



1000XFR series

NEW Approved for New Designs

Single Output DC/DC Converter



DESCRIPTIONS

The 1000XFR series are low-profile dc-dc converters that operate over input voltage ranges of 18 - 36 VDC and 36 - 75 VDC and provide precisely regulated output voltages of 2.5V, 3.3V, 5V and 12V.

The -40°C to +60°C operating temperature range makes it ideal for data communication equipments, mobile battery driven equipment, distributed power systems, telecommunication equipment, mixed analog/digital subsystems, process/machine control equipment, computer peripheral systems and industrial robot systems.

OUTPUT CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Output Voltage Set Point			±1.2	% Output voltage at nominal line & FL
Line Regulation		±0.3	±1	Change / Percentage change in Input voltage
Load Regulation - 2.5Vout			±1.5	% Output voltage measured from FL to 10% load (Balanced Loads)
- Others			±1.2	
Temperature Coefficient		±0.01	±0.02	% per degree C
Ripple/Noise		60	100	mV p-p measured at 20 MHz bandwidth with external 1 µf capacitor
Load Transient Response		±3	±5	% deviation of Vout voltage for a 25% load change for 500µS
Short Circuit Protection				Indefinite, Automatic Recovery

FEATURES

- Up to 87% Efficiency
- Single Output, 10 watt converter
- Available in 24 and 48 VDC Inputs 2 - 1 Input Range
- Industry Standard 1.25" X 0.8" X 0.4" Package
- Short Circuit Protection

INPUT CHARACTERISTICS

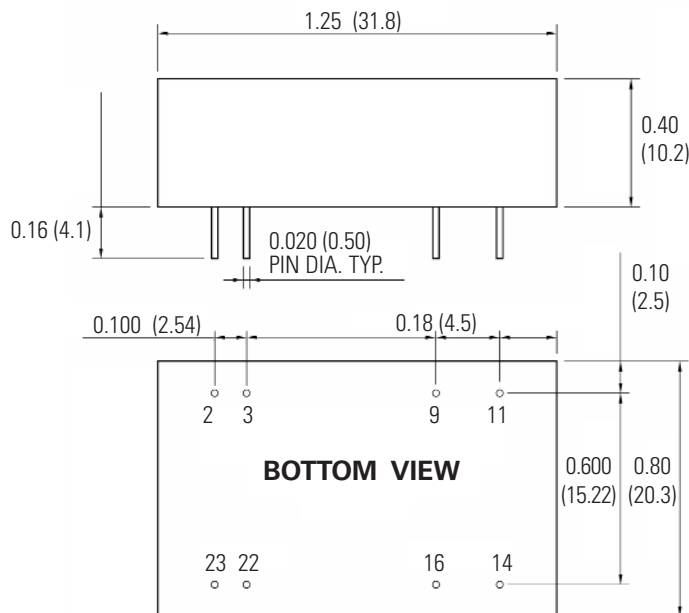
	Min	Typ	Max	Units/Comments
Switching Frequency		400		kHz; Factory set
Input - Output Capacitance			1200	pF, @1V, 100kHz
Input Filter				Pi type
Isolation Voltage		1500		VDC
Isolation Resistance		1000		MOhms; @ 500 VDC



GENERAL CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Operating Temp. Range	-40		+60	°C; measured at ambient
Operating Temp. Range	-40		+90	°C; measured at case
Storage Temp. Range	-40		+125	° C
Material Flammability				UL94V-0
Relative Humidity	5		95	% Humidity, non-condensing
Weight			17.3	Grams
Size				1.25" X 0.8" X 0.4"
Case Material				Metal with non-conductive baseplate
Agency Approvals				CSA1950, EN55022 Class A

OUTLINE DRAWING



PIN OUT CHART

Pins	Single
2	- Vin
3	- Vin
9	NO PIN
11	NC
14	+ Vout
16	- Vout
22	+ Vin
23	+ Vin

NC = No Connection

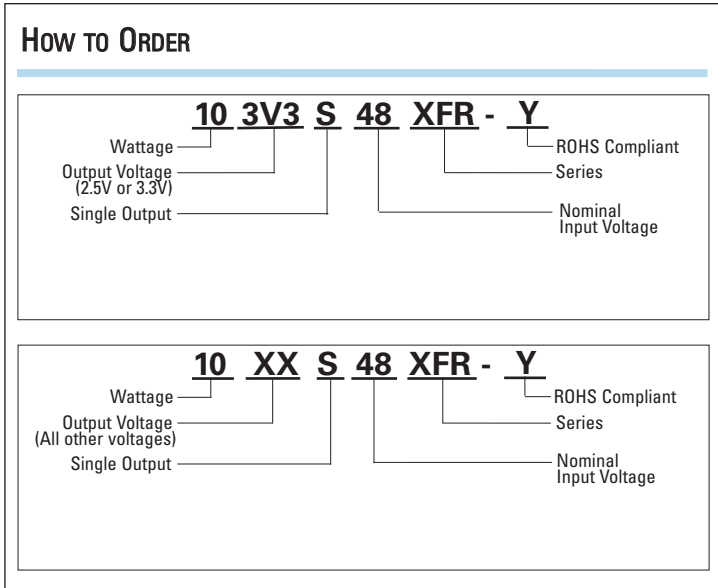
Notes:

- Unless otherwise specified dimensions are in inches (mm).
 Tolerances: X.XX = ±0.02 (±0.5)
 X.XXX = ±0.010 (±0.25)

All specifications are typical at nominal input, nominal load and 25° C unless otherwise specified.
 External, low ESR, 10 microfarad (minimum) capacitor across output is recommended for operation.



How To ORDER



MODEL SELECTION CHART

Model Number	Nominal Input Voltage (VDC)	Input Voltage Range (VDC)	Under Voltage Shutdown (VDC)	Output Voltage (VDC)	Full Load Output Current (mA)	Full Load Input Current Typ.(mA)	No Load Input Current Typ. (mA)	Input Fuse (Slow Blow Type) (A)	Efficiency @ FL Typ. (%)
1002V5S24XFR	24	18 - 36	< 17	2.5	3000	377	20	1	83
1003V3S24XFR	24	18 - 36	< 17	3.3	3000	485	20	1	85
1005S24XFR	24	18 - 36	< 17	5.0	2000	479	20	1	87
1012S24XFR	24	18 - 36	< 17	12.0	833	479	20	1	87
1002V5S48XFR	48	36 - 75	< 34	2.5	3000	188	10	0.5	83
1003V3S48XFR	48	36 - 75	< 34	3.3	3000	243	10	0.5	85
1005S48XFR	48	36 - 75	< 34	5.0	2000	239	10	0.5	87
1012S48XFR	48	36 - 75	< 34	12.0	833	240	10	0.5	87

DERATING CURVES

MODEL 1000XFR

