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COSEL DC-DC Converters PCB Mount type

ZTW1R5

Ordering information

ZT	W	1R5	12	12	
①	②	③	④	⑤	

①Series name
②Dual output
③Output wattage
④Input voltage
⑤Output voltage

RoHS

MODEL		ZTW1R50512	ZTW1R50515	ZTW1R51212	ZTW1R51215	ZTW1R52412	ZTW1R52415	ZTW1R54812	ZTW1R54815
MAX OUTPUT WATTAGE[W]		1.56	1.50	1.56	1.50	1.56	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V]	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.065	0.050	0.065	0.050	0.065	0.050	0.065	0.050

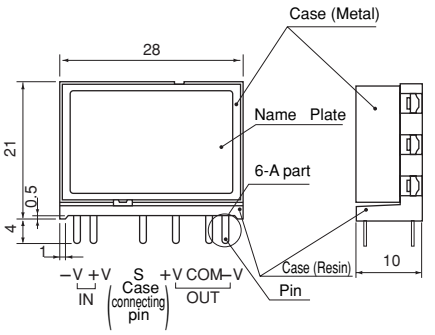
SPECIFICATIONS

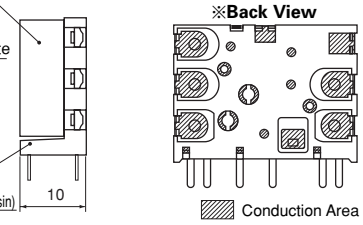
Output pins can be connected in series to make a 24V/30V output.

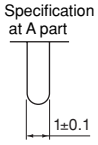
	MODEL	ZTW1R50512	ZTW1R50515	ZTW1R51212	ZTW1R51215	ZTW1R52412	ZTW1R52415	ZTW1R54812	ZTW1R54815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72	
	CURRENT[A] *1	0.466typ	0.448typ	0.183typ	0.176typ	0.092typ	0.088typ	0.046typ	0.044typ
	EFFICIENCY[%] *1	67typ	67typ	71typ	71typ	71typ	71typ	71typ	71typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.065	0.050	0.065	0.050	0.065	0.050	0.065	0.050
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max
	RIPPLE[mVp-p] *2	120max	120max	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *2	150max	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV] -20 to +55℃	150max	180max	150max	180max	150max	180max	150max	180max
	DRIFT[mV] *3	50max	60max	50max	60max	50max	60max	50max	60max
	START-UP TIME[ms]	20max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed							
	OUTPUT VOLTAGE SETTING[V]	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
	INPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-20 to +71℃, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION	10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT	490.3m/s² (50G), 11ms, once each X, Y and Z axis							
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	28×21×10mm (W×H×D) / 15g max							
	COOLING METHOD	Convection							

*1 Rated input 5V, 12V, 24V or 48V DC, Io=100%.
*2 Measured by 20MHz oscilloscope.
*3 The drift is a change at 25℃ of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
* The output specification is at ±12V and ±15V.
* Series/Parallel operation with other model is not possible.

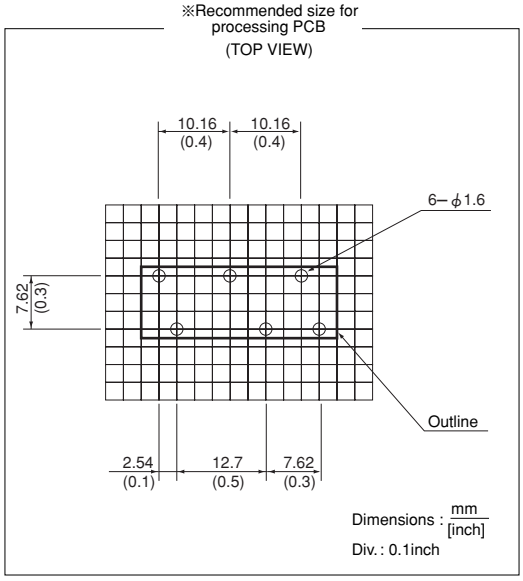
External view





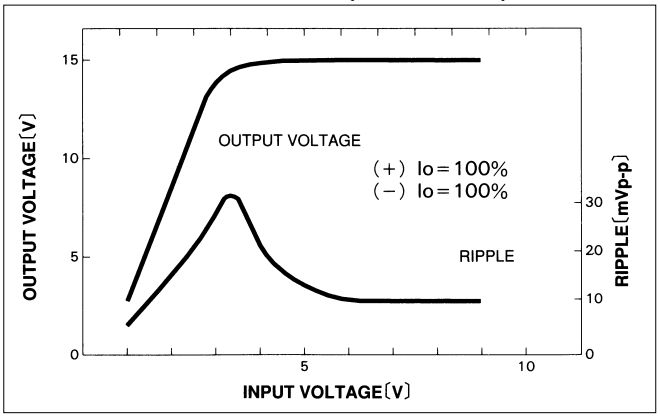


Weight: 15g or less
Tolerance: ±0.5
Case Material (Metal): Brass
Case Material (Resin): PPS
Pin Material: Phosphor Bronze (t=0.3)
(Solder Plate)

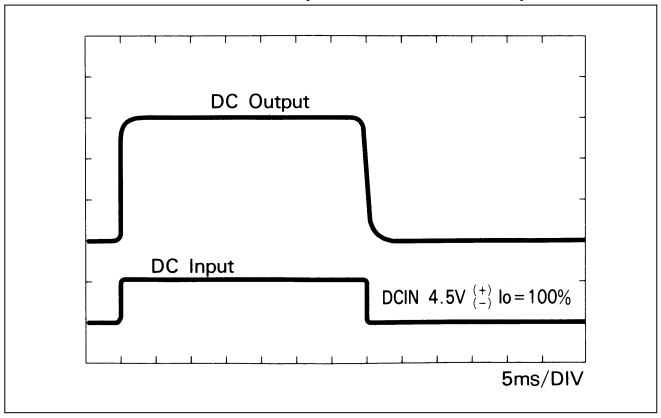


Performance data

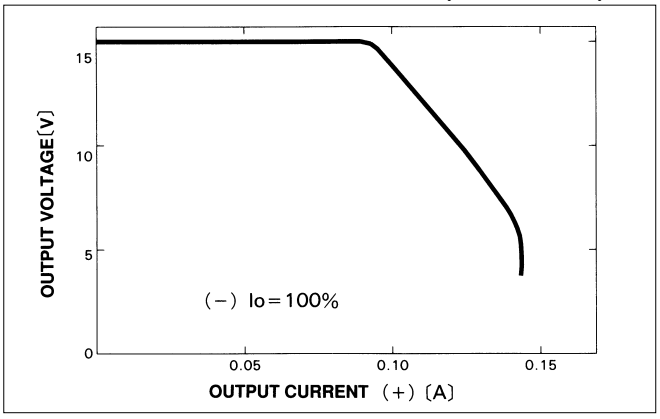
■STATIC CHARACTERISTICS (ZTW1R50515)



■RISE TIME & FALL TIME (ZTW1R50515:+15V)



■OVERCURRENT CHARACTERISTICS (ZTW1R50515)



COSEL DC-DC Converters PCB Mount type

ZTW3

Ordering information

ZT	W	3	12	12	
①	②	③	④	⑤	

①Series name
②Dual output
③Output wattage
④Input voltage
⑤Output voltage

RoHS

MODEL		ZTW30512	ZTW30515	ZTW31212	ZTW31215	ZTW32412	ZTW32415	ZTW34812	ZTW34815
MAX OUTPUT WATTAGE[W]		3.12	3.00	3.12	3.00	3.12	3.00	3.12	3.00
DC OUTPUT	VOLTAGE[V]	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.13	0.10	0.13	0.10	0.13	0.10	0.13	0.10

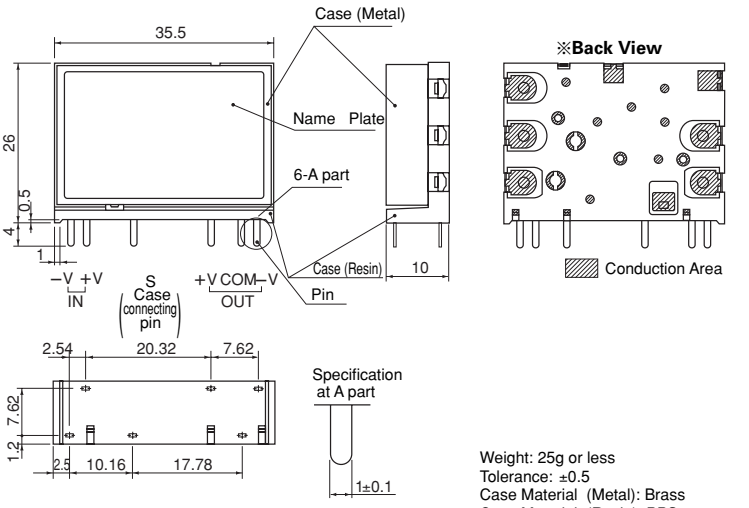
SPECIFICATIONS

Output pins can be connected in series to make a 24V/30V output.

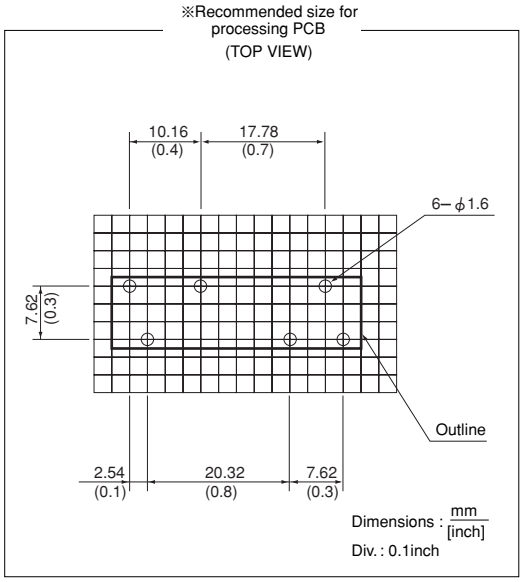
	MODEL	ZTW30512	ZTW30515	ZTW31212	ZTW31215	ZTW32412	ZTW32415	ZTW34812	ZTW34815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72	
	CURRENT[A] *1	0.891typ	0.857typ	0.351typ	0.338typ	0.176typ	0.169typ	0.087typ	0.083typ
	EFFICIENCY[%] *1	70typ	70typ	74typ	74typ	74typ	74typ	75typ	75typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.13	0.10	0.13	0.10	0.13	0.10	0.13	0.10
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max
	RIPPLE[mVp-p] *2	120max	120max	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *2	150max	150max	150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV] -20 to +55℃	150max	180max	150max	180max	150max	180max	150max	180max
	DRIFT[mV] *3	50max	60max	50max	60max	50max	60max	50max	60max
	START-UP TIME[ms]	20max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed							
	OUTPUT VOLTAGE SETTING[V]	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
	INPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
	OUTPUT-CASE	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-20 to +71℃, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE	-40 to +85℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION	10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT	490.3m/s² (50G), 11ms, once each X, Y and Z axis							
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	35.5×26×10mm (W×H×D) / 25g max							
	COOLING METHOD	Convection							

*1 Rated input 5V, 12V, 24V or 48V DC, Io=100%.
*2 Measured by 20MHz oscilloscope.
*3 The drift is a change at 25℃ of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
* The output specification is at ±12V and ±15V.
* Series/Parallel operation with other model is not possible.

External view

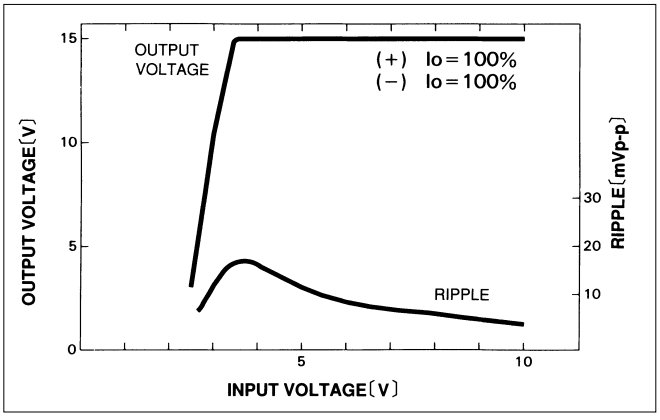


Weight: 25g or less
Tolerance: ±0.5
Case Material (Metal): Brass
Case Material (Resin): PPS
Pin Material: Phosphor Bronze (t=0.3)
(Solder Plate)

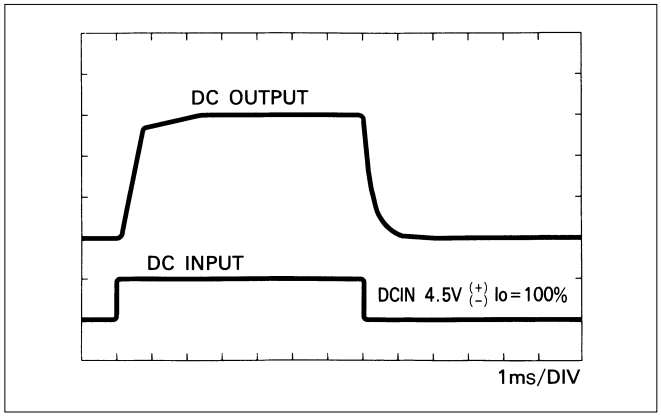


Performance data

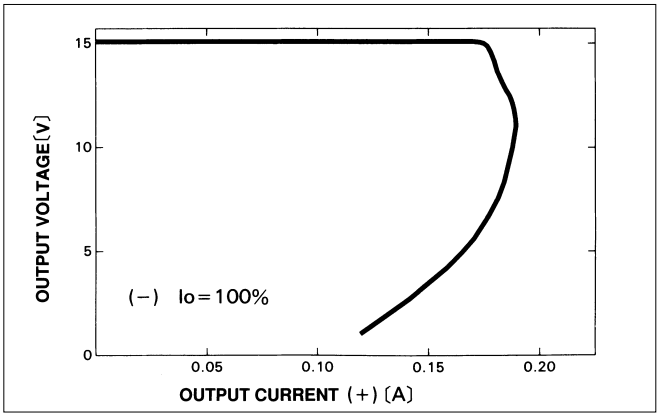
■STATIC CHARACTERISTICS (ZTW30515)



■RISE TIME & FALL TIME (ZTW30515:+15V)



■OVERCURRENT CHARACTERISTICS (ZTW30515)



ZU/ZT