COSEL **On-board type**

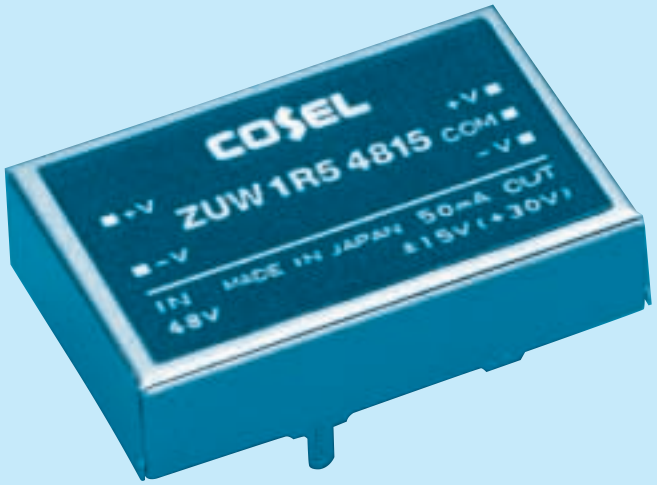
ZUW1R5

Ordering information

ZU	W	1R5	12	12	
①	②	③	④	⑤	

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

RoHS



MODEL		ZUW1R50512	ZUW1R50515	ZUW1R51212	ZUW1R51215	ZUW1R52412	ZUW1R52415	ZUW1R54812	ZUW1R54815
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

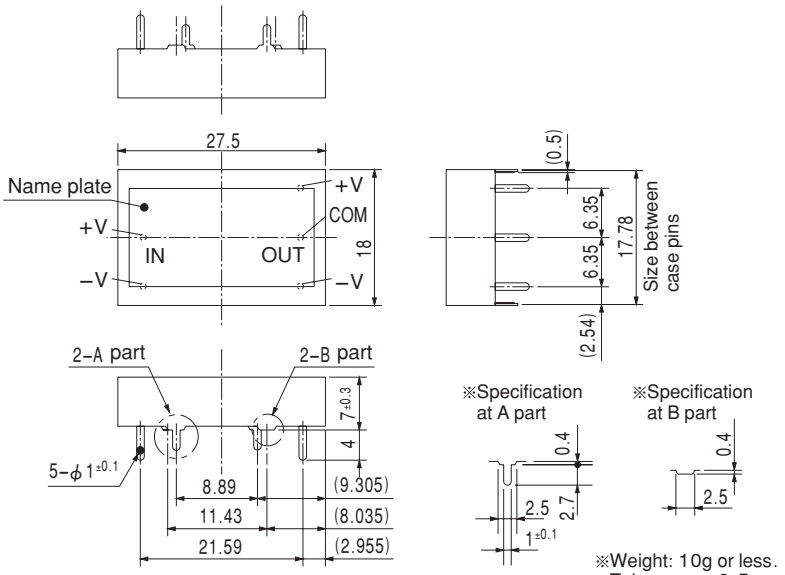
SPECIFICATIONS

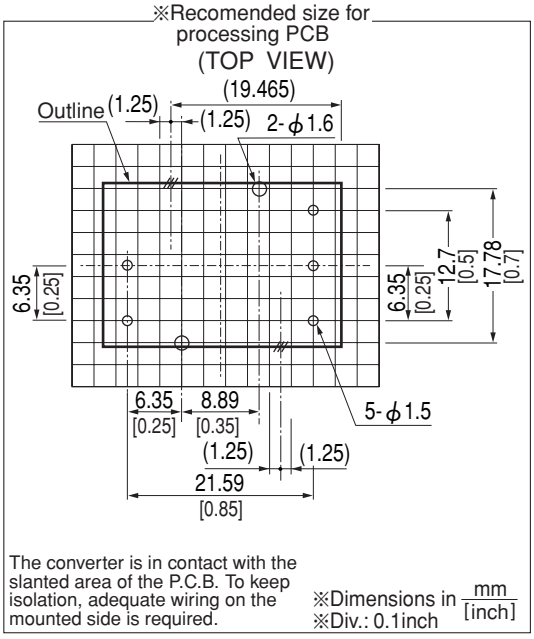
Output pins can be connected in series to make a 24V/30V output.

	MODEL	ZUW1R50512	ZUW1R50515	ZUW1R51212	ZUW1R51215	ZUW1R52412	ZUW1R52415	ZUW1R54812	ZUW1R54815
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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	27.5×7×18mm (W×H×D) / 10g 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.

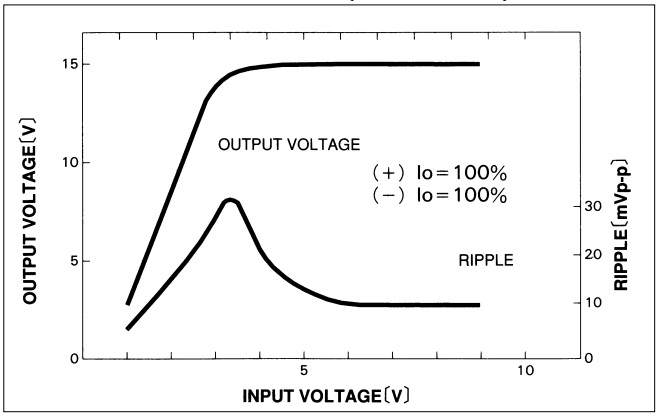
External view



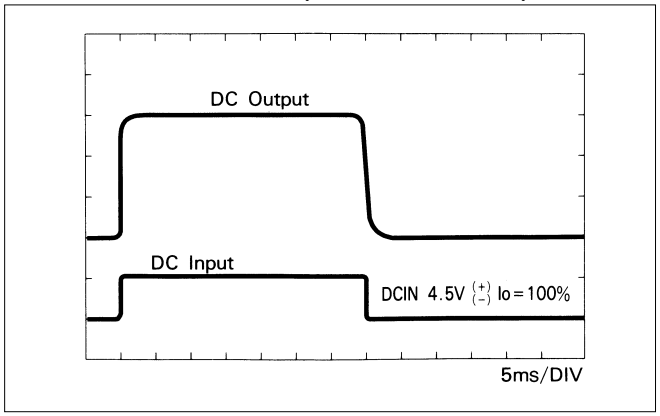


Performance data

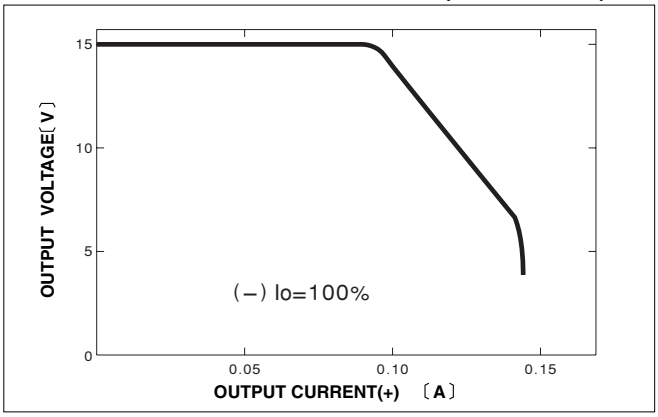
■STATIC CHARACTERISTICS (ZUW1R50515)



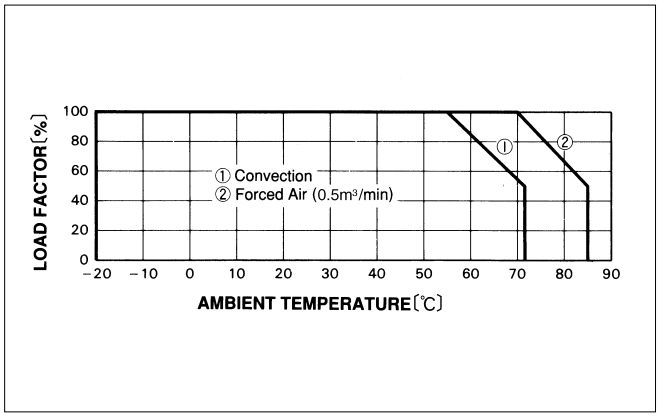
■RISE TIME & FALL TIME (ZUW1R50515:+15V)



■OVERCURRENT CHARACTERISTICS (ZUW1R50515)



■DERATING CURRENT



ZU/ZT

COSEL **On-board type**

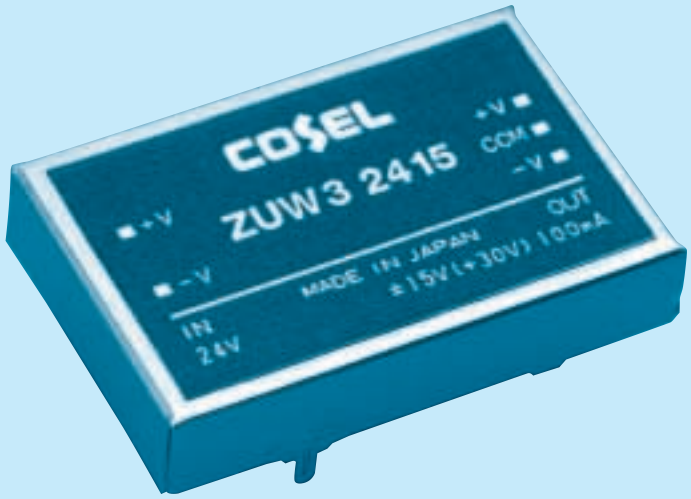
ZUW3

Ordering information

ZU	W	3	12	12	
①	②	③	④	⑤	

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

RoHS



MODEL		ZUW30512	ZUW30515	ZUW31212	ZUW31215	ZUW32412	ZUW32415	ZUW34812	ZUW34815
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

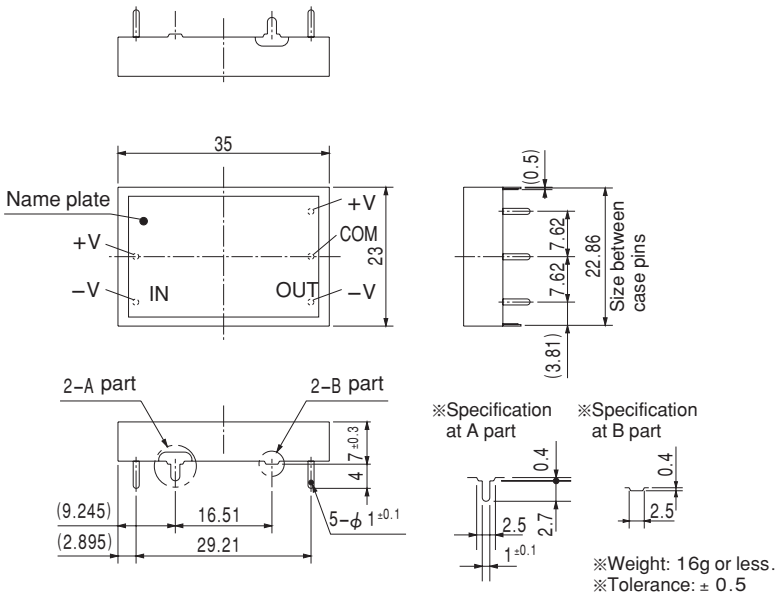
SPECIFICATIONS

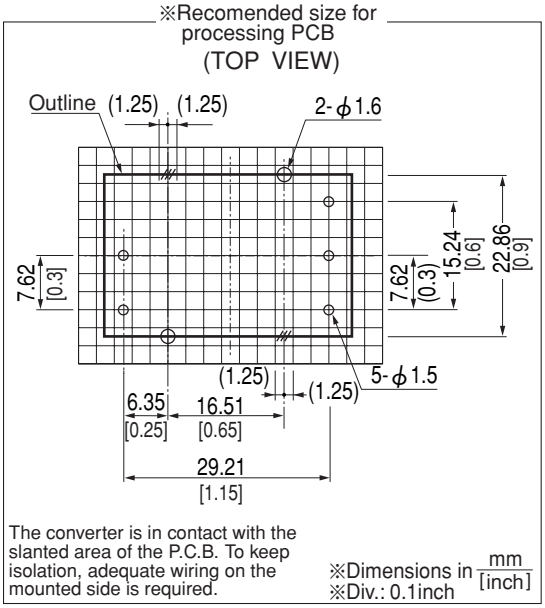
Output pins can be connected in series to make a 24V/30V output.

	MODEL	ZUW30512	ZUW30515	ZUW31212	ZUW31215	ZUW32412	ZUW32415	ZUW34812	ZUW34815
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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	35×7×23mm (W×H×D) / 16g 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.

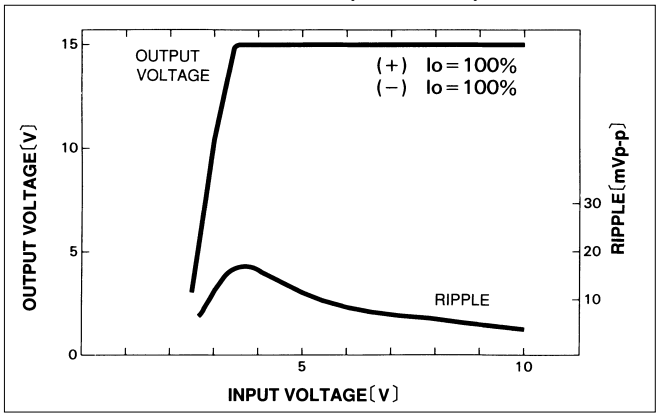
External view



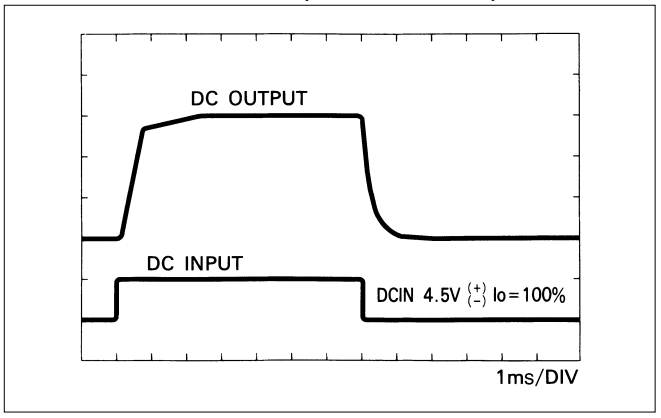


Performance data

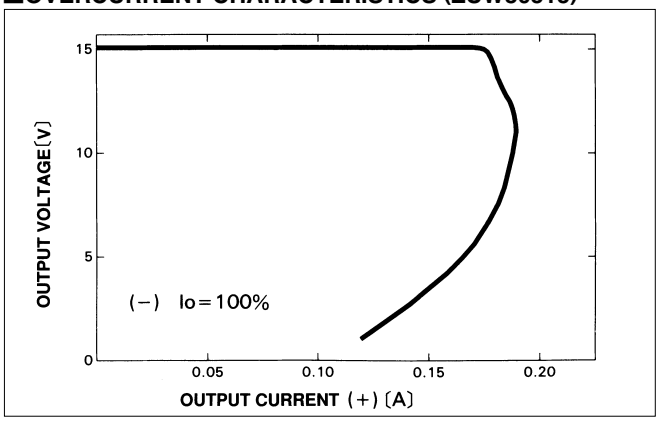
■STATIC CHARACTERISTICS (ZUW30515)



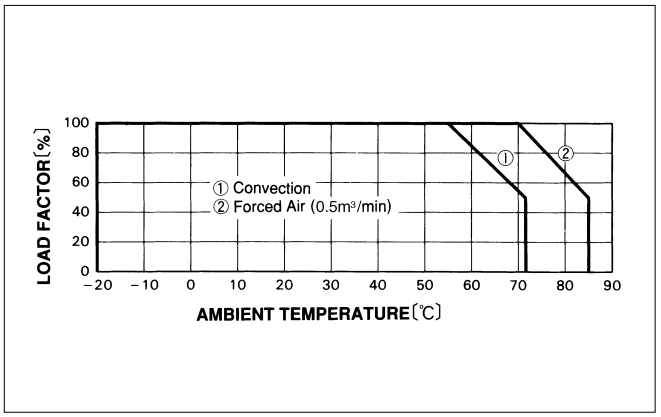
■RISE TIME & FALL TIME (ZUW30515:+15V)



■OVERCURRENT CHARACTERISTICS (ZUW30515)



■DERATING CURVE



ZU/ZT

COSEL **On-board type**

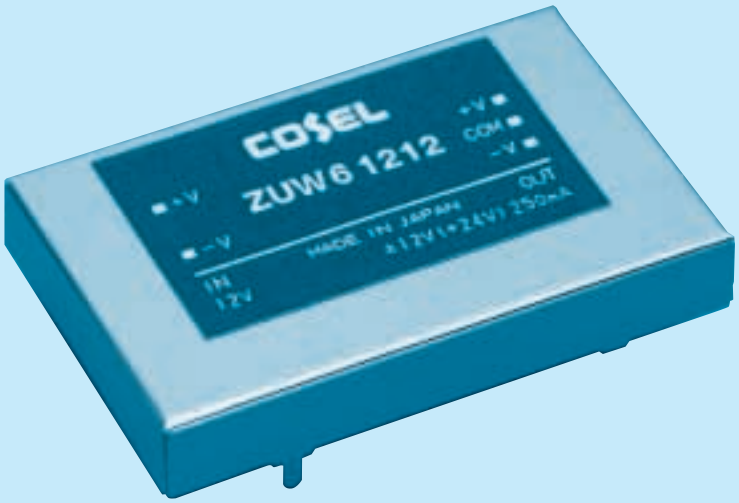
ZUW6

Ordering information

ZU	W	6	12	12	
①	②	③	④	⑤	

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

RoHS



MODEL		ZUW60512	ZUW60515	ZUW61212	ZUW61215	ZUW62412	ZUW62415	ZUW64812	ZUW64815
MAX OUTPUT WATTAGE[W]		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
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]	0.25	0.20	0.25	0.20	0.25	0.20	0.25	0.20

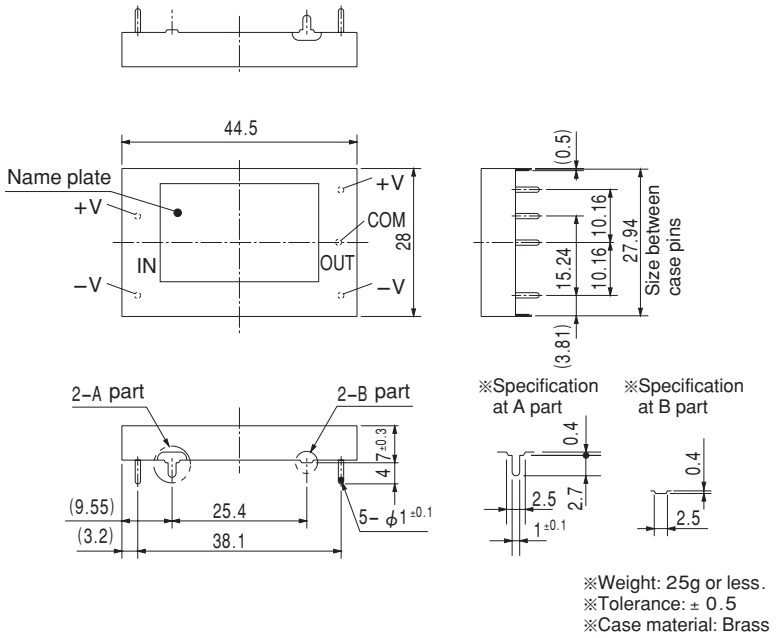
SPECIFICATIONS

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

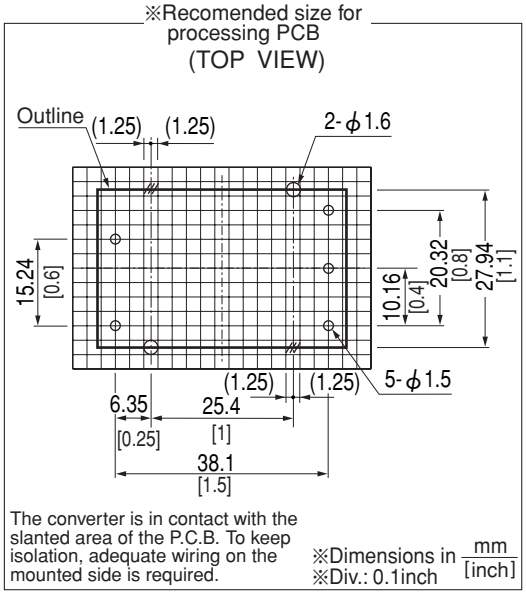
	MODEL	ZUW60512	ZUW60515	ZUW61212	ZUW61215	ZUW62412	ZUW62415	ZUW64812	ZUW64815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72	
	CURRENT[A] *1	1.60typ	1.60typ	0.65typ	0.65typ	0.33typ	0.33typ	0.17typ	0.17typ
	EFFICIENCY[%] *1	75typ	75typ	77typ	77typ	77typ	77typ	77typ	77typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.25	0.20	0.25	0.20	0.25	0.20	0.25	0.20
	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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	44.5×7×28mm (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: Brass

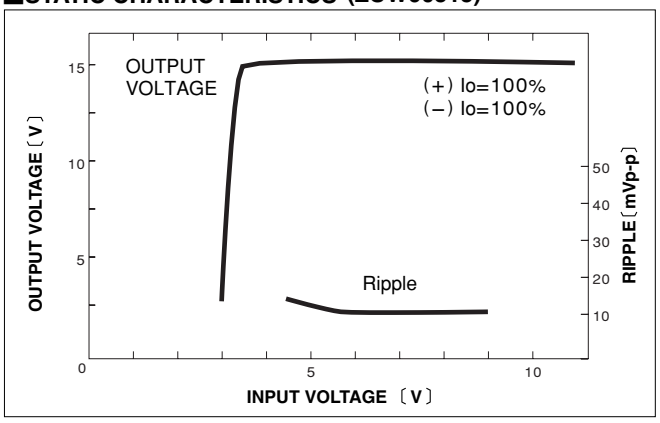


The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.

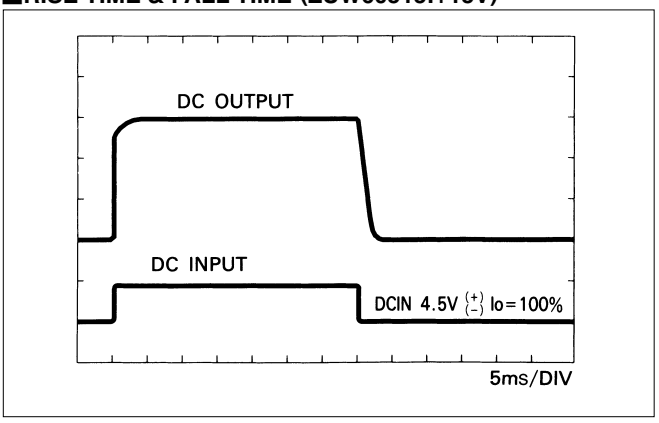
※Dimensions in mm [inch]
※Div.: 0.1inch

Performance data

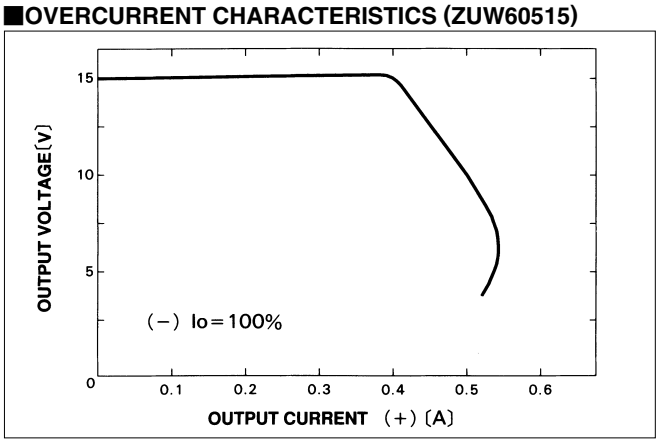
■STATIC CHARACTERISTICS (ZUW60515)



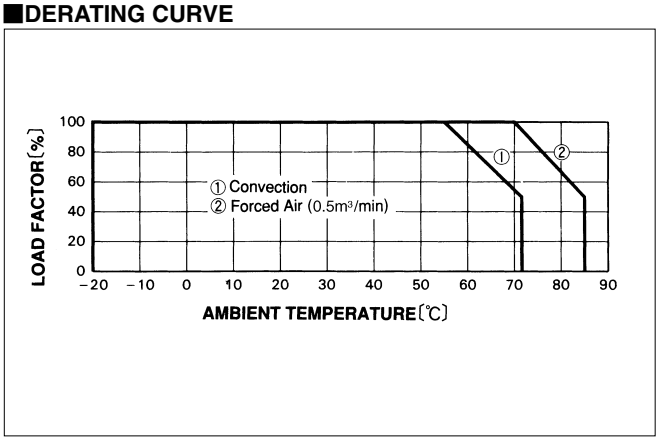
■RISE TIME & FALL TIME (ZUW60515:+15V)



■OVERCURRENT CHARACTERISTICS (ZUW60515)



■DERATING CURVE



ZU/ZT

COSEL **On-board type**

ZUW10

Ordering information

ZU	W	10	12	12	
①	②	③	④	⑤	

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

RoHS

MODEL		ZUW100512	ZUW100515	ZUW101212	ZUW101215	ZUW102412	ZUW102415	ZUW104812	ZUW104815
MAX OUTPUT WATTAGE[W]		8.4	9.0	10.8	10.5	10.8	10.5	10.8	10.5
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]	0.35	0.30	0.45	0.35	0.45	0.35	0.45	0.35

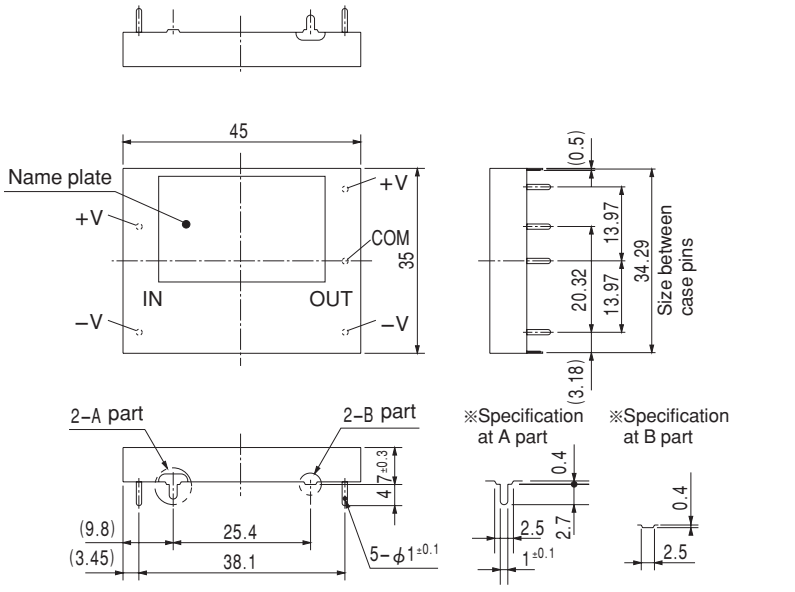
SPECIFICATIONS

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

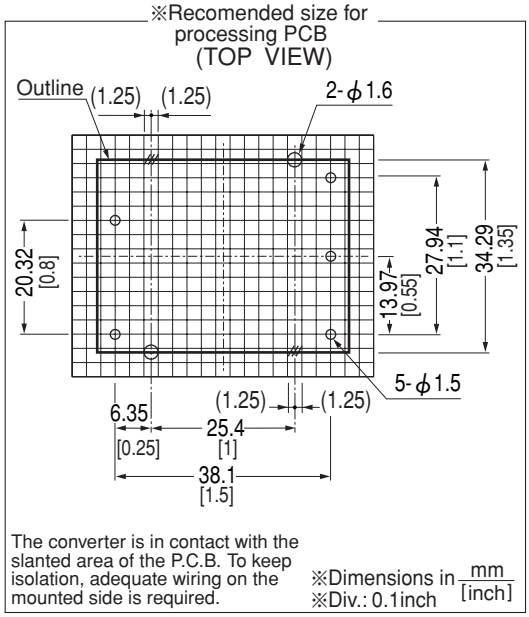
	MODEL	ZUW100512	ZUW100515	ZUW101212	ZUW101215	ZUW102412	ZUW102415	ZUW104812	ZUW104815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 72	
	CURRENT[A] *1	2.24typ	2.40typ	1.12typ	1.09typ	0.56typ	0.55typ	0.28typ	0.28typ
	EFFICIENCY[%] *1	75typ	75typ	81typ	81typ	81typ	81typ	81typ	81typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.35	0.30	0.45	0.35	0.45	0.35	0.45	0.35
	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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	45×7×35mm (W×H×D) / 40g 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: 40g or less.
※Tolerance: ± 0.5
※Case material: Brass

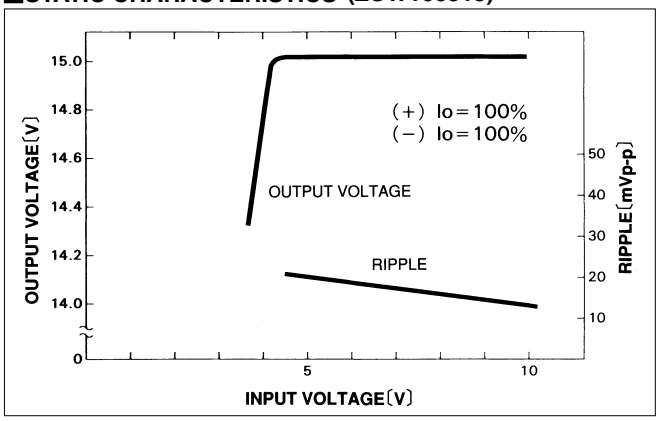


The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.

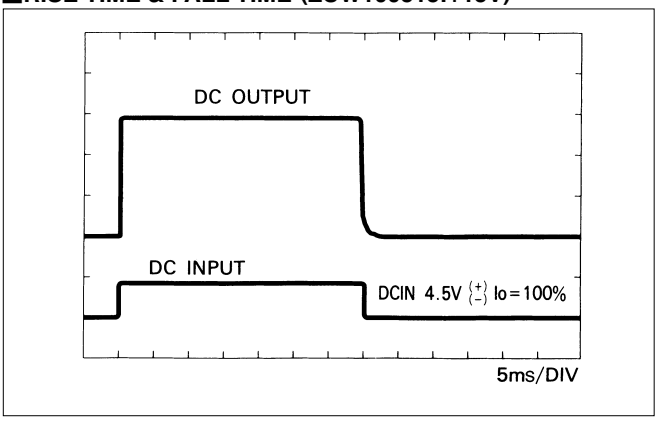
※Dimensions in mm [inch]
※Div.: 0.1inch

Performance data

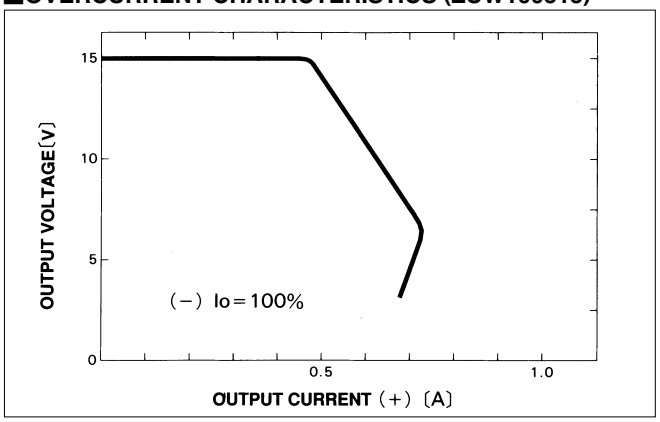
■STATIC CHARACTERISTICS (ZUW100515)



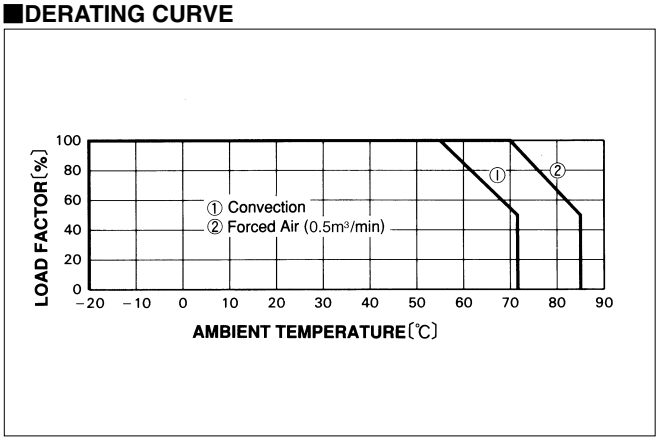
■RISE TIME & FALL TIME (ZUW100515:+15V)



■OVERCURRENT CHARACTERISTICS (ZUW100515)



■DERATING CURVE



ZU/ZT

COSEL **On-board type**

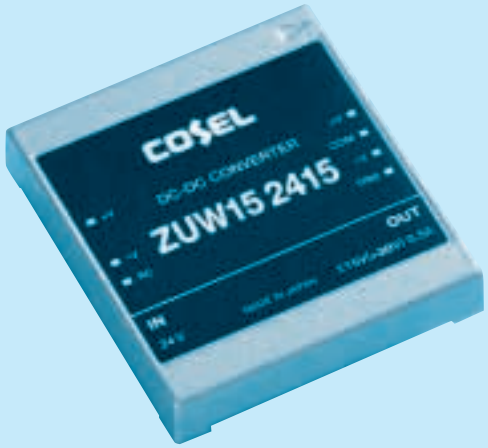
ZUW15

Ordering information

ZU	W	15	12	12	
①	②	③	④	⑤	

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

RoHS



MODEL		ZUW150512	ZUW150515	ZUW151212	ZUW151215	ZUW152412	ZUW152415	ZUW154812	ZUW154815
MAX OUTPUT WATTAGE[W]		14.4	15.0	15.6	15.0	15.6	15.0	15.6	15.0
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]	0.6	0.5	0.65	0.5	0.65	0.5	0.65	0.5

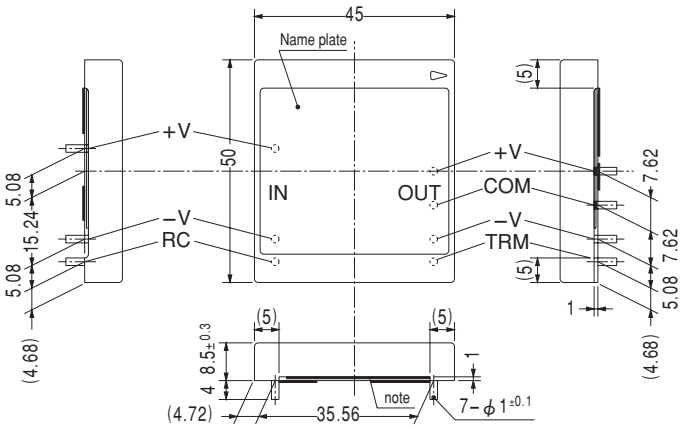
SPECIFICATIONS

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

	MODEL	ZUW150512	ZUW150515	ZUW151212	ZUW151215	ZUW152412	ZUW152415	ZUW154812	ZUW154815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 75	
	CURRENT[A] *1	3.56typ	3.70typ	1.57typ	1.51typ	0.78typ	0.75typ	0.39typ	0.38typ
	EFFICIENCY[%] *1	81typ	81typ	83typ	83typ	83typ	83typ	83typ	83typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.60	0.50	0.65	0.50	0.65	0.50	0.65	0.50
	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] 0 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]	100max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Internally fixed (TRM pin open), ±5% adjustable by external VR							
	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							
	OVERVOLTAGE PROTECTION	Works at 115 - 140% of rating (Total of +V and -V)							
	REMOTE ON/OFF	Between RC and -side of input:short - 1.2V ・・・output ON, 2.4V - 5.5V(or open) ・・・output OFF, Compatible to TTL							
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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	45×8.5×50mm (W×H×D) / 55g max							
	COOLING METHOD	Convection							

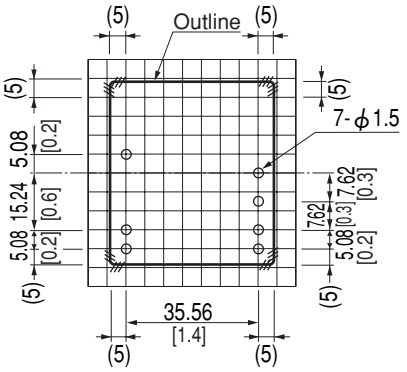
*1 Rated input 5V, 12V, 24V or 48V DC, Io=100%.
*2 Measured by 20MHz oscilloscope.
*3 The drift is a change at 25℃ of ambient temperature and 30 minutes - 8 hours after the input voltage applied at rated input/output.
* The output specification is at ±12V and ±15V.
* Series/Parallel operation with other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

External view



note) Internal parts
※Weight: 55g or less.
※Tolerance: ± 0.5
※Case material: Aluminum

※Recomended size for processing PCB (TOP VIEW)

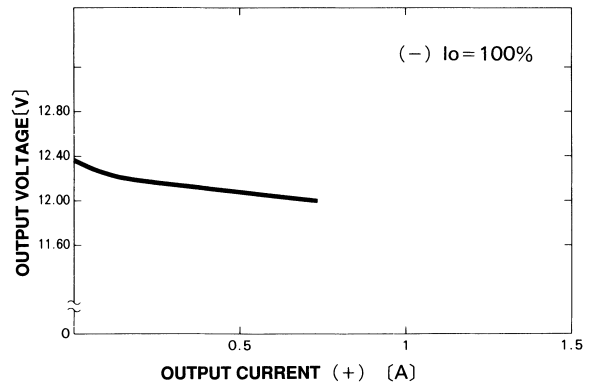


The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.

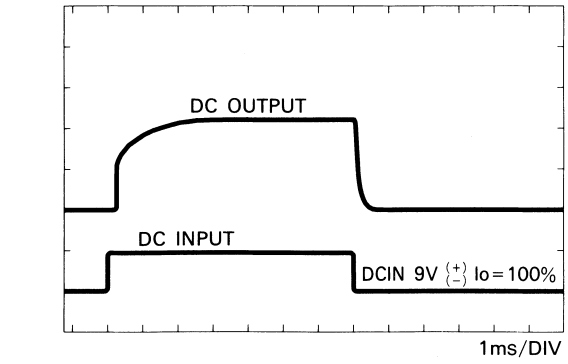
※Dimensions in mm [inch]
※Div.: 0.2inch

Performance data

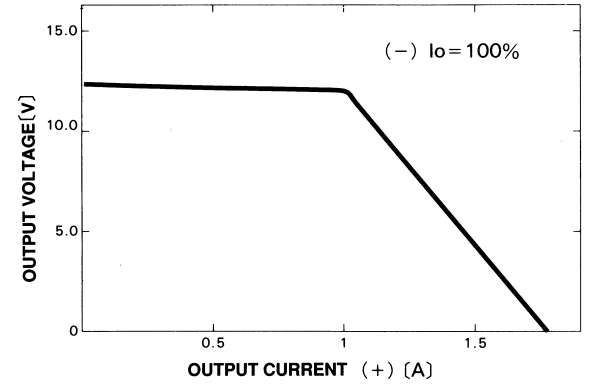
■STATIC CHARACTERISTICS (ZUW151212)



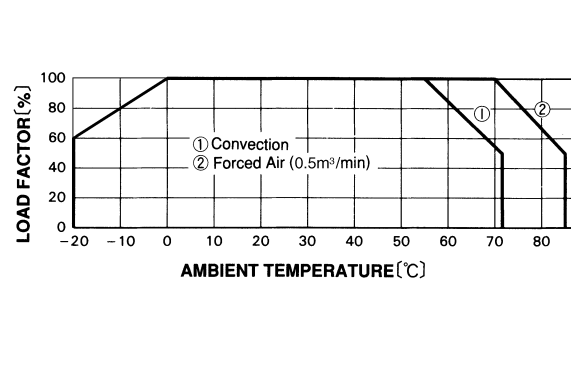
■RISE TIME & FALL TIME (ZUW151212:+12V)



■OVERCURRENT CHARACTERISTICS (ZUW151212)



■DERATING CURRENT



ZU/ZT

COSEL **On-board type**

ZUW25

Ordering information

ZU	W	25	12	12	
①	②	③	④	⑤	

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

RoHS

MODEL		ZUW250512	ZUW250515	ZUW251212	ZUW251215	ZUW252412	ZUW252415	ZUW254812	ZUW254815
MAX OUTPUT WATTAGE[W]		20.2	20.1	25.2	25.5	25.2	25.5	25.2	25.5
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]	0.84	0.67	1.05	0.85	1.05	0.85	1.05	0.85

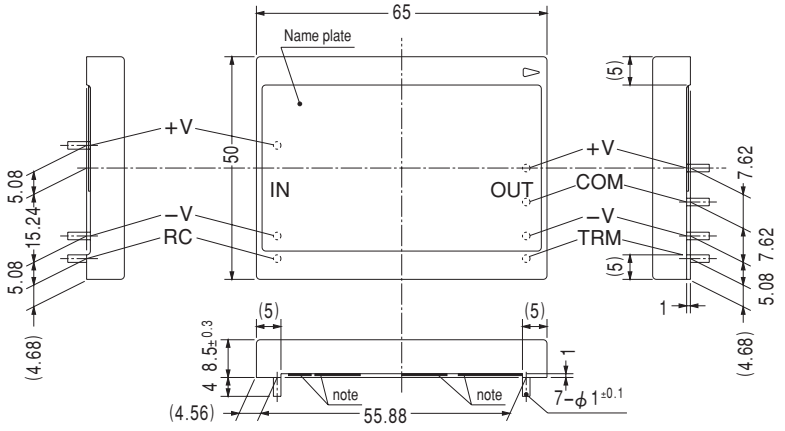
SPECIFICATIONS

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

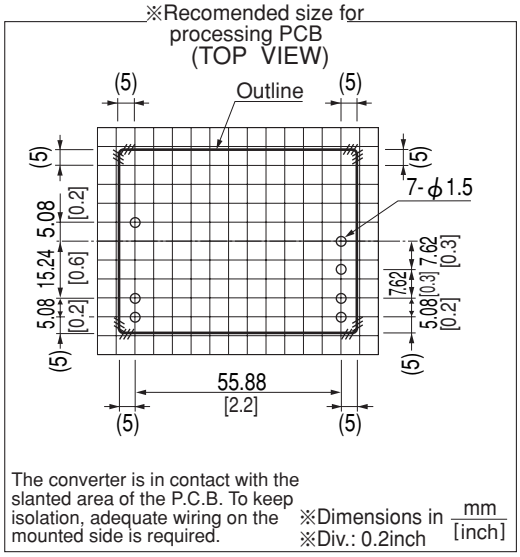
	MODEL	ZUW250512	ZUW250515	ZUW251212	ZUW251215	ZUW252412	ZUW252415	ZUW254812	ZUW254815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 75	
	CURRENT[A] *1	4.92typ	4.90typ	2.47typ	2.50typ	1.23typ	1.25typ	0.62typ	0.63typ
	EFFICIENCY[%] *1	82typ	82typ	85typ	85typ	85typ	85typ	85typ	85typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.84	0.67	1.05	0.85	1.05	0.85	1.05	0.85
	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] 0 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]	100max (Minimum input, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Internally fixed (TRM pin open), ±5% adjustable by external VR							
	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							
	OVERVOLTAGE PROTECTION	Works at 115 - 140% of rating (Total of +V and -V)							
	REMOTE ON/OFF	Between RC and -side of input:short - 1.2V ・・・output ON, 2.4V - 5.5V(or open) ・・・output OFF, Compatible to TTL							
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, EN60950-1, CSA C22.2 No.60950-1 Complies with IEC60950-1							
OTHERS	CASE SIZE/WEIGHT	65×8.5×50mm (W×H×D) / 65g 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



note) Internal parts
※Weight: 65g or less.
※Tolerance: ± 0.5
※Case material: Aluminum

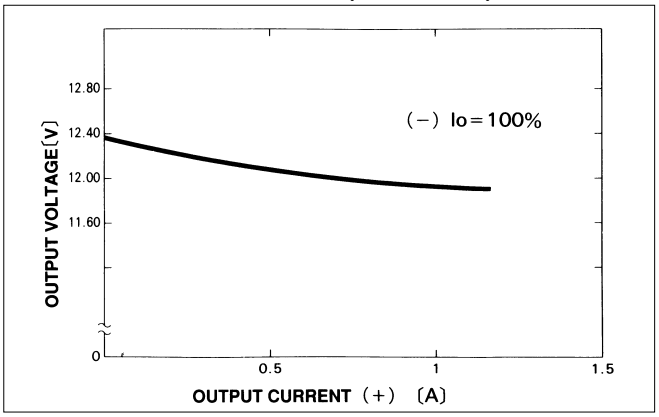


The converter is in contact with the slanted area of the P.C.B. To keep isolation, adequate wiring on the mounted side is required.

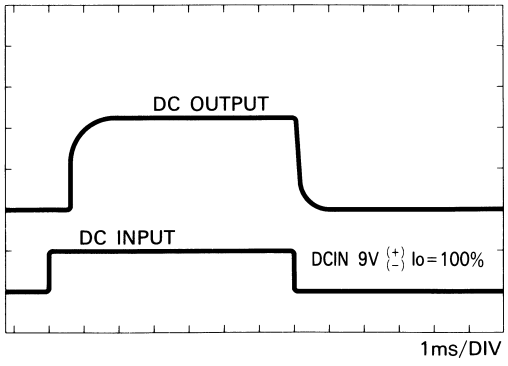
※Dimensions in mm [inch]
※Div.: 0.2inch

Performance data

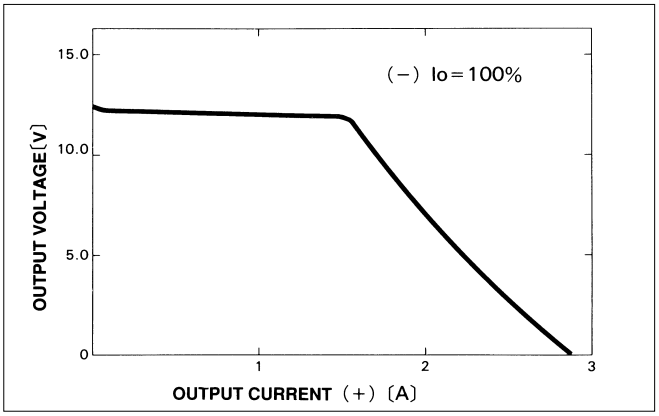
■STATIC CHARACTERISTICS (ZUW251212)



■RISE TIME & FALL TIME (ZUW251212:+12V)



■OVERCURRENT CHARACTERISTICS (ZUW251212)



■DERATING CURVE