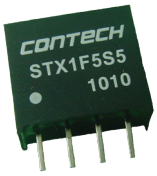
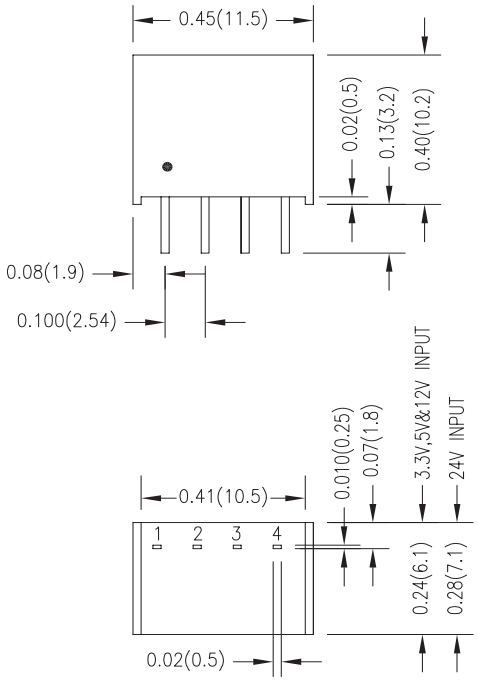
1 Watt STX Single Series

- Efficiency up to 80%
- 1000VDC Isolation
- MTBF > 2,000,000 Hours
- RoHS Compliant



Model Number	Voltage			Current				Load Regulation	Input Overvoltage (1000ms)	Efficiency	Capacitive Load
	Input		Output	Input		Output					
	Nom. (VDC)	Range (VDC)	(VDC)	@ No Load (mA)	@ Max Load (mA)	Min (mA)	Max (mA)	% (Max)	Max (VDC)	@ Max Load (%, Typ)	Max (Dual each output)
STX1F3R3S3R3	3.3	2.97 - 3.63	3.3	35	351	6	260	14	6	74	33 µF
STX1F3R3S5	3.3	2.97 - 3.63	5	35	394	4	200	14	6	77	33 µF
STX1F5S3R3	5	4.5 - 5.5	3.3	30	238	6	260	11	9	72	33 µF
STX1F5S5	5	4.5 - 5.5	5	30	290	4	200	11	9	69	33 µF
STX1F5S9	5	4.5 - 5.5	9	30	260	2	110	8	9	76	33 µF
STX1F5S12	5	4.5 - 5.5	12	30	262	1.5	84	7	9	77	33 µF
STX1F5S15	5	4.5 - 5.5	15	30	258	1	67	6	9	78	33 µF
STX1F12S5	12	10.8 - 13.2	5	13	117	4	200	9	18	71	33 µF
STX1F12S9	12	10.8 - 13.2	9	13	107	2	110	5	18	77	33 µF
STX1F12S12	12	10.8 - 13.2	12	13	106	1.5	84	5	18	79	33 µF
STX1F12S15	12	10.8 - 13.2	15	13	105	1	67	4	18	80	33 µF
STX1F24S5	24	21.6 - 26.4	5	7	60	4	200	8	30	70	33 µF
STX1F24S9	24	21.6 - 26.4	9	7	54	2	110	5	30	76	33 µF
STX1F24S12	24	21.6 - 26.4	12	7	53	1.5	84	4	30	79	33 µF
STX1F24S15	24	21.6 - 26.4	15	7	53	1	67	4	30	79	33 µF



Dimensions are inches (mm) unless noted

Tolerance:	Inches	Millimeters
	X.XX ±0.01	X.X ±0.25
	X.XXX ±0.005	X.XX ±0.13
Pin	±0.002	±0.05

Pin Connections	
Pin	**Function**
1	-Vin
2	+Vin
3	-Vout
4	+Vout

See Model Selection Table for Model Specific Parameters

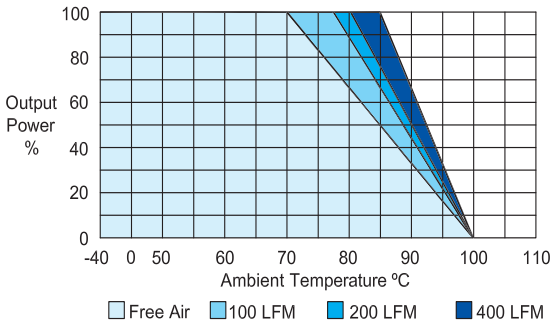
Input Parameters	Min	Typ	Max	Units
Reverse Polarity Input Current			0.3	A
Switching Frequency	50	90	110	kHz
Input Filter	Internal Capacitor			
Output Parameters	**Min**	**Typ**	**Max**	**Units**
Output Voltage Accuracy		±1.0	±3.0	%
Load Regulation Io = 20% to 100%	See Model Selection Guide			%
Line Regulation for Vin Change of 1%		±1.2	±1.5	%
Ripple & Noise (20MHz)		100	150	mV P-P
Ripple & Noise (20 MHz) Over Line, Load & Temp			200	mV P-P
Ripple & Noise (20 MHz)			15	mV RMS
Temperature Coefficient		±0.01	±0.02	% / ºC
Short Circuit Protection	0.5 Second Max			
General Specifications	**Min**	**Typ**	**Max**	**Units**
Isolation Voltage, 60 seconds	1000			VDC
Isolation Resistance 500VDC	1000			Mohms
Isolation Capacitance, 100kHz, 1V		60	100	pF
Operating Temperature (Ambient)	-40		+75	ºC
Storage Temperature	-40		+125	ºC
Humidity			95	%
MTBF MIL-HDBK-217F @25ºC, Ground Benign	2000			K Hours
Cooling	Free-Air Convection			
Case Size 3.3V, 5V & 12V	0.45 x 0.24 x 0.40 inches 11.5 x 6.1 x 10.2 mm			
24V	0.45 x 0.28 x 0.40 inches 11.5 x 7.1 x 10.2 mm			
Case Material	Non Conductive Black Plastic (UL94V-0)			
Weight 3.3V, 5V & 12V 24V	1.3g 1.7g			

Input Fuse Selection Table	
3.3V Input	800 mA Slow-Blow
5V Input	500 mA Slow-Blow
12V Input	200 mA Slow-Blow
24V Input	100 mA Slow-Blow

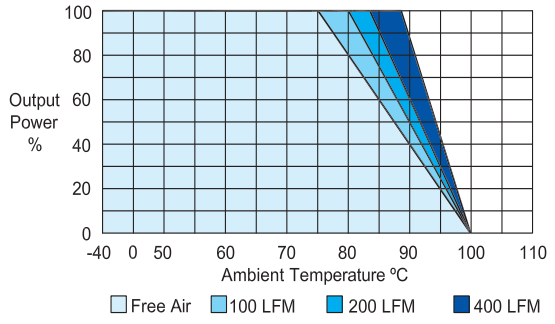
External fusing should be used for system protection due to a catastrophic failure. See ConTech website for Fusing Application Notes to determine the correct fuse.

Notes:

1. Specifications typical at Ta=+25ºC, resistive load, nominal input voltage, full rated output current unless otherwise noted.
2. 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.
3. 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.
4. When measuring peak-to-peak output noise, use a Cout 0.33µF 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.
5. 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.
6. See ConTech website for Definition of Terms, Application Notes, and Test Setups and Parameters. www.ConTech-us.com/appnotes.html.
7. Specifications subject to change without notice.
8. See Calex website www.ConTech-us.com/pdf/RoHS.pdf for RoHS Statement.



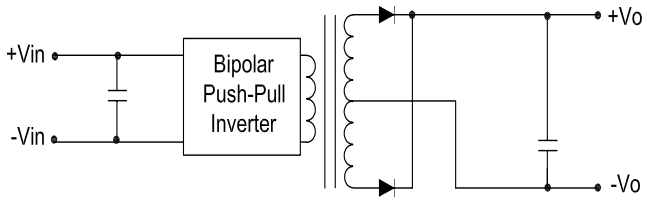
Derating Curve
(5V)



Derating Curve
(All other output voltages)

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

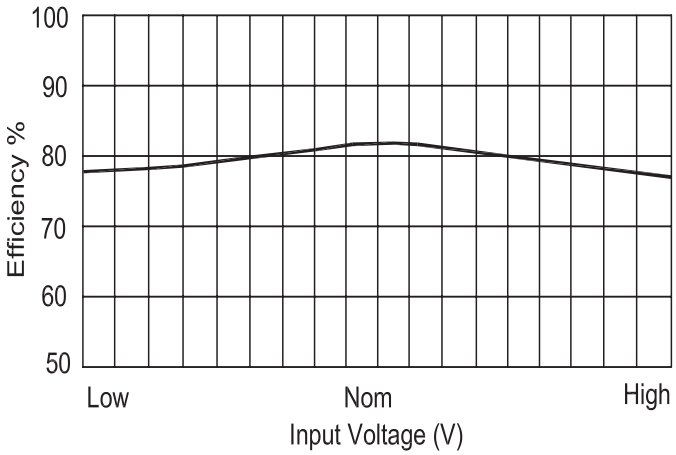
Block Diagram



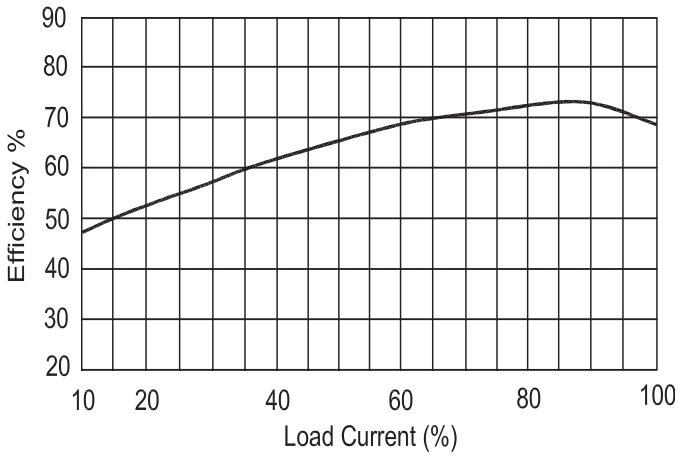
Single Output Block Diagram

Efficiency Curves

Single Output



Efficiency vs Input Voltage



Efficiency vs Output Load