

\*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	TUNS50F05	TUNS50F12	TUNS50F24
MAX OUTPUT WATTAGE[W]	50.0	50.4	50.4
DC OUTPUT	5V 10A	12V 4.2A	24V 2.1A

SP	EC	IFI	CAT	IONS	3

	MODEL		TUNS50F05	TUNS50F12	TUNS50F24			
	VOLTAGE[V]		AC85 - 264 1 $\phi$ (Please refer to the in	nstruction manual, 6.5 Derating)				
		ACIN 100V	0.67typ (lo=100%)					
	CORRENT[A]	ACIN 200V	0.35typ (lo=100%)					
	FREQUENCY[Hz]		50/60 (47 - 63)	50/60 (47 - 63)				
	EEEICIENCVI%1	ACIN 100V	79typ	83typ	84typ			
INFOT		ACIN 200V	81typ	84typ	86typ			
		ACIN 100V	0.95typ					
	FOWER FACTOR (ID=100%)	ACIN 200V	0.90typ					
	INRUSH CURRENT		Limited by external components (The	rmistor)				
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, lo=100%	0.75max (ACIN 240V 60Hz, lo=100%, According to IEC60950-1)				
	VOLTAGE[V]		5	12	24			
	CURRENT[A]		10	4.2	2.1			
	LINE REGULATION	mV]	10max	24max	48max			
	LOAD REGULATION	[mV]	10max	24max	48max			
		0 to +100℃*1	80max	120max	120max			
	RIPPLE[mVp-p]	-40 to 0°C *1	120max	150max	150max			
		0 to 15% Load <b>*</b> 1	200max	280max	380max			
		0 to +100℃*1	120max	150max	150max			
OULLOI	RIPPLE NOISE[mVp-p]	-40 to 0°C *1	200max	200max	250max			
		0 to 15% Load <b>*</b> 1	280max	360max	460max			
	TEMPERATURE REGULATION(m)/1	0 to +65℃	50max	120max	240max			
		-40 to +100℃	100max	240max	480max			
	DRIFT[mV]	*2	20max	40max	90max			
	OUTPUT VOLTAGE AD JUSTMEN		Fixed (TRM pin open), adjustable by	external resistor or external signal				
			4.50 - 6.00	10.80 - 13.20	21.60 - 26.40			
	OUTPUT VOLTAGE SET	TING[V]	4.97 - 5.13	11.91 - 12.29	23.62 - 24.38			
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of rating and recover	ers automatically				
	OVERVOLTAGE PROTEC	CTION[V]	6.30 - 7.00	13.90 - 16.35	27.60 - 32.40			
OTHERS	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Not provided					
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)					
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 1	0mA, DC500V 50MΩ min (20±15℃)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (20±15 $\degree$ )					
	OPERATING TEMP., HUMID.AND	ALTITUDE	-40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max					
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-40 to +100°C, 20 - 95%RH (Non con	densing), 9,000m (30,000 feet) max				
	VIBRATION		10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each al	ong X, Y and Z axis				
SAFETY AND	AGENCY APPROVAL	_S	UL60950-1, C-UL (CSA60950-1), EN	60950-1, EN50178				
NOISE REGULATIONS	HARMONIC ATTENU	ATOR	Complies with IEC61000-3-2 (Class A	A) *3				
OTHERS	CASE SIZE/WEIGHT		58.4×12.7×37.3mm [2.3×0.5×1.4	7 inches] (W×H×D) / 80g max				
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)					

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

Point 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. Please contact us about another class.

\*2 \*3

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#### **External view**





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Ordering information COSEL **AC-DC Power Supplies Power Module type TUNS100F** S 100 F 05 TUN 2 1 Series name
Single output
Output wattage
Universal Input \*Providing heat sink as option **RoHS** 5 Output voltage (a) Optional T : with Mounting hole  $(\phi 3.4 \text{ thru})$ A . RU ... CE TUNS 100F05 eco COSEL

\* 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.

\*If remote sensing is not necessary, connect between +Vout & +S and between -Vout & -S.

MODEL	TUNS100F05	TUNS100F12	TUNS100F24
MAX OUTPUT WATTAGE[W]	100.0	100.8	100.8
DC OUTPUT	5V 20A	12V 8.4A	24V 4.2A

## **SPECIFICATIONS**

	MODEL		TUNS100F05	TUNS100F12	TUNS100F24	
	VOLTAGE[V]		AC85 - 264 1 $\phi$ (Please refer to the in	nstruction manual, 6.5 Derating)		
		ACIN 100V	1.3typ (lo=100%)			
	CURRENT[A]	ACIN 200V	0.7typ (lo=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EEEICIENCVII/1	ACIN 100V	82typ	83typ	84typ	
INFOT		ACIN 200V	85typ	85typ	86typ	
		ACIN 100V	0.95typ			
	FOWER FACTOR (ID=100%)	ACIN 200V	0.90typ			
	INRUSH CURRENT		Limited by external components (The	rmistor)		
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, lo=100%, According to IEC60950-1)			
	VOLTAGE[V]		5	12	24	
	CURRENT[A]		20	8.4	4.2	
	LINE REGULATION	mV]	10max	24max	48max	
	LOAD REGULATION	[mV]	10max	24max	48max	
		0 to +100℃*1	80max	120max	120max	
	RIPPLE[mVp-p]	-40 to 0°C *1	120max	150max	150max	
		0 to 15% Load <b>*</b> 1	160max	240max	240max	
		0 to +100℃*1	120max	150max	150max	
OUTFUT	RIPPLE NOISE[mVp-p]	-40 to 0°C *1	200max	200max	250max	
		0 to 15% Load <b>* 1</b>	240max	300max	300max	
	TEMPERATURE REGULATION(m)/1	0 to +65℃	50max	120max	240max	
		-40 to +100℃	100max	240max	480max	
	DRIFT[mV]	*2	20max	40max	90max	
	OUTPUT VOLTAGE AD JUSTMEN	T RANGEIVI	Fixed (TRM pin open), adjustable by	Fixed (TRM pin open), adjustable by external resistor or external signal		
			4.50 - 6.00	10.80 - 13.20	21.60 - 26.40	
	OUTPUT VOLTAGE SET	TING[V]	4.97 - 5.13	11.91 - 12.29	23.62 - 24.38	
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of rating and recover	ers automatically	-	
	OVERVOLTAGE PROTEC	CTION[V]	6.30 - 7.00	13.90 - 16.35	27.60 - 32.40	
OTHERS	REMOTE SENSING		Provided			
	REMOTE ON/OFF		Not provided			
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 1	10mA, DC500V 50MΩ min (20±15℃)		
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 1	10mA, DC500V 50MΩ min (20±15℃)		
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M $\Omega$ min (20±15 $\degree$ )			
	OPERATING TEMP., HUMID.AND	ALTITUDE	-40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max			
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-40 to +100°C, 20 - 95%RH (Non con	densing), 9,000m (30,000 feet) max		
	VIBRATION	-	10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis			
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each al	long X, Y and Z axis		
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, C-UL (CSA60950-1), EN	60950-1, EN50178		
NOISE REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-3-2 (Class A	A) *3		
OTHERS	CASE SIZE/WEIGHT		58.4×12.7×61.0mm [2.3×0.5×2.4	inches] (W×H×D) / 120g max		
	COOLING METHOD		Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)			

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

\*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.

**TUNS-4** 

TUNS100F | COŞEL

#### External view



\* Dimensions in mm, [ ]=inches

\* Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max



\*Avoid short circuit between +BC/R and -BC. It may cause the failure of inside components.

\*Keep TRM open, if output voltage adjustment is not necessary.

\*If remote sensing is not necessary, connect between +Vout & +S and between -Vout & -S.

MODEL	TUNS300F12	TUNS300F28	TUNS300F48
MAX OUTPUT WATTAGE[W]	300	308	312
DC OUTPUT	12V 25A	28V 11A	48V 6.5A

## **SPECIFICATIONS**

	MODEL		TUNS300F12	TUNS300F28	TUNS300F48		
	VOLTAGE[V]		AC85 - 264 1 φ				
		ACIN 100V	3.6typ (lo=100%)				
	CORRENT[A]	ACIN 200V	1.8typ (lo=100%)				
	FREQUENCY[Hz]		50/60 (47 - 63)				
	EEEICIENCVI%1	ACIN 100V	84typ	87typ	87typ		
INFOI		ACIN 200V	86typ	89typ	90typ		
		ACIN 100V	0.96typ				
	FOWER FACTOR (ID=100/0)	ACIN 200V	0.93typ				
	INRUSH CURRENT		Limited by external resistance				
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, lo=100%	o, According to IEC60950-1)			
	VOLTAGE[V]		12	28	48		
	CURRENT[A]		25	11	6.5		
	LINE REGULATION	mV]	24max	56max	96max		
	LOAD REGULATION	[mV]	24max	56max	96max		
	RIPPI E[mVn-n]	0 to +100℃*1	120max	180max	250max		
	KIFFEE[IIIvp-p]	-40 to 0℃ *1	150max	200max	300max		
	RIPPI E NOISE[m\/n-n]	0 to +100℃*1	150max	200max	300max		
OUTFOI		-40 to 0℃ *1	200max	300max	450max		
	TEMPERATURE REGULATION(m)/1	0 to +65°C	120max	280max	480max		
		-40 to +100℃	240max	560max	960max		
	DRIFT[mV]	*2	40max	90max	180max		
	OUTPUT VOLTAGE AD ILISTMEN		Fixed (TRM pin open), adjustable by external resistor or external signal				
			9.60 - 14.40	22.40 - 33.60	38.40 - 52.80 (-Y1 Option : 38.4 - 57.6)		
	OUTPUT VOLTAGE SET	TING[V]	11.91 - 12.29	27.56 - 28.44	47.24 - 48.76		
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of rating and recover	ers automatically			
	OVERVOLTAGE PROTEC	CTION[V]	15.00 - 16.80	35.00 - 39.20	55.20 - 64.80 (-Y1 Option : 60.0 - 67.2)		
OTHERS	REMOTE SENSING		Provided				
	REMOTE ON/OFF		Optional (External power supply is re-	quired)			
	INPUT-OUTPUT · RC	*4	AC3,000V 1minute, Cutoff current = 1	10mA, DC500V 50MΩ min (20±15℃)			
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)				
	OUTPUT · RC-FG	*4	AC500V 1minute, Cutoff current = 10	0mA, DC500V 50MΩ min (20±15℃)			
	OUTPUT-RC	*4	AC100V 1minute, Cutoff current = 100mA, DC100V 10M $\Omega$ min (20±15°C)				
	OPERATING TEMP., HUMID.AND	) ALTITUDE	-40 to +100°C (On aluminum base plate), 2	0 - 95%RH (Non condensing) (Refer to DEF	RATING CURVE), 3,000m (10,000 feet) max		
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-40 to +100℃, 20 - 95%RH (Non con	densing), 9,000m (30,000 feet) max			
EntrinoitiniEntri	VIBRATION		10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes p	eriod, 60minutes each along X, Y and	Z axis		
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each al	ong X, Y and Z axis			
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, C-UL (CSA60950-1), EN	60950-1			
NOISE REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-3-2 (Class A	A) *3			
OTHERS	CASE SIZE/WEIGHT		117.3×12.7×61.5mm [4.62×0.5×2	2.42 inches] (W×H×D) / 190g 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 \*4

Please contact us about another class. "RC" is applicable when remote control (optional) is added.



#### **External view**





% Tolerance : ±0.3 [±0.012]

% Weight : 190g max

\* Dimensions in mm, [ ]=inches

\* Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max

TUNS



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\*Avoid short circuit between +BC/R and -BC. It may cause the failure of inside components.

\*Keep TRM open, if output voltage adjustment is not necessary.

\*If remote sensing is not necessary, connect between +Vout & +S and between -Vout & -S.

MODEL	TUNS500F12	TUNS500F28	TUNS500F48
MAX OUTPUT WATTAGE[W]	504	504	504
DC OUTPUT	12V 42A (Peak 55A)	28V 18A (Peak 24A)	48V 10.5A (Peak 14A)

## **SPECIFICATIONS**

	MODEL		TUNS500F12	TUNS500F28	TUNS500F48	
	VOLTAGE[V]		AC85 - 264 1 φ			
		ACIN 100V	6.0typ (lo=100%)			
	CORRENT[A]	ACIN 200V	3.0typ (lo=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EEEICIENCVI%1	ACIN 100V	84typ	87typ	88typ	
		ACIN 200V	86typ	90typ	90.5typ	
		ACIN 100V	0.96typ			
		ACIN 200V	0.93typ			
	INRUSH CURRENT		Limited by external resistance			
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, lo=100%	, According to IEC60950-1)		
	VOLTAGE[V]		12	28	48	
	CURRENT[A]	*3	42 (Peak 55)	18 (Peak 24)	10.5 (Peak 14)	
	LINE REGULATION	mV]	24max	56max	96max	
	LOAD REGULATION	[mV]	24max	56max	96max	
	RIPPI F[m\/n-n]	0 to +100℃*1	120max	180max	250max	
		-40 to 0°C *1	150max	200max	300max	
	PIPPI E NOISEImVn-n1	0 to +100℃*1	150max	200max	300max	
001101		-40 to 0°C *1	200max	300max	450max	
	TEMPERATURE REGULATION(m)/1	0 to +65℃	120max	280max	480max	
		-40 to +100℃	240max	560max	960max	
	DRIFT[mV]	*2	40max	90max	180max	
	OUTPUT VOLTAGE AD JUSTMEN		Fixed (TRM pin open), adjustable by external resistor or external signal			
			9.60 - 14.40	22.40 - 33.60	38.40 - 52.80 (-Y1 Option : 38.4 - 57.6)	
	OUTPUT VOLTAGE SET	TING[V]	11.91 - 12.29	27.56 - 28.44	47.24 - 48.76	
PROTECTION	OVERCURRENT PROT	ECTION	Works over 101% of peak current and	d recovers automatically		
	OVERVOLTAGE PROTEC	CTION[V]	15.00 - 16.80	35.00 - 39.20	55.20 - 64.80 (-Y1 Option : 60.0 - 67.2)	
OTHERS	REMOTE SENSING		Provided			
	REMOTE ON/OFF		Optional (External power supply is re-	quired)		
	INPUT-OUTPUT · RC	*5	AC3,000V 1minute, Cutoff current = 1	10mA, DC500V 50MΩ min (20±15℃)		
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)			
1002/1101	OUTPUT · RC-FG	*5	AC500V 1minute, Cutoff current = 10	0mA, DC500V 50MΩ min (20±15℃)		
	OUTPUT-RC	*5	AC100V 1minute, Cutoff current = 100mA, DC100V 10M $\Omega$ min (20±15°C)			
	OPERATING TEMP., HUMID. AND	O ALTITUDE	-40 to +100°C (On aluminum base plate), 2	0 - 95%RH (Non condensing) (Refer to DEF	RATING CURVE), 3,000m (10,000 feet) max	
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-40 to +100℃, 20 - 95%RH (Non con	densing), 9,000m (30,000 feet) max		
Littinoitin	VIBRATION		10 - 55Hz, 49.0m/s <sup>2</sup> (5G), 3minutes p	eriod, 60minutes each along X, Y and	Z axis	
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis			
SAFETY AND	AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1					
NOISE REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-3-2 (Class A	A) *4		
OTHERS	CASE SIZE/WEIGHT		117.3×12.7×61.5mm [4.62×0.5×2	2.42 inches] (W×H×D) / 190g 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.

**\***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.

() means peak current. Avoid operating with peak current continuously. It may cause failure of the components inside the product. There are limitation of available condition of the peak current, such as peak time, duty etc. (Refer to the instruction manual in detail.) \*3

**\***4 **\***5 Please contact us about another class

"RC" is applicable when remote control (optional) is added.



### **External view**





% Tolerance : ±0.3 [±0.012]

% Weight : 190g max

\* Dimensions in mm, [ ]=inches

% Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max



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

\*If remote sensing is not necessary, connect between +Vout & +S and between -Vout & -S.

SPECIFICATIONS					
DC OUTPUT		12V 58.4A	28V 25A	48V 14.6A	
MAX OUTPU	T WATTAGE[W]	700.8	700.0	700.8	
MODEL		TUNS700F12	TUNS700F28	TUNS700F48	

	MODEL		TUNS700F12	TUNS700F28	TUNS700F48
	VOLTAGE[V]		AC85 - 264 1 φ		
		ACIN 100V	8.6typ (lo=100%)		
	CORRENT[A]	ACIN 200V	4.1typ (lo=100%)		
	FREQUENCY[Hz]		50/60 (47 - 63)		
	EEEICIENCVII/1	ACIN 100V	83typ	86typ	87typ
INFUT	EFFICIENCI[70]	ACIN 200V	86typ	89typ	90typ
	POWER FACTOR	ACIN 100V	0.96typ		
	(lo=100%)	ACIN 200V	0.93typ		
	INRUSH CURRENT		Limited by external resistance		
	LEAKAGE CURREN	T[mA]	0.75max (ACIN 240V 60Hz, lo=100%	, According to IEC60950-1)	
	VOLTAGE[V]		12	28	48
	CURRENT[A]		58.4	25	14.6
	LINE REGULATION	mV]	24max	56max	96max
	LOAD REGULATION	[mV]	24max	56max	96max
	DIDDI E[m\/n_n]	0 to +100℃*1	120max	180max	250max
		-40 to 0°C *1	150max	200max	300max
	PIPPI E NOISEImV/n-n1	0 to +100℃*1	150max	200max	300max
OUIFUI		-40 to 0°C *1	200max	300max	450max
	TEMPERATURE REGULATIONImVI	0 to +65°C	120max	280max	480max
		-40 to +100℃	240max	560max	960max
	DRIFT[mV]	*2	40max	90max	180max
	OUTPUT VOLTAGE ADJUSTMEN	IT	Fixed (TRM pin open), adjustable by e	external resistor or external signal	
	RANGE[V]		9.60 - 14.40	22.40 - 33.60	38.40 - 52.80 (-Y1 Option : 38.4 - 57.6)
	OUTPUT VOLTAGE SET	TING[V]	11.91 - 12.29	27.56 - 28.44	47.24 - 48.76
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of rating and recover	ers automatically	
PROTECTION	OVERVOLTAGE PROTEC	TION[V]	15.00 - 16.80	35.00 - 39.20	55.20 - 64.80 (-Y1 Option : 60.0 - 67.2)
	REMOTE SENSING		Provided		
UTHERS	REMOTE ON/OFF		Optional (External power supply is red	quired)	
MODEL			TUNS700F12-P	TUNS700F28-P	TUNS700F48-P
MAX OUTPL	JT WATTAGE[W]		700.8	700.0	700.8
DC OUTPUT	Г		12V 58.4A	28V 25A	48V 14.6A

## **SPECIFICATIONS**

MODEL		TUNS700F12-P	TUNS700F28-P	TUNS700F48-P			
VOLTAGE[V]		AC85 - 264 1 ¢					
	ACIN 100V	8.6typ (lo=100%)	3.6typ (lo=100%)				
CORRENT[A]	ACIN 200V	4.1typ (lo=100%)					
FREQUENCY[Hz]		50/60 (47 - 63)					
EFFICIENCVII/1	ACIN 100V	83typ	86typ	87typ			
EFFICIENCI[%]	ACIN 200V	86typ	89typ	90typ			
POWER FACTOR	ACIN 100V	0.96typ					
(lo=100%)	ACIN 200V	0.93typ					
INRUSH CURREN	Т	Limited by external resistance					
LEAKAGE CURRE	NT[mA]	0.75max (ACIN 240V 60Hz, lo=100%, According to IEC60950-1)					
VOLTAGE[V]		12	28	48			
CURRENT[A]		58.4	25	14.6			
VOLTAGE ACCUR	ACY[%]	+5, -3	+5, -3	+5, -3			
	0 to +100°C *1	240max	360max	600max			
RIPPLE[mVp-p]	-40 to 0℃ *1	300max	400max	700max			
	0 to +30% Load *1	360max	540max	900max			
	0 to +100°C *1	300max	400max	700max			
RIPPLE NOISE[mVp-p]	-40 to 0℃ *1	400max	600max	1000max			
	0 to +30% Load *1	450max	600max	1000max			
OVERCURRENT PR	OTECTION	Works over 105% of rating and recover	ers automatically				
OVERVOLTAGE PROT	ECTION[V]	15.00 - 16.80	35.00 - 39.20	55.20 - 64.80			
<b>REMOTE ON/OFF</b>		Optional (External power supply is red	quired)				
	MODEL VOLTAGE[V] CURRENT[A] FREQUENCY[Hz] EFFICIENCY[%] POWER FACTOR (Io=100%) INRUSH CURREN INRUSH CURREN VOLTAGE CURREN VOLTAGE[V] CURRENT[A] VOLTAGE ACCUR RIPPLE[mVp-p] RIPPLE[mVp-p] OVERCURRENT PR OVERCURRENT PR OVERCURRENT PRO	MODEL       VOLTAGE[V]     ACIN 100V       CURRENT[A]     ACIN 100V       FREQUENCY[Hz]     ACIN 100V       EFFICIENCY[%]     ACIN 100V       POWER FACTOR     ACIN 100V       Iolo 100%)     ACIN 100V       INRUSH CURRENT     ACIN 100V       INRUSH CURRENT     LEAKAGE CURK       VOLTAGE[V]     0to 100C \$*1       VOLTAGE[V]     0to 100C \$*1       RIPPLE[mVp-p]     0to 100C \$*1       RIPPLE NOISE[mVp-p]     0to 100C \$*1       0to 100C \$*1     0to 100C \$*1       0to 400C \$*1     0to 400 C \$*1       0to 400 C \$*1     0to %Load \$*1       0to +100C \$*1     0to 400 C \$*1       0to +100 C \$*1     0to 400 C \$*1       0to +100 C \$*1     0to %Load \$*1       0to +100 C \$*1     0to %Load \$*1       0to +100 C \$*1     0to 400 C \$*1       0to +100 C     \$*1       0to +100 C     \$*1       0to +100 C     \$*1       0to +100 C     \$*1       0to +100 C     \$*1       0to +100 C     \$*1	MODEL     TUNS700F12-P       VOLTAGE[V]     AC85 - 264 1 φ       CURRENT[A]     ACIN 100V     8.6typ (lo=100%)       ACIN 200V     4.1typ (lo=100%)       FREQUENCY[Hz]     50/60 (47 - 63)       EFFICIENCY[%]     ACIN 100V     83typ       POWER FACTOR     ACIN 200V     86typ       POWER FACTOR     ACIN 200V     86typ       INRUSH CURRENT     Limited by external resistance       LEAKAGE CURRENT[MA]     0.75max (ACIN 240V 60Hz, lo=100%)       VOLTAGE[V]     12       CURRENT[A]     12       RIPPLE[mVp-p]     40 to 0C ≠1     300max       0to +100C ≠1     300max     0to +100C ≠1       RIPPLE NOISE[mVp-p]     40 to 0C ≠1     300max       0to +100C ±1     300max     0to +30%Lad ≠1       0to +30%Lad ±1     450max     0to +30%Lad ±1       0to +30%Lad ±1     450max     0to +30%Lad ±1       0VERCURRENT P	MODELTUNS700F12-PTUNS700F28-PVOLTAGE[V]AC85 - 264 1 \$CURRENT[A]ACIN 100V8.6typ (10=100%)ACIN 200V4.1typ (10=100%)FREQUENCY[Hz]50/60 (47 - 63)EFFICIENCY[%]ACIN 200V86typACIN 200V86typ89typPOWER FACTOR (to=100%)ACIN 200V86typINRUSH CURRENTLimited by external resistanceLEAKAGE CURRENT[M]0.75max (ACIN 240V 60Hz, lo=100%, According to IEC60950-1)VOLTAGE[V]1228CURRENT[A]95.425VOLTAGE ACURCY[*]55.345.3VOLTAGE ACURCY[*]58.425VOLTAGE ACURCY[*]50.00max400maxMIPPLE[mVp-DI240max360maxM0 +100C *1300max400max010 +100C *1300max600maxMIPPLE NOISE[mVp-1]40 to 0C *1300max010 +100C *1300max600max010 +100C *1300max600max			

TUNS-10



# **GENERAL SPECIFICATIONS**

ISOLATION	INPUT-OUTPUT · RC *4	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20±15°C)
	OUTPUT · RC-FG *4	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃)
	OUTPUT-RC *4	AC100V 1minute, Cutoff current = 100mA, DC100V 10M $\Omega$ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +100°C (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 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
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis
SAFETY AND	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1
NOISE REGULATIONS	HARMONIC ATTENUATOR	Complies with IEC61000-3-2 (Class A) *3
OTHERS	CASE SIZE/WEIGHT	117.3×12.7×61.5mm [4.62×0.5×2.42 inches] (W×H×D) / 190g max
	COOLING METHOD	Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink)

\*1

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. \*2

\*3 Please contact us about another class.

"RC" is applicable when remote control (optional) is added. \*4

#### External view







% Tolerance : ±0.3 [±0.012]

% Weight : 190g max

\* Dimensions in mm, []=inches

\* Mounting hole screwing torque : 0.49N · m (5.0kgf · cm) max



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