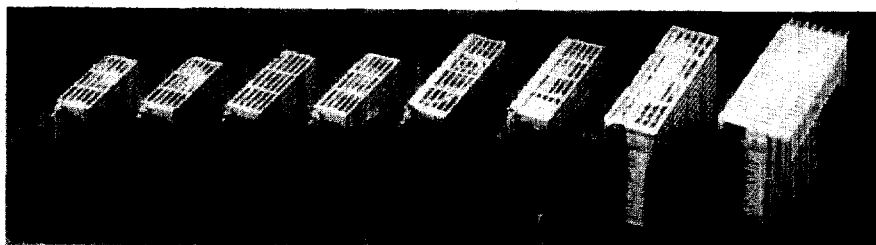


WR SERIES SMPU's — 85 TO 264 Vac WIDE INPUT RANGE

- Accepting worldwide AC input voltages (85 to 264 Vac)
- Units are enclosed in a case, which can be mounted on either of two surfaces (except WRE)
- Can be used as an open frame unit if desired (WRM, WRA, WRT, WRB)
- Proof voltage AC 3750
- Fully meeting the requirements of : UL, CSA and TUV
- Terminal noise voltage in accordance with FCC Class B, and VDE 0871 Class B
- Truly cost-effective



This series of switching power supplies, of low or intermediate power, can cope with all international mains voltage systems without switching between input terminals. The low power (15, 25, 30 & 50 Watt) series accepts all voltages from 85 to 264 Vac. The higher power models from 75 to 450 Watts, use a new and innovative detector circuit, which automatically senses the input voltage level, and internally selects between 85 to 132 or 170 to 264 Vac.

All units meet the highest safety specification requirements of UL, CSA & TUV, and the EMC requirements of the FCC and VDE.

POWER	INPUT	SERIES NAME	WEIGHT grams	DIMENSIONS w x l x h (mm)		OUTPUT MODEL NAME					EFFICIENCY (%)
AC INPUT SINGLE OUTPUT											
15 W	85 to 264 V	WRM-SX	290	97 x 98.5 x 33.5	5V 3A WRM05SX	12V 1.3A WRM12SX	15V 1A WRM15SX	24V 0.7A WRM24SX	48V 0.35A WRM48SX	75	
25 W	85 to 264 V	WRA-SX	350	97 x 116.5 x 33	5V 5A WRA05SX	12V 2.1A WRA12SX	15V 1.7A WRA15SX	24V 1.1A WRA24SX	48V 0.55A WRA48SX	73	
30 W	85 to 264 V	WRT-SX	350	97 x 124 x 36.5	5V 6.0A WRT05SX	12V 2.5A WRT12SX	15V 2.0A WRT15SX	24V 1.4A WRT24SX	48V 0.7A WRT48SX	78	
50 W	85 to 264 V	WRB-SX	460	97 x 159 x 39.5	5V 10A WRB05SX	12V 4.2A WRB12SX	15V 3.4A WRB15SX	24V 2.1A WRB24SX	48V 1A WRB48SX	73	
75 W	85 to 264 V	WRC-SX	520	94 x 175.5 x 38	5V 15A WRC05SX	6V 12.5A WRC06SX	12V 6.3A WRC12SX	15V 5A WRC15SX	24V 3.2A WRC24SX	85	
					30V 2.5A WRC30SX	38V 2.1A WRC36SX	48V 1.6A WRC48SX				
100 W	85 to 264 V	WRD-SX	690	93 x 191 x 48	5V 20A WRD05SX	12V 9A WRD12SX	15V 7A WRD15SX	24V 4.5A WRD24SX	48V 2.2A WRD48SX	81	
150 W	85 to 264 V	WRE-SX		93 x 207 x 65	5V 30A WRE05SX	12V 14A WRE12SX	15V 11A WRE15SX	24V 7A WRE24SX	48V 3.5A WRE48SX	82	
300 W	85 to 264 V	WRF-SX	1800	120 x 170 x 93	5V 60A WRF05SX	6V 50A WRF06SX	12V 27A WRF12SX	15V 22A WRF15SX	24V 14A WRF24SX	79	
					30V 11A WRF30SX	36V 9A WRF36SX	48V 7A WRF48SX			84	
450 W	85 to 264 V	WRP-SX	2000	120 x 190 x 93	5V 90A WRP05SX	6V 75A WRP06SX	12V 40A WRP12SX	15V 32A WRP15SX	24V 20A WRP24SX	86	
					30V 16A WRP30SX	36V 13A WRP36SX	48V 10A WRP48SX				
AC INPUT MULTI OUTPUT 2ch											
15 W	85 to 264 V	WRM-FWX	310	97 x 98.5 x 33.5	5V 1.2A 24V 0.4A WRM21FWX	12V 0.8A 12V 0.5A WRM22FWX	15V 0.5A 15V 0.5A WRM23FWX	5V 1.8A 12V 0.5A WRM24FWX		66	
25 W	85 to 264 V	WRA-FWX	400	97 x 116.5 x 33	5V 2.6A 24V 0.5A WRA21FWX	24V 0.85A 5V 0.9A WRA21FWX-B	12V 1.2A 12V 0.9A WRA22FWX	15V 0.85A 15V 0.85A WRA23FWX		68	
					5V 2.6A 12V 0.9A WRA24FWX	12V 1.7A 5V 0.9A WRA24FWX-B				65	
30 W	85 to 264 V	WRT-FWX	400	97 x 124 x 36.5	24V 1A 5V 0.5A WRT21FW-B	12V 2A 12V 0.8A WRT22FWX-B	15V 1A 15V 1A WRT23FWX	12V 2A 5V 1.5A WRT24FWX-B		76	
50 W	85 to 264 V	WRB-FWX	480	97 x 159 x 39.5	24V 1.7A 5V 1.8A WRB21FWX-B	12V 3A 12V 1.2A WRB22FWX	15V 1.8A 15V 1.5A WRB23FWX	12V 3.4A 5V 1.8A WRB24FWX-B	5V 5A 12V 1.8A WRB24FWX	72	
AC INPUT MULTI OUTPUT 3ch											
15 W	85 to 264 V	WRM-00X	310	97 x 98.5 x 33.5	5V 2A +12V 0.3A -12V 0.2A WRM01X	5V 2A +12V 0.3A -5V 0.2A WRM03X	5V 2A +15V 0.2A -15V 0.2A WRM04X			66	
25 W	85 to 264 V	WRA-00X	400	97 x 116.5 x 33	5V 3A +12V 0.5A -12V 0.35A WRA01X	5V 3A +12V 0.5A -5V 0.35A WRA03X	5V 3A +15V 0.35A -15V 0.35A WRA04X			66	
30 W	85 to 264 V	WRT-00X	430	97 x 124 x 36.5	5V 3A +12V 1.2A -12V 0.3A WRT01X	5V 3A +12V 1.2A -5V 0.3A WRT03X	5V 3A +12V 1.2A +15V 0.5A WRT04X			73	
50 W	85 to 264 V	WRB-00X	480	97 x 159 x 39.5	5V 5A +12V 1.5A -12V 0.5A WRB01X	5V 5A +12V 1.5A -5V 0.5A WRB03X	5V 5A +15V 1.2A -15V 0.5A WRB04X			72	

WR SERIES SMPU's – 85 TO 264 Vac WIDE INPUT RANGE

SPECIFICATIONS

WRX-SX Series

Input		WRM-SX	WRT-SX	WRA-SX	WRB-SX	WRC-SX	WRE-SX WRD-SX	WRP-SX WRF-SX
AC Phase		Single	Single	Single	Single	Single	Single	Single
AC Voltage	V	85 - 264	85 - 264	85 - 264	85 - 264	85 - 264	85 - 264	85 - 264
AC Frequency	Hz	47 - 440	47 - 400	47 - 440	47 - 440	47 - 440	47 - 440	47 - 440
DC Voltage	V	110 - 350	110 - 350	110 - 350	110 - 350	110 - 350	220 - 360	220 - 360
Output								
Adjustable Voltage	%	±5%	±5%	±5%	±5%	±10%	±10%	±10%
Ripple & noise (DC - 100 MHz)	mvp-p	1% + 50	1% + 50	1% + 50	1% + 50	1% + 50	1% + 50	120 - 300 according to o/p V
Line Regulation (85 - 132 170 - 264 Vac)		0.5% max.	0.5% max.	0.5% max.	0.5% max.	0.8% max.	0.3% max.	0.5% max.
Load Regulation (0 - 100%)		1% max.	1% max.	1% max.	1% max.	0.9% max.	0.3% max.	1.0% max.
Temp. Coefficient (-5 to +50°C)	%/°C	0.03	0.03	0.03	0.03	0.03	0.01	0.03
Drift (after 1 H)	mV	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H
Rise Time (+25°C)	mS	200 max.	200 max.	200 max.	200 max.	400 max.	200 max.	300 max.
Hold Up Time (Nom. input & output)	mS	10 (+25°C)	10 (+25°C)	10 (25°C)	10 (25°C)	150 min.	20 (25°C)	20 (25°C)
Remote Sensing		None	None	None	None	Standard	Standard	Standard
Protection								
Overcurrent Protection		Foldback Current Limiting						
Overvoltage Protection		Overvoltage clamp	Output shutdown	Output shutdown	Output shutdown	Output shutdown	Output shutdown	Output shutdown
Input Inrush Current	A	25 max.	25 max.	30 max.	30 max.	40 max.	20 max.	10 max.
Environment								
Operating Temp. (Full load)	°C	-5 to +50	-5 to +50	-5 to +50	-5 to +50	-5 to +50	-5 to +50	-5 to +50
Storage Temperature	°C	-20 to +85	-20 to +85	-20 to +85	-20 to +85	-20 to +85	-20 to +85	-20 to +85
Humidity		85%	85%	85%	85%	85%	85%	85%
Vibration		(5 - 10 Hz) 10mm (10 - 55 Hz) 2 G						
Shock	G	30	30	10	30	30	30	30
Isolation								
Input - Output (minute)	Vac	3750	3750	3750	3750	3750	3750	3750
Input - Case (minute)	Vac	2500	2500	2500	2500	2500	2500	2500
Output - Case (minute)	Vac	500	500	500	500	500	500	500
Input - Output - Case (500 Vdc)	MK2	50	50	50	50	50	50	50
Safety		Built to meet UL, CSA and VDE						
Conducted Radio Noise		Built to meet FCC Class B and VDE 0871 Class B (Up to 150 kHz)						

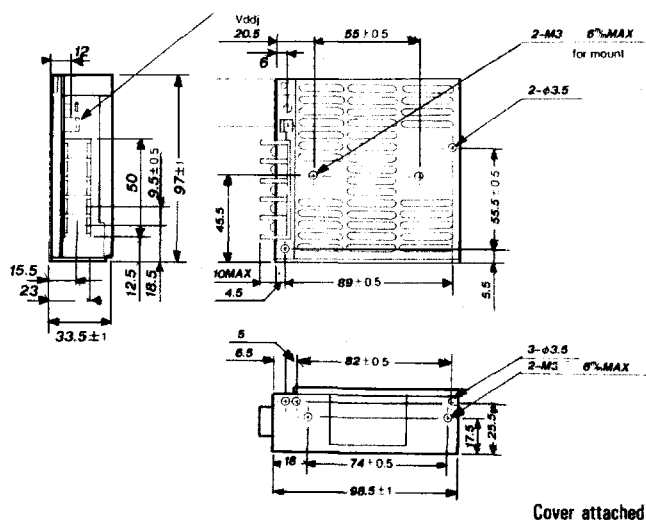
WRX-FWX, WRX-00X Series

Input		WRB-FWX WRA-00X	WRM-FWX WRM-00X	WRT-FWX WRT-00X
AC Phase		Single	Single	Single
AC Voltage	V	85 - 264	85 - 264	85 - 264
AC Frequency	Hz	47 - 440	47 - 400	47 - 440
DC Voltage	V	110 - 350	110 - 350	110 - 350
Output				
Adjustable Voltage	%	+3, -0(V ₁) ±4.0 fixed (V ₂ , V ₃)	+3, -0(V ₁) ±4.0 fixed (V ₂ , V ₃)	+3, -0(V ₁) ±4.0 fixed (V ₂ , V ₃)
Ripple & noise (DC - 100 Mhz)	mvp-p	1% + 50	1% + 50	1% + 50
Line Regulation (85 - 132 170 - 264 Vac)		0.5% max.	0.5% max.	0.5% max.
Load Regulation (0 - 100%)		1% max.	1% max.	1% max.
Temp. Coefficient (-5 to +50°C)	%/°C	0.03	0.03	0.03
Drift (after 1 H)	mV	(0.5% + 15)/8 H	(0.5% + 15)/8 H	(0.5% + 15)/8 H
Rise Time (+25°C)	mS	200 max.	200 max.	200 max.
Hold Up Time (Nom. input & output)	mS	10 (+25°C)	10 (+25°C)	20 (25°C)
Remote Sensing		None	None	None
Protection				
Overcurrent Protection		Foldback Current Limiting		
Overvoltage Protection		V ₁ only, Output shutdown	V ₁ only, Output shutdown	V ₁ only, Output shutdown
Input Inrush Current	A	30 max.	25 max.	25 max.
Environment				
Operating Temp. (Full load)	°C	-5 to +50	-5 to +50	-5 to +50
Storage Temperature	°C	-20 to +85	-20 to +85	-20 to +85
Humidity		85%	85%	85%
Vibration		(5 - 10 Hz) 10mm (10 - 55 Hz) 2 G		
Shock	G	30	10	30
Isolation				
Input - Output (minute)	Vac	3750	3750	3750
Input - Case (minute)	Vac	2500	2500	2500
Output - Case (minute)	Vac	500	500	500
Input - Output - Case (500 Vdc)	MK2	50	50	50
Safety		Built to meet UL, CSA and VDE		
Conducted Radio Noise		Built to meet FCC Class B and VDE 0871 Class B (Up to 150 kHz)		

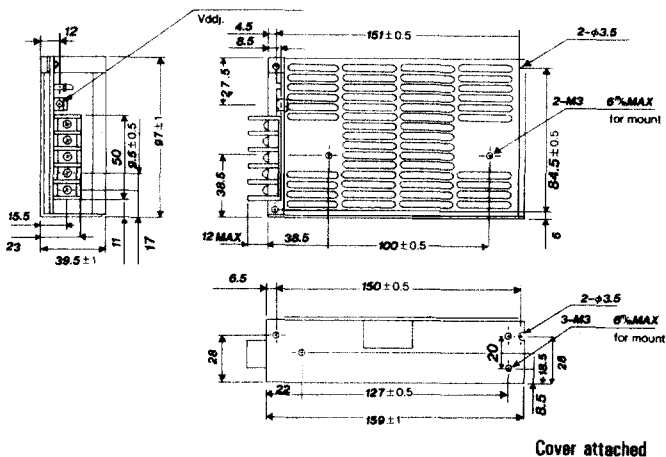
WR SERIES SMPU's – 85 TO 264 Vac WIDE INPUT RANGE

CASE DIMENSIONS

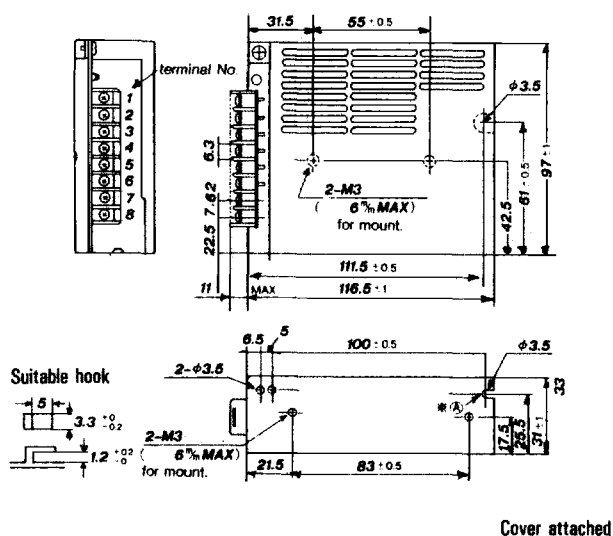
WRM-SX



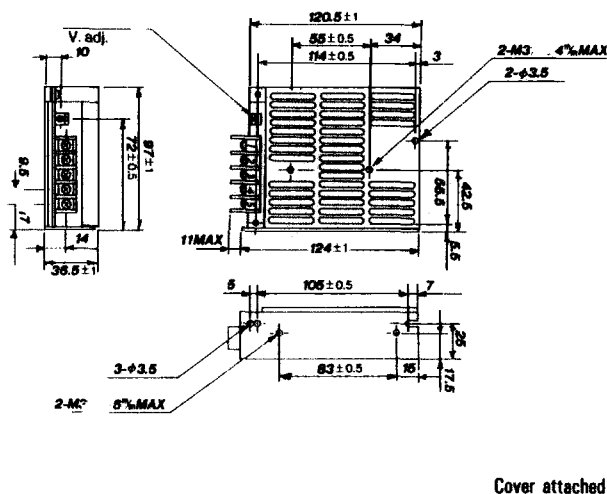
WRB-SX



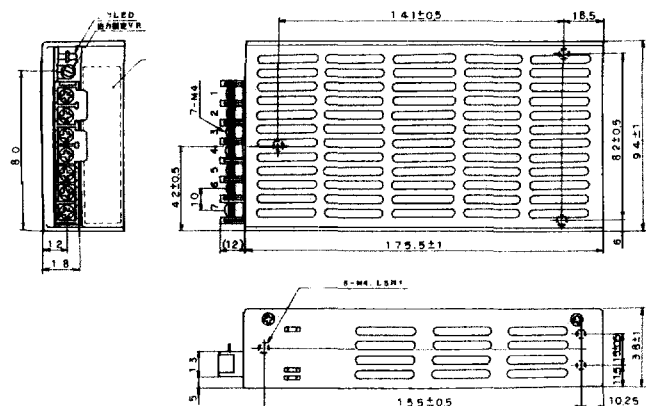
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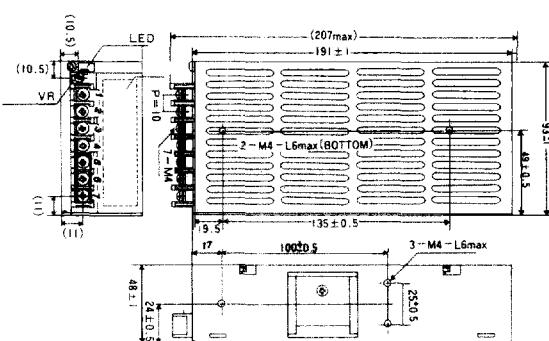
WRT-SX



WRC-SX



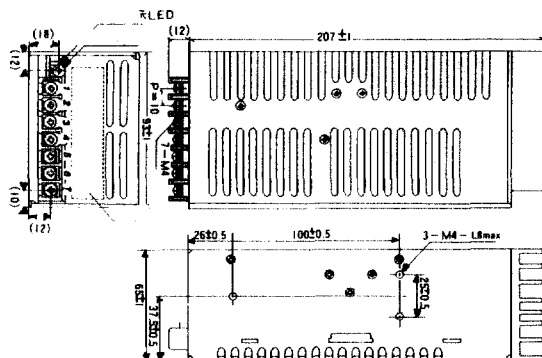
WRD-SX



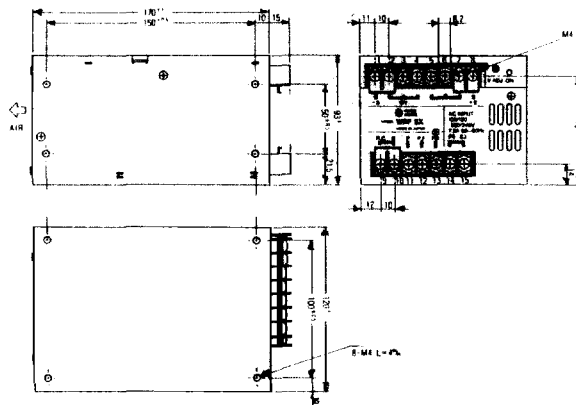
All dimensions are in mm

WR SERIES SMPU's — 85 TO 264 Vac WIDE INPUT RANGE

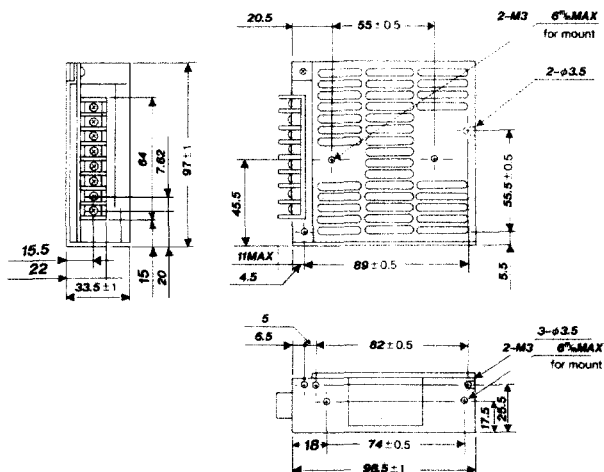
WRE-SX



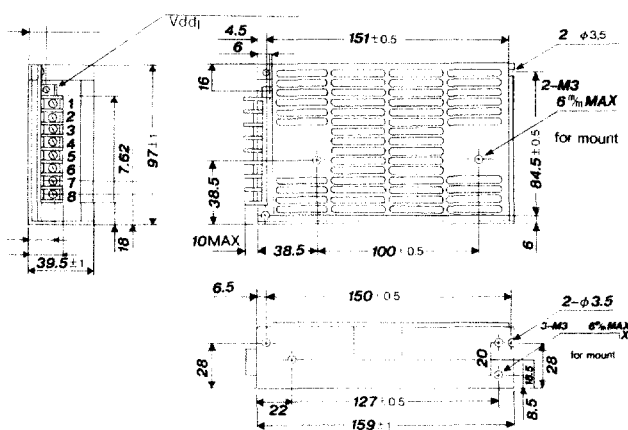
WRF-SX



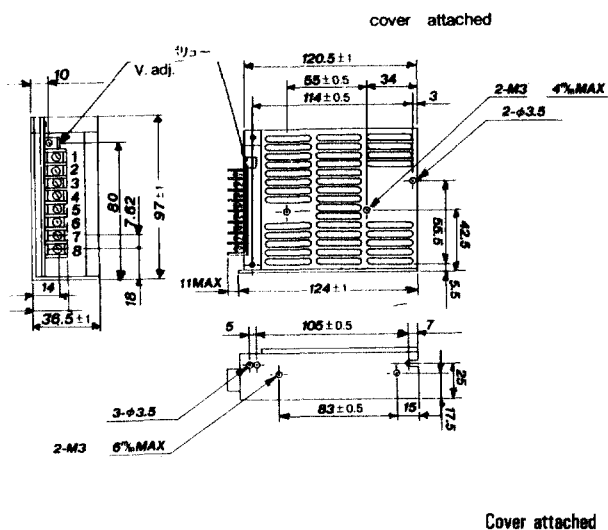
WRM-FWX, WRM-00X



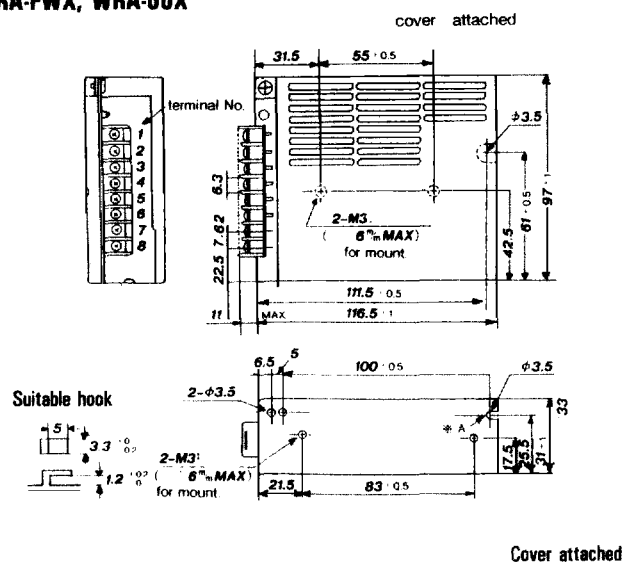
WRB-FWX, WRB-00X



WRT-FWX, WRT-00X



WRA-FWX, WRA-00X



All dimensions are in mm