

DC/DC Converter  
 AC/DC Inverters  
 Delay-Lines  
 Pulsetransformers  
 Burst & Surge Filters  
 Harmonic Filters  
 Switching Power Supplies

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# INDUSTRIAL & AUTOMOTIVE

Stand: 20/08

Regulated  
 Case style: DIP24

## DC/DC Converters

3 Watt  
 Series:  
 CSK / CMK / CMKA  
 1CSK / 1CMK / 1CMKA

### Electrical specifications:

Output voltage accuracy: +/- 3%  
 Line regulation: +/- 0,3%  
 Load regulation: +/- 0,5%  
 Operating temperature: max. +105°C  
 Ambient temperature:  
 CSK / CMK -40°C to +71°C  
 CMKA -55°C to +85°C & up to 105°C  
 Efficiency: min. 55%  
 Ripple & Noise: typ. 50mVp-p

Short circuit switch-off (1CSK/1CMK/1CMKA only)

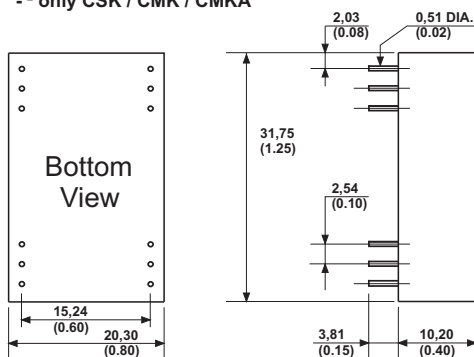
Over load protection  
 Thermal shut down  
 rel. humidity: 93% / 40°C  
 Shock proof acc.: IEC 68-2-34  
 Flameability: UL - 94V -0  
 Insulation test voltage: 1000V DC  
 Insulation optional 3000V AC rms ( only CSK )  
 Case material:  
 (1)CSK polycarbonat  
 (1)CMK / (1)CMKA metal

**CAUTION: NO INPUT POLARITY CHANGE ALLOWED!**

Part - No. Single and Dual	Input voltage	Input Voltage	Output Voltage	Output Current	Overcurrent Short circuit cut off <sup>2</sup>
CSK/CMK/CMKA05-3-0505D-3	-5% / +10%	5V	+/- 5V*	+/-300mA	120 %
CSK/CMK/CMKA05-3-0512D-3	-5% / +10%		+/-12V	+/-125mA	120 %
CSK/CMK/CMKA05-3-0515D-3	-5% / +10%		+/-15V	+/-100mA	120 %
CSK/CMK/CMKA10-3-1205D-3	+/-10%	12V	+/- 5V*	+/-300mA	120 %
CSK/CMK/CMKA10-3-1212D-3	+/-10%		+/-12V	+/-125mA	120 %
CSK/CMK/CMKA10-3-1215D-3	+/-10%		+/-15V	+/-100mA	120 %
CSK/CMK/CMKA10-3-1505D-3	+/-10%	15V	+/- 5V*	+/-300mA	120 %
CSK/CMK/CMKA10-3-1512D-3	+/-10%		+/-12V	+/-125mA	120 %
CSK/CMK/CMKA10-3-1515D-3	+/-10%		+/-15V	+/-100mA	120 %
CSK/CMK/CMKA10-3-2405D-3	+/-10%	24V	+/- 5V*	+/-300mA	120 %
CSK/CMK/CMKA10-3-2412D-3	+/-10%		+/-12V	+/-125mA	120 %
CSK/CMK/CMKA10-3-2415D-3	+/-10%		+/-15V	+/-100mA	120 %

**Attention:**

- don't change input polarity!
- \* at unbalanced load of 5V - output types max. 2,4 Watt output power
- <sup>2</sup> only CSK / CMK / CMKA

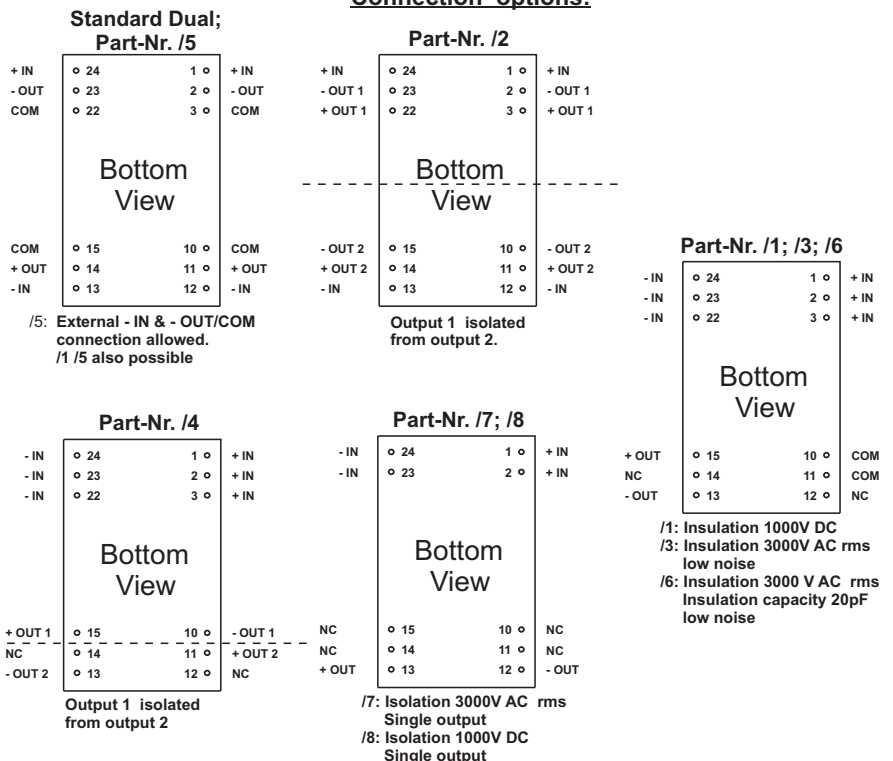


ALL DIMENSIONS IN MM (INCHES)  
 MILLIMETERS +/- 0,50mm  
 (INCHES +/- 0,02")

All pins on a 2,54mm pitch  
 Note: NC = No connection; NP = No pin  
 Dot denote pin 1

1CSK / 1CMK / 1CMKA short circuit proof & autorestart available.

### Connection options:



Specification may be changed without notice  
 please contact office for verification

We can offer EMC - Filter  
 according to EN55011/22 Class B.

# INDUSTRIAL & AUTOMOTIVE

3 Watt

Regulated  
 Case style: DIP24

DC/DC Converters

Series:

Application: A/D conversion

triple output

CSK / CMK / CMKA  
 1CSK / 1CMK / 1CMKA

**Electrical specifications:**

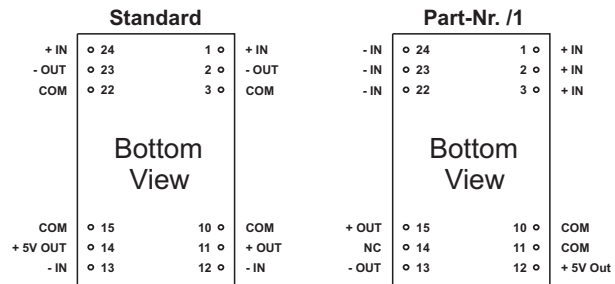
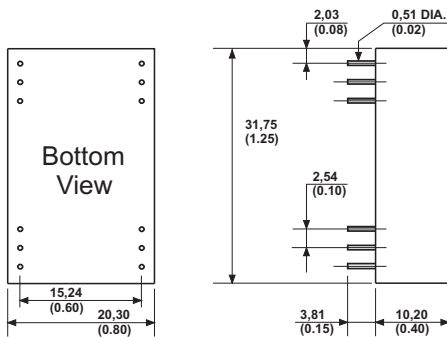
Input voltage range:  
 5V -5%+10%  
 12V, 15V, 24V +/- 10%  
 Output voltage accuracy: +/- 3% @ U<sub>out</sub> 1&2  
 Line regulation: +/- 0,3%  
 Load regulation: +/- 0,5%  
 Operating temperature: max. +105°C  
 Ambient temperature:  
 CSK / CMK -40°C to +71°C  
 CMKA -55°C to +85°C & up to 100°C  
 Efficiency: min. 68%  
 Ripple & Noise: typ. 50mVp-p

Short circuit switch-off (1CSK/1CMK/1CMKA only)  
 Over load protection  
 Thermal shut down  
 Over current /  
 Short circuit cut-off: 120%  
 rel. humidity: 93% / 40°C  
 Shock proof acc.: IEC 68-2-34  
 Flameability: UL - 94V -0  
 Insulation test voltage: 1000V DC  
 Part-Nr. /5 External -IN & -OUT/COM connection allowed  
 Case material:  
 CSK polycarbonat  
 CMK / CMKA metal

**CAUTION: NO INPUT POLARITY CHANGE ALLOWED!**

Part - No. Triple	Input Voltage	Output Voltage 1&2	max. Output Current 1&2	Output Voltage 3	max. Output Current 3
CSK/CMK/CMKA05-3-0512D05 CSK/CMK/CMKA05-3-0515D05	5V	+/-12V +/-15V	+/-125mA +/-100mA	5V 5V	100mA 100mA
CSK/CMK/CMKA10-3-1212D05 CSK/CMK/CMKA10-3-1215D05	12V	+/-12V +/-15V	+/-125mA +/-100mA	5V 5V	100mA 100mA
CSK/CMK/CMKA10-3-1512D05 CSK/CMK/CMKA10-3-1515D05	15V	+/-12V +/-15V	+/-125mA +/-100mA	5V 5V	100mA 100mA
CSK/CMK/CMKA10-3-2412D05 CSK/CMK/CMKA10-3-2415D05	24V	+/-12V +/-15V	+/-125mA +/-100mA	5V 5V	100mA 100mA

**Connection options:**

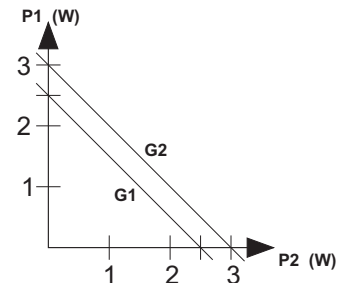


**NOTE:** Output voltage 3 is unregulated, without load U<sub>Out 3</sub> max. = 6,5V.

ALL DIMENSIONS IN MM (INCHES)  
 MILLIMETERS +/- 0,50mm  
 (INCHES +/- 0,02")  
 All pins on a 2,54mm pitch  
 Note: NC = No connection; NP = No pin  
 Dot denote pin 1

Special request: 1 CSK / 1CMK / 1CMKA  
 short circuit proof & autorestart available.

Output 1 = P1 0 - 3W } G2  
 Output 2 = P2 0 - 3W }  
 Output 3 = P3 0W }  
 Output 1 = P1 0 - 2,5W } G1  
 Output 2 = P2 0 - 2,5W }  
 Output 3 = P3 0,5W }



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 according to EN55011/22 Class B.