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 800ms, 50ms/115VAC at full load											
	HOLD UP TIME (Typ.)	24ms/230VAC 24ms/115VAC at full load											
INPUT	VOLTAGE RANGE Note.5	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 ≦40A/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											
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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 EN55022 (CISPR22) Class B, EN61000-3-2,-3											
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A											
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. 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 http://www.meanwell.com)
5. Derating may be needed under low input voltages. Please check the derating curve for more details.

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/Over load/Over voltage
- Free air cooling convection
- CH4:±Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty

SPECIFICATION

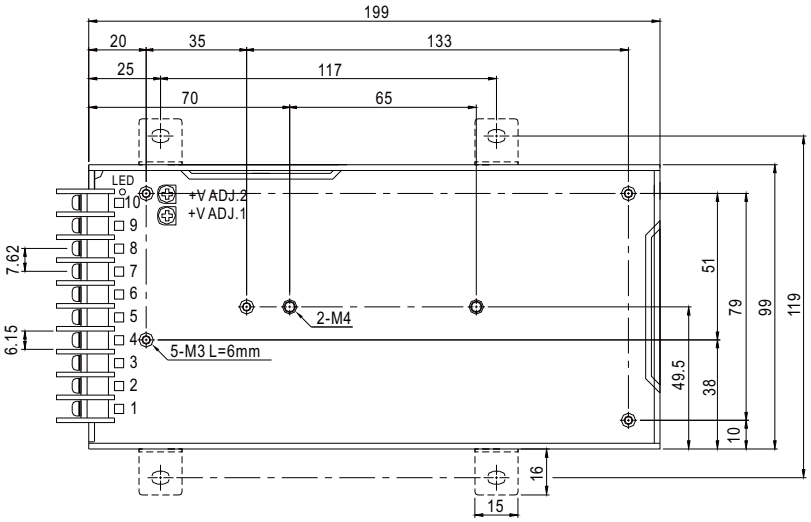
MODEL		QP-100-3D				QP-100D				QP-100F			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	3.3V	24V	-12V	5V	12V	24V	-12V	5V	15V	24V	-15V
	RATED CURRENT	8A	8A	1.3A	0.6A	8A	2.4A	1A	0.6A	8A	2A	1A	0.6A
	CURRENT RANGE	2 ~ 10A	0 ~ 10A	0.3 ~ 2A	0 ~ 1A	2 ~ 10A	0 ~ 3A	0.3 ~ 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%	±6.0%	±2.0%
	SETUP, RISE TIME	800ms, 50ms/230VAC 800ms, 50ms/115VAC at full load											
	HOLD UP TIME (Typ.)	24ms/230VAC 24ms/115VAC at full load											
INPUT	VOLTAGE RANGE Note.5	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 ≦40A/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			
		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											
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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 EN55022 (CISPR22) Class B, EN61000-3-2,-3											
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A											
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											

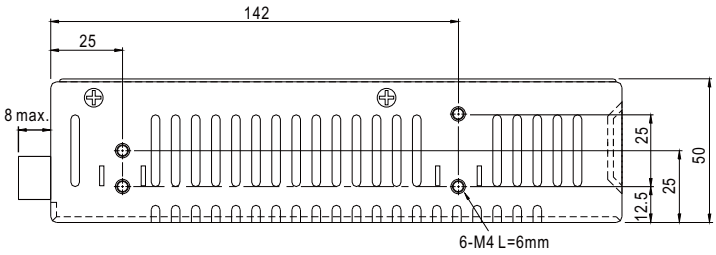
NOTE

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. 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 http://www.meanwell.com)
5. Derating may be needed under low input voltages. Please check the derating curve for more details.

■ Mechanical Specification

Case No. 916A Unit:mm



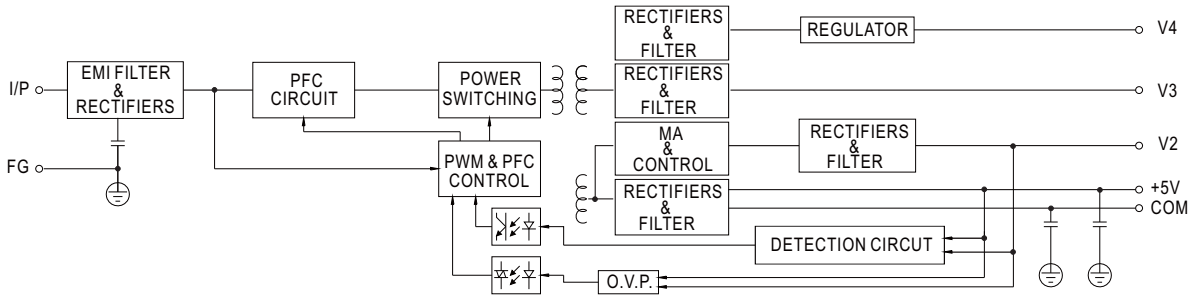


Terminal Pin No. Assignment :

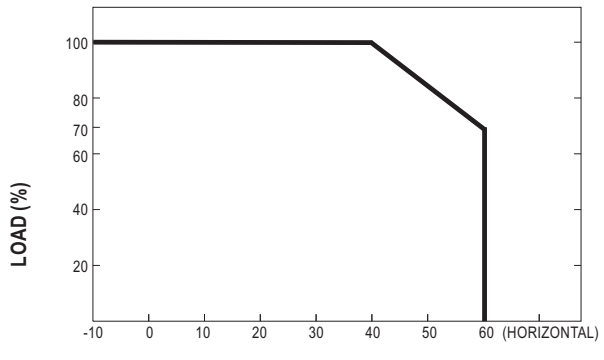
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT V3
2	AC/N	6,7	DC OUTPUT V1
3	FG ⏚	8,9	DC OUTPUT COM
4	DC OUTPUT V4	10	DC OUTPUT V2

■ Block Diagram

fosc : 100KHz

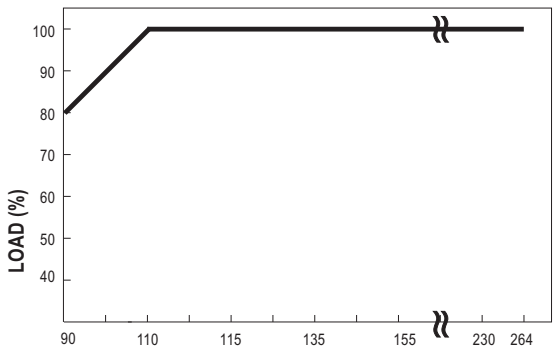


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz

100W Quad Output with PFC Function

QP-100B,C series

■ Features :

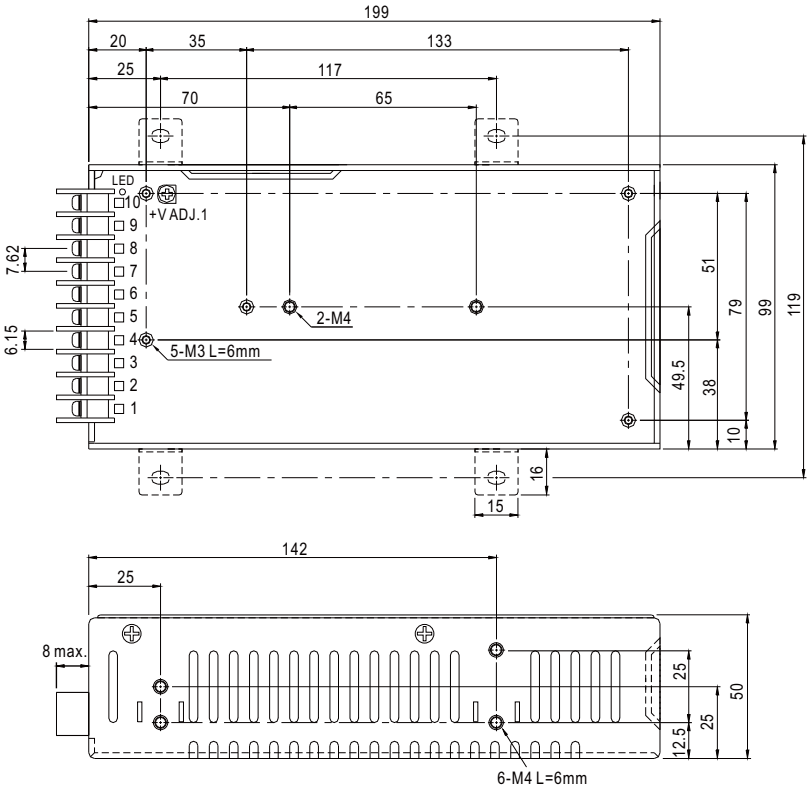
- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage
- Free air cooling convection
- Fixed switching frequency at 100KHz
- 3 years warranty

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 at full load							
	HOLD UP TIME (Typ.)	24ms at full load							
INPUT	VOLTAGE RANGE Note.5	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							
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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 EN55022 (CISPR22) Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A							
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. 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 http://www.meanwell.com) 5. Derating may be needed under low input voltages. Please check the derating curve for more details.								

■ Mechanical Specification

Case No. 916A Unit:mm

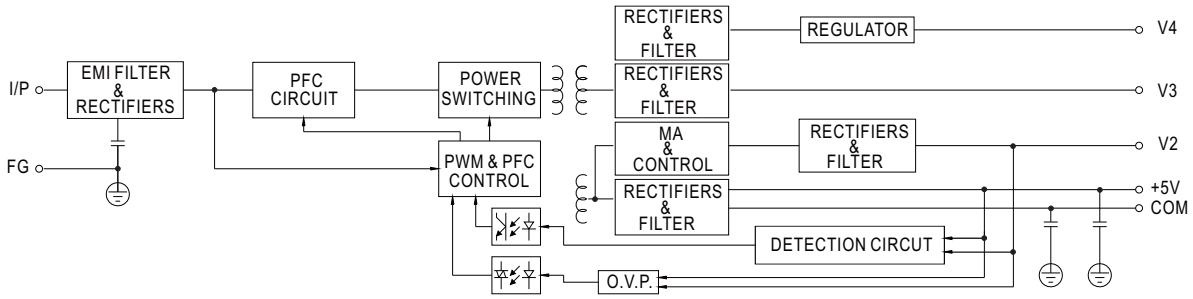


Terminal Pin No. Assignment :

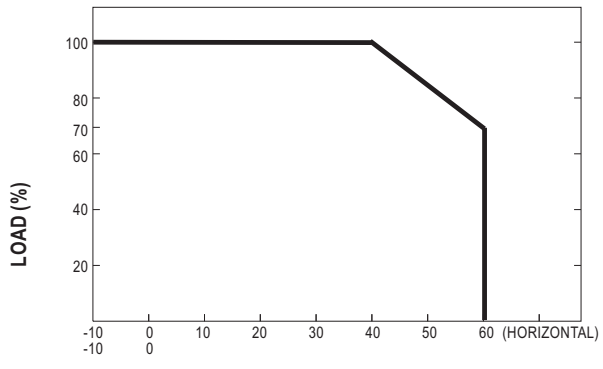
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT V3
2	AC/N	6,7	DC OUTPUT V1
3	FG ⏚	8,9	DC OUTPUT COM
4	DC OUTPUT V4	10	DC OUTPUT V2

■ Block Diagram

fosc : 100KHz

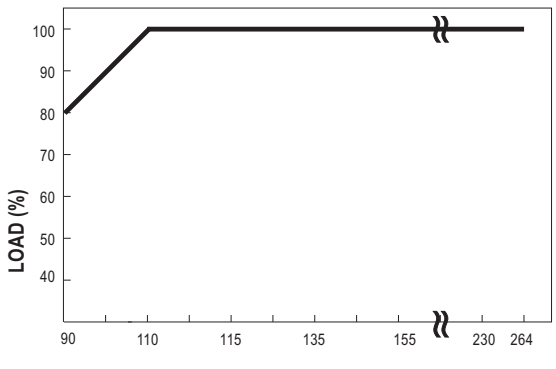


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz