AC-DC Power Supplies Power Module Type







TUXS-series



Feature

AC-DC Power Module Type Converter Harmonic attenuator (Complies with IEC61000-3-2 class A) Small size Built-in overcurrent, overvoltage and thermal protection circuits Mounting hole (M3 tapped) High efficiency 94%

CE marking

Low voltage directive RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations RoHS Regulations

Safety Approval

UL60950-1, C-UL, EN62368-1





*Avoid short circuit between +BC and -BC. It may cause the failure of inside components. *Keep TRM open, if output voltage adjustment is not necessary.

MODEL	TUXS150F50
MAX OUTPUT WATTAGE[W]	150.0
DC OUTPUT	50V 3A

SPECIFICATIONS

	MODEL		TUX\$150F50				
	VOLTAGE[V]		AC85 - 264 1 ¢				
		ACIN 100V	1.70tvp (lo=100%)				
	CURRENT[A]	ACIN 200V	0.80tvp (l=100%)				
	FREQUENCY[Hz]		50/60 (45 - 66)				
		ACIN 100V	93tvp				
INPUT	EFFICIENCY[%]	ACIN 200V	94typ				
		ACIN 100V	0.96typ				
	POWER FACTOR (Io=100%)	ACIN 200V	0.93tvp				
	INRUSH CURRENT		Limited by external components (Thermistor)				
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, Io=100%, According to IEC62368-1)				
	VOLTAGE[V]		50				
	CURRENT[A]		3				
	LINE REGULATION	mV]	100max				
	LOAD REGULATION	[mV]	100max				
		-20 to +100°C *1	200max				
	RIPPLE[mvp-p]	-40 to -20°C *1	300max				
OUTPUT		-20 to +100°C *1	200max				
OUIPUI	RIPPLE NOISE[mvp-p]	-40 to -20°C *1	300max				
		0 to +100℃	500max				
		-40 to +100℃	1000max				
	DRIFT[mV] *2		200max				
			ixed (TRM pin open), adjustable by external resistor or external signal				
	OUTFUT VOLIAGE ADJUSTINEN		45.0 - 55.0				
OUTPUT VOLTAGE S		TING[V]	49.2 - 50.8				
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTEC	CTION[V]	57.5 - 67.5				
OTHERS	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Not provided				
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (20±15 \degree)				
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (20±15°C)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (20±15°C)				
	OPERATING TEMP., HUMID. AND ALTITUDE		-40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to "Derating"), 4,000m (13,000 feet) max				
	STORAGE TEMP., HUMID. AND ALTITUDE		-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max				
	VIBRATION		10 - 55Hz, 49.0m/s ² (5G), 3minutes period, 60minutes each along X, Y and Z axis				
	IMPACT		196.1m/s ² (20G), 11ms, once each along X, Y and Z axis				
SAFETY AND	AGENCY APPROVAI	S	UL60950-1, C-UL (CSA60950-1), EN62368-1				
NOISE REGULATIONS	HARMONIC ATTENU	ATOR	Complies with IEC61000-3-2 (Class A) *3				
OTHERS	CASE SIZE/WEIGHT		76.2×28.5×50.8mm [3.0×1.12×2.0 inches] (W×H×D) / 150g max				
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)				

Refer to instruction manual for measuring method of electric characteristics. *1 *****2

Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

*3 Please contact us about another class.

TUXS150F | CO\$EL

External view







% Tolerance : ±0.3 [±0.012]

* Weight : 150g max

Weight 100g max
Dimensions in mm, []=inches
Mounting hole screwing torque : 0.49N/m (5.0kgf/cm) max



*Avoid short circuit between +BC and -BC. It may cause the failure of inside components. *Keep TRM open, if output voltage adjustment is not necessary.

MODEL TUXS200F24 TUXS200F28 TUXS200F32 TUXS200F42 TUXS200F50 MAX OUTPUT WATTAGE[W] 199.2 196.0 198.4 197.4 200.0 DC OUTPUT 24V 8.3A 28V 7.0A 32V 6.2A 42V 4.7A 50V 4.0A									
MODEL TUXS200F24 TUXS200F28 TUXS200F32 TUXS200F42 TUXS200F50 MAX OUTPUT WATTAGE[W] 199.2 196.0 198.4 197.4 200.0	DC OUTPUT 24V 8.3A 28V 7.0A 32V 6.2A 42V 4.7A 50V 4.0A								
MODEL TUXS200F24 TUXS200F28 TUXS200F32 TUXS200F42 TUXS200F50	MAX OUTPUT WATTAGE[W]	199.2	196.0	198.4	197.4	200.0			
	MODEL	TUXS200F24	TUXS200F28	TUXS200F32	TUXS200F42	TUXS200F50			

CD	FC	IFI	CA	TI	10	JC.
JE	LC					10

MODEL TUXS200F24 TUXS200F28 TUXS200F32 TUXS200F42 TUXS200F30 VOLTAGE[V] AC85 - 264 1 φ	SPECIFI	ICATION5								
VOLTAGE[V] AC85 - 264 1 ф CURRENT[A] ACN100V 2.20typ (0=100%) FREQUENCY[H2] 5060 (45 - 66) FREQUENCY[H2] 50060 (45 - 66) POWER FACTOR (0=100%) ACN100V 90typ 91typ 91typ 92typ POWER FACTOR (0=100%) ACN100V 90typ 91typ 92typ 93typ INRUSH CURRENT Limited by external components (Thermistor) Image: Components (Thermistor) Image: Components (Thermistor) LEAKAGE CURRENT[mA] 0.75max (ACIN 240V 60Hz, 1o=100%, According to IEC62368-1) VOLTAGE[V] 48max CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[TV] 48max 56max 64max 84max 100max LOAD REGULATION[TV] 48max 168max 192max 252max 300max Alb #00 ^C 192max 224max 256max 336max 400max Alb #00 ^C 192max 224max 256max 336max 400max Alb #00 ^C 192max 224max 256max <t< th=""><th></th><th colspan="2">MODEL</th><th>TUXS200F24</th><th>TUXS200F28</th><th>TUXS200F32</th><th>TUXS200F42</th><th>TUXS200F50</th></t<>		MODEL		TUXS200F24	TUXS200F28	TUXS200F32	TUXS200F42	TUXS200F50		
CURRENT[A] ACM 1007 2.201pc 10c=100%) FREQUENCY[H2] 50/60 (45: 66) FFFCUENCY[%] ACM 1007 901yp 911yp 911yp 911yp 931yp POWER FACTOR (lo=100%) ACM 1007 0.901yp 911yp 921yp 931yp 931yp POWER FACTOR (lo=100%) ACM 1007 0.901yp 911yp 921yp 921yp 931yp INRUSH CURRENT ACM 2007 0.931yp 0.931yp US US US INRUSH CURRENT ACM 2007 0.931yp 0.75max (ACIN 2407 60Hz, Io=100%, According to IEC62368-1) US US INRUSH CURRENT 0.75max (ACIN 2407 60Hz, Io=100%, According to IEC62368-1) US US SO ILIAR AGE[V] 48max 56max 64max 84max 100max ILIAR AGE[V] 48max 56max 64max 84max 100max ILIAR AGE[W] 48max 168max 192max 252max 300max ILIAR AGE[W] 48max 168max 192max 252max 300ma		VOLTAGE[V]		AC85 - 264 1 ¢						
POURLY TAI ACIN 2007 1.10typ (lo=100%) FREQUENCY[H2] 50/60 (45 - 66) EFFICIENCY[%] ACIN 1007 90typ 91typ 91typ 92typ 93typ POWER FACTOR (lo=100%) ACIN 1007 90typ 91typ 92typ 93typ INRUSH CURRENT Limited by external components (Thermistor) LEAKAGE CURRENT[TM] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max IPPLE[mVp-p] 40±00 ² L1 192max 224max 256max 336max 400max IPPLE[mVp-p] 40±0 ² L1 192max 224max 256max 336max 400max IPPLE[mVp-p] 40±0 ² L1 192max 224max 256max 336max 400max <		CURRENT[A] ACIN 100V ACIN 200V		2.20typ (lo=100%)						
NPUT FREQUENCY[Hz] 50/60 (45 - 66) EFFICENCY[%] ACIN 100/ ACIN 200 90/yp 91/yp 91/yp 91/yp 91/yp NPUT ACIN 100/ ACIN 200 93/yp 91/yp 91/yp 91/yp 93/yp NPUT ACIN 100/ ACIN 200 0.39/yp				1.10typ (lo=100%)						
NPUT EFFICIENCY[%] ACIN 2007 ACIN 1007 90typ 90typ 91typ 91typ 91typ 92typ 92typ 92typ 93typ POWER FACTOR (to=100%] ACIN 2007 91typ 91typ 92typ 92typ 92typ 93typ INRUSH CURRENT Limited by external components (Thermistor) ACIN 2007 0.93typ 0.93typ VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[IV] 48max 56max 64max 84max 100max LOAD REGULATION[IV] 48max 56max 64max 84max 100max RIPPLE[mVp-p] 40±40℃* 192max 224max 256max 330max 400max MiteMatic REGULATION[IV] 48max 168max 192max 252max 300max MiteMatic REGULATION[IV] 48max 260max 320max 320max 400max BIPPLE[mVp-p] 40±40℃* 192max 224max		FREQUENCY[Hz]		50/60 (45 - 66)						
POULPUT EFFICIENCY [7s] ACM 200V 91typ 91typ 92typ 92typ 93typ POWER FACTOR (lo=100%) ACM 100V 0.98typ ACM 100V 0.98typ INRUSH CURRENT Limited by external components (Thermistor) LEAKAGE CURRENT[mA] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) V VOLTAGE[V] 24 28 32 42 50 CURRENT[mA] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) V V 40 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max RIPPLE [mVp-p] 40b 400csi 192max 225max 300max 40max 40b 400csi 192max 224max 256max 336max 400max RIPPLE NOISE[mVp-p] 40b 400csi 192max 225max 300max 40max 40b 400csi 192max 224max 256max 336max 400max 0UTPUT VOLTAGE EADJUSTMENT RANGE[V] <td>NIDUT</td> <td></td> <td>ACIN 100V</td> <td>90typ</td> <td>90typ</td> <td>91typ</td> <td>91typ</td> <td>92typ</td>	NIDUT		ACIN 100V	90typ	90typ	91typ	91typ	92typ		
POWER FACTOR (lo=100%) ACIN 100/ ACIN 2007 0.96iyp INRUSH CURRENT Limited by external components (Thermistor) LEAKAGE CURRENT[M] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max CORRENT[A] 48max 168max 192max 252max 300max RIPPLE[mVp-p] 400+40℃1 192max 256max 356max 400max 400+40℃1 192max 224max 256max 336max 400max RIPPLE[mVp-p] 400+40℃1 192max 224max 256max 336max 400max 400+40℃1 192max 224max 256max 336max 400max 120max 24max 256max 336max 400max 400+40℃1 192max 252max 306max 400max 120max 280max	INPUT	EFFICIENCY[%]	ACIN 200V	91typ	91typ	92typ	92typ	93typ		
POWEN PAC.104 (UE100%) ACIN 200V 0.93typ INRUSH CURRENT Limited by external components (Thermistor) LEAKAGE CURRENT[MA] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max AIPPLE [mVp-p] 48max 168max 192max 252max 300max 40 to 40C+ 192max 224max 256max 336max 400max 8IPPLE [mVp-p] 40 to 40C+ 192max 224max 256max 300max 101/00C 240max 280max 320max 420max 20max 102max 224max 256max 336max 400max 101/00C 440max 68max 192max 22max 100max 101/00C 480max <td< th=""><td></td><td></td><td>ACIN 100V</td><td>0.96typ</td><td>·</td><td></td><td></td><td></td></td<>			ACIN 100V	0.96typ	·					
INRUSH CURRENT Limited by external components (Thermistor) LEAKAGE CURRENT[mA] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 300max RIPPLE[mVp-p] 40±40* 102max 255max 336max 400max 40±40* 192max 256max 336max 400max 300max RIPPLE NOISE[mVp-p] 40±40* 192max 256max 336max 400max 40±40* 192max 24max 256max 336max 400max FIMPLE NOISE[mVp-p] 40±40* 140max 168max 192max 252max 300max 00TFUT VOLTAGE ADJUSTMENT FANGE[V] 240max 280max 640max 620max 200max 1000max 00TPUT VOLTAGE ADJUSTMENT FANGE[V]		POWER FACTOR (IO=100%)	ACIN 200V	0.93typ						
LEAKAGE CURRENT[mA] 0.75max (ACIN 240V 60Hz, lo=100%, According to IEC62368-1) VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max RIPPLE[mVP-p] 40b:400±1 144max 168max 192max 252max 300max 40b:400±1 142max 168max 192max 252max 300max RIPPLE[mVP-p] 40b:400±1 192max 224max 256max 336max 400max 40b:400±1 192max 224max 256max 336max 400max TEMPERATURE REGULATION[mV] 40b:400±1 128max 2180max 320max 220max 300max 0UTPUT VOLTAGE ROULTION[mV] 0+1000± 480max 560max 640max 820max 1000max 0UTPUT VOLTAGE MODISTINENT RANGE[V] 0+1000± 480max <		INRUSH CURRENT		Limited by external co	mponents (Thermistor)				
VOLTAGE[V] 24 28 32 42 50 CURRENT[A] 8.3 7.0 6.2 4.7 4.0 LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max RIPPLE[mVp-p] 400+00C+1 192max 255max 300max 400+00C+1 192max 256max 336max 400max MBPLE NOSE[mVp-p] 400+00C+1 192max 256max 336max 400max TEMPERATURE REGULATION[mV] 480max 168max 192max 252max 300max 00+100C 400+00C+1 192max 224max 256max 336max 400max TEMPERATURE REGULATION[mV] 480max 168max 192max 226max 300max 000+100C 400+00C+1 192max 224max 256max 336max 400max 00+100C 480max 560max 640max 820max 1000max <		LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V	60Hz, lo=100%, Accor	ding to IEC62368-1)				
$ POUTPUT VOLTAGE SETTING[V] = 8.3 7.0 6.2 4.7 4.0 \\ LINE REGULATION[mV] = 48max 56max 64max 84max 100max \\ GAM = 100max 56max 64max 84max 100max \\ GAM = 100max 56max 64max 84max 100max \\ GAM = 100max 252max 300max \\ GAM = 100max 500max \\ GAM = 100max 500max 320max 420max 500max \\ GAM = 100max 500max 320max 420max 500max \\ GAM = 100max 112max 128max 168max 200max \\ GAM = 100max 12max 128max 168max 200max \\ Fixed (TRM pin open), adjustable by external resistor or external signal \\ GAM = 20max 12max 128max 168max 200max \\ GAM = 100max 12max 128max 168max 200max \\ GAM = 100max 12max 128max 168max 200max \\ GAM = 100max 12max 128max 168max 1000max \\ GAM = 100max 12max 12max 128max 168max 100max \\ GAM = 100max 12max 12max 128max 168max 100max \\ GAM = 100max 12max 12max 128max 168max 100max \\ GAM = 100max 12max 12max 12max 12max 12max 12max 12max 12max 12max$		VOLTAGE[V]		24	28	32	42	50		
LINE REGULATION[mV] 48max 56max 64max 84max 100max LOAD REGULATION[mV] 48max 56max 64max 84max 100max RIPPLE[mVp-p] 40b+0000+ 144max 168max 192max 252max 300max RIPPLE[mVp-p] 40b+0000+ 144max 168max 192max 252max 300max RIPPLE NOISE[mVp-p] 40b+0000+ 144max 168max 192max 252max 300max TEMPERATURE REGULATION[mV] 40b+0000+ 144max 168max 192max 252max 300max OUTPUT VOLTAGE REGULATION[mV] 10+1000 240max 224max 256max 336max 400max OUTPUT VOLTAGE REGULATION[mV] 10+1000 240max 224max 256max 336max 400max OUTPUT VOLTAGE REGULATION[mV] 0 192max 224max 256max 336max 400max OUTPUT VOLTAGE ADJUSTMENT RANGE[V] 0 Fixed (TRM pin open), adjustable by external resistor or external signal 1000max OUTPUT VOLTAGE SETTING[V]		CURRENT[A]		8.3	7.0	6.2	4.7	4.0		
$ \begin{tabular}{ c c c c c c } \hline UCAD REGULATION[mV] & 48max & 56max & 64max & 84max & 100max \\ \hline HIPPLE[mVp-p] & $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$		LINE REGULATION[I	mV]	48max	56max	64max	84max	100max		
$ \begin{tabular}{ c c c c c c } \hline POUTPUT $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$		LOAD REGULATION	[mV]	48max	56max	64max	84max	100max		
HIPPLE[IIVP,P] 40 to 20°* 192max 224max 256max 336max 400max RIPPLE NOISE[mVp-p] 40 to 20°* 144max 168max 192max 252max 300max TEMPERATURE REGULATION[mV] 40 to 20°* 192max 224max 256max 336max 400max DRIFT[mV] 40 to 20°* 192max 224max 256max 336max 400max DRIFT[mV] 40 to 40°* 192max 224max 256max 336max 400max DRIFT[mV] 40 to 40°* 192max 224max 256max 336max 400max OUTPUT VOLTAGE ADJUSTMENT RANGE[V] 10 to 100° 240max 560max 640max 820max 1000max OUTPUT VOLTAGE ADJUSTMENT RANGE[V] *** 96max 112max 128max 168max 200max OUTPUT VOLTAGE ADJUSTMENT RANGE[V] Fixed (TRM pin open), adjustable by external resistor or external signal 200max 45.00 - 55.00 45.00 - 55.00 OUTPUT VOLTAGE ADJUSTMENT RANGE[V] 23.62 - 24.38 27.55 - 28.45 31.49 - 32.51 41.			-20 to +100°C * 1	144max	168max	192max	252max	300max		
$ \begin{tabular}{ c c c c c } \hline POUTPUT $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$		RIPPLE[mvp-p]	-40 to -20°C *1	192max	224max	256max	336max	400max		
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$			-20 to +100°C * 1	144max	168max	192max	252max	300max		
$\begin{tabular}{ c c c c } \hline FEINPERATURE REGULATION[m] & 0 to +100° & 240 max & 280 max & 320 max & 420 max & 500 max & 1000 max $	OUIPUI	RIPPLE NOISE[mvp-p]	-40 to -20°C *1	192max	224max	256max	336max	400max		
$\begin{tabular}{ c $			0 to +100℃	240max	280max	320max	420max	500max		
$\begin{tabular}{ c c c c c c } \hline PRIFT[mV] & & & & & & & & & & & & & & & & & & &$		TEMPERATURE REGULATION[MV]	-40 to +100℃	480max	560max	640max	820max	1000max		
$\begin{tabular}{ c c c c c c c } \hline Fixed (TRM pin open), adjustable by external resistor or external signature is the protein signature is the p$		DRIFT[mV] *2		96max	112max	128max	168max	200max		
OUTPUT VOLIAGE AUXOSIMENT NANCE[V] 21.60 - 26.40 25.20 - 30.80 28.80 - 35.20 37.80 - 46.20 45.00 - 55.00 OUTPUT VOLTAGE SETTING[V] 23.62 - 24.38 27.55 - 28.45 31.49 - 32.51 41.33 - 42.67 49.20 - 50.80 PROTECTION CIRCUIT AND CIRCUIT		OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed (TRM pin open), adjustable by external resistor or external signal						
OUTPUT VOLTAGE SETTING[V] 23.62 - 24.38 27.55 - 28.45 31.49 - 32.51 41.33 - 42.67 49.20 - 50.80 PROTECTION CIRCUIT AND OTHERS OVERCURRENT PROTECTION[V] 27.60 - 28.80 32.20 - 33.60 36.80 - 38.40 48.30 - 50.40 57.50 - 60.00 REMOTE SENSING Not provided Not provided V V V INPUT-OUTPUT AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) V V ISOLATION INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) V				21.60 - 26.40	25.20 - 30.80	28.80 - 35.20	37.80 - 46.20	45.00 - 55.00		
OVERCURRENT PROTECTION Works over 105% of rating and recovers automatically OVERCURRENT PROTECTION[V] 27.60 - 28.80 32.20 - 33.60 36.80 - 38.40 48.30 - 50.40 57.50 - 60.00 OTHERS REMOTE SENSING Not provided Not provided 57.50 - 60.00 REMOTE ON/OFF Not provided Not provided 57.50 - 60.00 57.50 - 60.00 ISOLATION INPUT-OUTPUT AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) 57.50 - 60.00 INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) 57.50 - 60.00		OUTPUT VOLTAGE SETTING[V]		23.62 - 24.38	27.55 - 28.45	31.49 - 32.51	41.33 - 42.67	49.20 - 50.80		
Image: Protection Circuit AND		OVERCURRENT PROT	ECTION	Works over 105% of r	ating and recovers aut	omatically				
REMOTE SENSING Not provided REMOTE ON/OFF Not provided INPUT-OUTPUT AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) ISOLATION INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) OUTPUT-FG AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)	PROTECTION	OVERVOLTAGE PROTEC	CTION[V]	27.60 - 28.80	32.20 - 33.60	36.80 - 38.40	48.30 - 50.40	57.50 - 60.00		
REMOTE ON/OFF Not provided INPUT-OUTPUT AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) ISOLATION INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) OUTPUT-FG AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)	OTHERS	REMOTE SENSING		Not provided						
INPUT-OUTPUT AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C) ISOLATION INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C) OUTPUT-FG AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)	omeno	REMOTE ON/OFF		Not provided						
INPUT-FG AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) OUTPUT-FG AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)		INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (20±15°C)						
OUTPUT-FG AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (20±15°C)	ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (20±15°C)						
		OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15°C)						
OPERATING TEMP, HUMID.AND ALTITUDE -40 to +100°C (On aluminum base plate), 20 - 95% RH (Non condensing) (Refer to "Derating"), 4,000m (13,000 feet) max		OPERATING TEMP., HUMID. AND ALTITUDE		-40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to "Derating"), 4,000m (13,000 feet) max						
STORAGE TEMP,HUMID.AND ALTITUDE -40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max		STORAGE TEMP., HUMID. AND ALTITUDE		-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max						
VIBRATION 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis	ENVIRONMENT	VIBRATION		10 - 55Hz, 49.0m/s ² (5G), 3minutes period, 60minutes each along X, Y and Z axis						
IMPACT 196.1m/s ² (20G), 11ms, once each along X, Y and Z axis		IMPACT		196.1m/s ² (20G), 11ms, once each along X, Y and Z axis						
SAFETY AND AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN62368-1	SAFETY AND	AGENCY APPROVAL	S	UL60950-1, C-UL (CS	A60950-1), EN62368-	1				
NOISE REGULATIONS HARMONIC ATTENUATOR Complies with IEC61000-3-2 (Class A) *3	NOISE REGULATIONS	HARMONIC ATTENU	ATOR	Complies with IEC610	000-3-2 (Class A) *3					
CASE SIZE/WEIGHT 76.2×28.5×50.8mm [3.0×1.12×2.0 inches] (W×H×D) / 150g max	OTHERS	CASE SIZE/WEIGHT		76.2×28.5×50.8mm	[3.0×1.12×2.0 inche	s] (W×H×D) / 150g r	nax			
COOLING METHOD Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)	UTIENS	COOLING METHOD		Conduction cooling (e	.g. heat radiation from	the aluminum base pla	te to the attached heat	sink)		

*1 *2 Refer to instruction manual for measuring method of electric characteristics.

Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

*3 Please contact us about another class.

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External view







% Tolerance : ±0.3 [±0.012]

* Weight : 150g max

Weight 100g max
Dimensions in mm, []=inches
Mounting hole screwing torque : 0.49N/m (5.0kgf/cm) max

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Pin Configuration



	D'	
No.	Pin Connection	Function
1	AC1	AC input
2	AC2	AC Input
3	BCR	+BC output
(4)	+BC	+BC output
5	-BC	-BC output
6	+VOUT	+DC output
1	TRM	Adjustment of output voltage
8	-VOUT	-DC output
-	FG	Mounting hole (FG)

Implementation • Mounting Method

Mounting method

- The unit can be mounted in any direction. When two or more power supplies are used side by side, position them with proper intervals to allow enough air ventilation. Aluminum base plate temperature of each power supply should not exceed the temperature range shown in "Derating".
- Avoid placing the AC input line pattern layout underneath the unit. It will increase the line conducted noise. Make sure to leave an ample distance between the line pattern layout and the unit. Also avoid placing the DC output line pattern underneath the unit because it may increase the output noise. Lay out the pattern away from the unit.
- Avoid placing the signal line pattern layout underneath the unit because the power supply might become unstable. Lay out the pattern away from the unit.
- High-frequency noise radiates directly from the unit to the atmosphere. Therefore, design the shield pattern on the printed circuit board and connect it to FG.

The shield pattern prevents noise radiation.

When a heat sink cannot be fixed on the base plate side, order the power module with "-T" option. A heat sink can be mounted by affixing a M3 tap on the heat sink. Please make sure a mounting hole will be connected to a grounding capacitor CY.

	Mounting hole
Standard	M3 tapped
Optional : -T	ϕ 3.4 thru

Stress onto the pins

- When too much stress is applied to the pins may damage internal connections. Avoid applying stress in excess of that shown in right figure.
- The pins are soldered onto the internal PCB.
 - Therefore, Do not bend or pull the leads with excessive force.
- Mounting hole diameter of PCB should be 3.5mm to reduce the stress to the pins.
- Fix the unit on PCB (fixing fittings) by screws to reduce the stress to the pins. Be sure to mount the unit first, then solder the unit.

Soldering

■Flow soldering : 260°Cless than 15 seconds. ■Soldering iron (26W) : 450°Cless than 5 seconds.



Derating

Output voltage derating curve

- Use the power modules with conduction cooling (e.g. heat dissipation from the aluminum base plate to the attached heat sink). Below shows the derating curves with respect to the aluminum base plate temperature. Note that operation within the hatched areas will cause a significant level of ripple and ripple noise.
- ■Please measure the temperature on the aluminum base plate edge side when you cannot measure the temperature of the center part of the aluminum base plate. In this case, please take 5deg temperature margin from the derating characteristics shown in Below. Please reduce the temperature fluctuation range as much as possible when the up and down of the temperature are frequently generated. Contact us for more information on cooling methods.



Instruction Manual

◆ It is neccessary to read the "Instruction Manual" and "Before using our product" before you use our product.

Instruction Manual Before using our product https://www.cosel.co.jp/redirect/catalog/en/TUXS/ https://en.cosel.co.jp/technical/caution/index.html





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Basic Characteristics Data

Model Circu	Oine uit as eth e d	Switching	Input	Inrush current protection circuit	PCB/Pattern			Series/Parallel operation availability	
	Circuit method	[kHz]	[A] *1		Material	Single sided	Double sided	Series operation	Parallel operation
	Active filter	80-600							
TUXS150F	LLC resonant converter	100-300	1.70	Thermistor	Aluminum	Yes		Yes	*2
	Active filter	80-600							
TUXS200F	LLC resonant converter	100-300	2.20	Thermistor	Aluminum	Yes		Yes	*2

*1 The value of input current is at ACIN 100V and rated load.

*2 Refer to instruction manual.