
CC6-□□□□D□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	–Vout
No.5	Common out
No.6	TRM
No.7	+Vout

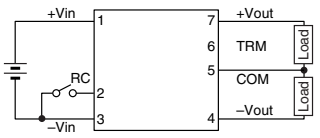
CONNECTIONS

CC10-□□□□S□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	NC
No.5	–Vout
No.6	TRM
No.7	+Vout

CC10-□□□□D□-E



TERMINAL PIN CONFIGUTATION	
No.1	+Vin
No.2	RC
No.3	–Vin
No.4	–Vout
No.5	Common out
No.6	TRM
No.7	+Vout



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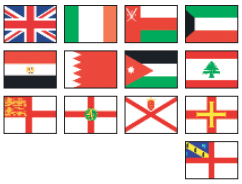

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