



# 100W Quad Output with PFC Function

# QP-100 series



## ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage
- Free air cooling convection
- CH4:±Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty



## SPECIFICATION

MODEL		QP-100-3A				QP-100-3B				QP-100-3C				
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	
	DC VOLTAGE	5V	3.3V	12V	-5V	5V	3.3V	12V	-12V	5V	3.3V	15V	-15V	
	RATED CURRENT	8A	8A	2.5A	0.6A	8A	8A	2.2A	0.6A	8A	8A	1.7A	0.6A	
	CURRENT RANGE	2 ~ 10A	0 ~ 10A	0.3 ~ 3A	0 ~ 1A	2 ~ 10A	0 ~ 10A	0.3 ~ 3A	0 ~ 1A	2 ~ 10A	0 ~ 10A	0.3 ~ 2A	0 ~ 1A	
	RATED POWER (max.)	99.4W				100W				100.9W				
	RIPPLE & NOISE (max.)	Note.2	100mVp-p	100mVp-p	150mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V		CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V		CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V		
	VOLTAGE TOLERANCE	Note.3	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	+8,-6%	± 5.0%
	LINE REGULATION		± 1.0%	± 1.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 2.0%	± 1.0%
	LOAD REGULATION		± 2.0%	± 2.0%	± 6.0%	± 2.0%	± 2.0%	± 2.0%	± 6.0%	± 2.0%	± 2.0%	± 2.0%	± 6.0%	± 2.0%
SETUP, RISE TIME	800ms, 50ms/230VAC				1800ms, 50ms/115VAC at full load									
HOLD UP TIME (Typ.)	24ms/230VAC		24ms/115VAC at full load											
INPUT	VOLTAGE RANGE	Note.4	90 ~ 264VAC		127 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.95/230VAC		PF>0.98/115VAC at full load										
	EFFICIENCY (Typ.)	74%					74%			75%				
	AC CURRENT (Typ.)	1.5A/115VAC		0.75A/230VAC										
	INRUSH CURRENT (Typ.)	COLD START ≤50A/230V												
LEAKAGE CURRENT	<3.5mA / 240VAC													
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed												
	OVER VOLTAGE	CH1:5.75 ~ 6.75V    CH2:3.8 ~ 4.4V Protection type : Shut down o/p voltage, re-power on to recover												
	OVER TEMPERATURE(OPTION)	Shut down o/p voltage, recovers automatically after temperature goes down												
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")												
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH non-condensing												
	TEMP. COEFFICIENT	± 0.03%/℃ (0~50℃)												
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved												
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC												
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH												
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020												
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020												
OTHERS	MTBF	139.9K hrs min.    MIL-HDBK-217F (25℃)												
	DIMENSION	199*99*50mm (L*W*H)												
	PACKING	0.87Kg; 20pcs/18.4Kg/1.28CUFT												
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).													


**■ Features :**

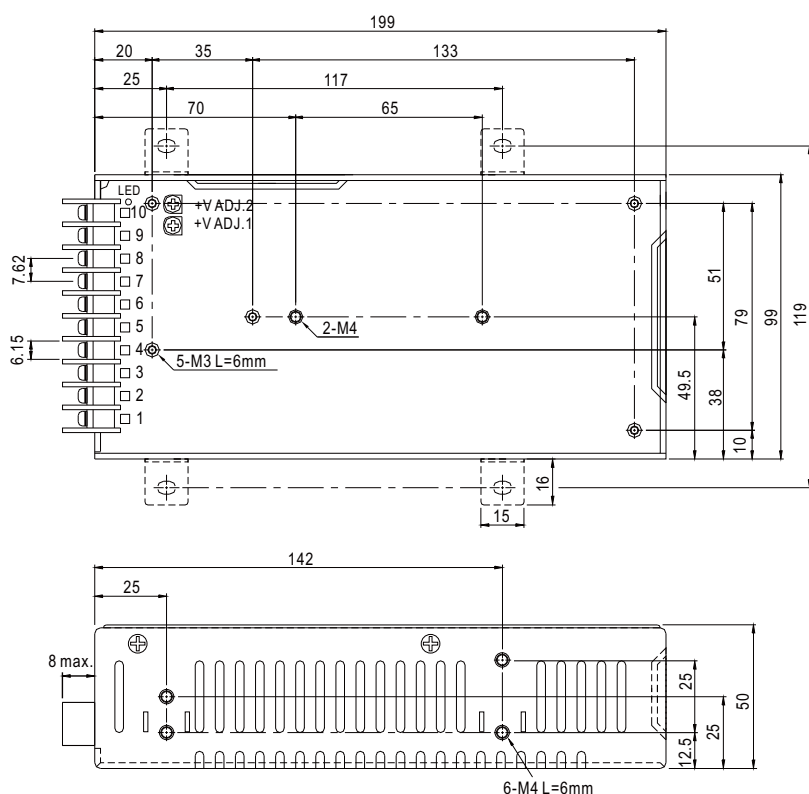
- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit/Over load/Over voltage
- Free air cooling convection
- CH4:  $\pm$  Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty


**SPECIFICATION**

MODEL		QP-100-3D				QP-100D				QP-100F				
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	
	DC VOLTAGE	5V	3.3V	24V	-12V	5V	12V	24V	-12V	5V	15V	24V	-15V	
	RATED CURRENT	8A	8A	1.3A	0.6A	8A	2.4A	1A	0.6A	8A	2A	1A	0.6A	
	CURRENT RANGE	2 ~ 10A	0 ~ 10A	0.3 ~ 2A	0 ~ 1A	2 ~ 10A	0 ~ 3A	0.3 ~ 2A	0 ~ 1A	2 ~ 10A	0 ~ 3A	0.3 ~ 2A	0 ~ 1A	
	RATED POWER (max.)	104.8W				100W				103W				
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	150mVp-p	150mVp-p	120mVp-p	150mVp-p	200mVp-p	150mVp-p	120mVp-p	180mVp-p	200mVp-p	150mVp-p	
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V		CH1: 4.75 ~ 5.5V		CH2: 11.4 ~ 13.2V		CH1: 4.75 ~ 5.5V		CH2: 14.3 ~ 16.5V		
	VOLTAGE TOLERANCE Note.3	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%	
	LINE REGULATION	± 1.0%	± 1.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 2.0%	± 1.0%	
	LOAD REGULATION	± 2.0%	± 2.0%	± 6.0%	± 2.0%	± 2.0%	± 2.0%	± 6.0%	± 2.0%	± 2.0%	± 2.0%	± 2.0%	± 2.0%	
SETUP, RISE TIME	800ms, 50ms/230VAC				1800ms, 50ms/115VAC at full load									
HOLD UP TIME (Typ.)	24ms/230VAC		24ms/115VAC at full load											
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC		127 ~ 370VDC										
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.95/230VAC				PF>0.98/115VAC at full load								
	EFFICIENCY (Typ.)	75%					78%					78%		
	AC CURRENT (Typ.)	1.5A/115VAC		0.75A/230VAC										
	INRUSH CURRENT (Typ.)	COLD START ≤50A/230V												
LEAKAGE CURRENT	<3.5mA / 240VAC													
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed												
	OVER VOLTAGE	CH1:5.75 ~ 6.75V CH2:3.8 ~ 4.4V				CH1:5.75 ~ 6.75V CH2:13.8 ~ 16.2V				CH1:5.75 ~ 6.75V CH2:17.25 ~ 20.25V				
	OVER TEMPERATURE(OPTION)	Shut down o/p voltage, recovers automatically after temperature goes down												
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")												
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH non-condensing												
	TEMP. COEFFICIENT	± 0.03%/℃ (0~50℃)												
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved												
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC												
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH												
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020												
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020												
OTHERS	MTBF	139.9K hrs min. MIL-HDBK-217F (25℃)												
	DIMENSION	199*99*50mm (L*W*H)												
	PACKING	0.87Kg; 20pcs/18.4Kg/1.28CUFT												
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).													

## ■ Mechanical Specification

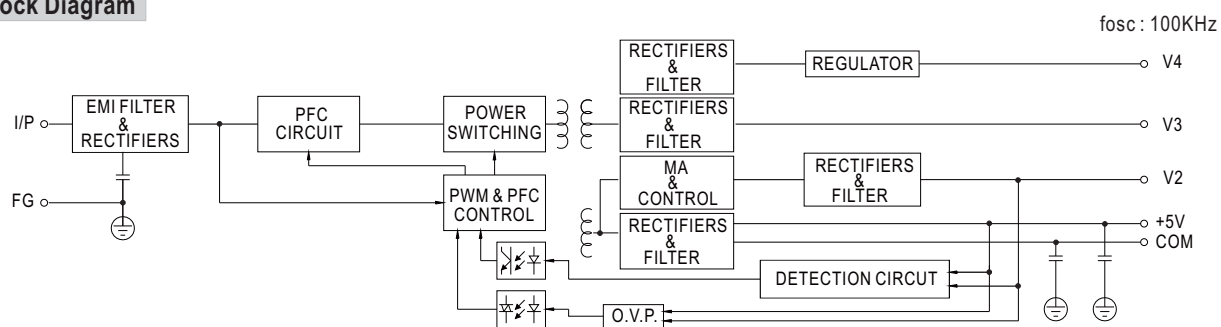
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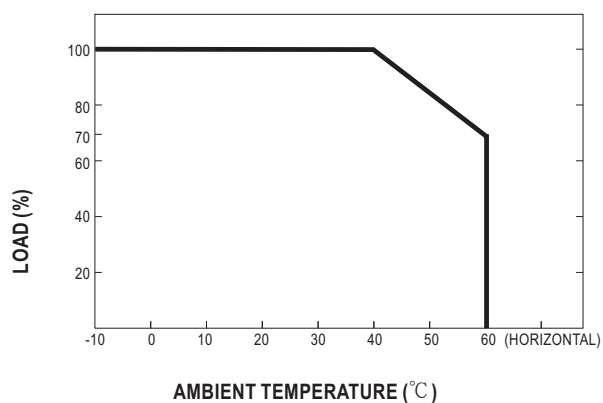
Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT V3
2	AC/N	6,7	DC OUTPUT V1
3	FG $\perp$	8,9	DC OUTPUT COM
4	DC OUTPUT V4	10	DC OUTPUT V2

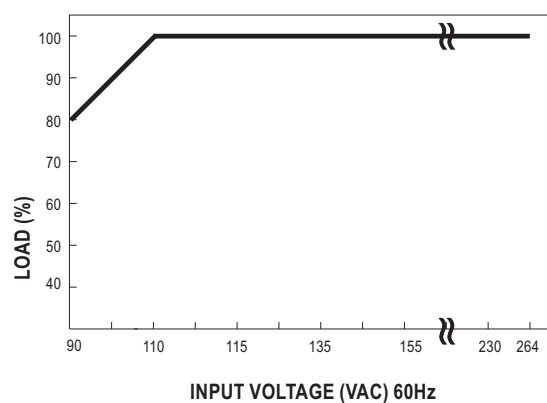
### ■ Block Diagram



### Derating Curve



### ■ Output Derating VS Input Voltage





100W Quad Output with PFC Function

QP-100B,C series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage
- Free air cooling convection
- Fixed switching frequency at 100KHz
- 3 years warranty

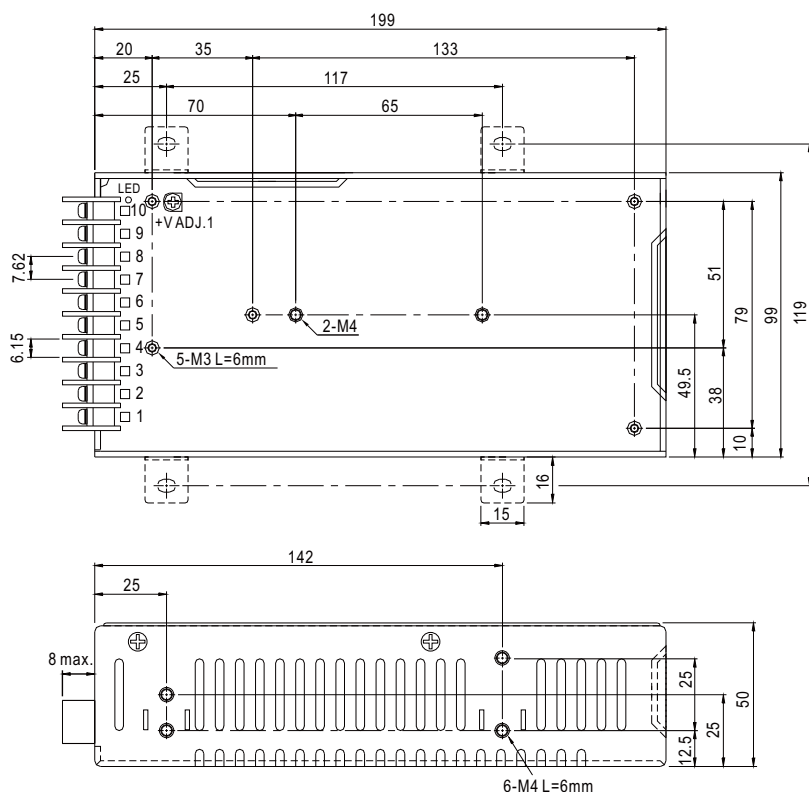


SPECIFICATION

MODEL		QP-100B				QP-100C			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	12V	-12V	-5V	5V	15V	-15V	-5V
	RATED CURRENT	10A	3A	1A	0.6A	10A	2.2A	1A	0.6A
	CURRENT RANGE	2 ~ 10A	0.3 ~ 4A	0.15 ~ 1A	0 ~ 1A	2 ~ 10A	0.3 ~ 3A	0.15 ~ 1A	0 ~ 1A
	RATED POWER (max.)	101W				101W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V				CH1:4.75 ~ 5.5V			
	VOLTAGE TOLERANCE Note.3	± 3.0%	± 6.0%	+10,-6%	± 5.0%	± 3.0%	+6,-10%	± 8.0%	± 5.0%
	LINE REGULATION	± 1.0%	± 2.0%	± 2.0%	± 1.0%	± 1.0%	± 2.0%	± 2.0%	± 1.0%
	LOAD REGULATION	± 2.0%	± 6.0%	± 6.0%	± 2.0%	± 2.0%	± 2.0%	± 6.0%	± 2.0%
SETUP, RISE TIME	1000ms, 50ms/230VAC      2200ms, 50ms/115VAC at full load								
HOLD UP TIME (Typ.)	24ms at full load								
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC      127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/230VAC      PF>0.98/115VAC at full load							
	EFFICIENCY (Typ.)	76%					77%		
	AC CURRENT (Typ.)	1.5A/115VAC      0.75A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 40A							
	LEAKAGE CURRENT	<3.5mA / 240VAC							
PROTECTION	OVERLOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	CH1:5.75 ~ 6.75V Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE(OPTION)	Shut down o/p voltage, recovers automatically after temperature goes down							
	ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")						
WORKING HUMIDITY		20 ~ 90% RH non-condensing							
STORAGE TEMP., HUMIDITY		-20 ~ +85℃, 10 ~ 95% RH non-condensing							
TEMP. COEFFICIENT		±0.03%/℃ (0~50℃)							
VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY & EMC (Note 5)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved							
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH							
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020							
OTHERS	MTBF	139.9K hrs min.    MIL-HDBK-217F (25℃)							
	DIMENSION	199*99*50mm (L*W*H)							
	PACKING	1.1Kg; 20pcs/22Kg/1.28CUFT							
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).								

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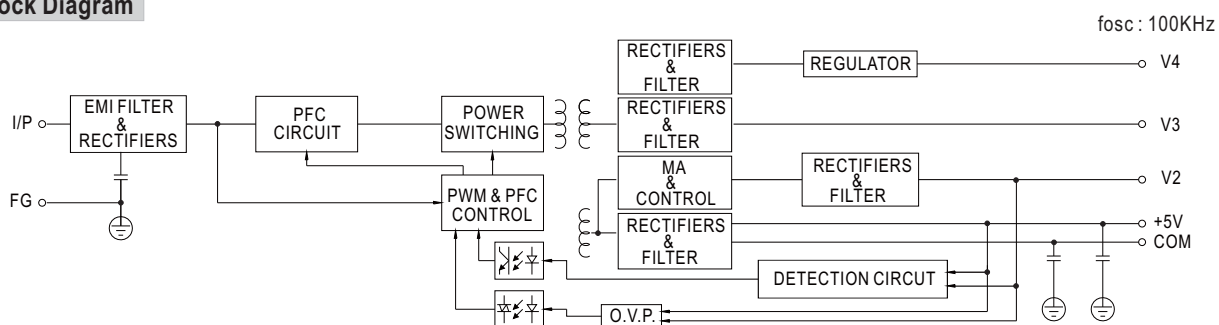
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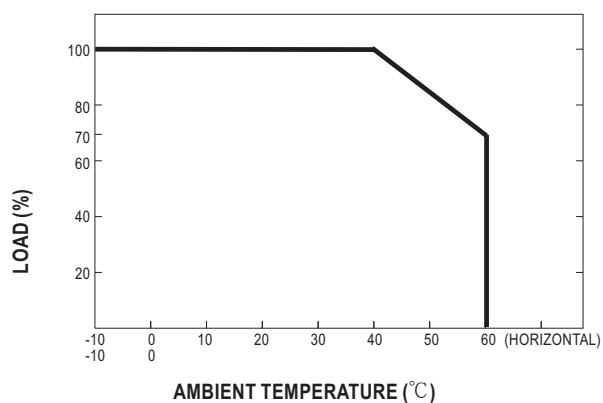
Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
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3	FG $\perp$	8,9	DC OUTPUT COM
4	DC OUTPUT V4	10	DC OUTPUT V2

### ■ Block Diagram



### Derating Curve



### ■ Output Derating VS Input Voltage

