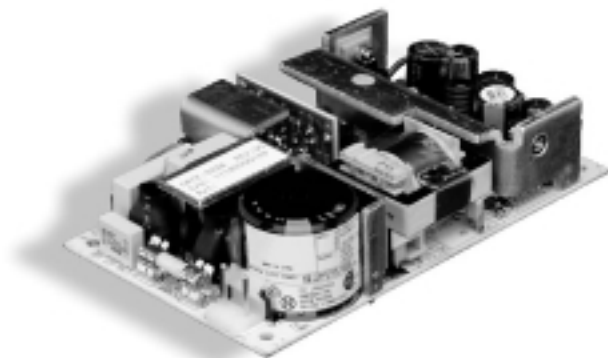


Single & Multi Output Switchers

KM25-110 SERIES

25-110 Watts



CE Marked - LVD

•

High MTBF

•

Single & Multi Outputs

•

Wide Output Adjustment

•

Logic Control

•

Remote Sense

•

International Safety Approvals

Specification

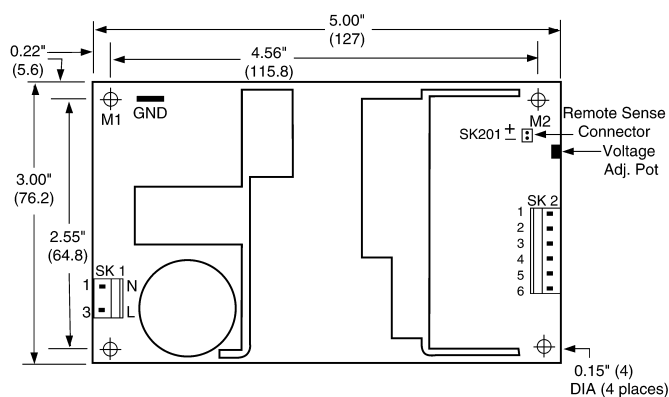
Input Voltage	• 85-264 V AC (120-370 V DC)
Input Frequency	• 47-440 Hz
Inrush Current	• <30 A (KM25) <36 A (KM40-110) @ 230 V AC, cold start @ 25 °C
Hold Up Time	• 20 ms @ full load & 115 V AC nominal line
Output Voltage	• See Tables
Output Voltage Adjustment	• -5/+10% V_i (KM25-60), $\pm 5\%$ V_i (KM110)
Line Regulation	• See Tables
Load Regulation	• See Tables
Ripple & Noise	• See Tables
Overload Protection	• S/C protected. Output power limited @ 110-145% above pk rating
Overvoltage Protection	• 3.3 V & 5 V outputs @ <135%, other main outputs @ <125% nominal
Temperature Coefficient	• $\pm 0.04\%/^{\circ}\text{C}$
Efficiency	• 70% typical (KM25-110)
Operating Temperature	• 0 °C to 70 °C, derate each output @ 2.5%/°C above +50 °C
Storage Temperature	• -40 °C to +85 °C
Relative Humidity	• 5% to 95 % operating - non-condensing
Vibration	• 3 orthogonal axis sweep @ 1 oct/min, 5 min dwell at four major resonances 0.75 G pk 5 Hz to 500 Hz
EMC	• All models meet FCC class B, CISPR22 class B, EN55022 class B, VDE0878 Part 3 class B conducted
Safety Approvals	• EN60950, UL 1950, CSA 22.2 - 234 level 3
MTBF Demonstrated	• >550,000 hrs @ full load & 25 °C ambient conditions
Leakage Current	• <0.5 mA @ 264 V AC to ground
Power Fail	• KM110 TTL signal goes 'high' 50-150 ms after 5 V output. Signal goes 'Low' at least 4 ms before loss of regulation
Remote Sense	• All models

Output Voltage & Current Ratings - 25 Watt Models

Output Voltage	Minumum Load ⁽¹⁾	Max. Load Convection	Max Load 30 CFM	Peak Load ⁽²⁾	Regulation ⁽³⁾	Ripple Pk-Pk (PARD) ⁽⁴⁾	Model Number
5 V	0.0 A	5.0 A	8.0 A	9.0 A	±2%	50 mV	KM25US05
12 V	0.0 A	2.1 A	3.3 A	3.7 A	±2%	120 mV	KM25US12
15 V	0.0 A	1.7 A	2.7 A	3.0 A	±2%	150 mV	KM25US15
24 V	0.0 A	1.1 A	1.8 A	1.9 A	±2%	240 mV	KM25US24
+5 V ₁	0.3 A	3.0 A	4.0 A	5.0 A	±2%	50 mV	KM25UT22
+12 V ₂	0.1 A	1.5 A	2.0 A	3.0 A	±5%	120 mV	
-12 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5 V ₁	0.4 A	4.0 A	5.0 A	6.0 A	±2%	50 mV	KM25UT23
+12 V ₂	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
-12 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5 V ₁	0.3 A	3.0 A	4.0 A	5.0 A	±2%	50 mV	KM25UT24
+12 V ₂	0.1 A	1.5 A	2.0 A	3.0 A	±5%	120 mV	
-5 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	50 mV	
+5 V ₁	0.3 A	3.0 A	4.0 A	5.0 A	±2%	50 mV	KM25UT25
+12 V ₂	0.1 A	1.5 A	2.0 A	2.5 A	±5%	150 mV	
-15 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	150 mV	

NOTES:

1. Minimum loads required for operation.
2. Peak current lasting <30 secs with max. duty cycle of 10%.
3. At 25 °C including initial tolerance, line voltage, load currents & output voltages adjusted to factory settings.
4. Peak to peak with 20 MHz bandwidth & 10 µF in parallel with 0.1 µF capacitor @ rated line voltage and load ranges.

Mechanical Details - 25 Watt Models

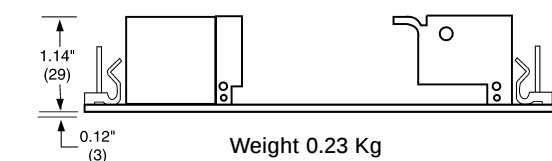
PIN CONNECTIONS		
Connector	Single Output	Multi Output
SK1-1	Neutral	Neutral
SK1-3	Line	Line
SK2-1	+V out	V ₂
SK2-2	+V out	V ₁
SK2-3	+V out	V ₁
SK2-4	Common	Common
SK2-5	Common	Common
SK2-6	Common	V ₃
SK201-1	+ Sense	+ Sense
SK201-2	- Sense	- Sense

Mating Connectors

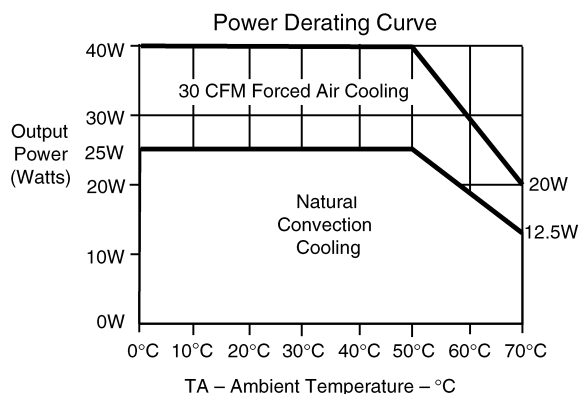
SK1 Molex 09-91-0300
Pins 08-58-0111

SK2 Molex 09-91-0600
Pins 08-58-0111

SK201 Molex 22-01-2025
Pins 08-05-0114



Weight 0.23 Kg



Cover kit available order Part No. KM25/40 Cover or add suffix '-C' to model number to receive unit with cover fitted.

Overall cover dimensions in inches (mm):
5.9" (150) x 3.86" (98) x 1.5" (38)

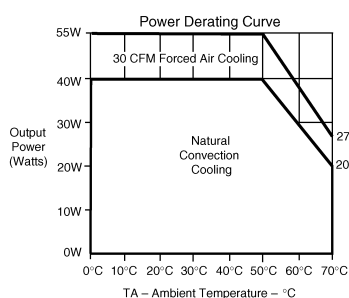
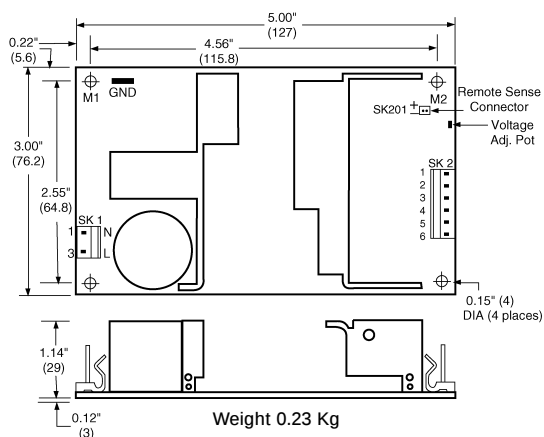
Output Voltage & Current Ratings - 40 Watt Models

Output Voltage	Minimum Load ⁽¹⁾	Max. Load Convection	Max. Load 30 CFM	Peak Load ⁽²⁾	Regulation ⁽³⁾	Ripple PK-PK PARD ⁽⁴⁾	Model Number
3.3 V	0.0 A	8.0 A	11.0 A	12.0 A	±2%	33 mV	KM40US03
5.0 V	0.0 A	8.0 A	11.0 A	12.0 A	±2%	50 mV	KM40US05 ⁽⁵⁾
12.0 V	0.0 A	3.3 A	4.5 A	5.0 A	±2%	120 mV	KM40US12 ⁽⁵⁾
15.0 V	0.0 A	2.6 A	3.6 A	4.0 A	±2%	150 mV	KM40US15 ⁽⁵⁾
24.0 V	0.0 A	1.6 A	2.3 A	2.5 A	±2%	240 mV	KM40US24 ⁽⁵⁾
48.0 V	0.0 A	0.9 A	1.2 A	1.3 A	±2%	480 mV	KM40US48
+3.3 V ₁	0.5 A	4.0 A	7.0 A	7.5 A	±2%	33 mV	KM40UT41
+5.0 V ₂	0.0 A	1.5 A	2.0 A	2.5 A	±2%	50 mV	
+12.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	125 mV	
+5.0 V ₁	0.4 A	4.0 A	5.0 A	7.0 A	±2%	50 mV	KM40UT42 ⁽⁵⁾
+12.0 V ₂	0.2 A	2.0 A	2.5 A	4.0 A	±5%	120 mV	
-12.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5.0 V ₁	0.5 A	6.0 A	8.0 A	9.0 A	±2%	50 mV	KM40UT43
+12.0 V ₂	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
-12.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5.0 V ₁	0.4 A	4.0 A	5.0 A	7.0 A	±2%	50 mV	KM40UT44
+12.0 V ₂	0.2 A	2.0 A	2.5 A	4.0 A	±5%	120 mV	
-5.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	50 mV	
+5.0 V ₁	0.4 A	4.0 A	5.0 A	7.0 A	±2%	50 mV	KM40UT45 ⁽⁵⁾
+15.0 V ₂	0.2 A	2.0 A	2.5 A	3.0 A	±5%	150 mV	
-15.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	150 mV	
+5.0 V ₁	0.4 A	4.0 A	5.0 A	6.0 A	±2%	50 mV	KM40UT46
+24.0 V ₂	0.1 A	1.0 A	1.5 A	2.0 A	±7%	240 mV	
+12.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5.0 V ₁	0.4 A	4.0 A	0.5 A	6.0 A	±2%	50 mV	KM40UT47
+24.0 V ₂	0.2 A	1.0 A	1.5 A	2.0 A	±7%	240 mV	
-12.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	120 mV	
+5.0 V ₁	0.4 A	4.0 A	5.0 A	6.0 A	±2%	50 mV	KM40UT48
+24.0 V ₂	0.1 A	1.0 A	1.5 A	2.0 A	±7%	240 mV	
-5.0 V ₃	0.0 A	0.5 A	0.7 A	1.0 A	±5%	50 mV	

NOTES:

1. Minimum loads required for operation.
2. Peak current lasting <30 secs, with a maximum duty cycle of 10%.
3. At 25 °C including initial tolerance, line voltage, load currents & output voltages adjusted to factory settings.
4. Peak to peak with 20 MHz bandwidth & 10 µF in parallel with a 0.1 µF capacitor at rated line voltage & load ranges.
5. Medical versions available add suffix '-M' to model number. Contact sales for detailed datasheet.

Mechanical Details - 40 Watt Models



PIN CONNECTIONS

Connector	Single Output	Multi Output
SK1-1	Neutral	Neutral
SK1-3	Line	Line
SK2-1	+V out	V ₂
SK2-2	+V out	+V ₁
SK2-3	+V out	+V ₁
SK2-4	Common	Common
SK2-5	Common	Common
SK2-6	Common	V ₃
SK201-1	+ Sense	+ Sense
SK201-2	- Sense	- Sense

Mating Connectors

SK1 Molex 09-09-0300
Pins 08-58-0111

SK2 Molex 09-91-0600
Pins 08-58-0111

SK201 Molex 22-01-2025
Pins 08-05-0114

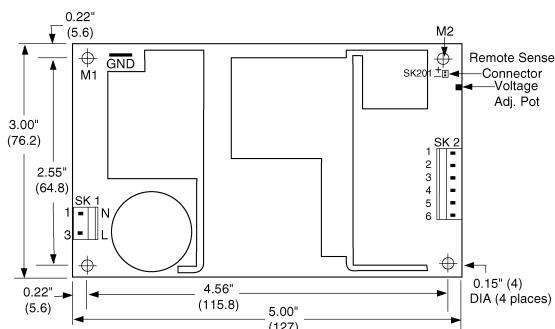
Cover kits available, order Part No. KM25/40 Cover or add suffix '-C' to receive unit with cover fitted.
Overall cover dimensions in inches (mm):
5.9" (150) x 3.86" (98) x 1.5" (38)

Output Voltage & Current Ratings - 60 Watt Models

Output Voltage	Minimum Load ⁽¹⁾	Max. Load Convection	Max. Load 30 CFM	Peak Load ⁽²⁾	Regulation ⁽³⁾	Ripple Pk-Pk PARD ⁽⁴⁾	Model Number
3.3 V	2.0 A	12.0 A	16.0 A	18.0 A	±2%	33 mV	KM60US03
5.0 V	0.0 A	12.0 A	16.0 A	18.0 A	±2%	50 mV	KM60US05
12.0 V	0.0 A	5.0 A	6.7 A	7.5 A	±2%	120 mV	KM60US12 ⁽⁵⁾
15.0 V	0.0 A	4.0 A	5.3 A	6.0 A	±2%	150 mV	KM60US15 ⁽⁵⁾
24.0 V	0.0 A	2.5 A	3.3 A	3.8 A	±2%	240 mV	KM60US24 ⁽⁵⁾
48.0 V	0.0 A	1.3 A	1.7 A	1.9 A	±2%	480 mV	KM60US48
+3.3 V ₁	0.7 A	5.0 A	8.5 A	9.5 A	±2%	50 mV	KM60UT61
+5.0 V ₂	0.0 A	2.5 A	3.0 A	3.3 A	±2%	50 mV	
+12.0 V ₃	0.0 A	0.5 A	1.0 A	1.0 A	±5%	120 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT62 ⁽⁵⁾
+12.0 V ₂	0.3 A	3.0 A	3.5 A	6.0 A	±5%	120 mV	
-12.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT63 ⁽⁵⁾
+15.0 V ₂	0.3 A	2.8 A	3.3 A	4.0 A	±5%	150 mV	
-15.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	150 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT64
+12.0 V ₂	0.3 A	3.0 A	3.5 A	6.0 A	±5%	120 mV	
-5.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	50 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT65
+24.0 V ₂	0.1 A	1.5 A	2.0 A	3.0 A	±7%	240 mV	
+12.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT66
+24.0 V ₂	0.1 A	1.5 A	2.0 A	3.0 A	±7%	240 mV	
-12.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	
+5.0 V ₁	0.7 A	7.0 A	8.0 A	10.0 A	±2%	50 mV	KM60UT67
+24.0 V ₂	0.1 A	1.5 A	2.0 A	3.0 A	±7%	240 mV	
-5.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	

NOTES:

1. Minimum loads required for operation.
2. Peak current lasting <30 secs, with a maximum duty cycle of 10%.
3. At 25 °C including initial tolerance, line voltage, load currents & output voltages adjusted to factory settings.
4. Peak to peak with 20 MHz bandwidth & 10 µF in parallel with a 0.1 µF capacitor to rated line voltage & load ranges.
5. Medical versions available add suffix '-M' to model number. Contact sales for detailed datasheet.

Mechanical Details - 60 Watt Models

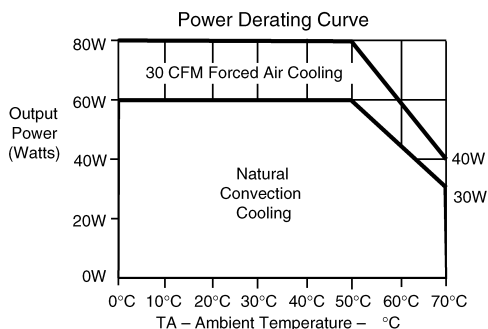
PIN CONNECTIONS		
Connector	Single Output	Multi Output
SK1-1	Neutral	Neutral
SK1-3	Line	Line
SK2-1	+V out	V ₂
SK2-2	+V out	+V ₁
SK2-3	+V out	+V ₁
SK2-4	Common	Common
SK2-5	Common	Common
SK2-6	Common	V ₃
SK201-1	+ Sense	+ Sense
SK201-2	- Sense	- Sense

Mating Connectors

SK1 Molex 09-91-0300
Pins 08-58-0111

SK2 Molex 09-91-0600
Pins 08-58-0111

SK201 Molex 22-01-2025
Pins 08-05-0114



Cover kits available, order Part No. KM60 Cover or add suffix '-C' to receive unit with cover fitted. Overall cover dimensions in inches (mm) 5.9" (150) x 3.86" (98) x 1.97" (50)

Output Voltage & Current Ratings - 110 Watt Models

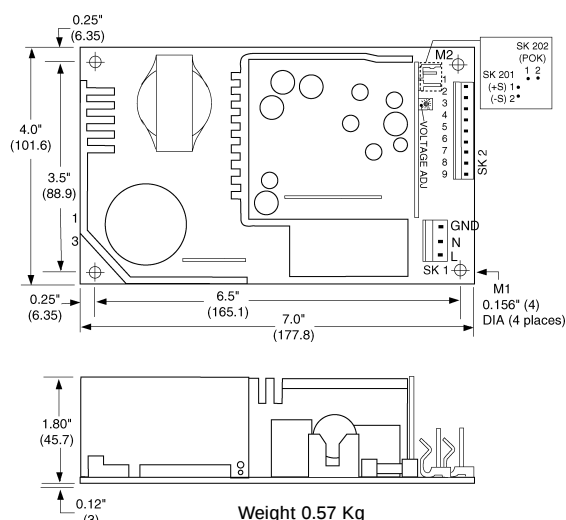
Output Voltage	Minimum Load ⁽¹⁾	Max. Load Convection	Max. Load 30 CFM	Peak Load ⁽²⁾	Regulation ⁽³⁾	Ripple PK-PK PARD ⁽⁴⁾	Model Number
5.0 V	0.0 A	16.0 A	22.0 A	25.0 A	±2%	50 mV	KM110US05
12.0 V	0.0 A	6.7 A	9.2 A	10.4 A	±2%	120 mV	KM110US12
15.0V	0.0 A	5.3 A	7.3 A	8.3 A	±2%	150 mV	KM110US15
24.0 V	0.0 A	3.3 A	4.6 A	5.2 A	±2%	240 mV	KM110US24
48.0 V	0.0 A	1.7 A	2.3 A	2.6 A	±2%	480 mV	KM110US48
+5.0 V ₁	2.0 A	9.0 A	11.0 A	15.0 A	±2%	50 mV	KM110UQ12-B
+12.0 V ₂	0.0 A	4.5 A	5.0 A	9.0 A	±3%	120 mV	
-12.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	
±5-25 V ₄ ⁽⁵⁾	0.0 A	2.5 A	3.0 A	3.5 A	±3%	240 mV (max)	
+5.0 V ₁	2.0 A	9.0 A	11.0 A	15.0 A	±2%	50 mV	KM110UQ13-B
+15.0 V ₂	0.0 A	4.5 A	5.0 A	9.0 A	±3%	150 mV	
-15.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	150 mV	
±5-25 V ₄ ⁽⁵⁾	0.0 A	2.5 A	3.0 A	3.5 A	±3%	240 mV (max)	
+5.0 V ₁	2.0 A	9.0 A	11.0 A	15.0 A	±2%	50 mV	KM110UQ14-B
+12.0 V ₂	0.0 A	4.5 A	5.0 A	9.0 A	±3%	120 mV	
-12.0 V ₃	0.0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV	
+24.0 V ₄	0.5 A	3.5 A	4.5 A	5.0 A	+10/-5%	240 mV	

NOTES:

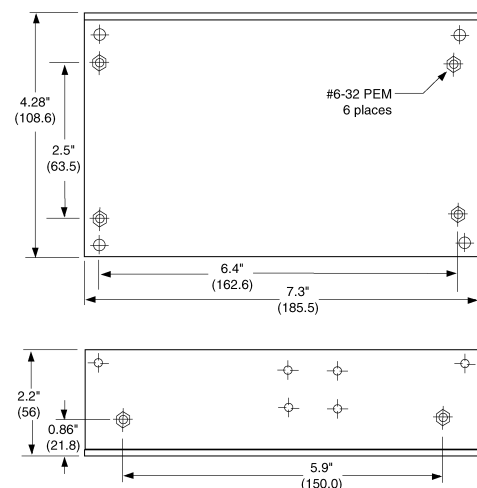
- Minimum loads required for operation.
- Peak current lasting <30 secs, with a maximum duty cycle of 10%.
- At 25 °C including initial tolerance, line voltage, load currents & output voltages adjusted to factory settings.
- Peak to peak with 20 MHz bandwidth & 10 µF in parallel with a 0.1 µF capacitor to rated line voltage & load ranges.
- 4th output adjustable 5-25 V, factory set @ 5 V output is floating and can be referenced positive or negative.

N.B: '-B' suffix added to model indicates L bracket fitted as standard.

Mechanical Details - 110 Watt Models



(-B) BRACKET



PIN CONNECTIONS

Connector	Single Output	Multi Output
SK1-1	Ground	Ground
SK1-3	Neutral	Neutral
SK1-5	Line	Line
SK2-1	+V out	+V ₁
SK2-2	+V out	+V ₁
SK2-3	+V out	+V ₁
SK2-4	Common	Common
SK2-5	Common	Common
SK2-6	Common	Common
SK2-7	Common	Common
SK2-8	+V out	V ₂
SK2-9	+V out	V ₂
SK2-10	N/A	V ₃
SK2-11	N/A	V ₄
SK2-12	N/A	V ₄ *
SK201-1	+ Sense	+ Sense
SK201-2	- Sense	- Sense
SK202-1	POK	POK
SK202-2	Common	Common

*SK2-12 is common for KM110UQ14-B

Mating Connectors

SK1 Molex 09-91-0500
Pins 08-58-0111

SK2 Singles Molex 09-91-0900
Pins 08-58-0111

SK2 Multis Molex 09-91-1200
Pins 08-58-0111

SK201 Singles Molex 22-01-1022
Multis Pins 08-50-0114

SK202 Singles Molex 22-01-1022
Multis Pins 08-50-0114

Cover kits available, order Part No. KM110 Cover or substitute suffix '-B' for '-C' to receive unit with cover fitted. Overall cover dimensions in inches (mm)
7.62" (193.5) x 4.55" (115.6) x 2.48" (63)