COSEC	LUYEL AC-DC Power Supplies Medical type										
	PN	IA1	1 5F			M	Α	15	F		
c Suis RoHS		Ontional	Normal	Continue		E contraction	Low leaks	mmended EMI/EM A-04-000	C Filter series mended ces.	 Series name Single output Output wattage Universal input Output voltage Optional *5 T : Vertical terminal block T1: Horizontal terminal block N: with Cover J1: VH(J.S.T.)connector type 	
	-T1	-T		-N	~					option, refer to Instruction Manual.	
MODEL			PMA15F-3R3	PMA15F-5	1	PMA15F	12	PMA15F	-15	PMA15F-24	
MAX OUTPU	JT WATTAGE[W]		9.9	15	·	15.6		15		16.8	
DC OUTPUT	Г		3.3V 3A	5V 3A		12V 1.3A		15V 1A		24V 0.7A	
SPECIF	ICATIONS										
<u></u>	MODEL		DMA15E 2D2				10	DMA15E	15	DMA15E 04	
			AC85 - 264 1 d (Ref	PINA 15F-5	etion Ma	PINA ISF	and 3 2)	PINA I DF	-15	PMA15F-24	
-	CURRENT[A] ACIN 100V ACIN 200V		A COD - 204 I ψ (Helef to the instruction Manual I.1 and 3.2) *3 0.30 to (lo=100%) 0.40 to (lo=100%)								
			0.15typ(10-100%) = 0.70typ(10-100%)								
			50 / 60 / 47 - 440								
INPUT		ACIN 100V	66typ	70tvp	· ·	74tvn 76tvn			76tvp		
	EFFICIENCY[%]	ACIN 200V	67typ	74typ		78tvn		79typ		79typ	
		ACIN 100V	15typ (lo=100%) (At	t cold start)		Jotyp		1.01310		1.000	
	INRUSH CURRENT[A]		30typ (lo=100%) (At cold start)								
	LEAKAGE CURREN	T[mA]	0.05/0.10max (ACIN	0.05/0.10max (ACIN 100V / 240V 60Hz. Io=100%. According to IEC60601-1)							
	VOLTAGE[V]		3.3	5	·	12		15		24	
	CURRENT[A]		3.0	3.0		1.3		1.0		0.7	
	LINE REGULATION	mV]	20max	20max	1	48max		60max		96max	
	LOAD REGULATION	l[mV]	40max	40max	-	100max		120max		150max	
	RIPPLE[mVp-p]	0 to +50℃	80max	80max		120max		120max		120max	
	*1	-10 - 0 ℃	140max	140max	-	160max		160max		160max	
	RIPPLE NOISE[mVp-p]	0 to +50℃	120max	120max		150max		150max		150max	
OUTPUT	*1	-10 - 0℃	160max	160max		180max		180max		180max	
	TEMPERATURE REGUL ATIONIMVI	0 to +50℃	50max	50max		120max		150max		240max	
		-10 to +50℃	60max	60max		150max		180max		290max	
	DRIFT[mV]	*2	20max	20max	4	48max		60max		96max	
	START-UP TIME[ms]		200typ (ACIN 100V, Io=100	1%) * Start-up tim	e is 700ms	typ for less	than 1minu	ite of applying in	put again	from turning off the input voltage.	
			20typ (AGIN 100V, 10	0 = 100%		10.00 to	10.00	10.00 to	10.00	10.00 to 07.00	
			2.00 to 3.00	4.50 to 5.50		12.00 to	13.20	15.20 to	15.00	24.00 to 24.06	
	OVERCURRENT PROT		Works over 105% of	f rating and rec	OVARS 311	tomatica	12.40	15.00 10	13.00	24.00 10 24.90	
PROTECTION	OVERVOLTAGE PROTE	CTION[V]	4 00 to 5 25	5 75 to 7 00		15 00 to	18.00	20 00 to	25.00	30 00 to 37 00	
CIRCUIT AND	OPERATING INDICA		LED (Green)	0.10 10 1.00		10.00 10	10.00	20.00 10	20.00	00.00 10 01.00	
OTHERS	REMOTE ON/OFF										
	INPUT-OUTPUT		AC4.000V 1minute. Cutoff current = 10mA DC500V 50M Ω min (At Room Temperature)								
ISOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current :	= 10mA,	DC500V	50MΩ n	nin (At Room	1 Tempe	erature)	
	OUTPUT-FG		AC500V 1minute, Cu	itoff current = 2	25mA, D	C500V 5	0MΩ mii	n (At Room 1	Tempera	ature)	
	OPERATING TEMP., HUMID.AN	D ALTITUDE	-10 to +70°C, 20 - 90	0%RH (Non co	ndensinç	g), 3,000	m (10,00	0 feet) max	*3		
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90	0%RH (Non co	ndensinç	g), 9,000	n (30,000	feet) max			
	VIBRATION		10 - 55Hz, 19.6m/s ²	(2G), 3minutes	s period,	60minu	es each a	along X, Y ar	ıd Z axi	S	
	IMPACT		196.1m/s2 (20G), 11	ms, once each	X, Y and	l Z axis					
SAFETY AND	AGENCY APPROVA	LS	UL60601-1, C-UL (C	SA-C22.2 No.6	501.1), El	N60601-	1				
NOISE	CONDUCTED NOISI	E	Complies with FCC-E	B, VCCI-B, CISF	PR11-B,	CISPR22	2-B, EN55	5011-B, EN55	5022-B		
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61	000-3-2 (Class	3 A) *6 (N	lot built-	n to activ	/e filter * 4)			
OTHERS	CASE SIZE/WEIGHT	Г	31×78×103mm [1.	22×3.07×4.0	6 inches] (W×H	×D) / 230	Og max (with	out cov	/er)	
	COOLING METHOD		Convection								

- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 *3 Derating is required.
 *4 When two or more units are used, they may not comply with the harmonic attenuator. Please contact us for details.
- *5 Please contact us about safety approvals for the model with option.
 *6 Please contact us about another class.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with cover.
 * A sound may occur from power supply at peak loading.

PM





External view





4

5

FG

- Option : -J1 : (J.S.T) connector type
 -T : Vertical terminal block type
- -T1 : Horizontal terminal block type Refer to Instruction Manual 4.

- * PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
- * Chassis material : Electric galvanizing steel board
- % Keep drawing current per pin bellow 5A of CN2.
- % Dimensions in mm, []=inches
- % Mounting torque : 0.6N \cdot m (6.3kgf \cdot cm) max
- % Please connect safety ground to the unit in 2-M3 holes.

PMA

CUYEL	AC-DC Po	ower S	upplies Medica	al type	Ordering information							
	PN	IA :	SOF	(30 F	•					
c AL us RoHS		The state			Re N Low le *The to a	example of EMI/EMC Filter AM-04-000 Away of the series away of the series of MI/EMC Filter is recommended connect with several devices.	 ①Series name ②Single output ③Output wattage ④Universal input ⑤Output voltage ⑥Optional *5 T: Vertical termin T1: Horizontal term N: with Cover J1: VH(J.S.T.)conne 					
	Optional -T1	Optiona -T	al Normal	Optional -N			Specification is chan option, refer to Instr Manual.					
MODEL			PM430F-3B3	PMA30E-5	PMA30F-12	PMA30E-15	PMA30E-24					
MAX OUTPU DC OUTPUT	JT WATTAGE[W] Г		19.8 3.3V 6A	30 5V 6A	30 12V 2.5A	30 15V 2A	31.2 24V 1.3A					
SPECIF	ICATIONS											
	MODEL		PMA30F-3R3	PMA30F-5	PMA30F-12	PMA30F-15	PMA30F-24					
	VOLTAGE[V]		AC85 - 264 1 ¢ (Ref	er to the Instruction	on Manual 1.1 and 3.	2) *3						
	CURRENT[A]		0.30typ (lo=100%) 0.70typ (lo=100%) 0.30typ (lo=100%) 0.40typ (lo=100%)									
NIBUT	FREQUENCY[Hz]		50 / 60 (47 - 440)	744	701	774	774					
INPUT	EFFICIENCY[%]	ACIN 100V	67typ 69typ	7 Ityp 74typ	76typ 78typ	77typ 80typ	277typ					
ľ		ACIN 200V	15typ (lo=100%) (At cold start)									
	INRUSH CURRENT[A]		30typ (lo=100%) (At cold start)									
	LEAKAGE CURREN	T[mA]	0.05 / 0.10max (ACI	N 100V / 240V 60	Hz, Io=100%, Accor	ding to IEC60601-1)						
	VOLTAGE[V]		3.3	5	12	15	24					
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3					
		mV] I[mV]	20max	20max	48max	60max	96max					
		0 to +50°C	40max	40max	120max	120max	120max					
	RIPPLE[mvp-p]	-10 - 0°C	140max	140max	160max	160max	160max					
ł	BIPPLE NOISE[mVn-n]	0 to +50°C	120max	120max	150max	150max	150max					
OUTPUT	*1	-10 - 0°C	160max	160max	180max	180max	180max					
	TEMPERATURE REGULATION(mV)	0 to +50℃	50max	50max	120max	150max	240max					
ļ		-10 to +50℃	60max	60max	150max	180max	290max					
		*2	ZGMU2 XGMU2	2UMAX	48Max	bUMax	96max					
	HOLD-UP TIME[IIIS]		2001yp (ACIN 100V, 10=100	n = 100%	7001115 typ 101 less than 111	inute of applying input again	Ironi turning on the input					
	OUTPUT VOI TAGE ADJUSTMENT	BANGEIVI	2 85 to 3 60	4 50 to 5 50	10.00 to 13.20	13 20 to 18 00	19 20 to 27 0					
ł	OUTPUT VOLTAGE SET		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.9					
	OVERCURRENT PROT	ECTION	Works over 105% of	f rating and recove	ers automatically		1					
PROTECTION	OVERVOLTAGE PROTE	CTION[V]	4.00 to 5.25	5.75 to 7.00	15.00 to 18.00	20.00 to 25.00	30.00 to 37.0					
OTHERS	OPERATING INDICA	TION	LED (Green)									
OTTIENO	REMOTE ON/OFF		Not provided									
	INPUT-OUTPUT		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
ISOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 1	0mA, DC500V 50MΩ	min (At Room Tempe	erature)					
ISOLATION	OUTPUT-FG		AC500V 1minute, Cu	utoff current = 25n	nA, DC500V 50M Ω n	nin (At Room Tempera	ature)					
ISOLATION	OPERATING TEMP., HUMID.AND ALTITUDE		-10 to +70°C, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max *3									
ISOLATION	OPERATING TEMP., HUMID.ANL	ALIHODE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max									
	OPERATING TEMP., HUMID.ANL STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90	0%RH (Non conde	ensing), 9,000m (30,0	10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	OPERATING TEMP.,HUMID.ANI STORAGE TEMP.,HUMID.AND VIBRATION	ALTITUDE	-20 to +75℃, 20 - 90 10 - 55Hz, 19.6m/s²	0%RH (Non conde (2G), 3minutes pe	eriod, 60minutes eac	n along X, Y and Z axis	3					
	OPERATING TEMP.,HUMID.ANI STORAGE TEMP.,HUMID.AND VIBRATION IMPACT	ALTITUDE	-20 to +75°C, 20 - 90 10 - 55Hz, 19.6m/s ² 196.1m/s ² (20G), 11	0%RH (Non conde (2G), 3minutes pe ms, once each X,	eriod, 60minutes eac Y and Z axis	n along X, Y and Z axis	3					
ISOLATION ENVIRONMENT SAFETY AND	OPERATING TEMP.,HUMID.ANI STORAGE TEMP.,HUMID.AND VIBRATION IMPACT AGENCY APPROVAL	ALTITUDE	-20 to +75°C, 20 - 90 10 - 55Hz, 19.6m/s ² 196.1m/s ² (20G), 11 UL60601-1, C-UL (0	0%RH (Non conde (2G), 3minutes pe ms, once each X, CSA-C22.2 No.601	eriod, 60minutes eacl Y and Z axis .1), EN60601-1	n along X, Y and Z axis	3					
ISOLATION ENVIRONMENT SAFETY AND NOISE	OPERATING TEMP,HUMID.ANI STORAGE TEMP,HUMID.AND VIBRATION IMPACT AGENCY APPROVAI CONDUCTED NOISE		-20 to +75°C, 20 - 90 10 - 55Hz, 19.6m/s ² 196.1m/s ² (20G), 11 UL60601-1, C-UL (C Complies with FCC-F	0%RH (Non conde (2G), 3minutes pe ms, once each X, SA-C22.2 No.601 B, VCCI-B, CISPR1	ansing), 9,000m (30,0 eriod, 60minutes eacl Y and Z axis .1), EN60601-1 1-B, CISPR22-B, EN	55011-B, EN55022-B	3					
ISOLATION ENVIRONMENT SAFETY AND NOISE REGULATIONS	OPERATING TEMP, HUMID.ANI STORAGE TEMP, HUMID.AND VIBRATION IMPACT AGENCY APPROVAI CONDUCTED NOISE HARMONIC ATTENL	ALTITUDE LS JATOR	-20 to +75°C, 20 - 90 10 - 55Hz, 19.6m/s ² 196.1m/s ² (20G), 11 UL60601-1, C-UL (C Complies with FCC-F Complies with IEC6	0%RH (Non conde (2G), 3minutes pe ms, once each X, SA-C22.2 No.601 B, VCCI-B, CISPR1 1000-3-2 (Class A)	Anshig), 9,000H (30,1 priod, 60minutes eacl Y and Z axis .1), EN60601-1 11-B, CISPR22-B, EN *6 (Not built-in to ac	55011-B, EN55022-B tive filter * 4)	S 					
ISOLATION ENVIRONMENT SAFETY AND NOISE REGULATIONS OTHERS	OPERATING TEMP, HUMID.ANI STORAGE TEMP, HUMID.AND VIBRATION IMPACT AGENCY APPROVAI CONDUCTED NOISE HARMONIC ATTENL CASE SIZE/WEIGHT	ALTITUDE LS JATOR	-20 to +75°C, 20 - 90 10 - 55Hz, 19.6m/s ² 196.1m/s ² (20G), 11 UL60601-1, C-UL (C Complies with FCC-E Complies with IEC6 31 × 82 × 120mm [1	0%RH (Non conde (2G), 3minutes pe ms, once each X, SA-C22.2 No.601 B, VCCI-B, CISPR1 1000-3-2 (Class A) .22×3.23×4.72 ir	Ansing), 9,000m (30,1 eriod, 60minutes eacl 1), EN60601-1 11-B, CISPR22-B, EN *6 (Not built-in to ac inches] (W×H×D) / 2	55011-B, EN55022-B tive filter *4) 40g max (without cov	er)					

Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to REISURU-GIKEN: RMT
 2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 3 Derating is required.
 *4 When two or more units are used, they may not comply with the harmonic attenuator. Please contact us for details.

Please contact us about safety approvals for the model v
 Please contact us about another class.
 Parallel operation with other model is not possible.
 Derating is required when operated with cover.
 A sound may occur from power supply at peak loading.





External view







% Point A,Point B are thermometry points. Please refer to Instruction Manual 3.

I/C	O Connector	Mating Connector	Т	erminal			
014	4 4400704 0	4 4400700 5	Chain	1123721-1			
CINI	1-1123724-3	1-1123722-5	Loose	1318912-1			
CN2	1-1123723-4	4 4400700 4	Chain	1123721-1			
		1-1123722-4	Loose	1318912-1			
(Mfr : Tyco Electronics AMP)							

I/O Connector is Mfr.Tyco Electronics AMP
 Option : -J1 : (J.S.T) connector type
 -T : Vertical terminal block type
 -T1 : Horizontal terminal block type

Refer to Instruction Manual 4.

PIN	CONNECTION>

CN1			CN2		
Pin No.	Input		Pin No.	Output	
1	AC(N)		1.2	V	
2			1,∠	- v	
3	AC(L)		2.4		
4			3, 4	+v	
5	FG				

% Tolerance : ±1 [±0.04]

% Weight : 240g max (without cover)

- % PCB Material/thickness : CEM-3 / 1.6mm [0.06inches] % Chassis material : Aluminum
- % Keep drawing current per pin bellow 5A of CN2.

% Dimensions in mm, []=inches % Mounting torque : 0.49N · m (5kgf · cm) max

% Please connect safety ground to the unit in 2-M3 holes.

PMA

LOJEL	AC-DC PC	ower S	upplies medica	птуре	ordering into	rmation				
	PN	IA	50F	ā		60	F	- <u>-</u> -		
c PUL us a RoHS	Optional CE	Optiona	Normal	Optional		Recommended EN NAM-04-000	IVEMC Filter	 Series name Single output Output wattage Universal input Output voltage Output voltage Optional *5 T : Vertical termina T1: Horizontal termina N : with Cover J1: VH(J.S.T.)connec R : with Remote O 		
	-T1	-T		-N				option, refer to Instru Manual.		
MODEL			PMA60F-3R3	PMA60F-5	PMA60F-12	PMA	60F-15	PMA60F-24		
MAX OUTPUT	FWATTAGE[W]		39.6	60	60	60		60		
DC OUTPUT			3.3V 12A	5V 12A	12V 5A	15V 4	A	24V 2.5A		
SPECIFIC	CATIONS									
N	MODEL		PMA60F-3R3	PMA60F-5	PMA60F-12	PMA	60F-15	PMA60F-24		
V	VOLTAGE[V]		AC85 - 264 1 φ (Ref	er to the Instruction	on Manual 1.1)			1		
c	CURRENT[A]	ACIN 100V ACIN 200V	0.7typ (lo=100%) 0.4typ (lo=100%)	0.8typ (lo=100%) 0.5typ (lo=100%))					
F	FREQUENCY[Hz]		50 / 60 (47 - 63)	1						
	EFFICIENCY[%]	ACIN 100V	77typ	80typ	80typ	81typ)	81typ		
		ACIN 200V	78typ	83typ	82typ	83typ)	83typ		
P	POWER FACTOR	ACIN 100V	0.98typ	0.001						
(10=100%)	ACIN 200V	0.85typ	0.000yp 0.000yp 15typ (Io-100%) (At cold start)						
11	INRUSH CURRENT[A]		15typ (10=100%) (At cold start)							
-			30typ (10=100%) (At cold start)							
		I[mA]	0.09/ 0.101110X (AU	5	12, 10=100%, AU		50601-1)	24		
			3.3	12.0	5.0	15		24		
		mV1	20max	20max	48max	60m	ax	96max		
	LOAD REGULATION	límV1	40max	40max	100max	120m	nax	150max		
	BIPPI F[m\/n-n]	0 to +50°C	80max	80max	120max	1201	nax	120max		
. I.	*1	-10 - 0°C	140max	140max	160max	160n	nax	160max		
B	RIPPLE NOISE[mVp-n]	0 to +50℃	120max	120max	150max	150n	nax	150max		
OUTPUT	*1	-10 - 0°C	160max	160max	180max	180n	nax	180max		
		0 to +50℃	50max	50max	120max	150n	nax	240max		
		-10 to +50℃	60max	60max	150max	180n	nax	290max		
C	DRIFT[mV]	*2	20max	20max	48max	60ma	ax	96max		
S	START-UP TIME[ms]		250typ (ACIN 100V,	lo=100%)						
I I	HOLD-UP TIME[ms]		20typ (ACIN 100V, I	0=100%)		<u> </u>				
0			2.85 to 3.60	4.50 to 5.50	10.00 to 13	.20 13.20	0 to 18.00	19.20 to 27.00		
			3.30 10 3.40	5.00 10 5.15		.48 15.00	0 10 15.60	24.00 10 24.90		
PROTECTION		CTIONIVI	4 00 to 5 25		15 00 to 18	00 20.00) to 25.00	30.00 to 37.00		
CIRCUIT AND			1 FD (Green)	5.75 10 7.00	13.00 10 10	.00 20.00	10 23.00	30.00 10 37.00		
OTHERS	BEMOTE ON/OFF		Ontional (Required external power source)							
i	NPUT-OUTPUT-RC	*3	AC4,000V 1minute	Cutoff current = 10	0mA, DC500V 50	$M\Omega$ min (At Re	oom Tempe	erature)		
ISOLATION I	NPUT-FG		AC2,000V 1minute,	Cutoff current = 10	0mA, DC500V 50	MΩ min (At Re	pom Tempe	erature)		
	OUTPUT·RC-FG *3		AC500V 1minute, Cu	utoff current = 25n	nA, DC500V 50M	Ω min (At Roo	m Tempera	ature)		
0	OPERATING TEMP., HUMID.AND	O ALTITUDE	-10 to +70℃, 20 - 9	0%RH (Non conde	nsing), 3,000m	10,000feet) ma	ax *4			
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 9	0%RH (Non conde	nsing), 9,000m (30,000feet) ma	ax			
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s ²	(2G), 3minutes pe	riod, 60minutes	each along X, `	and Z axis	S		
	IMPACT		196.1m/s ² (20G), 11ms, once each X, Y and Z axis							
ENVIRONMENT V	MPACT		UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1							
ENVIRONMENT SAFETY AND	MPACT AGENCY APPROVAI	LS	UL60601-1, C-UL (C	CSA-C22.2 No.601	1), EN60601-1					
ENVIRONMENT V II SAFETY AND A NOISE C	IMPACT AGENCY APPROVAI CONDUCTED NOISE	LS	UL60601-1, C-UL (C Complies with FCC-I	CSA-C22.2 No.601. B, VCCI-B, CISPR1	1), EN60601-1 1-B, CISPR22-B	EN55011-B, E	N55022-B			
ENVIRONMENT S V II SAFETY AND A NOISE REGULATIONS H	IMPACT AGENCY APPROVAI CONDUCTED NOISE HARMONIC ATTENU	LS E JATOR	UL60601-1, C-UL (C Complies with FCC-I Complies with IEC6	CSA-C22.2 No.601. B, VCCI-B, CISPR1 1000-3-2 *6	1), EN60601-1 1-B, CISPR22-B	EN55011-B, E	N55022-B			
ENVIRONMENT SAFETY AND A NOISE C REGULATIONS H OTHERS C	IMPACT AGENCY APPROVAI CONDUCTED NOISE HARMONIC ATTENU CASE SIZE/WEIGHT	LS E JATOR	UL60601-1, C-UL (C Complies with FCC-I Complies with IEC6 32×82×135mm [1	CSA-C22.2 No.601. B, VCCI-B, CISPR1 1000-3-2 *6 .26×3.23×5.31 in	1), EN60601-1 1-B, CISPR22-B ches] (W×H×D	EN55011-B, E	N55022-B without cov	/er)		

Invession of your provide the constraint of the const

* *

- Parallel operation with other model is not possible. Derating is required when operated with cover. A sound may occur from power supply at peak loading. *

Block diagram



External view



% External size of option T,T1,R and N is different from standard model and refer to 4 Option of instruction manual for details.

I/O Connector CN1 1-1123724-3

CN2 1-1123723-6

% I/O Connector is Mfr.Tyco Electronics AMP
 % Option : -J1 : (J.S.T) connector type
 -T : Vertical terminal block type
 -T1 : Horizontal terminal block type

Refer to Instruction Manual 4.

N1		CN2	
'in No.	Input	Pin No.	Output
1	AC(N)	4.0	V
2		1-3	- V
3	AC(L)	4.0	
4		4 - 6	+v
5	FG		

* Dimensions in mm, []=inches

※ Mounting torque : 0.49N ⋅ m (5kgf ⋅ cm) max

% Please connect safety ground to the unit in 2-M3 holes.

COŞEL	SEL AC-DC Power Supplies Medical type				Ordering information						
	PM	A1	00F		PM	A	<u>100</u>	F	- <u>-</u> <u>-</u> <u>-</u>		
CRU'US RoHS	CE Οptional	Optiona	Victoria Normal	Optional			Recommended EMVEMC VAM-06-000 Velakage current type : NAM se The EMV/EMC Filter is recomm o connect with several device	Filter (1 2 3 4 6 6 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Series name Single output Output wattage Universal input Output voltage Optional *6 T : Vertical terminal block N: with Cover J1: VHJ.S.T.)connector type R : with Remote ON/OFF		
	-11	-1		-N				or M	ption, refer to Instruction lanual.		
MODE			PMA100F-3R3	PMA100E-5	PM	A100F-12	PMA100F	-24	PMA100F-48		
MAX OUTP	UT WATTAGE[W]		66	100	102		108		100.8		
DC OUTPUT	<u>г</u>		3.3V 20A	5V 20A	121	8.5A	24V 4.5A		48V 2.1A		
SDECIE			I	1	I		1				
SPECIF			1								
	MODEL		PMA100F-3R3	PMA100F-5	PM	A100F-12	PMA100F	-24	PMA100F-48		
-	VOLTAGE[V]		AC85 - 264 1 ¢ (Ref	er to the Instru	ction Manua	al 1.1)					
	CURRENT[A]	ACIN 100V	0.9typ (lo=100%) 1.3typ (lo=100%)								
	ACIN 200V		0.5typ (lo=100%) 0.7typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 63)	0.1 +	0.01		0.45		0.45		
	EFFICIENCY[%]	ACIN 100V	77typ	8 I typ	821	ур	84typ		84typ		
INFOI		ACIN 200V		озтур	031	yh	оотур		σοιγμ		
	(lo=100%)	(lo=100%) ACIN 200V									
		ACIN 100V	20typ (lo=100%) (At cold start)								
	INRUSH CURRENT[A]	ACIN 200V	40tvp (lo=100%) (At	t cold start)							
	LEAKAGE CURRENT[mA]		0.09 / 0.18max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60601-1)								
	VOLTAGE[V]		3.3	5	12		24		48		
	CURRENT[A]		20.0	20.0	8.5		4.5		2.1		
	LINE REGULATION	mV]	20max	20max	48r	nax	96max		192max		
	LOAD REGULATION	[mV]	40max	40max	100	max	150max		240max		
	RIPPLE[mVp-p]	0 to +50°C	80max	80max	120	Imax	120max		150max		
	*1	-10 - 0°C	140max	140max	160	max	160max		200max		
	RIPPLE NOISE[mVp-p]	0 to +50℃	120max	120max	150	Imax	150max		250max		
OUTPUT	*1	-10-00	T60max	T60max	180	imax	180max		300max		
	TEMPERATURE REGULATION[mV]	-10 to +50°C	60may	60max	120	Imax	240111dX 290max		400111aX 600max		
	DRIFT[mV]	*2	20max	20max	48r	nax	96max		192max		
	START-UP TIME[ms]		250tvp (ACIN 100V In=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Ic	p=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	RANGE[V]	2.85 to 3.60	4.50 to 5.50	10.	00 to 13.20) 19.20 to 2	27.00	39.00 to 53.00		
	OUTPUT VOLTAGE SET	TING[V]	3.30 to 3.40	5.00 to 5.15	12.	00 to 12.48	3 24.00 to 2	24.96	48.00 to 49.92		
PROTECTION	OVERCURRENT PROT	ECTION	Works over 105% of	rating and rec	overs auton	natically					
	OVERVOLTAGE PROTEC	CTION[V]	4.00 to 5.25	5.75 to 7.00	15.	00 to 18.00) 30.00 to 3	37.00	58.00 to 65.00		
OTHERS	OPERATING INDICA	TION	LED (Green)								
	REMOTE ON/OFF		Optional (Required e	xternal power	source)		<u> </u>				
	INPUT-OUTPUT-RC	*3	AC4,000V 1minute, 0	Cutoff current =	= 10mA, DC	500V 50IVI	Ω min (At Room	Tempera	ature)		
ISULATION		*0	AC2,000V Immute, 0	utoff ourrant - (= 1011A, DC		2 IIIII (AL ROOIII	rempera			
			-10 to ±70°C 20 - 00	$\mathbb{R} = 2$	ndensina) (3 000m (10	000feet) may ¥	<u>4</u>	10/		
	STORAGE TEMP. HUMID AND	ALTITUDE	-20 to +75°C 20 - 90)%RH (Non co	ndensina) (9.000m (30	0.000feet) max	•			
ENVIRONMENT	VIBRATION		10 - 55Hz. 19.6m/s ²	(2G). 3minutes	s period. 60	minutes ea	ch along X. Y and	I Z axis			
	IMPACT		196.1m/s ² (20G), 11	ms, once each	X, Y and Z	axis					
SAFETY AND	AGENCY APPROVAL	LS	UL60601-1, C-UL (C	SA-C22.2 No.6	601.1), EN60	0601-1					
NOISE	CONDUCTED NOISE		Complies with FCC-E	3, VCCI-B, CISF	PR11-B, CIS	PR22-B, E	N55011-B, EN550)22-B			
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61	000-3-2 *6							
	CASE SIZE/WEIGHT		34×93×168mm [1.	34×3.66×6.6	1 inches] (V	V×H×D)/	560g max (witho	ut cover	·)		
UTIENS	COOLING METHOD		Convection								

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN: RM101).
*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
*3 Applicable when Remote ON/OFF (optional) is added. RC is insulated with input, output and FG.
*4 Derating is required.
*5 Please contact us about safety approvals for the model with option.

PMA

- *6 Please contact us about class C.
 * Parallel operation with other model is not possible.
 * Derating is required when operated with cover.
 * A sound may occur from power supply at peak loading.

Block diagram



External view

Refer to Instruction Manual 4.



※ External size of option T,T1,R and N is different from standard model and refer to 4 Option of instruction manual for detalis.

* Please connect safety ground to the unit in 2-M3 holes.