

RACM1200-V Series ◊ AC/DC Power Supply

1200W ◊ Input: 100V-240VAC

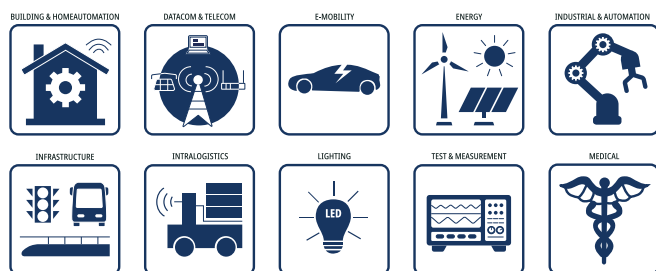
FEATURES

- Up to 1000 Watt fan-less power / 1200W boost
- Thermal base-plate cooling, fanless construction
- Peak efficiency up to 95%
- Wide operating temperature range -40°C...+80°C
- Certified to industrial- and medical standards
- Analogue control & monitor function
- Active load sharing for parallel operation
- PMBus capable versions
- Flexible modified standard solutions
- Designed and manufactured in Europe
- 3 year warranty



Dimensions (LxWxH): 228.0 x 96.2 x 40.0mm (9.0 x 3.8 x 1.6 inch)
 1000g (2.2 lbs)

APPLICATIONS



SAFETY & EMC



DESCRIPTION

The RACM1200-V series is setting a new benchmark for compactness in the class of AC power supplies for reliable fan-less operation supporting long term system availability. A special baseplate cooled design supports heat transfer to allow up to 1000W continuous output power. Up to 1200 Watt output power is available for up to 10 seconds and in boost mode operation or for extended time with sufficient system airflow through the unit. A wide output voltage adjustment range and a combination of constant current limitation and hiccup mode settings makes the product multipurpose. Load sharing supports reliable operation with parallel connected units to increase power. The various analogue control and monitoring functions are accessible via connector. Optional firmware settings available on project base. The RACM1200-V Series can be limited to inherently fail-safe settings on request, using smart, controlled, fault-limiting functions. Only the /PMB Variant supports default settings ex factory to be adjusted, and warning signals to be adopted. An adjustable 12V system FAN output and a 1.5kVAC isolated auxiliary stand by output of 5VSB/1A are available to power the application's housekeeping functions. Peak efficiency reaches up to 95% and in standby mode, the unit is compliant to ecodesign requirements. The product holds worldwide safety files to medical, industrial and ITE standards along with electromagnetic compatibility compliance with class A immunity and class B emissions. Spring stainless steel mounting brackets are available separately for a perfect fixation when mounting over the top of the base plate is preferred. All these features make the product one of the easiest to integrate modular power solutions in the industry.

SELECTION GUIDE

Part Number	Input Voltage Range ⁽⁵⁾ [VAC]	Output Voltage Factory Set [VDC]	Output Voltage Range [VDC]	Boost Current max ⁽¹⁾ [A]	Efficiency typ. ⁽²⁾ [%]	Output Power ⁽³⁾ [W]
RACM1200-24SAV/ENC	80-264	24	24-28	50	95	1200
RACM1200-48SAV/ENC	80-264	48	48-56	25	95	1200
RACM1200-36SAV/ENC	80-264	36	30-36	33.3	95	1200

Note1: Refer to „Peak Load Calculation“

Note2: Efficiency is tested at nominal input and 40-60% load at +25°C ambient temperature

Note3: Refer to „Suggested Power Rating for MAIN Output“

MODEL NUMBERING



Note4: with suffix "/PMB" PMBus option is built-in. For master commands please refer to link: [PMBus_mastercommands.pdf](#)
 RACM1200-36SAV/ENC/PMB: available only upon request; minimum order quantity (MOQ) may apply.

ACCESSORIES

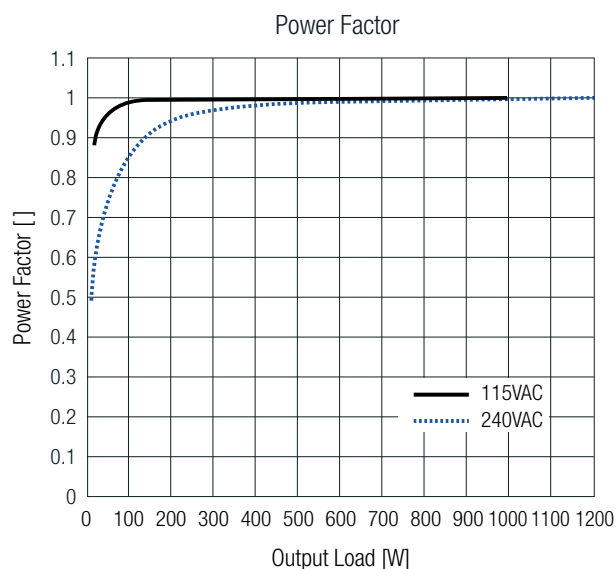
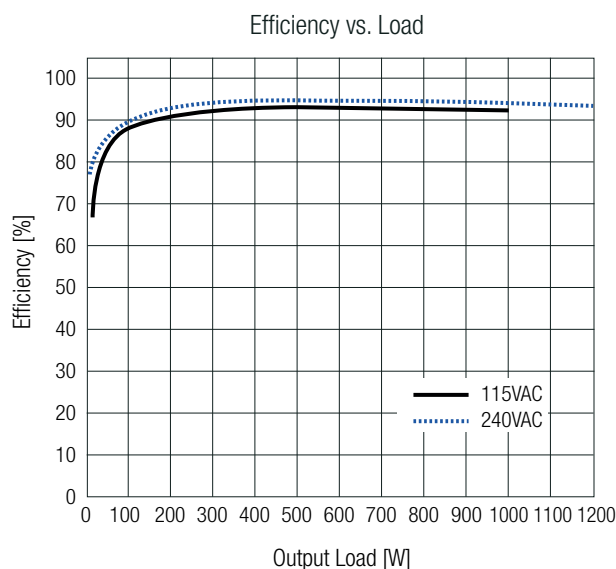
Part Number	Description	Datasheet Link
RAC-MB1	mounting bracket for additional top mounting, refer to „Mounting with RECOM RAC-MB-1“	RAC-MB1.pdf

BASIC CHARACTERISTICS (measured @ $T_{AMB} = 25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)

Parameter	Condition	Min.	Typ.	Max.
Nominal Input Voltage	60/50Hz	100VAC		240VAC
Operating Range ⁽⁵⁾	47-63Hz	80VAC		264VAC
Input Current	according to CB report		11.5A	14A
Inrush Current	cold start at 25°C, 230VAC			25A
No Load Power Consumption	MAIN output REMOTE ON		2W	
Standby Power	MAIN output REMOTE OFF			1W
Input Frequency Range		47Hz		63Hz
Minimum Load		0%		
Power Factor		refer to „Power Factor“		
Start-up time	refer to „SIGNALS“	5VSB Aux.		500ms
		FAN	750ms	1.5s
		MAIN, 800W, 85-264VAC (-25°C to +70°C)	750ms	1.5s
Hold-up time	MAIN 800W	20ms		
Output Ripple and Noise ⁽⁶⁾	20MHz BW, valid for MAIN, 5VSB, FAN			1% of nom. V _o

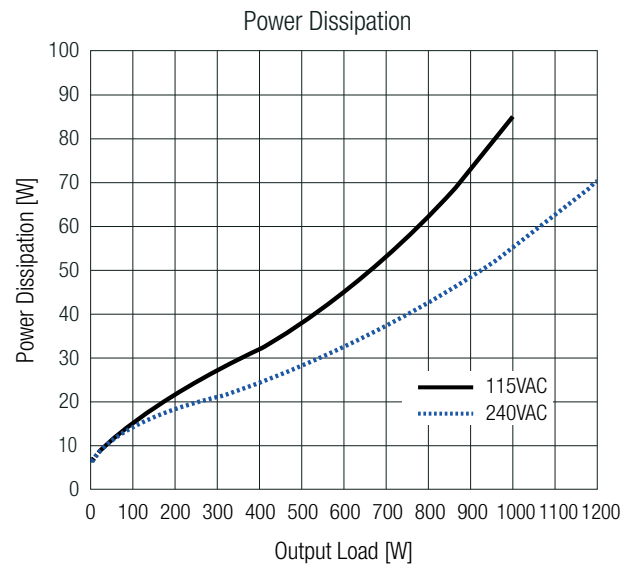
Note5: The products were submitted for safety files at AC-Input operation. (90V-264VAC), DC operation is inhibited.

Note6: Measurements are made with a 0.1 μ F MLCC & 10 μ F E-cap in parallel across output. (low ESR)



RACM1200-V Series ♦ AC/DC Power Supply

1200W ♦ Input: 100V-240VAC

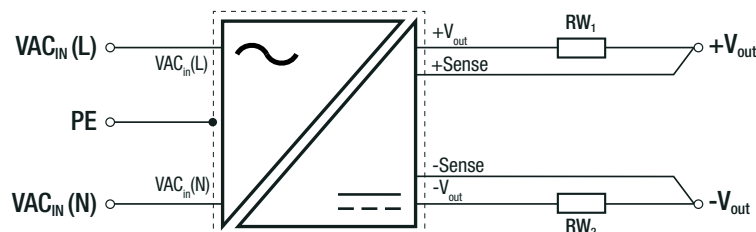
BASIC CHARACTERISTICS (measured @ $T_{AMB} = 25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)REGULATIONS (measured @ $T_{AMB} = 25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)

Parameter	Condition	Value
Set Point Accuracy	MAIN	$\pm 1.0\%$ max.
	5VSB Aux. / FAN	$\pm 5.0\%$ max.
Total Regulation	line, load and temperature drift	$\pm 2.0\%$ max.
	5VSB Aux.	$\pm 5.0\%$ max.

ADDITIONAL FEATURES

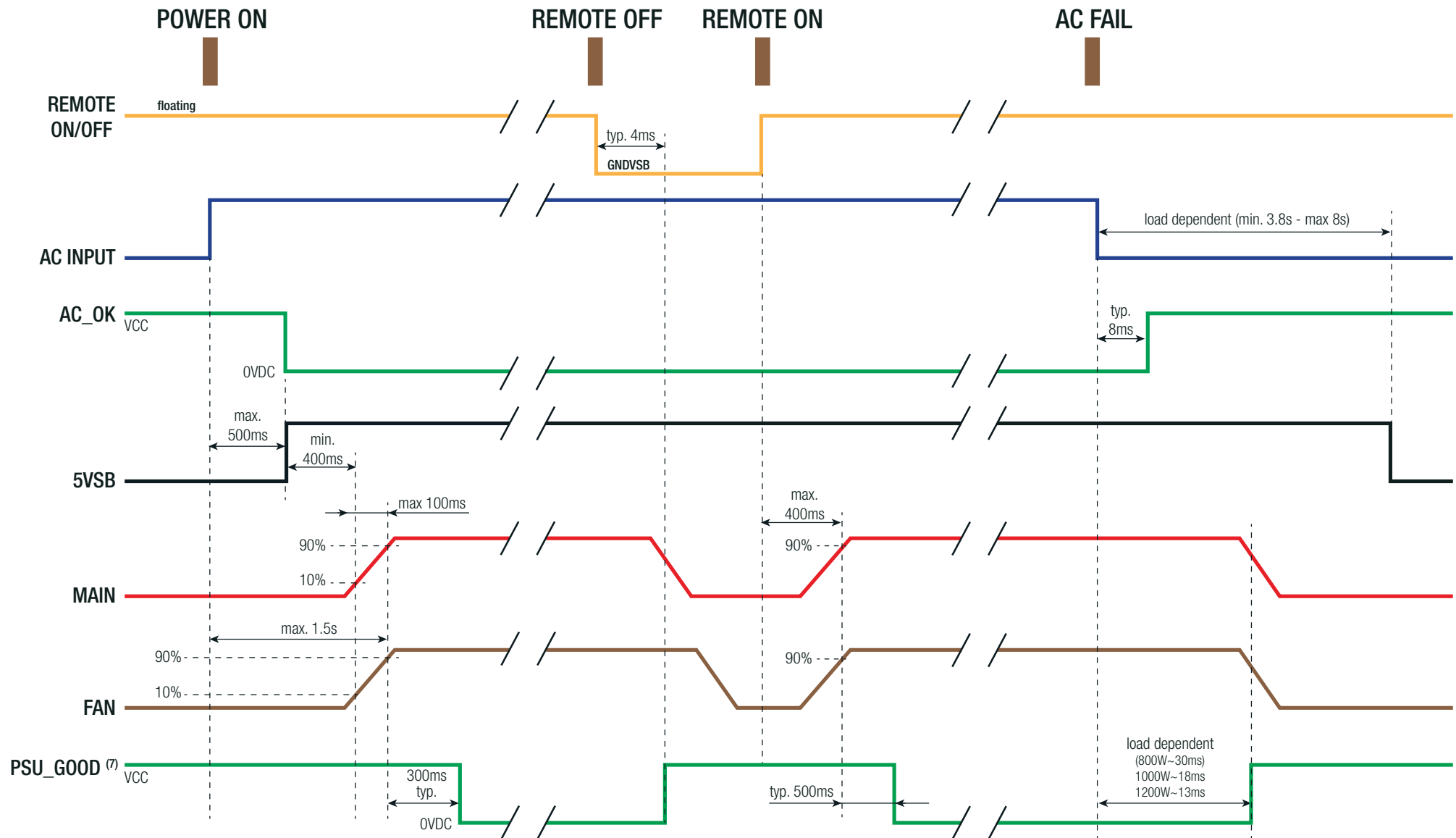
Parameter	Condition	Min.	Typ.	Max.
5VSB Stand By Output Voltage	always on			5VDC
5VSB Stand By Output Current				1A
Output Voltage Adjustability	tactile button push up/down	24Vout type (100mV steps)	24VDC	28VDC
		36Vout type (120mV steps)	30VDC	36VDC
		48Vout type (200mV steps)	48VDC	56VDC
Remote ON/OFF	maximum allowed voltage referenced to SIGNAL RTN			5VDC
FAN Output Voltage adjustment via FAN ADJ Pin #8 @ TTL levels	CTRL= 2.5VDC		OFF	
	CTRL= 2.2VDC...0VDC or open	5VDC		12VDC
FAN Output Current	ON/OFF with MAIN channel			1A
„Remote Sense“	differential mode, cable loss compensation			500mV
Parallel Operation		refer to „SHARE“		
LED Signals (Single RGB LED)	Green continuously	PSU-Good: PSU in standard operation mode		
	Blue intermittent (30% on)	STBY: Standby mode; MAIN Output OFF via REMOTE signal		
	Green intermittent (50% on)	DC-LOW: Signal: $\{75\% < V_{OUT} < 95\%\}$ drives nonlinear loads		
	Green / Red alternatively (50%:50%)	OTW: Over temperature warning; Output normal operation		
	Red intermittent (50% on)	OTP: Over temperature, Output OFF, self-recovering after cooling		
	Red / Blue alternatively (50%:50%)	OLP: Over load protection: Output OFF; auto-recovery		
	Green / Blue alternatively (50%:50%)	Aux-OLP: Aux overload protection, Aux auto-recovery		
	Red continuously	DC-Fail: Output latch-OFF, permanent fault until AC-reset		

Remote Sense



RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

SIGNALS

Note7: The outputs are open-drain and require an external pull-up resistor to keep the output in a defined logic state

RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

SIGNALS

Signal Description*

*default signal functions of standard firmware setting

Remote ON/OFF (applicable with non PMBus version)

Pin position - #17 (CON3 connector). Pin type – input pin, referenced to 'SIGNAL RTN' ground. Maximum allowed voltage level: 5VDC. Leave this signal 'open' (not connected) for always-ON operation. Connect to 'SIGNAL RTN' for 'always-OFF' operation.

NOTE: Typically, use external mechanical switch between pins #17 and #18 of CON3 connector to control the unit's on/off functionality.

/SCL (applicable with "/PMB" version)

For PMBus master commands please refer to link: [PMBus_mastercommands.pdf](#)

Remote Sense Activation (applicable with non PMBus version)

Pin position - #15 (CON3 connector). Pin type – input pin, referenced to 'SIGNAL RTN' ground. Maximum allowed voltage level: 5VDC. Leave this signal 'open' (not connected) for internal output sensing functionality. Connect to 'SIGNAL RTN' for activating the remote MAIN-output voltage sensing. When this functionality is set active, the pins 'Remote Sense +' (pin #10) and 'Remote Sense RTN' (pin #9) must be connected to the load points where customer wants to remotely monitor the MAIN output amplitude. When this functionality shall be left inactive (default state), the remote sensing lines 'Remote Sense+' and 'Remote Sense RTN' must stay unconnected.

NOTE: Typically, activating this feature comes together with an external wired sense line connections to the load point, which is expected to be done at process of installing the unit within a system.

/SDA (applicable with "/PMB" version)

For PMBus master commands please refer to link: [PMBus_mastercommands.pdf](#)

AC_OK

Pin position - #13 (CON3 connector). Pin type – open-collector output pin, referenced to 'SIGNAL RTN' ground. Minimal pull-up resistor: 5kOhm. Maximal pull-up rail voltage: 5VDC. Maximal output current (+25°C): 1mAmp. Active status: low. Output voltage at active-low state (+25°C): max. 0.4V.

Recommended usage: pull-up resistor of 10kOhm to +5VSB voltage rail. The 'AC_OK' signal is set active-low state, when input AC line is more than typ. 80VACrms. The 'AC_OK' signal is set inactive-high state, when input AC line is less than typ. 70VACrms.

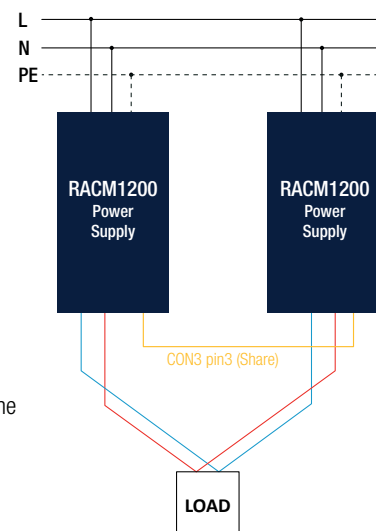
PSU_GOOD

Pin position - #14 (CON3 connector). Pin type – open-collector output pin, referenced to 'SIGNAL RTN' ground. Minimal pull-up resistor: 5kOhm. Maximal pull-up rail voltage: 5VDC. Maximal output current (+25°C): 1mAmp. Active status: low. Output voltage at active-low state (+25°C): max. 0.4V. Recommended usage: use pull-up resistor of 10kOhm to +5VSB voltage. The 'PSU_OK' signal is set active-low state, when 3 conditions are met: outputs are present, temperature is within limits (less than warning temperature) and no internal failure is activated (e.g. OTP, OCP, OLP, etc.) The 'PSU_OK' signal is set inactive-high state, when at least one of the above 3 conditions is not met.

SHARE

Pin position - #3 (CON3 connector) handshake line for active load sharing in parallel use of units.

- 1) Make sure that pin3 "Share" of CON3 is connected from PSU1 to PSU2.
- 2) Adjust each power supply to the same output voltage with same load and cooling conditions. When PSU is still used with factory set, no adjustment is needed.
- 3) Use the same wire length and cable cross-section for each power supply (star connection) and energize all units at the same time to avoid triggering overload protection.
- 4) Do not use power supplies in parallel in mounting orientations other than the standard mounting orientation (input terminals on the bottom of the unit) or in any other condition where a derating of the output current is required.
- 5) Pay attention that leakage current, EMI, inrush current, harmonics will increase when using multiple power supplies.



RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

PROTECTIONS (measured @ $T_{AMB} = 25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)

Parameter	Type		Value
Internal Input Fuse	dual-fusing (line and neutral)		2x T12A/250VAC slow-blow type
Over Voltage Category (OVC)	IEC62368-1; IEC61010-1 ⁽¹⁶⁾		OVC II
	according to IEC62477-1		OVC III (2000m)
Over Temperature Protection (OTP)	detected on internal sensors		auto recovery after cooling down to $+80^{\circ}\text{C}$ ($\pm 5^{\circ}\text{C}$)
Over Temperature Warning			refer to „LED Signals“ and „PSU_GOOD“ description
Class of Equipment	with PE		Class I
Isolation Voltage ⁽⁸⁾	1 minute	I/P to O/P (unit)	4kVAC
		I/P and O/P to chassis	2.25kVDC
		O/P to 5VSB & signals; 5VSB & signals to chassis (when factory bridge #7 to #16 is removed)	2.25kVDC
Insulation Grade	I/P to O/P		reinforced
Means of Protection	I/P to O/P		2MOPP
Medical Device Classification	built-in power supply		designed to support type BF applications
Touch Current	normal condition		$<100\mu\text{A}$
	single fault		$<500\mu\text{A}$
Earth Leakage Current	normal condition		$<300\mu\text{A}$
	single fault		$<1000\mu\text{A}$

Note8: For repeat Hi-Pot testing, reduce the time and/or the test voltage

PROTECTIONS MAIN OUTPUT

Parameter	Type		Value
Short Circuit Protection (SCP)			hiccup mode, auto recovery
Over Voltage Protection (OVP)	protects the output against overvoltage caused by internal faults	24Vout	33VDC typ.
		36Vout	38.8VDC typ.
		48Vout	59VDC typ.
Over Load Protection (OLP)	refer to „Over Load Protection“		max. power / max. current limiting / hiccup mode

Over Load Protection

The unit operates in constant-voltage mode until the max. output power is reached.

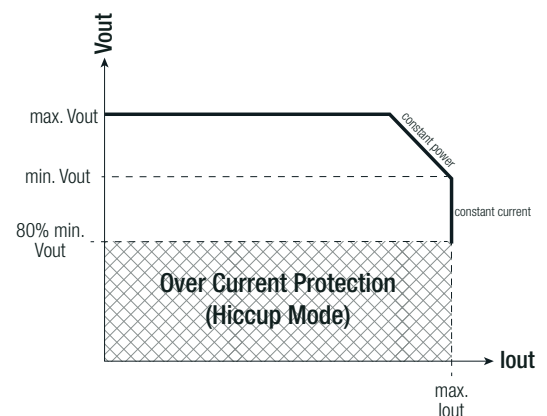
In case of overload, the unit then decreases the output voltage according the constant power curve until the current reaches the maximum output current. Permanent operation in overload may damage the unit.

Refer to „Suggested Power Rating for MAIN Output“

For even higher load demands, the unit delivers the max. lout current and further reduces the output voltage (constant-current curve). When the output is less than 80% of the minimal output voltage, the unit shuts-off and triggers short circuit protection mode of MAIN and FAN Output (unlimited hiccup mode, 4 sec period).

For continuous operation with reduced power (limited to max. 700 Watt).

See [PMBus_mastercommands.pdf](#) STATUS_IOUT bitmap for constant current with limited max. output power.


PROTECTIONS FAN OUTPUT

Parameter	Type	Value
Short Circuit Protection (SCP)		auto recovery
Over Voltage Protection (OVP)		auto recovery, hiccup mode
Over Current Protection (OCP)		auto recovery, power limitation

RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

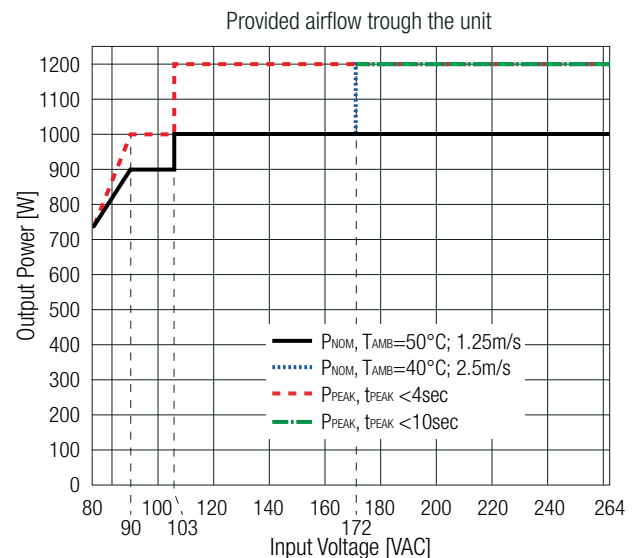
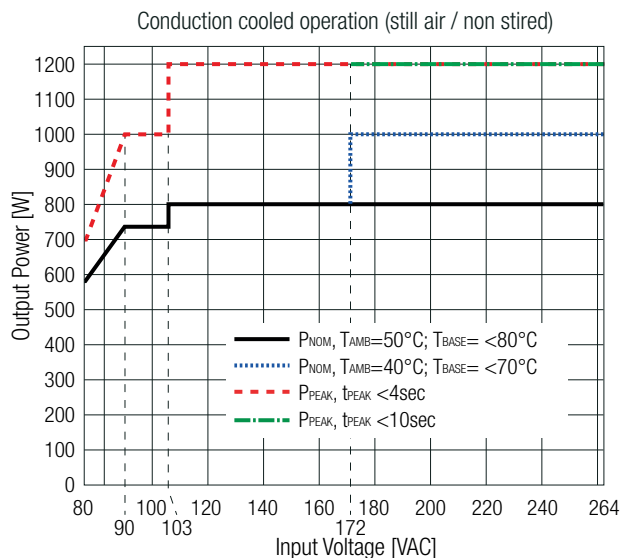
PROTECTIONS 5VSB AUX. OUTPUT

Parameter	Type	Value
Short Circuit Protection (SCP)	all outputs protection will be activated	hiccup mode, auto recovery
Over Voltage Protection (OVP)		hiccup mode, auto recovery
Over Current Protection (OCP)		hiccup mode, auto recovery

ENVIRONMENTAL (measured @ $T_{AMB}=25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)

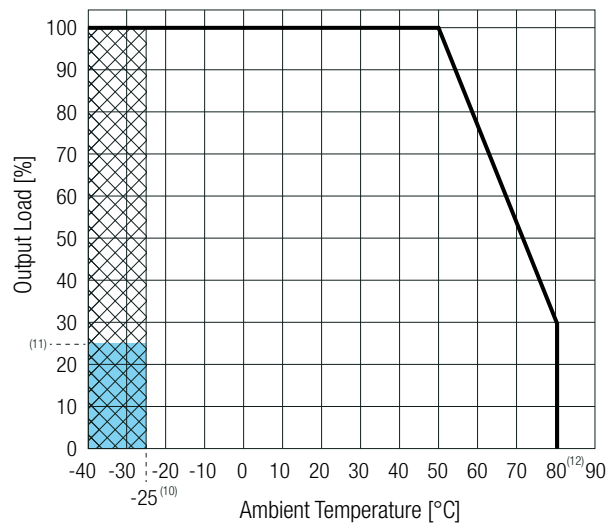
Parameter	Condition		Value
Operating Temperature Range	refer to „MAIN Output Nominal Power Rating vs. Ambient Temperature“	T_{AMB} and T_{BASE} temperature	-40°C to $+80^{\circ}\text{C}$
		max. start-up temperature	$+80^{\circ}\text{C}$ typ.
Operating Altitude ⁽⁹⁾	according to 62368-1		5000m
	according to 60601-1		4000m
Operating Humidity	non-condensing		95% RH max.
IP Rating			IP20
Pollution Degree			PD2
Conformal Coating	Please get in touch with your RECOM contact		on request
Shock	random	5-500Hz, 2Grms, 15 min for each axis	according to IEC60068-2-64
	sinusoidal	5-500Hz, 20m/s ² 15 min for each axis	according to IEC60068-2-6
	Functional Shock, 40G, 11ms, 3axes, 3pulses/direction		according to MIL-STD-810H, Method 516.8, Proc. I
Vibration (Bump)	Half Sine 100m/s ² , 11ms duration, 100 pulse per direction		according to IEC60068-2-29
Vibration	2.24Grms, 5-500Hz, 40min/axis, Table 514.8C-VIII		according to MIL-STD-810H, Method 514.8, Proc. I, Cat. 4
Design Lifetime	$+40^{\circ}\text{C}$ (refer to „thermal reference point“)		88×10^3 hours

Note9: Recognized by safety agency for safe operation up to 5000m. High altitude operation above 2000m may impact the performance and lifetime. Please contact RECOM tech support for advice.

Suggested Power Rating for MAIN Output


The units were evaluated to safety files for nominal input voltages 100-240VAC; including a tolerance band of $\pm 10\%$, with a specified maximum T_{BASE} of 80°C for full load rating with 50°C T_{AMB} and up to 80°C T_{AMB} at reduced output power. T_{BASE} at reference point (see „thermal reference point“) shall not exceed 70°C , 80°C or 90°C depending on the condition as per derating graph.

Peak power was evaluated at 60s duty cycle period for safety files. Without externally provided forced airflow, continuous output power needs to be limited to 1000W at high input voltage range and $T_{AMB} < 40^{\circ}\text{C}$ with a $T_{BASE} < 70^{\circ}\text{C}$. With forced airflow of 2.5m/s 1200W continuous boost power at high input voltage range ($> 172\text{V}$) is available.

ENVIRONMENTAL (measured @ $T_{AMB} = 25^{\circ}\text{C}$, nom. V_{IN} , full load and after warm-up unless otherwise stated)**MAIN Output Nominal Power Rating vs. Ambient Temperature**Note10: Below $T_{AMB} -25^{\circ}\text{C}$ some specifications may not be metNote11: Output Power at $T_{AMB} = -40^{\circ}\text{C}$ cold start $\leq 250\text{W}$.Note12: At $T_{AMB} +80^{\circ}\text{C}$ and 30% load, the maximum allowed baseplate temperature $T_{BASE} \leq 90^{\circ}\text{C}$ measured on thermal reference point. Refer to „thermal reference point“**PEAK LOAD CAPABILITY**

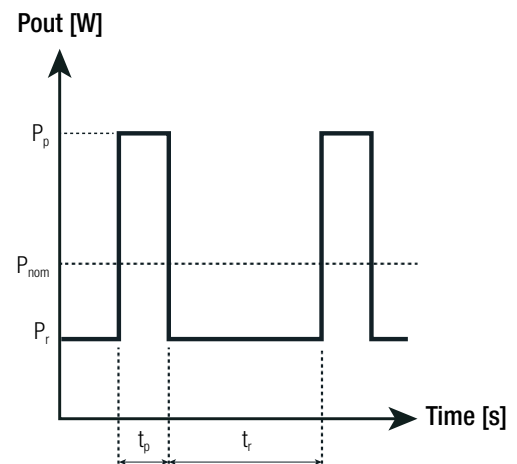
PEAK POWER IS NOT AVAILABLE DURING START UP PHASE!

Exceeding power ratings, may reduce the lifetime and lead to OLP power limitation or OTP temperature shut off. Inherently safe unit set up for more strict automatic power limitation is available on request per firmware setting option. Peak Power duty cycle plus recovery period shall not exceed 90% of the average nominal power for repetitive load conditions.

Peak Load Calculation

$$P_{nom} \times 0.9 \times (t_{rec} + t_{peak}) \geq P_{peak} \times t_{peak} + P_{rec} \times t_{rec}; [t_{rec} + t_{peak} \geq 60\text{s}]$$

P_{nom}	... nominal power output (as per derating graph)	[W]
P_{rec}	... applied recovery power	[W]
P_{peak}	... applied peak power	[W]
t_{rec}	... recovery time	[s]
t_{peak}	... peak time	[s]
	$V_{IN} < 172\text{VAC} = 4\text{s max.}$	[s]
	$V_{IN} \geq 172\text{VAC} - 264\text{VAC} = 10\text{s max.}$	[s]



RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

SAFETY & CERTIFICATIONS

Certificate Type (Safety)	Report Number	Standard
Audio/video, information and communication technology equipment- Safety requirements (CB)	T223-0232/24	IEC62368-1:2014 2nd Edition
Audio/video, information and communication technology equipment - Safety requirements		EN62368-1:2014 + A11:2017
Audio/video, information and communication technology equipment- Safety requirements (CB)	E224736	UL62368-1:2014
Audio/video, information and communication technology equipment - Safety requirements	-A6006-UL	CAN/CSA-C22.2 No. 62368-1:2014
Medical Electric Equipment, General Requirements for Safety and Essential Performance	E314885 -D6001-UL	ANSI/AAMI ES60601-1:2005(R)2012+C1:2009+A2:2010/(R)2012 CAN/CSA-C22.2 No. 60601:14, 3rd Edition
Medical Electric Equipment, General Requirements for Safety and Essential Performance (CB)	T223-0217_24	IEC60601-1:2005, 3rd Edition + C1:2006 + C2:2007 + AM1:2012
Medical Electric Equipment, General Requirements for Safety and Essential Performance		EN60601-1:2006 + A1:2013
Safety of transformers, reactors, power supply units and combinations thereof - Part 1: General requirements and tests	compliant ⁽¹³⁾	IEC61558-1:2005, 2nd Edition + A1:2009 EN61558-1:2005 + A1:2009
Electrical Equipment For Measurement, Control, and Laboratory Use; Part 1: General Requirements	compliant ⁽¹⁴⁾	IEC61010-1/-2-201
Lamp controlgear Part 1: General and safety requirements (CB Scheme)	designed to meet	IEC61347-1:2015 + A1:2017, 3rd Edition
Lamp controlgear Part 1: General and safety requirements (LVD)		EN61347-1:2015+A1:2021
Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (CB Scheme)		IEC61347-2-13:2014 + A1:2016, 2nd Edition
Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (LVD)		EN61347-2-13:2014 + A1:2017
Light Emitting Diode (LED) Equipment for Use in Lighting Products	E490696 (48Vout only)	UL8750:2015 2nd Edition CSA C22.2 No. 250.13:2020 4th Edition
RoHS2		RoHS 2011/65/EU + AM2015/863

Note13: Insulation inside transformer meets requirements for insulation and overload per IEC61558-1 (tested in T223-0765/20)

Note14: Creepage and clearance according to IEC61010-1/-2-201 (tested in T223-0766/20)

EMC COMPLIANCE

EMC Compliance (EN60601-1-2)	Condition	Standard / Criterion
Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests		IEC60601-1-2:2014, Class B EN60601-1-2:2015, Class B
Industrial, scientific and medical equipment - Radio frequency disturbance characteristics - Limits and methods of measurement		EN55011, Class B
Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement ⁽¹⁷⁾		CISPR 11, Group 1, Class B
ESD Electrostatic discharge immunity test	Contact: ±8kV	IEC61000-4-2:2008 EN61000-4-2:2009
Radiated, radio-frequency, electromagnetic field immunity test	10V/m (80-1000MHz, 1.0-2.7GHz) 27V/m (385MHz) 28V/m (450, 810, 870, 930, 1720, 1845, 1970, 2450MHz) 9V/m (710, 745, 780, 5240, 5500, 5785MHz)	IEC61000-4-3:2006+A2:2010 EN61000-4-3:2006+A2:2010
Fast Transient and Burst Immunity	AC Power Port: ±4kV	IEC/EN61000-4-4:2012
Surge Immunity	AC Power Port: L-N ±4kV L-PE, N-PE: ±3kV	IEC/EN61000-4-5:2014
Immunity to conducted disturbances, induced by radio-frequency fields	3Vrms (0.15-80MHz) 6Vrms (ISM, amateur radio bands)	IEC61000-4-6:2013 EN61000-4-6:2014
Power Magnetic Field Immunity	30A/m, 50Hz	IEC61000-4-8:2009 EN61000-4-8:2010
Voltage Dips and Interruptions	Voltage Dip 100% (0.5P) Voltage Dip 100% (1.0P) Voltage Dip 30% Voltage Interruption 100%	IEC/EN61000-4-11:2004
Limits of Harmonic Current Emissions	Class A	EN61000-3-2
Limits of Voltage Fluctuations & Flicker	Clause 5	EN61000-3-3

RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

EMC COMPLIANCE

EMC Compliance (EN55032/55035)	Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment - Emission requirements ⁽¹⁵⁾		EN55032:2015, Class B
Electromagnetic compatibility of multimedia equipment - Immunity requirements		EN55035:2017
Information technology equipment - Immunity characteristics - Limits and methods of measurement		EN55024:2010 + A1:2015
Limitations on the amount of electromagnetic interference allowed from digital and electronic devices		FCC 47 CFR Part 15 Subpart B, ANSI C63.4:2014, Class B

Note15: The emission performance was tested with snap-on ferrite Wurth 742 712 21. The 48V versions with 2-turns of AC-line cable; the 24V version with 2-turns of N (neutral) line only. The output cables were used twisted pair lines, with the typical configuration of grounded return lines.

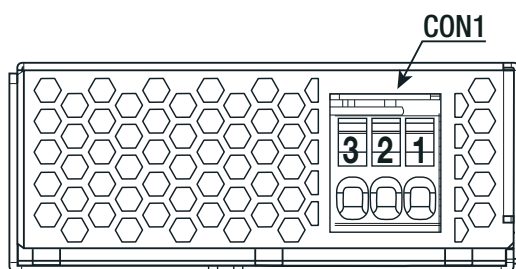
Note16: Performance criteria A indicates operation within $\pm 10\%$ tolerance band of nominal settings

DIMENSION & PHYSICAL CHARACTERISTICS

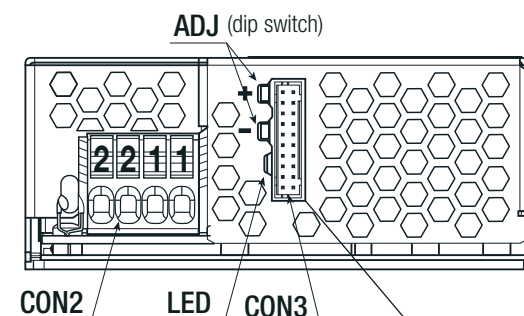
Parameter	Type	Value
Materials	chassis	aluminum
	PCB	FR4, (UL94 V-0)
Dimension (LxWxH)		228.0 x 96.2 x 40.0mm
		9.0 x 3.8 x 1.6 inch
Weight		1000g typ.
		2.2 lbs

Connector Information's

Front View (Input)



Back View (Output/Signal)



AC Input Connector CON1

#	Function	Terminal
1	AC/L	Phoenix TDPT 4/ 3-SP-6,35-ZB
2	PE	
3	AC/N	

DC Output Connector CON2

#	Function	Terminal
1, 1	-Vout	Phoenix TDPT 2,5/ 4-SP-5,08
2, 2	+Vout	

General tolerances according to ISO 2768-m (table for reference only)	
Dimension range	Tolerances
0.5 - 6 mm	± 0.1 mm
6 - 30 mm	± 0.2 mm
30 - 120 mm	± 0.3 mm
120 - 400 mm	± 0.5 mm

Connector information CON3

Cvilux CI0120P1HD0.NH Type Pin Header

#	Function	#	Function
2	Reserved for factory config.	1	reserved for factory config.
4	Reserved for factory config.	3	Share
6	NC	5	FAN+
8	FAN ADJ	7	FAN RTN *
10	Remote Sense+	9	Remote Sense RTN
12	NC	11	NC
14	PSU_GOOD	13	AC_OK
16	Signal RTN *	15	Remote Sense Activation** / SDA***
18	Signal RTN	17	Remote ON/OFF** / SCL ***
20	5VSB RTN	19	5VSB+

* factory bridge from Pin7 (FAN RTN) to Pin16 (Signal RTN)

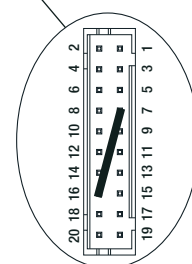
** applicable with standard version

*** applicable with "/PMB" version

Mating connector CON3

Housing= Cvilux CI0120SD000 / PHDR-20VS

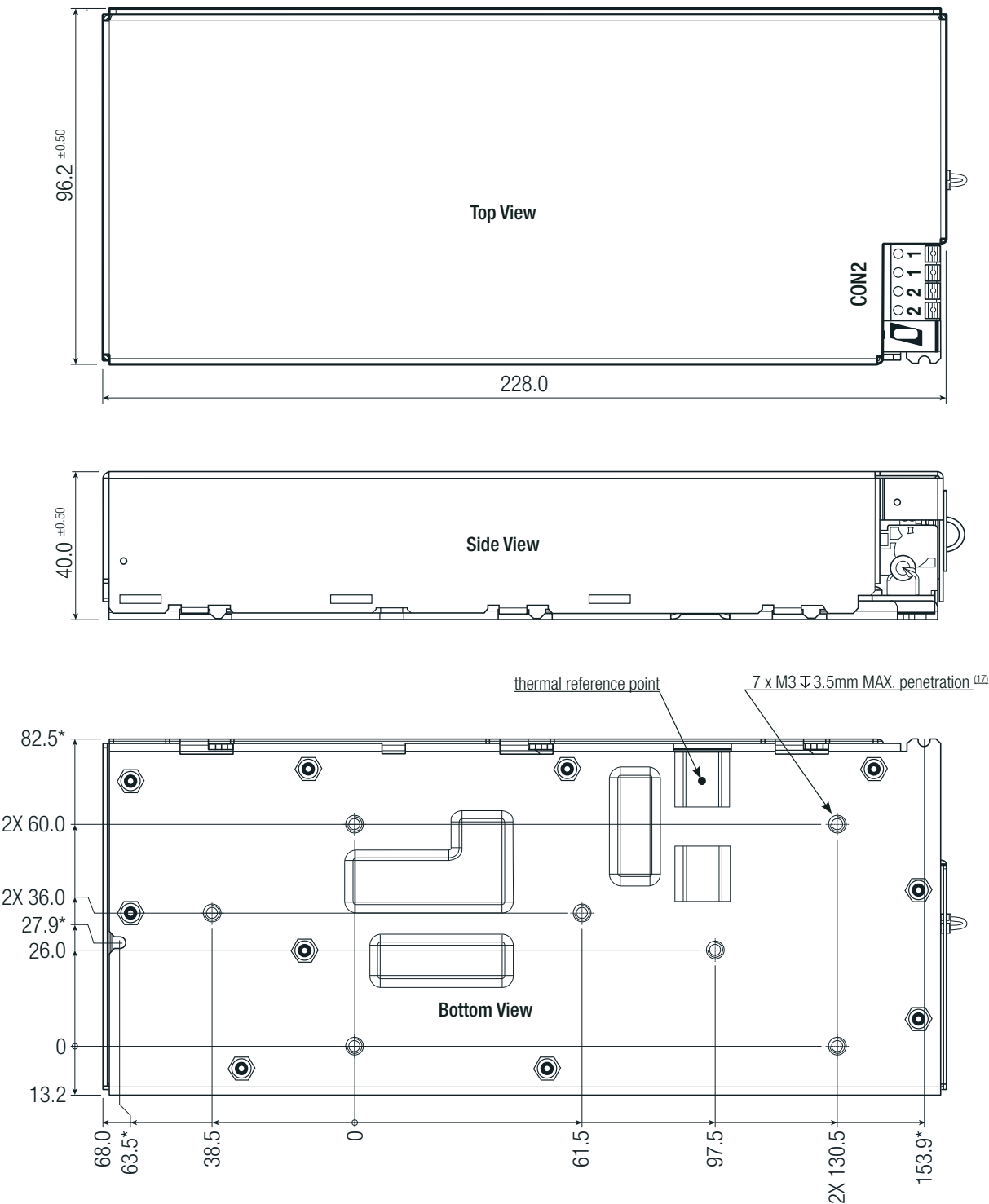
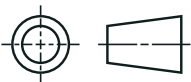
Crimp Terminal= Cvilux CI01TD21PE0 / SPHD-002T-P0.5



Connection wire cross sections: during building in the product, installer needs to take care to use wires with appropriate cross-section for the rated voltage/currents

DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing



Dimensions marked with * are for pre-fixing features

Note17: Exceeding the MAX. penetration can cause a safety hazard within product.

General tolerances according to ISO 2768-m (table for reference only)	
Dimension range	Tolerances
0.5 - 6 mm	±0.1 mm
6 - 30 mm	±0.2 mm
30 - 120 mm	±0.3 mm
120 - 400 mm	±0.5 mm

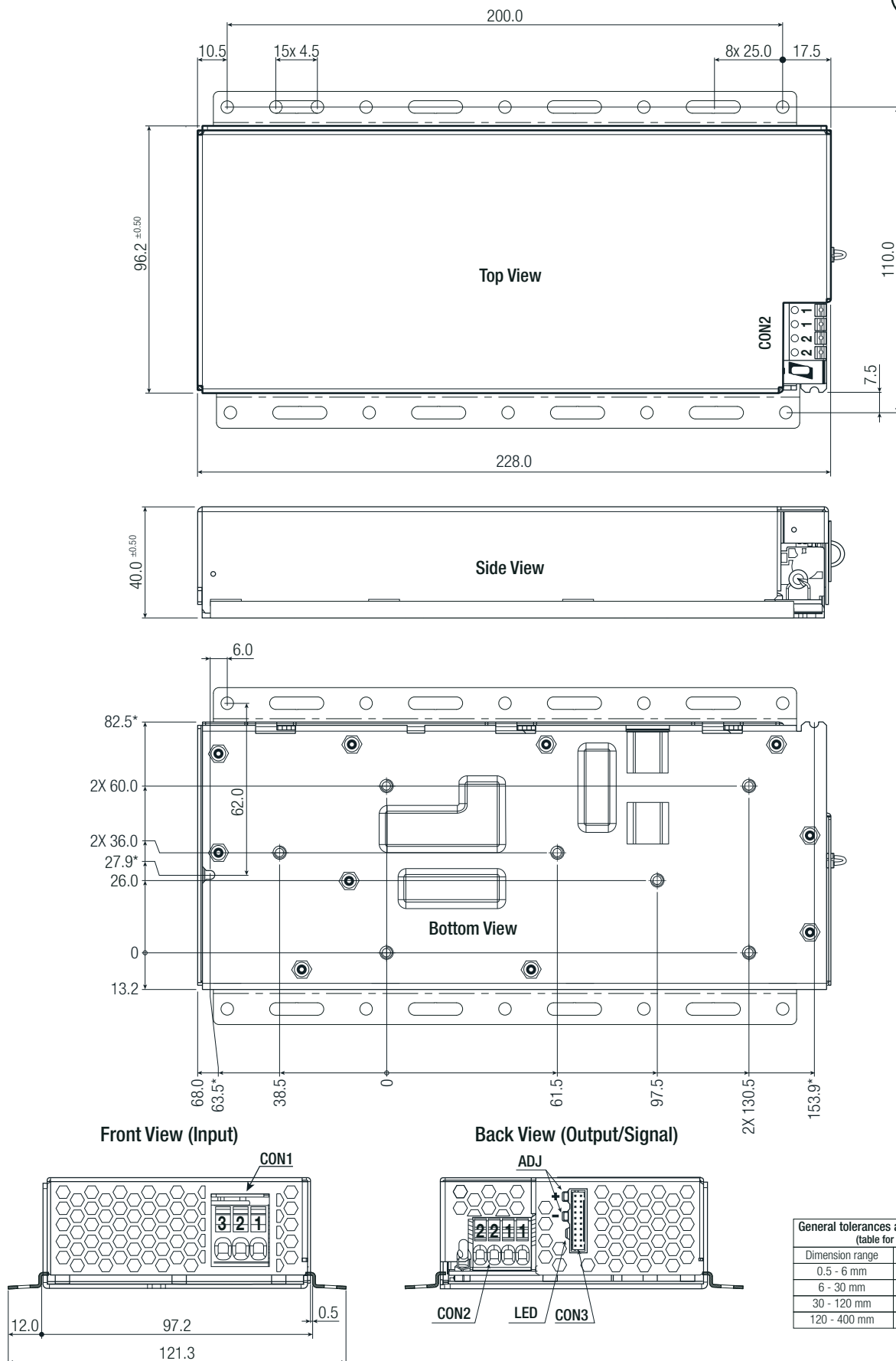
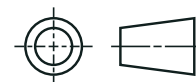
RACM1200-V Series ◇ AC/DC Power Supply

1200W ◇ Input: 100V-240VAC

DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing

Mounting with RECOM RAC-MB-1 accessory kit ⁽¹⁸⁾:



General tolerances according to ISO 2768-m
(table for reference only)

Dimension range	Tolerances
0.5 - 6 mm	±0.1 mm
6 - 30 mm	±0.2 mm
30 - 120 mm	±0.3 mm
120 - 400 mm	±0.5 mm

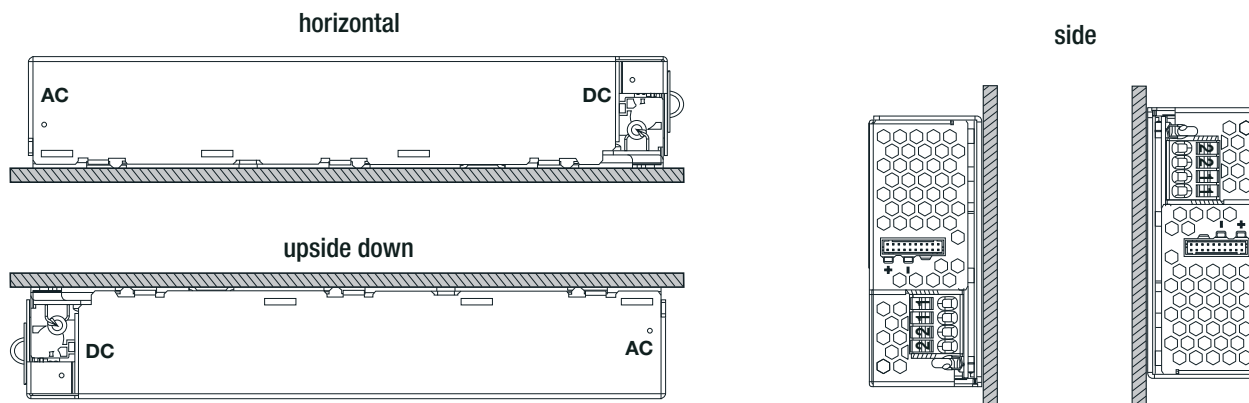
Note18: Although sufficient heat transfer via base plate can be achieved with just 3 screws per side, the use of 2x4 screws is recommended.

RACM1200-V Series ⬠ AC/DC Power Supply

1200W ⬠ Input: 100V-240VAC

INSTALLATION AND APPLICATION

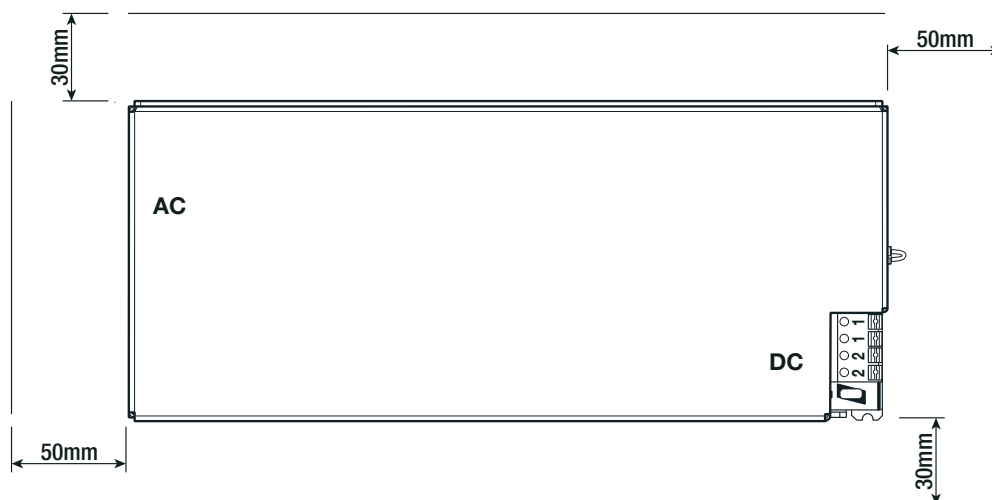
Mounting position and clearances



If the PSU is horizontal, upside down or side mounted, no derating is required.

With forced air cooling, mounting orientation has no impact on output power. Device should be FAN cooled from AC side.

If thermal conduction cooling is suggested, use of heat sink compound is recommended for improved heat transfer via baseplate.



A minimum clearance of 50mm must be maintained on the narrow sides of the power supply, (AC input and DC output/Signal).

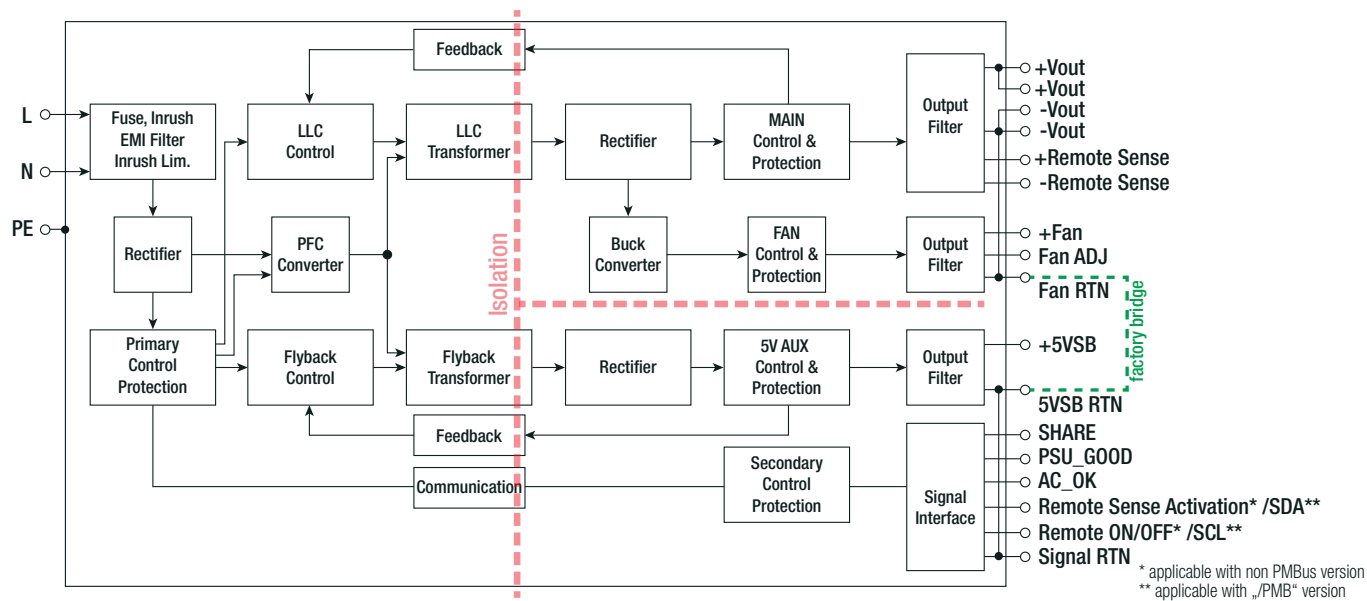
Additionally, a minimum clearance of 30mm is required on the sidewalls and top surface, when operating at 50% continuous load or higher, unless an active airflow or a heat-conducting mechanism is provided.

These clearances are mandatory to ensure proper heat dissipation and safe operation of the power supply.

RACM1200-V Series ♦ AC/DC Power Supply

1200W ♦ Input: 100V-240VAC

BLOCK DIAGRAM



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard box	303.0 x 164.0 x 45.0mm
Packaging Quantity		1pc
Storage Temperature Range		-40°C to +85°C
Storage Humidity	non-condensing	90% RH max.

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.