



#### Features:

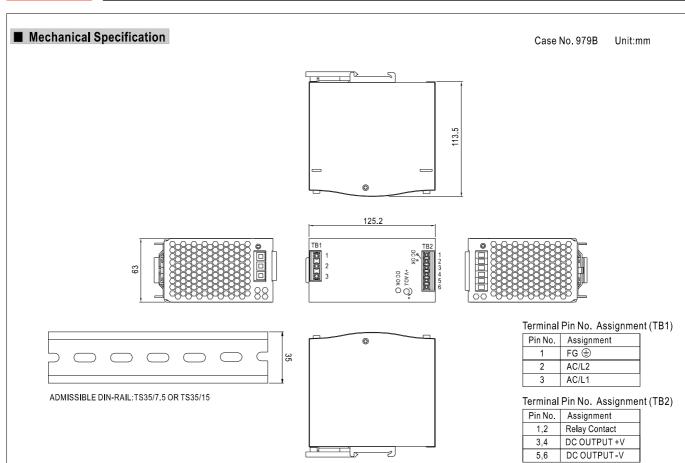
- Single and two phase wide input range 180~550VAC
- Built-in active PFC circuit compliance to EN61000-3-2
- High efficiency 91% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

### **SPECIFICATION**

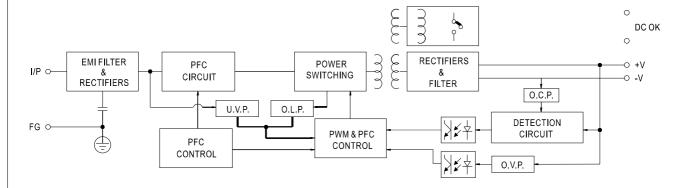


DC VOLTAGE   24V   48V   55	MODEL		WDR-240-24	WDR-240-48	
CURRENT RANGE		DC VOLTAGE	24V	48V	
RATED POWER   240W   240W   RIPPLE & NOISE (max), Note, 2 150m/tp-p   150m/	ОИТРИТ	RATED CURRENT	10A	5A	
RIPPLE & NOISE (max.) Neta.   150mVp-p		CURRENT RANGE	0 ~ 10A	0 ~ 5A	
VOLTAGE ADJ. RANGE   24 - 28V		RATED POWER	240W	240W	
VOLTAGE TOLERANCE Note.3		RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	
LINE REGULATION   ±0.5%   ±10.5%   ±10.5%   ±10.5%   ±10.7%		VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V	
LOAD REGULATION   ±1.0%   150ms, 150ms/300VAC   1500ms, 150ms/230VAC at full load		VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	
SETUP, RISE TIME		LINE REGULATION	±0.5%	±0.5%	
HOLD UP TIME (Typ.)   18ms / 400VAC   18ms / 230VAC at full load		LOAD REGULATION	±1.0%	±1.0%	
VOLTAGE RANGE		SETUP, RISE TIME	800ms, 150ms/400VAC 1500ms, 150ms/230VAC at full load		
FREQUENCY RANGE   47 - 63Hz   POWER FACTOR (Typ.)   PF ≥ 0.84/400VAC   PF ≥ 0.84/230VAC   PROBLEM   PROB		HOLD UP TIME (Typ.)	18ms / 400VAC 18ms / 230VAC at full load		
POWER FACTOR (Typ.)   PF≥0.84/400VAC   PF≥0.84/230VAC		VOLTAGE RANGE Note.6	180 ~ 550VAC 254 ~ 780VDC		
INPUT   AC CURRENT (Typ.)   14/400/AC   24/230VAC   14/400VAC   24/230VAC   105 - 130% rated output power   Protection type : Constant current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed   105 - 130% rated output power   Protection type : Constant current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed   29 - 33V   56 - 65V   700		FREQUENCY RANGE	47 ~ 63Hz		
AC CURRENT (Typ.) INRUSH CURRENT (Typ.) INRUSH CURRENT (Typ.) LEAKAGE CURRENT OVERLOAD  OVERLOAD  OVERLOAD  OVER VOLTAGE  OVER VOLTAGE  OVER VOLTAGE  OVER TEMPERATURE  TEMPERATURE  OVER TEMPER	INPUT	POWER FACTOR (Typ.)	PF≥0.84/400VAC PF≥0.84/230VAC		
AC CURRENT (Typ.) INRUSH CURRENT (Typ.) COLD STAR 50A  LEAKAGE CURRENT OVERLOAD  OVERLOAD  OVERLOAD  OVER VOLTAGE  OVER VOLTAGE  OVER VOLTAGE  OVER TEMPERATURE  OVER TEMPERAT		, , ,			
INRUSH CURRENT (Typ.)   COLD STAR 50A					
LEAKAGE CURRENT   C3.5mA / 530VAC   105 - 130% rated output power   Protection type : Constant current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed   29 - 33V   Protection type : Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed   29 - 35C   TSW) detect on heatsink of power switch   Protection type : Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed   90°C±5°C (TSW) detect on heatsink of power switch   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage recovers automatically after temperature goes down   Protection type : Shut down o/p voltage recovers automatically after temperature goes down   Protection type : Shut down o/p voltage recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage, recovers automatically after temperature goes down   Protection type : Shut down o/p voltage recovers automatically after temperature goes down   Prot					
OVERLOAD   105 ~ 130% rated output power   Protection type : Constant current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed   29 ~ 33V   56 ~ 65V		, , ,			
PROTECTION  OVER VOLTAGE  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  FOR CONTACT RATINGS (max.)  OVER TEMPERATURE  FOR CONTACT RATINGS (max.)  OVER TEMP. Note.5  OVER TEMPERATURE  FOR CONTACT RATINGS (max.)  OVER TEMPERATURE  TEMPERATURE  TEMPERATURE  OVER TEMPERATURE  DOVER TEMPERATURE  D					
PROTECTION  OVER VOLTAGE  29 ~ 33V   56 ~ 65V  Protection type : Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed  90°C±5°C (TSW) detect on heatsink of power switch  Protection type : Shut down o/p voltage, recovers automatically after temperature goes down  FUNCTION  DC OK REALY CONTACT RATINGS (max.) 60°Vcl/0.3A, 30°Vcl/1.4, 30°Vac/1.5A resistive load  WORKING TEMP. Note.5 -30 ~ +70°C (Refer to "Derating Curve")  WORKING HUMIDITY 20 ~ 95% RH non-condensing  STORAGE TEMP., HUMIDITY 40 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT ±0.03%/°C (0 ~ 50°C)  VIBRATION  SAFETY STANDARDS UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE I/P-O/P; I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH  EMC (Note 4)  EMC EMISSION Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY Compliance to EN65022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximation of the compliance o		OVERLOAD	Protection type: Constant current limiting, unit will shut down after	3 sec., auto-recovery after 1 minute if the fault condition is removed	
Protection type : Shut down o/p voltage, auto-recovery after 1 minute if the fault condition is removed  OVER TEMPERATURE  Protection type : Shut down o/p voltage, recovers automatically after temperature goes down  OVER TEMPERATURE  FUNCTION  DC OK REALY CONTACT RATINGS (max.)  OVER TEMPERATURE  OV		OVER VOLTAGE			
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FUNCTION DC OK REALY CONTACT RATINGS (max.) 60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load  WORKING TEMP. Note.5 -30 ~ +70°C (Refer to "Derating Curve")  WORKING HUMIDITY 20 ~ 95% RH non-condensing  STORAGE TEMP., HUMIDITY 40 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT ±0.03%/°C (0 ~ 50°C)  VIBRATION Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6  SAFETY STANDARDS UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE I/P-0/P:3KVAC I/P-FG:1.5KVAC 0/P-FG:0.5KVAC 0/P-DC OK:0.5KVAC  ISOLATION RESISTANCE I/P-0/P:3KVAC I/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH  EMC (Note 4)  EMC EMISSION Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximate of the strength of		OVER TEMPERATURE	90°C±5°C (TSW) detect on heatsink of power switch		
WORKING TEMP. Note.5 -30 ~ +70°C (Refer to "Derating Curve") WORKING HUMIDITY 20 ~ 95% RH non-condensing  STORAGE TEMP., HUMIDITY -40 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT ±0.03%/°C (0 ~ 50°C) VIBRATION Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6  SAFETY \$  SAFETY STANDARDS UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE I/P-O/P, I/P-FG, 1.5KVAC 0/P-FG:0.5KVAC 0/P-DC OK:0.5KVAC  ISOLATION RESISTANCE I/P-O/P, I/P-FG, 0/P-FG:5-100M Ohms / 500VDC / 25°C / 70% RH  EMC (Note 4) EMC EMISSION Compliance to EN55022 (CISPR22), EN61204-3 (lass B, EN61000-3-2,-3  EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximate to the standard of the s					
WORKING HUMIDITY  20 ~ 95% RH non-condensing  STORAGE TEMP, HUMIDITY  40 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT  ±0.03%/°C (0 ~ 50°C)  VIBRATION  Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6  SAFETY STANDARDS  UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE  I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC  ISOLATION RESISTANCE  I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH  EMC EMISSION  EMC IMMUNITY  Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximate to the standard of	FUNCTION	DC OK REALY CONTACT RATINGS (max.)			
ENVIRONMENT  STORAGE TEMP, HUMIDITY		WORKING TEMP. Note.5			
TEMP. COEFFICIENT    ±0.03%/°C (0 ~ 50°C)     VIBRATION   Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6   SAFETY STANDARDS   UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL   WITHSTAND VOLTAGE   I/P-O/P:3KVAC   I/P-FG:1.5KVAC   O/P-FG:0.5KVAC   O/P-DC OK:0.5KVAC     I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH   EMC EMISSION   Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3     EMC IMMUNITY   Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximate to the standard of the standa	ENVIRONMENT	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
VIBRATION  Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6  SAFETY STANDARDS  UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE  I/P-O/P;3KVAC  I/P-FG:1.5KVAC  O/P-FG:0.5KVAC  O/P-DC OK:0.5KVAC  ISOLATION RESISTANCE  I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH  EMC EMISSION  Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A appro  MTBF  141.1Khrs min. MIL-HDBK-217F (25°C)  DIMENSION  63*125.2*113.5mm (W*H*D)  PACKING  1.06Kg; 12pcs/13.7Kg/1.06CUFT  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power in case the adjacent device is a heat source, 15mm clearance is recommended.		STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH		
SAFETY &  EMC (Note 4)  SAFETY STANDARDS  UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL  WITHSTAND VOLTAGE  I/P-O/P:3KVAC  I/P-FG:1.5KVAC  O/P-FG:0.5KVAC  O/P-DC OK:0.5KVAC  ISOLATION RESISTANCE  I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH  EMC EMISSION  Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximately a		TEMP. COEFFICIENT	,		
SAFETY &  EMC (Note 4)  ISOLATION RESISTANCE  I/P-O/P; I/P-FG, O/P-FG: >100M Ohms / 500VDC / 25°C / 70% RH  EMC EMISSION  Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approximately ap		VIBRATION			
ISOLATION RESISTANCE   I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH		SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ, design refer	to GL	
(Note 4)  EMC EMISSION Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A appro  MTBF 141.1Khrs min. MIL-HDBK-217F (25°C)  DIMENSION 63*125.2*113.5mm (W*H*D)  PACKING 1.06Kg; 12pcs/13.7Kg/1.06CUFT  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power in case the adjacent device is a heat source, 15mm clearance is recommended.	SAFETY &	WITHSTAND VOLTAGE			
EMC IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A appro  MTBF  141.1Khrs min. MIL-HDBK-217F (25°C)  DIMENSION  63*125.2*113.5mm (W*H*D)  PACKING  1.06Kg; 12pcs/13.7Kg/1.06CUFT  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power in case the adjacent device is a heat source, 15mm clearance is recommended.		ISOLATION RESISTANCE			
OTHERS    MTBF		EMC EMISSION			
OTHERS  DIMENSION 63*125.2*113.5mm (W*H*D)  PACKING 1.06Kg; 12pcs/13.7Kg/1.06CUFT  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power lines to the adjacent device is a heat source, 15mm clearance is recommended.		EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approved		
PACKING  1.06Kg; 12pcs/13.7Kg/1.06CUFT  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uf & 47 uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power lines the adjacent device is a heat source, 15mm clearance is recommended.	OTHERS	MTBF	( - /		
NOTE  1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power lines the adjacent device is a heat source, 15mm clearance is recommended.		DIMENSION			
<ol> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uf &amp; 47 uf parallel capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation and load regulation.</li> <li>The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power in case the adjacent device is a heat source, 15mm clearance is recommended.</li> </ol>		PACKING	1.06Kg; 12pcs/13.7Kg/1.06CUFT		
File Name:WDR-240-SPEC 2011	NOTE				





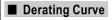
## ■ Block Diagram

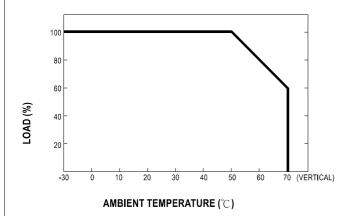


# **■** DC OK Relay Contact

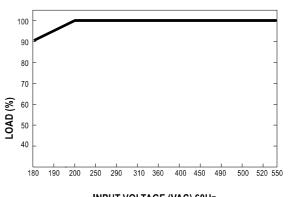
Contact Close	PSU turns on / DC OK.	
Contact Open	PSU turns off / DC Fail.	
Contact Ratings (max.)	30V/1A resistive load.	







# ■ Output derating VS input voltage



INPUT VOLTAGE (VAC) 60Hz