

Specifications (measured @ Ta= 25°C, nom. Vin (115/230VAC), full load and after warm-up unless otherwise stated)

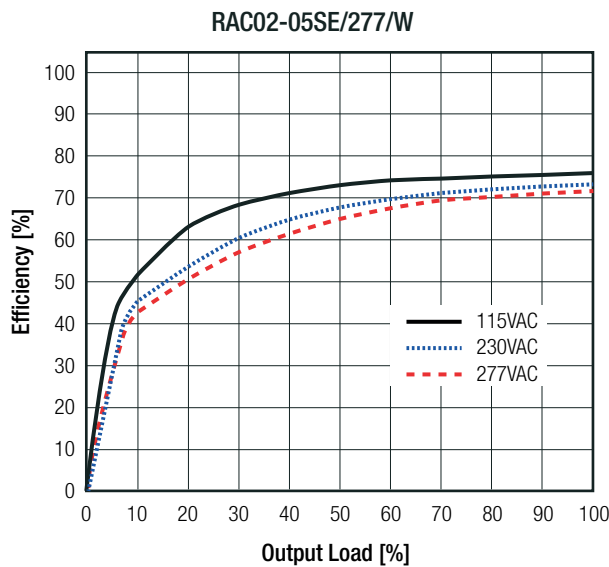
BASIC CHARACTERISTICS

Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range ⁽³⁾	nom. Vin= 230VAC	85VAC 120VDC	277VAC	305VAC 430VDC
Input Current	115VAC 230VAC		47mA 30mA	
Inrush Current	cold start at +25°C	115VAC 230VAC		15A 30A
No load Power Consumption	85-305VAC, 47-63Hz			35mW
Input Frequency Range	AC Input	47Hz		440Hz
Minimum Load			2%	
Hold-up Time	115VAC	18ms		
Internal Operating Frequency	100% load at nominal Vin		55kHz	
Output Ripple and Noise ⁽⁴⁾	3.3Vout 5, 12, 24Vout			300mVp-p 250mVp-p

Notes:

- Note3: The products were submitted for safety files at AC-Input operation
 Note4: Ripple and Noise is the maximum peak-to-peak voltage value measured at the output with a 20MHz bandwidth, at rated line voltage at full load. And with a 47µF low-ESR electrolytic capacitor in parallel with a 0.1µF ceramic capacitor across output

Efficiency vs. Load



REGULATIONS

Parameter	Condition	Value
Output Voltage Tolerance ⁽⁵⁾		±6.0% max.
Line Regulation	low line to high line, full load	±1.5% max.
Load Regulation	2% to 100% load	6.0% typ.

Notes:

- Note5: Includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions

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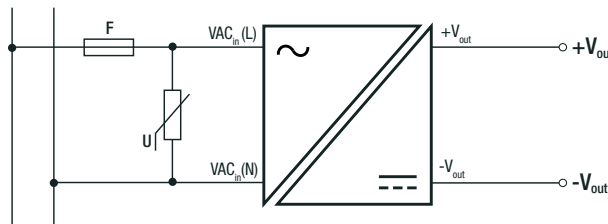
PROTECTIONS

Parameter	Type		Value
Short Circuit Protection (SCP)	below 100mΩ		continuous, automatic recovery
Over Voltage Protection (OVP)	zener diode clamp		110% - 140%
Over Current Limit			110% - 190%
Over Voltage Category			OVCII
Isolation Voltage	I/P to O/P	tested for 1 minute	3kVAC
Isolation Resistance			1GΩ min.
Leakage Current	85-305VAC, 47-63Hz		10μA max.

Notes:

Note6: Refer to local wiring regulations if input over-current protection is also required. Recommended fuse: slow blow type

Protection Circuit



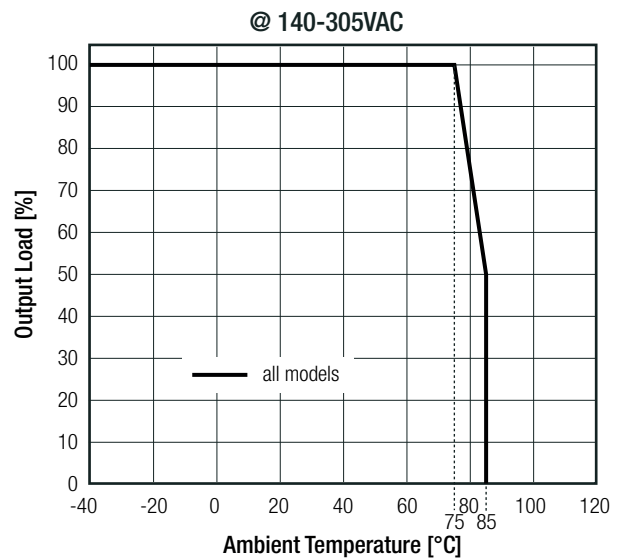
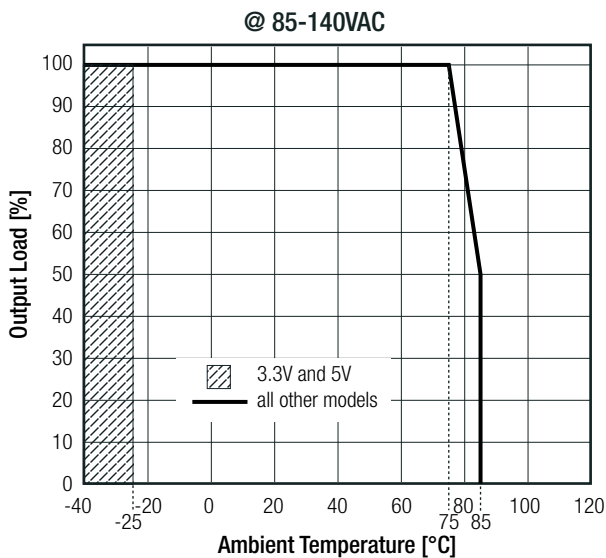
ENVIRONMENTAL

Parameter	Condition			Value
Operating Temperature Range ⁽⁷⁾	full load, 230VAC			-40°C to +75°C
	refer to derating graph			-40°C to +85°C
Maximum Case Temperature				+105°C
Thermal Impedance				8.5K/W typ.
Operating Humidity	non-condensing			5% - 95% RH max.
MTBF	according to MIL-HDBK-217F, G.B.	+25°C	115VAC	2238 x 10 ³ hours
			230VAC	1670 x 10 ³ hours

Notes:

Note7: At low input voltage (85-140VAC) and temperature below -25°C the RAC02-3.3SE/277/W and RAC02-05SE/277/W, will not start

Derating Graph



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SAFETY AND CERTIFICATIONS

Certificate Type (Safety)	Report / File Number	Standard
Information Technology Equipment, General Requirements for Safety	L0339L26-CB-1-B4	IEC60950-1:2005 2nd Edition + A2:2013 EN60950-1:2006 + A2:2013
Information Technology Equipment, General Requirements for Safety	E224736-X1-A24-UL	UL No. 60950-1, 2nd Edition, 2014 CAN/CSA-C22.2 No. 60950-1-07, 2nd Edition, 2014
Household and similar electrical appliances, General requirements	L0339L26-B2-L	EN60335-1:2012+A11:2014
EAC Safety of Low Voltage Equipment	RU-AT.37.02367	TP TC 004/2011
RoHS2		RoHS-2011/65/EU + AM-2015/863

EMC Compliance (Industrial)

Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment - Emission requirements	EN55032:2015, Class B
Information technology equipment - Immunity characteristics - Limits and methods of measurement	EN55024:2010
ESD Electrostatic discharge immunity test	±8.0kV air, ±4.0kV contact EN61000-4-2:2009, Criteria B
Radiated, radio-frequency, electromagnetic field immunity test	3V/m EN61000-4-3:2006 + A2:2010, Criteria A
Fast Transient and Burst Immunity	AC Power Port: ±1.0kV EN61000-4-4:2012, Criteria A
Power Magnetic Field Immunity	50Hz, 1 A/m EN61000-4-8:2010, Criteria A
Voltage Dips and Interruption	Voltage Dips: >95% reduction >30% reduction Interruption: >95% EN61000-4-11:2004, Criteria A EN61000-4-11:2004, Criteria A EN61000-4-11:2004, Criteria B
Limits of Voltage Fluctuations & Flicker	EN61000-3-3:2013

EMC Compliance (Household)

Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment – Emission Requirements	EN55014-1:2006+A2:2011
Information technology equipment - Immunity characteristics - Limits and methods of measurement	EN55014-2:2015
ESD Electrostatic discharge immunity test	±8.0kV air, ±4.0kV contact IEC61000-4-2:2008, Criteria A
Radiated, radio-frequency, electromagnetic field immunity test	3V/m IEC61000-4-3:2006 + A2:2010, Criteria A
Fast Transient and Burst Immunity	AC Power Port ±1.0kV DC Output ±0.5kV IEC61000-4-4:2012, Criteria A
Surge Immunity	AC Power Port L-N ±2.0kV DC Output L-N ±1.0kV IEC61000-4-5:2014, Criteria B
Immunity to conducted disturbances, induced by radio-frequency fields	AC Power Port 3V, DC Output 3V IEC61000-4-6:2013, Criteria A
Voltage Dips and Interruption	Voltage Dips: >95% reduction >30% reduction Interruption: >95% IEC61000-4-11:2004, Criteria B IEC61000-4-11:2004, Criteria C IEC61000-4-11:2004, Criteria C
Limits of Harmonic Current Emissions	EN61000-3-2:2014
Limits of Voltage Fluctuations & Flicker	EN61000-3-3:2013

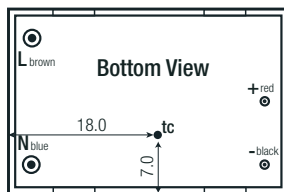
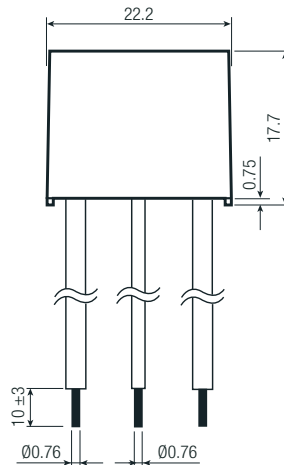
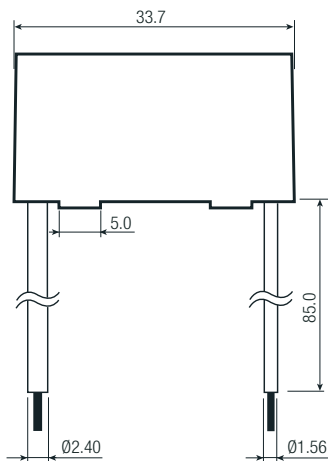
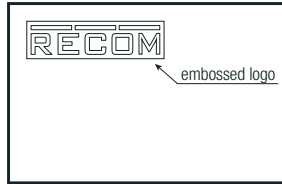
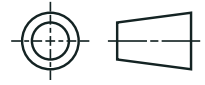
DIMENSION AND PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	case potting	black plastic, (UL94V-0) epoxy, (UL94V-0)
Dimension (LxWxH)		33.7 x 22.2 x 17.75mm
Weight		25g typ.

continued on next page

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Dimension Drawing (mm)



Wired Connections

Wired Color	Type	Function
1, blue	UL-1015, AWG22	VAC in (N)
2, brown	UL-1015, AWG22	VAC in (L)
3, black	UL-1430, AWG22	-Vout
4, red	UL-1430, AWG22	+Vout

Tolerance: xx.x= ±0.5mm
xx.xx= ±0.35mm

PACKAGING INFORMATION		
Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard box	520.0 x 195.0 x 68.0mm
Packaging Quantity		30pcs
Storage Temperature Range		-40°C to +85°C

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