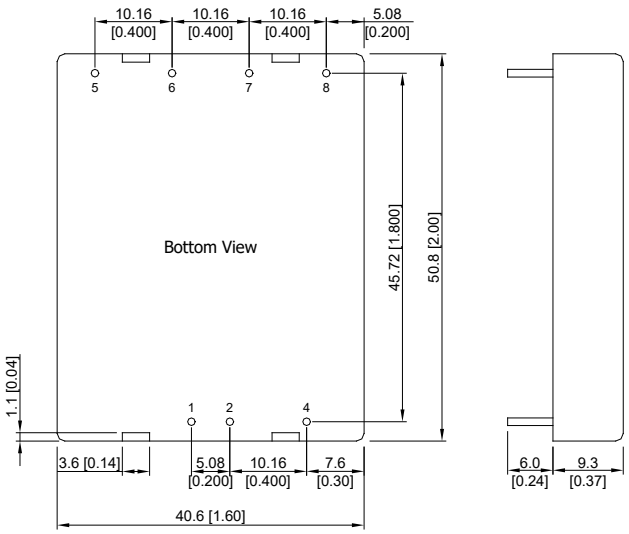
25-30 Watt KMS Single and Dual Series

- Efficiency up to 89%
- 1500VDC Isolation
- MTBF > 1,000,000 Hours
- 2:1 Input
- Six-Sided Shielding
- Over Voltage Protection
- Remote On/Off
- Output Trim
- CSA Approved
- RoHS Compliant

Model Number	Voltage			Current				Reflected Ripple	Input Overvoltage (1000ms)	Over Voltage Protection	Efficiency	Capacitive Load
	Input		Output	Input		Output						
	Nom. (VDC)	Range (VDC)	(VDC)	@ No Load (mA)	@ Max Load (mA)	Min (mA)	Max (mA)	Typ (mA)	Max (VDC)	(VDC)	@ Max Load (%, Typ)	Max (Dual each output)
KMS18H12S3R3	12	9-18	3.3	40	1867	400	5500	100	25	3.9	81	470 µF
KMS25H12S5	12	9-18	5	40	2480	350	5000	100	25	6.8	84	470 µF
KMS30H12S12	12	9-18	12	40	2841	166	2500	100	25	15	88	470 µF
KMS30H12S15	12	9-18	15	40	2841	133	2000	100	25	18	88	470 µF
KMS30H12D12	12	9-18	±12	40	2841	±83	±1250	100	25	±15	88	220 µF
KMS30H12D15	12	9-18	±15	40	2841	±65	±1000	100	25	±18	88	220 µF
KMS18H24S3R3	24	18-36	3.3	20	922	400	5500	50	50	3.9	82	470 µF
KMS25H24S5	24	18-36	5	20	1225	350	5000	50	50	6.8	85	470 µF
KMS30H24S12	24	18-36	12	20	1404	166	2500	50	50	15	89	470 µF
KMS30H24S15	24	18-36	15	20	1404	133	2000	50	50	18	89	470 µF
KMS30H24D12	24	18-36	±12	20	1404	±83	±1250	50	50	±15	89	220 µF
KMS30H24D15	24	18-36	±15	20	1404	±65	±1000	50	50	±18	89	220 µF
KMS18H48S3R3	48	36-75	3.3	10	461	400	5500	25	100	3.9	82	470 µF
KMS25H48S5	48	36-75	5	10	613	350	5000	25	100	6.8	85	470 µF
KMS30H48S12	48	36-75	12	10	702	166	2500	25	100	15	89	470 µF
KMS30H48S15	48	36-75	15	10	702	133	2000	25	100	18	89	470 µF
KMS30H48D12	48	36-75	±12	10	702	±83	±1250	25	100	±15	89	220 µF
KMS30H48D15	48	36-75	±15	10	702	±65	±1000	25	100	±18	89	220 µF



Dimensions are mm (inches)

Tolerance: X.X±0.25 (X.XX±0.01)

XX±0.13 (X.XXX±0.005)

Pin diameter tolerance: X.X±0.05 (X.XX±0.002)

Pin Connections (NC) Not Connected

Pin	Single	Dual	Diameter mm(inches)
1	+Vin	+Vin	Ø 1.0 [0.04]
2	-Vin	-Vin	Ø 1.0 [0.04]
4	Remote On/Off	Remote On/Off	Ø 1.0 [0.04]
5	No Pin	+Vout	Ø 1.0 [0.04]
6	+Vout	Common	Ø 1.0 [0.04]
7	-Vout	-Vout	Ø 1.0 [0.04]
8	Trim	Trim	Ø 1.0 [0.04]

See Model Selection Table for Model Specific Parameters

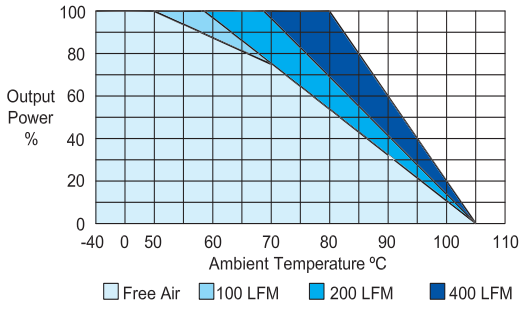
Input Parameters		Min	Typ	Max	Units
Reverse Polarity Input Current				2	A
Short Circuit Input Power				4500	mW
Start Voltage	12 Vin 24 Vin 48 Vin	8.6 17 34	8.8 17.5 35	9 18 36	VDC
Under Voltage Shutdown	12 Vin 24 Vin 48 Vin	8.1 16 32	8.3 16.5 33	8.5 17 34	VDC
Switching Frequency		290	330	360	kHz
Input Filter		Pi Filter			
Output Parameters		**Min**	**Typ**	**Max**	**Units**
Output Voltage Accuracy			±0.5	±1.0	%
Output Voltage Balance Dual Output, Balanced Loads			±0.5	±2.0	%
Load Regulation Io = 10% to 100%			±0.1	±0.5	%
Line Regulation Vin=Min. to Max.			±0.1	±0.3	%
Ripple & Noise (20MHz)			55	80	mV P-P
Ripple & Noise (20 MHz) Over Line, Load & Temp				100	mV P-P
Ripple & Noise (20 MHz)				10	mV RMS
Over Power Protection		110		160	%
Transient Recovery Time 25% Load Step Change			150	300	µs
Transient Response Deviation, 25% Load Step Change			±2	±4	%
Temperature Coefficient			±0.01	±0.02	% / ºC
Short Circuit Protection		Continuous			
General Specifications		**Min**	**Typ**	**Max**	**Units**
Isolation Voltage, 60 seconds		1500			VDC
Isolation Resistance 500VDC		1000			Mohms
Isolation Capacitance, 100kHz, 1V			1200	1500	pF
Operating Temperature (Ambient)		-40		+80	ºC
Storage Temperature		-50		+125	ºC
Over Temperature Protection Case Temperature, automatic recovery		107	112	117	ºC
Humidity				95	%
Case Temperature				+105	ºC
Lead Temperature				260	ºC
MTBF MIL-HDBK-217F @25ºC, Ground Benign		1000			K Hours
Cooling		Free-Air Convection			
Case Size		2.0 x 1.6 x 0.37 inches 50.8 x 40.6 x 9.3 mm			
Case Material		Six Sided Shielding Metal Case (UL94V-0)			
Weight		48g			
Agency Approval		CSA60950 Approved			

Remote On/Off	Min	Typ	Max	Units
Supply On	2.5 to 100VDC or Open Circuit			VDC
Supply Off	-1		1	VDC
Device Standby Input Current		2	5	mA
Control Input Current (on) Vin - RC = 5.0V			5	µA
Control Input Current (off) Vin - RC = 0V			-100	µA
Control Common	Referenced to Negative Logic			

Output Voltage Trim	Min	Typ	Max	Units
Trim Up / Down Range % of nominal output voltage	±9.0	±10.0	±11.0	%

Notes:

1. Specifications typical at Ta=+25ºC, resistive load, nominal input voltage, full rated output current unless otherwise noted.
2. Transient recovery time is measured to within 1% error band for a step change in output load 75% to 100%.
3. ConTech power converters require a minimum output loading to maintain specified regulation. Operation under no-load conditions will not damage these modules; however, they may not meet all specifications listed.
4. The series has a limitation of a maximum connected capacitance at the output. The power module may be operated in current limiting mode during start-up, affecting the ramp-up and the startup time.
5. When measuring peak-to-peak output noise, use a Cout 1.0µF ceramic capacitor. Scope measurement should be made by using a BNC socket, measurement bandwidth is 0-20MHz. Position the load between 2" and 2.5" from the converter.
6. Water washability - ConTech DC/DC converters are designed to withstand most solder/wash processes. Careful attention should be used when assessing the applicability in your specific manufacturing process. Converters are not hermetically sealed.
7. See ConTech website for Definition of Terms, Application Notes, and Test Setups and Parameters. www.ConTech-us.com/appnotes.html
8. Specifications subject to change without notice.
9. See ConTech website www.ConTech-us.com/pdf/rohs.pdf for RoHS Statement.



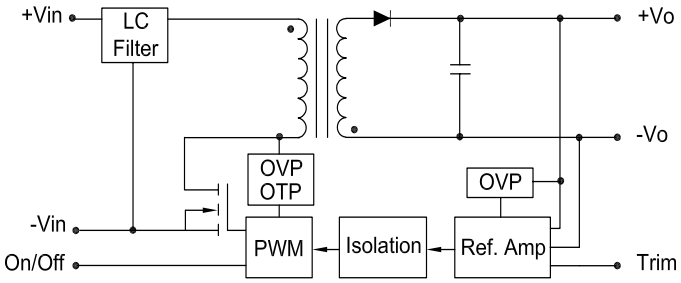
Derating Curve

To avoid exceeding the maximum termperature rating of the components inside the power module, the case temperature must be kept below 90ºC.

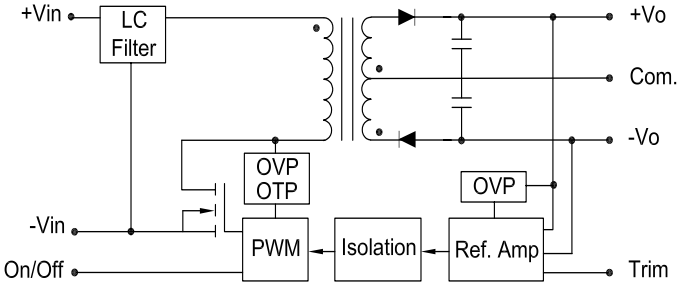
Input Fuse Selection Table	
12V Input	6000 mA Slow-Blow
24V Input	3000 mA Slow-Blow
48V Input	1500 mA Slow-Blow

External fusing should be used for system protection due to a catastrophic failure. See ConTech website for Fusing Application Notes to determine the correct fuse.

Block Diagrams



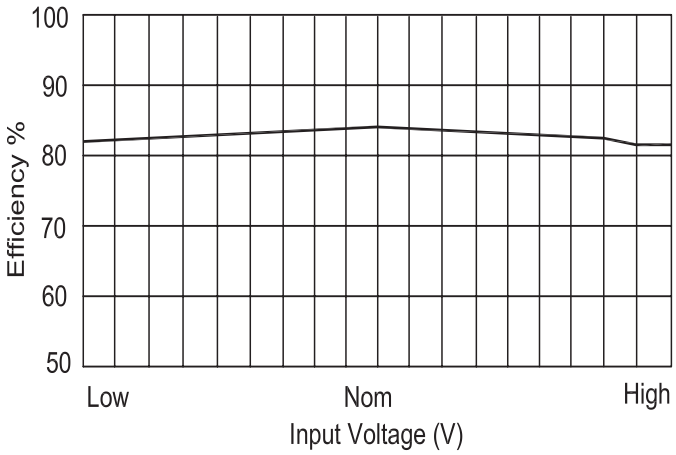
Single Output Block Diagram



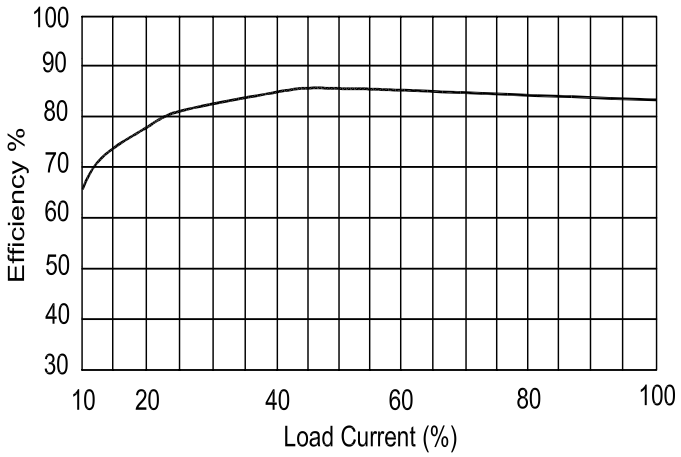
Dual Output Block Diagram

Efficiency Curves

Single Output

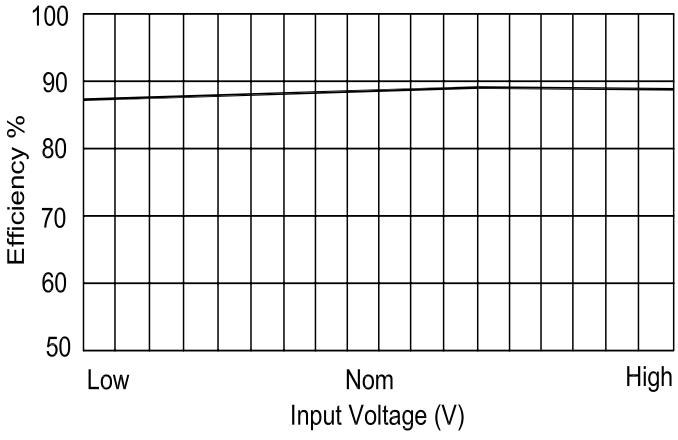


Efficiency vs Input Voltage

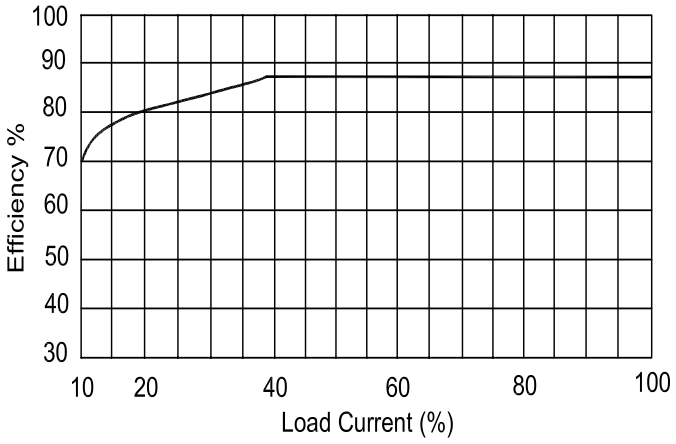


Efficiency vs Output Load

Dual Output



Efficiency vs Input Voltage



Efficiency vs Output Load