Technical Data Sheet

RP300H-(R)W Series ◊ DC-DC Converter

300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

RECOM DC/DC Converter

FEATURES

- 4:1 wide input voltage range
- 110VDC nom. input with 3kVAC reinforced isolation
- Efficiency up to 92.5%
- Wide operating temperature range -40°C to +105°C
- Operating altitude up to 5000m
- Optional heat sink version
- 3 year warranty



APPLICATIONS



SAFETY & EMC

RoHS² compliant 10 from 10

Reach compliant

c UL us E196683

DESCRIPTION

The RP300H-(R)W series is a high-performance 300W isolated DC/DC converter family featuring a 4:1 wide input range and up to 92.5% efficiency. Designed for demanding railway, industrial, and automation applications, the series offers 3kVAC reinforced isolation for nominal 110VDC input models and 3kVDC basic isolation for nominal 24VDC and 48VDC input models. The series provides comprehensive protection functions including OVP, OLP, OTP, and SCP with automatic recovery. With a wide operating case temperature range of -40°C to +105°C, operating altitude up to 5000m, and optional heat sink version, it ensures reliable operation in harsh environments. The output voltage is trimmable from -20% to +10%, with remote ON/OFF control featuring positive or negative logic and integrated Sense/Trim functions. The series is designed to meet railway application requirements and is RoHS and REACH compliant.

SELECTION GUIDE

Part Number	Input Voltage Range [VDC]	nom. Output Voltage [VDC]	Output Current max. [mA]	Efficiency typ. (1) [%]	Max. Capacitive Load (2) [µF]
RP300H-2405SW (3, 4, 5)	9-36	05	60000	88	108000
RP300H-2412SW (3, 4, 5)	9-36	12	25000	90.5	19150
RP300H-2415SW (3, 4, 5)	9-36	15	20000	90.5	12000
RP300H-2424SW (3, 4, 5)	9-36	24	12500	89	4800
RP300H-2428SW (3, 4, 5)	9-36	28	10700	90	3450
RP300H-2448SW (3, 4, 5)	9-36	48	6200	90.5	1250
RP300H-2454SW (3, 4, 5)	9-36	54	5600	90.5	930
RP300H-4805SW (3, 4, 5)	18-75	05	60000	90.5	108000
RP300H-4812SW (3, 4, 5)	18-75	12	25000	92	19150
RP300H-4815SW (3, 4, 5)	18-75	15	20000	92	12000
RP300H-4824SW (3, 4, 5)	18-75	24	12500	92	4800
RP300H-4828SW (3, 4, 5)	18-75	28	10700	92.5	3450
RP300H-4848SW (3, 4, 5)	18-75	48	6200	91.5	1250
RP300H-4854SW (3, 4, 5)	18-75	54	5600	91.5	930

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RP300H-(R)W Series ◊ DC-DC Converter

300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

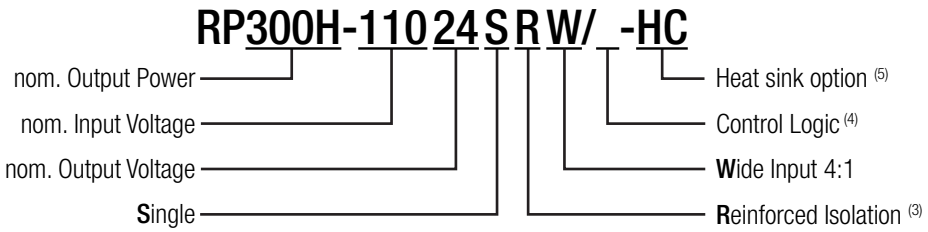
RECOM DC/DC Converter

SELECTION GUIDE

Part Number	Input Voltage Range [VDC]	nom. Output Voltage [VDC]	Output Current max. [mA]	Efficiency typ. (1) [%]	Max. Capacitive Load (2) [µF]
RP300H-11005SRW (3, 4, 5)	40-160	05	60000	90	108000
RP300H-11012SRW (3, 4, 5)	40-160	12	25000	91	19150
RP300H-11015SRW (3, 4, 5)	40-160	15	20000	91	12000
RP300H-11024SRW (3, 4, 5)	40-160	24	12500	90.5	4800
RP300H-11028SRW (3, 4, 5)	40-160	28	10700	91	3450
RP300H-11048SRW (3, 4, 5)	40-160	48	6200	91.5	1250
RP300H-11054SRW (3, 4, 5)	40-160	54	5600	91.5	930

Note1: Efficiency is tested at nominal input and full load at +25°C ambient
Note2: Max. Cap Load is tested at nominal input and full resistive load

MODEL NUMBERING



Note3: "R" = Reinforced Isolation for nom. V_{IN}= 110VDC types only
without "R" = Basic Isolation for nom. V_{IN}= 24V and 48VDC types
Note4: add suffix "/N" for negative logic, add suffix "/P" for positive logic
Note5: add suffix "/N-HC" for negative logic and pre-mounted heat sink
add suffix "/P-HC" for positive logic and pre-mounted heat sink

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

Parameter	Condition		Min.	Typ.	Max.
Internal Input Filter					Pi-Type
Input Voltage Range	nom. V_{IN}= 24VDC		9VDC	24VDC	36VDC
	nom. V_{IN}= 48VDC		18VDC	48VDC	75VDC
	nom. V_{IN}= 110VDC		40VDC	110VDC	160VDC
Input Surge Voltage	1 second max.	nom. Vin= 24VDC			50VDC
		nom. Vin= 48VDC			100VDC
		nom. Vin= 110VDC			185VDC
Under Voltage Lockout (UVLO)	nom. Vin= 24VDC	DC-DC ON			9VDC
		DC-DC OFF	7.2VDC	7.7VDC	8.3VDC
	nom. Vin= 48VDC	DC-DC ON			18VDC
		DC-DC OFF	15VDC	16VDC	16.6VDC
	nom. Vin= 110VDC	DC-DC ON			40VDC
		DC-DC OFF	33VDC	34.5VDC	35.8VDC
Quiescent Current	nom. V_{IN}= 24VDC		45mA		60mA
	nom. V_{IN}= 48VDC			45mA	
	nom. V_{IN}= 110VDC			25mA	
Output Voltage Trimming	refer to **„Output Voltage Trimming“**		-20%		+10%
Start-up Time	constant resistive load	power up		75ms	100ms
		remote ON/OFF		75ms	100ms

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RP300H-(R)W Series ◊ DC-DC Converter

300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

RECOM DC/DC Converter

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

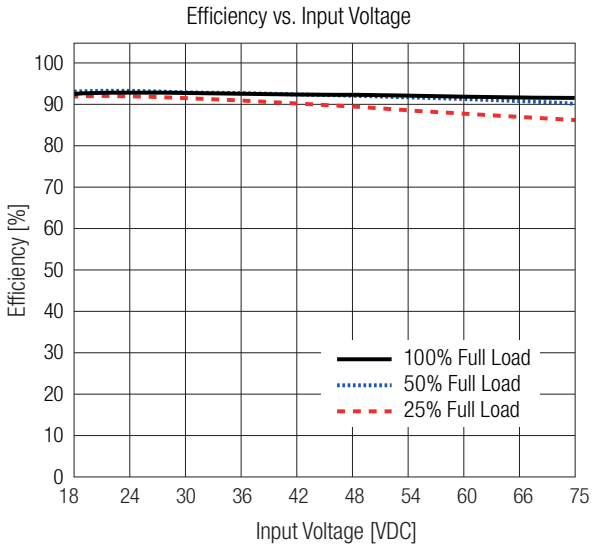
Parameter	Condition			Min.	Typ.	Max.
ON/OFF CTRL [6]	refer to „ON/OFF CTRL“	Negative Logic "/N" Version	DC/DC ON		Short or 0VDC - 1.2VDC	
			DC/DC OFF		Open or 3VDC - 12VDC	
		Positive Logic "/P" Version	DC/DC ON		Open or 3VDC - 12VDC	
			DC/DC OFF		Short or 0VDC - 1.2VDC	
Input Current of CTRL pin				-0.5mA		+1.0mA
Standby Current	remote OFF				3mA	
Internal Operating Frequency				200kHz	245kHz	290kHz
Output Ripple and Noise [7]	measured with 20MHz BW	nom. V_{OUT}= 5VDC	10µF/25V X7R MLCC and a 47µF/20V super polymer cap		100mVp-p	
		nom. V_{OUT}= 12V, 15VDC	22µF/25V X7R MLCC and a 22µF/25V super polymer cap		125mVp-p	
		nom. V_{OUT}= 24V, 28VDC	4.7µF/50V X7R MLCC		200mVp-p	
		nom. V_{OUT}= 48V, 54VDC	2.2µF/100V X7R MLCC		300mVp-p	
Remote Sense [8]						10% of V_{OUT} nom.

Note6: The ON/OFF control function can be positive or negative logic. The pin voltage is referenced to -Vin.

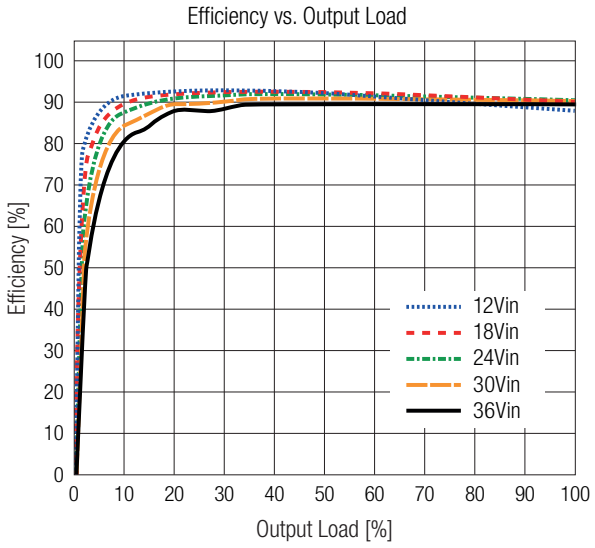
Note7: The test setup can have an impact on ripple noise values (placement of scope probe, capacitors, its specifications, wires, PCB tracks, distances, etc.)

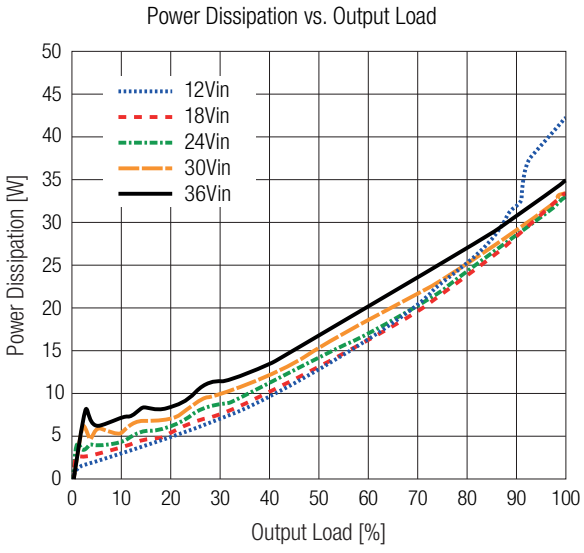
Note8: If not used connect Remote Sense pins to corresponding output pins

RP300H-4828SW



RP300H-2448SW





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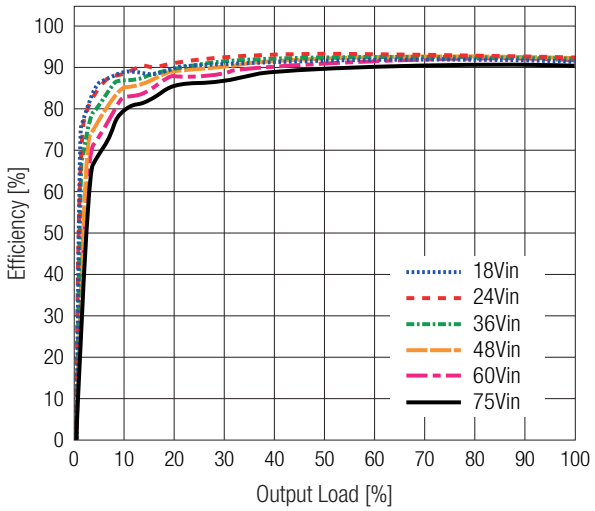
RP300H-(R)W Series ◊ DC-DC Converter

300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

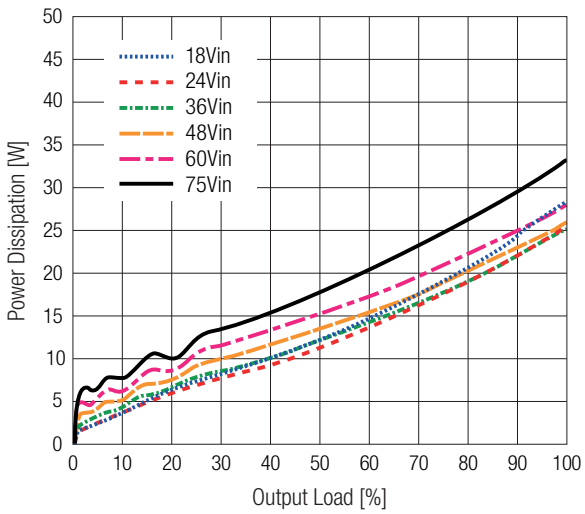
BASIC CHARACTERISTICS (measured @ T_{AMB}= 25°C, nom. V_{IN}, full load and after warm-up unless otherwise stated)

RP300H-4828SW

Efficiency vs. Output Load

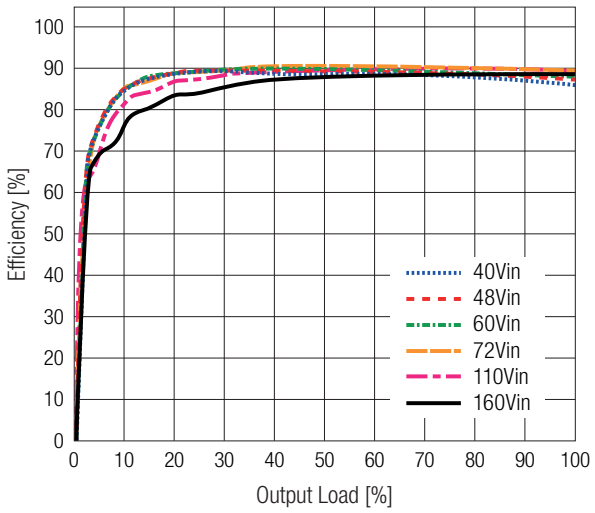


Power Dissipation vs. Output Load

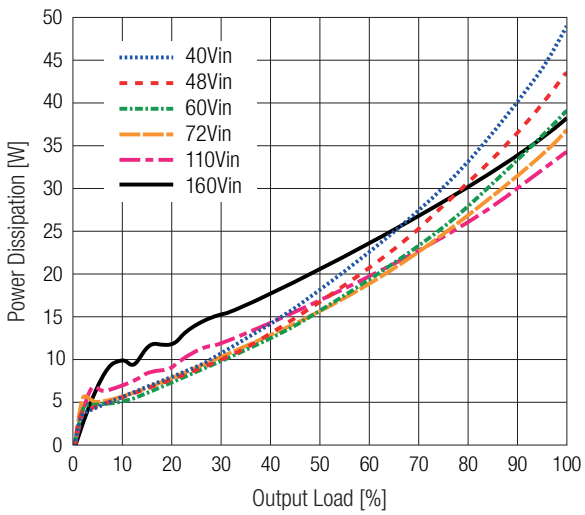


RP300H-11024SRW

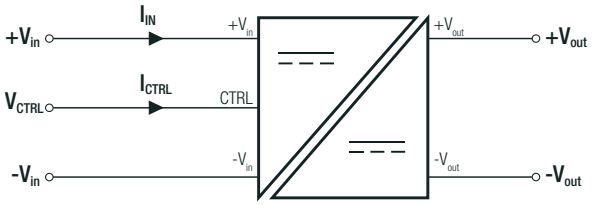
Efficiency vs. Output Load



Power Dissipation vs. Output Load

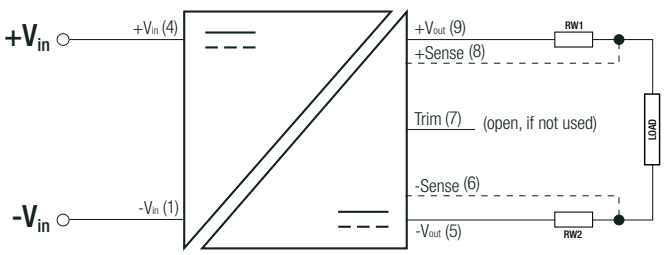


ON/OFF CTRL



Positive Logic	DC-DC ON	Open or 3VDC - 12VDC
	DC-DC OFF	Short or 0VDC - 1.2VDC
Negative Logic	DC-DC ON	Short or 0VDC - 1.2VDC
	DC-DC OFF	Open or 3VDC - 12VDC

REMOTE SENSE



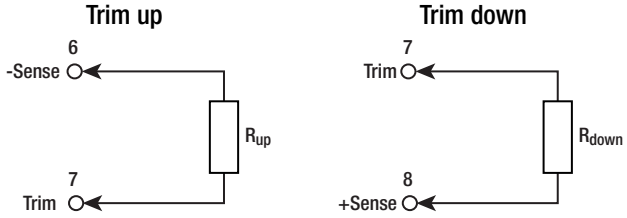
The remote sense function compensates for voltage drops in the output power lines, maintaining the regulated output voltage directly at the load terminals. Connect +Sense and -Sense to the corresponding positive and negative load terminals. If remote sense is not used, connect +Sense to +Vout and -Sense to -Vout. The maximum combined positive output voltage adjustment by trim and remote sense is +10% of the nominal output voltage.

R_{W1} = positive output line resistance
R_{W2} = negative output line resistance

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OUTPUT VOLTAGE TRIMMING

This module allows the user to increase or decrease the output voltage. This is accomplished by connecting an external resistor between the Trim pin and either the +Sense or -Sense pin. With the resistor between Trim and -Sense, the output voltage increases. With the resistor between Trim and +Sense, the output voltage decreases. The output voltage adjustment range is -20% to +10%, including a maximum combined trim and remote sense adjustment of +10%. The external trim resistor must be rated for at least 1/8W. Resistor values in the trim tables below follow the standard E96 series; the actual output voltage may vary slightly.



RP300H-xx05S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	5.05	5.1	5.15	5.2	5.25	5.3	5.35	5.4	5.45	5.5	[VDC]
R_{up} (E96) ≈	324k	162k	107k	80k6	63k4	53k6	45k3	39k2	34k8	30k9	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	4.95	4.9	4.85	4.8	4.75	4.7	4.65	4.6	4.55	4.5	[VDC]
R_{down} (E96) ≈	976k	487k	316k	237k	187k	150k	127k	110k	95k3	84k5	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	4.45	4.4	4.35	4.3	4.25	4.2	4.15	4.1	4.05	4.0	[VDC]
R_{down} (E96) ≈	75k	68k1	61k9	56k2	51k1	47k5	43k2	40k2	37k4	34k8	[Ω]

RP300H-xx12S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	12.12	12.24	12.36	12.48	12.60	12.72	12.84	12.96	13.08	13.2	[VDC]
R_{up} (E96) ≈	205k	100k	64k9	47k5	36k5	29k4	24k9	21k	17k9	15k8	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	11.88	11.76	11.64	11.52	11.4	11.28	11.16	11.04	10.92	10.8	[VDC]
R_{down} (E96) ≈	768k	383k	249k	182k	143k	118k	97k6	84k5	73k2	63k4	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	10.68	10.56	10.44	10.32	10.2	10.08	9.96	9.84	9.72	9.6	[VDC]
R_{down} (E96) ≈	56k2	51k1	45k3	41k2	37k4	34k	31k6	28k7	26k7	24k3	[Ω]

RP300H-xx15S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	15.15	15.3	15.45	15.6	15.75	15.9	16.05	16.2	16.35	16.5	[VDC]
R_{up} (E96) ≈	162k	78k7	49k9	36k5	28k	22k6	18k7	15k8	13k3	11k5	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	14.85	14.7	14.55	14.4	14.25	14.1	13.95	13.8	13.65	13.5	[VDC]
R_{down} (E96) ≈	825k	402k	261k	191k	150k	124k	105k	88k7	76k8	68k1	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	13.35	13.2	13.05	12.9	12.75	12.6	12.45	12.3	12.15	12.0	[VDC]
R_{down} (E96) ≈	60k4	54k9	48k7	44k2	40k2	37k4	34k	30k9	28k7	26k7	[Ω]

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OUTPUT VOLTAGE TRIMMING

RP300H-xx24S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	24.24	24.48	24.72	24.96	25.2	25.44	25.68	25.92	26.16	26.4	[VDC]
R_{up} (E96) ≈	576k	280k	182k	133k	105k	84k5	69k8	60k4	52k3	45k3	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	23.76	23.52	23.28	23.04	22.8	22.56	22.32	22.08	21.84	21.6	[VDC]
R_{down} (E96) ≈	4990k	2430k	1620k	1180k	931k	768k	649k	562k	487k	432k	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	21.36	21.12	20.88	20.64	20.4	20.16	19.92	19.68	19.44	19.2	[VDC]
R_{down} (E96) ≈	374k	348k	316k	287k	267k	243k	226k	210k	196k	182k	[Ω]

RP300H-xx28S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	28.28	28.56	28.84	29.12	29.4	29.68	29.96	30.24	30.52	30.8	[VDC]
R_{up} (E96) ≈	487k	237k	154k	113k	86k6	69k8	59k	49k9	42k2	37k4	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	27.72	27.44	27.16	26.88	26.6	26.32	26.04	25.76	25.48	25.2	[VDC]
R_{down} (E96) ≈	4990k	2490k	1620k	1210k	953k	787k	665k	562k	499k	442k	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	24.92	24.64	24.36	24.08	23.8	23.52	23.24	22.96	22.68	22.4	[VDC]
R_{down} (E96) ≈	392k	357k	324k	294k	274k	249k	232k	215k	200k	187k	[Ω]

RP300H-xx48S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	48.48	48.96	49.44	49.92	50.4	50.88	51.36	51.84	52.32	52.8	[VDC]
R_{up} (E96) ≈	316k	143k	86k6	59k	42k2	30k1	22k1	15k8	11k3	7k32	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	47.52	47.04	46.56	46.08	45.6	45.12	44.64	44.16	43.68	43.2	[VDC]
R_{down} (E96) ≈	6190k	3010k	2000k	1470k	1150k	953k	806k	681k	604k	536k	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	42.72	42.24	41.76	41.28	40.8	40.32	39.84	39.36	38.88	38.4	[VDC]
R_{down} (E96) ≈	475k	432k	392k	357k	324k	301k	274k	255k	237k	221k	[Ω]

RP300H-xx54S(R)W

Trim up	1	2	3	4	5	6	7	8	9	10	[%]
$Vout_{set}$ =	54.54	55.08	55.62	56.16	56.7	57.24	57.78	58.32	58.86	59.4	[VDC]
R_{up} (E96) ≈	280k	124k	75k	48k7	34k	23k7	16k5	11k3	6k98	3k57	[Ω]

Trim down	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	[%]
$Vout_{set}$ =	53.46	52.92	52.38	51.84	51.3	50.76	50.22	49.68	49.14	48.6	[VDC]
R_{down} (E96) ≈	6190k	3090k	2000k	1470k	1130k	953k	806k	698k	604k	536k	[Ω]

Trim down	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	[%]
$Vout_{set}$ =	48.06	47.52	46.98	46.44	45.9	45.36	44.82	44.28	43.74	43.2	[VDC]
R_{down} (E96) ≈	475k	432k	392k	357k	324k	301k	280k	255k	237k	221k	[Ω]

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REGULATIONS (measured @ T_{AMB}= 25°C, nom. V_{IN}, full load and after warm-up unless otherwise stated)

Parameter	Condition	Value
Output Accuracy		±1.0% max.
Line Regulation	low line to high line, full load	±0.2% max.
Load Regulation	0% to 100% load	±0.2% max.
Transient Response	25% load step change	200µs typ. / 250µs max.

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

Parameter	Condition			Value
Short Circuit Protection (SCP)	below 100mΩ			continuous, automatic recovery
Over Voltage Protection (OVP)	hiccup mode			115% of V_{OUT} nom. min. / 140% of V_{OUT} nom. max.
Over Load Protection (OLP)	hiccup mode			120% of rated I_{OUT} min. / 150% of rated I_{OUT} max.
Over Temperature Protection (OTP)	internal temperature sensor			115°C typ.
Isolation Voltage (9)	1 minute	I/P to O/P	nom. V_{IN}= 110VDC	3kVAC
		I/P (O/P) to case		1.5kVAC
		I/P to O/P	others	3kVDC
		I/P (O/P) to case		1.6kVDC
Isolation Resistance	V_{ISO}= 500VDC			1GΩ min.
Isolation Capacitance				2500pF max.
Insulation Grade	W-types		nom. V_{IN}= 24V, 48VDC	basic
	RW-types		nom. V_{IN}= 110VDC	reinforced

Note9: For repeat Hi-Pot testing, reduce the time and/or the test voltage.

Note10: This power module is not internally fused. An input line fuse must always be used.
Recom suggests:

- For nom. V_{IN}= 24VDC, fuse rating 50A, fast acting type
- For nom. V_{IN}= 48VDC, fuse rating 25A, fast acting type
- For nom. V_{IN}= 110VDC, fuse rating 12A, fast acting type

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

Parameter	Condition			Value
Operating Temperature Range	with derating, refer to **„Derating Graph“**			-40°C to +105°C
Maximum Case Temperature				+105°C
Temperature Coefficient				±0.02%/K
Thermal Impedance	24V, 48Vin standard types only			5.6°C/W typ.
	mount on aluminum baseplate 2U (11)			1.8°C/W typ.
	mount on aluminum baseplate 3U (12)			1.3°C/W typ.
	with heat sink (0.65" height)			3.0°C/W typ.
Operating Altitude				5000m
Operating Humidity				5%-95% RH
Pollution Degree				PD2
Shock				according to MIL-STD-810F
Thermal Shock				according to MIL-STD-810F
Vibration				according to MIL-STD-810F
MTBF	according to MIL-HDBK-217F, G.B.	@full load	T_{AMB}= +25°C	519.8 x 10^3 hours

Note11: The aluminum baseplate dimension is 482.6 x 88.9 x 1.6mm with height EIA standard 2U.

Note12: The aluminum baseplate dimension is 482.6 x 133.35 x 1.6mm with height EIA standard 3U.

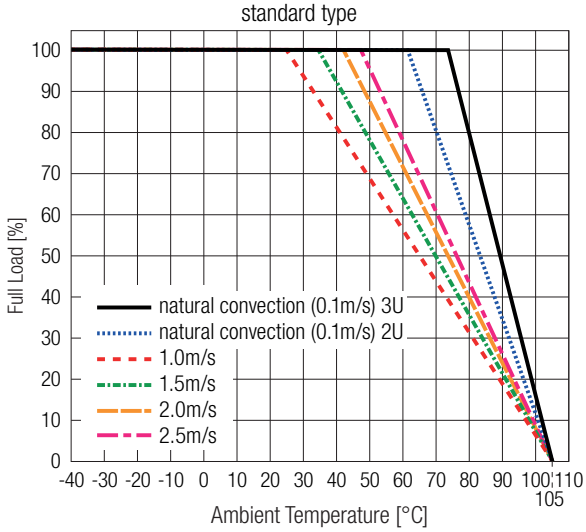
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ENVIRONMENTAL (measured @ T_{AMB}= 25°C, nom. V_{IN}, full load and after warm-up unless otherwise stated)

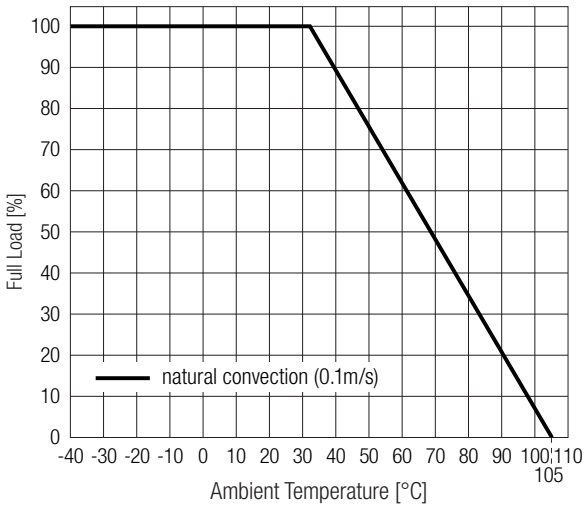
Derating Graph

(@natural convection (0.1m/s), vertical direction)

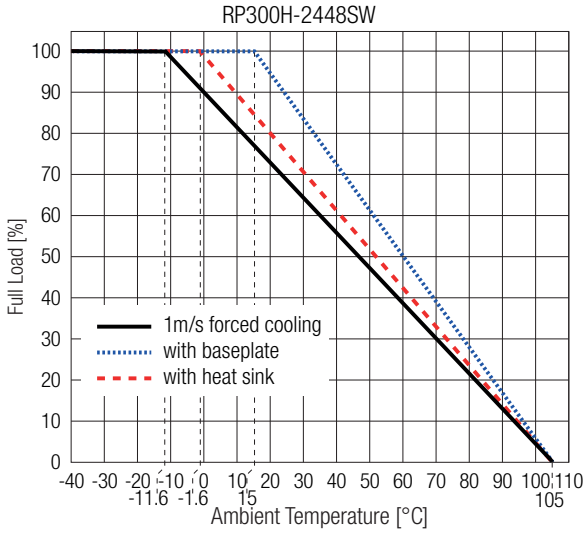
RP300H-4824SW
standard type



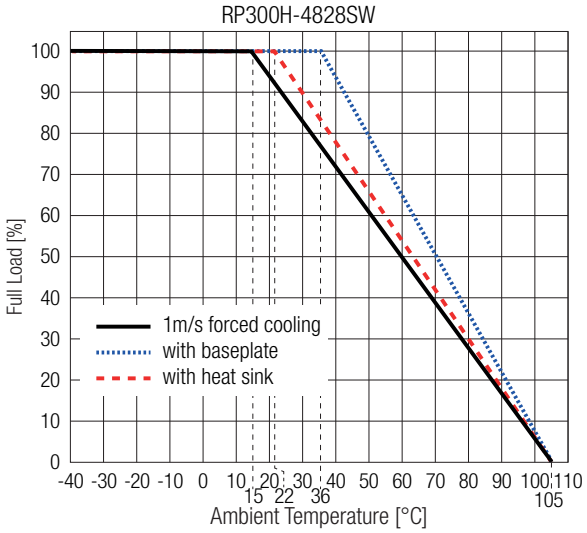
RP300H-4824SW
with heat sink



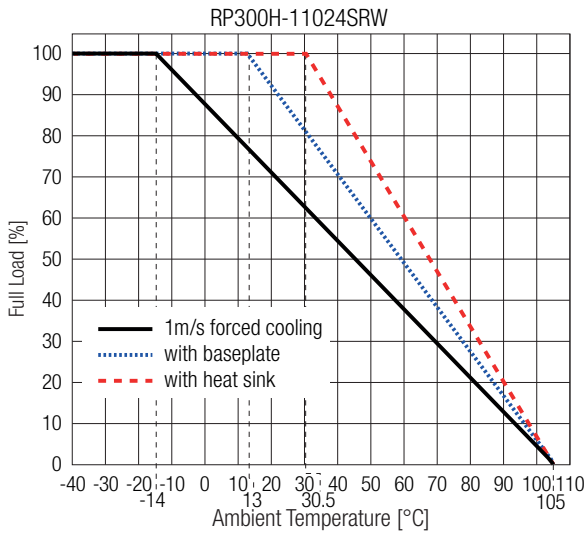
RP300H-2448SW



RP300H-4828SW



RP300H-11024SRW



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SAFETY AND CERTIFICATION

Certificate Type (Safety)	Report / File Number	Standard
Audio/Video, information and communication technology equipment - Part1: Safety requirements	E196683	UL62368-1:2014 2nd Edition CAN/CSA-C22.2 No. 62368-1-14 2nd Edition
Audio/Video, information and communication technology equipment - Part1: Safety requirements	nom. V_{IN}= 24V, 48VDC	IEC62368-1:2018 3rd Edition EN IEC 62368-1:2020+A11:2020
Audio/Video, information and communication technology equipment - Part1: Safety requirements (LVD)	nom. V_{IN}= 110VDC	EN IEC 62368-1:2020+A11:2020
RoHS2		RoHS 2011/65/EU + AM2015/863

EMC Compliance	Condition	Standard / Criterion
Electromagnetic compatibility of multimedia equipment - Emission requirements	with external components (14)	EN55032, Class A
Electromagnetic compatibility of multimedia equipment - Immunity requirements		EN55035
ESD Electrostatic discharge immunity test	Air: ±8kV, Contact: ±6kV	EN61000-4-2, Criteria A
Radiated, radio-frequency, electromagnetic field immunity test	20V/m	EN61000-4-3, Criteria A
Fast Transient and Burst Immunity (15)	DC Power Port: ±2kV	EN61000-4-4, Criteria A
Surge Immunity (15)	DC Power Port: ±2kV	EN61000-4-5, Criteria A
Immunity to conducted disturbances, induced by radio-frequency fields	DC Power Port: 10 Vrms	EN61000-4-6, Criteria A
Power Magnetic Field Immunity	100A/m continuous, 1000A/m 1 second	EN61000-4-8, Criteria A

Note13: The power module operates to specification without external components, assuming a low-impedance source with stable voltage regulation. Highly inductive impedances may impact stability—add an external filter capacitor for real voltage sources.

Note14: For the EMI guidelines refer to RECOM Website/RP300H-(R)W/Documentation

Note15: For the EN61000-4-4 and EN61000-4-5 immunity tests, the following external components were used:
Nom. V_{IN}= 24VDC models tested with 2pcs of aluminum electrolytic capacitors (220µF/100V) and a TVS (58V, 3000W peak pulse power) in parallel.
Nom. V_{IN}= 48VDC models tested with 2pcs of aluminum electrolytic capacitors (220µF/100V) and a TVS (120V, 3000W peak pulse power) in parallel.
Nom. V_{IN}= 110VDC models tested with 2pcs of aluminum electrolytic capacitors (220µF/200V) and a TVS (170V, 3000W peak pulse power) in parallel.

DIMENSION & PHYSICAL CHARACTERISTICS

Parameter	Type		Value
Material	case	nom. V_{IN}= 24VDC	metal
		nom. V_{IN}= 48VDC	
		nom. V_{IN}= 110VDC	aluminum baseplate with plastic case
	potting		silicone, (UL94 V-0)
	baseplate	nom. V_{IN}= 24VDC	FR4 PCB
		nom. V_{IN}= 48VDC	
		nom. V_{IN}= 110VDC	iron
Dimension (LxWxH)	without heat sink	nom. V_{IN}= 24V, 48VDC	61.5 x 58.4 x 12.7mm 2.42 x 2.30 x 0.50 inch
		nom. V_{IN}= 110VDC	61.0 x 57.9 x 12.7mm 2.40 x 2.28 x 0.50 inch
	with heat sink ("-HC")	nom. V_{IN}= 24V, 48VDC	61.5 x 58.4 x 30.2mm 2.42 x 2.30 x 1.19 inch
		nom. V_{IN}= 110VDC	61.5 x 58.4 x 30.2mm 2.42 x 2.30 x 1.19 inch
Weight	without heat sink	all types	107g typ 0.24 lbs
	with heat sink ("-HC")	all types	155g 0.342 lbs

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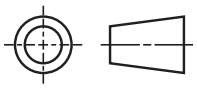
RP300H-(R)W Series ◊ DC-DC Converter

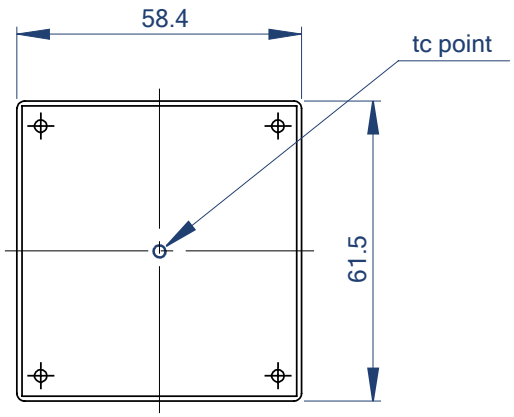
300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

RECOM DC/DC Converter

DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing (mm)
nom. V_{IN}= 24V, 48VDC

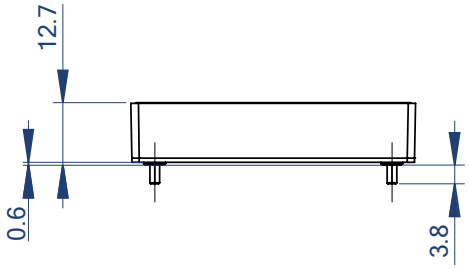


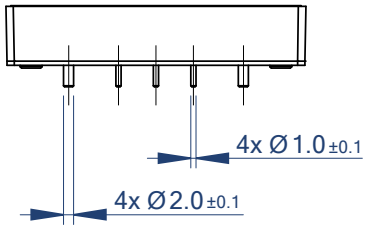


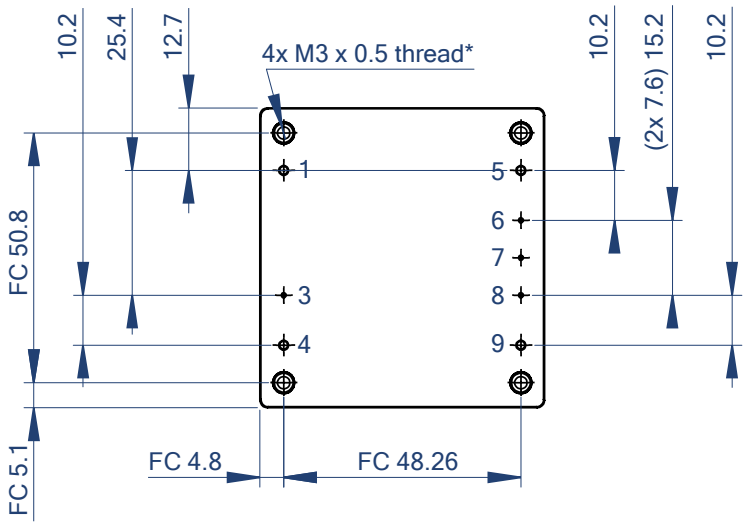
Pinning Information

Pin #	Single	Pin diameter
1	-Vin	2mm
3	CTRL	1mm
4	+Vin	2mm
5	-Vout	2mm
6	-Sense	1mm
7	Trim	1mm
8	+Sense	1mm
9	+Vout	2mm

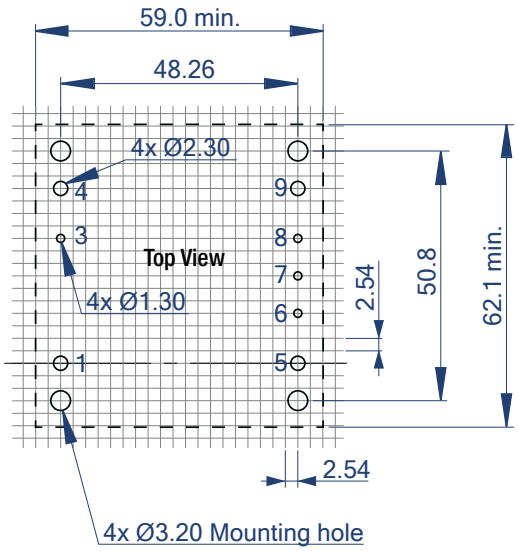
FC= fixing center
*screw locked torque:
MAX 5.0kgf-cm/0.49N-m







Recommended Footprint Detail

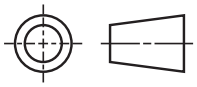


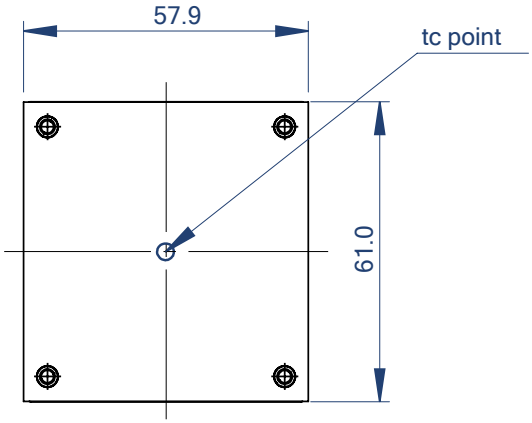
Tolerances:
x.x= ±0.5mm
x.xx= ±0.25mm

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DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing (mm)
nom. V_{IN}= 110VDC

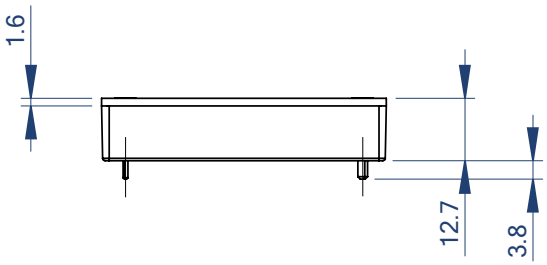


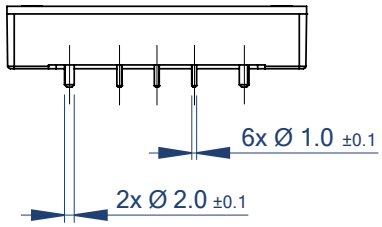


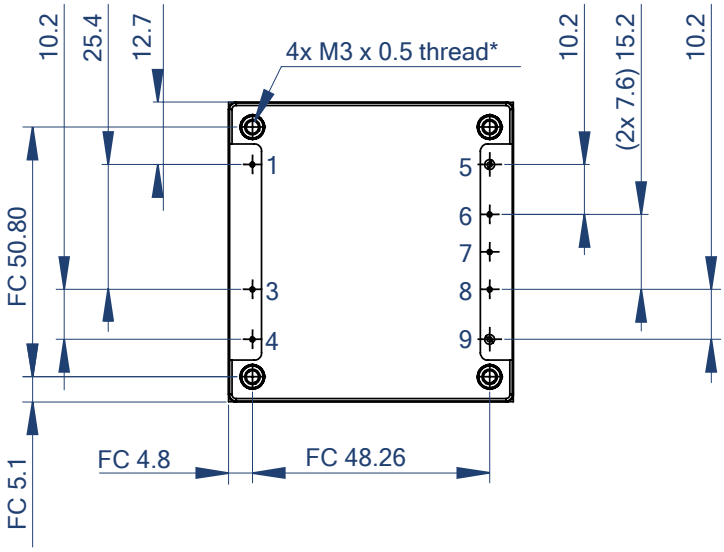
Pinning Information

Pin #	Single	Pin diameter
1	-Vin	1mm
3	CTRL	1mm
4	+Vin	1mm
5	-Vout	2mm
6	-Sense	1mm
7	Trim	1mm
8	+Sense	1mm
9	+Vout	2mm

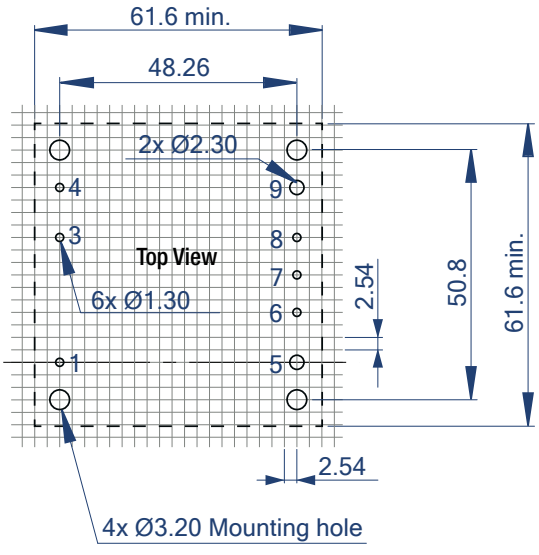
FC= fixing center
*screw locked torque:
MAX 3.5kgf-cm/0.34N-m







Recommended Footprint Detail

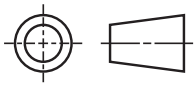


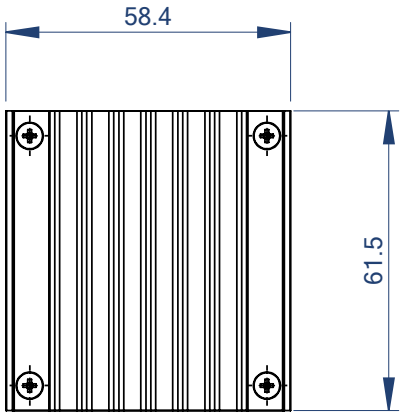
Tolerances:
x.x= ±0.5mm
x.xx= ±0.25mm

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DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing (mm)
Heat sink option
nom. V_{IN}= 24V, 48VDC

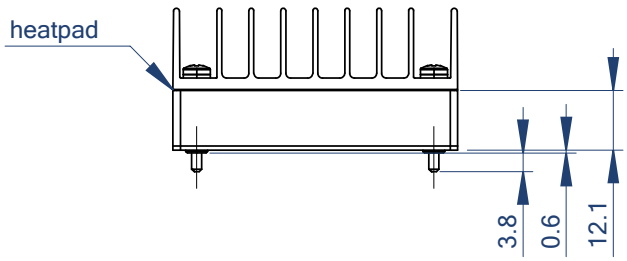


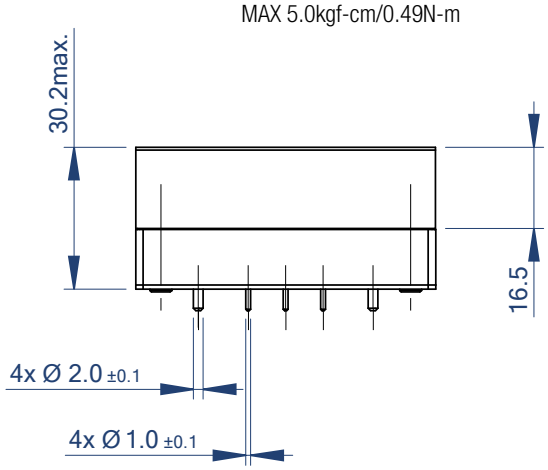


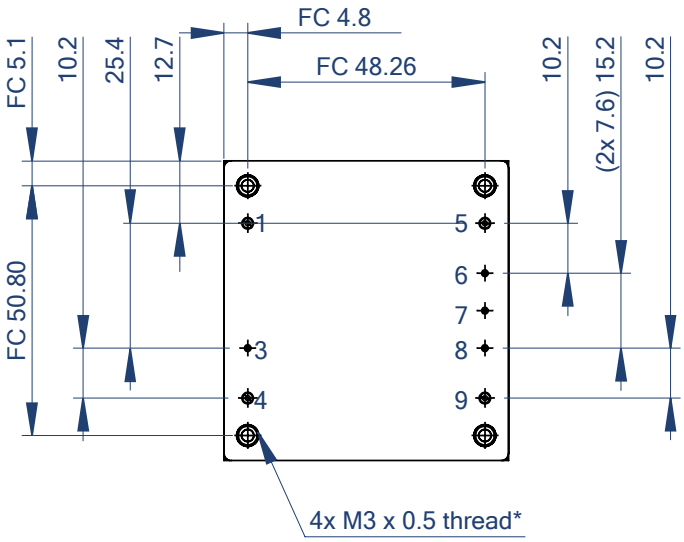
Pinning Information

Pin #	Single	Pin diameter
1	-Vin	2mm
3	CTRL	1mm
4	+Vin	2mm
5	-Vout	2mm
6	-Sense	1mm
7	Trim	1mm
8	+Sense	1mm
9	+Vout	2mm

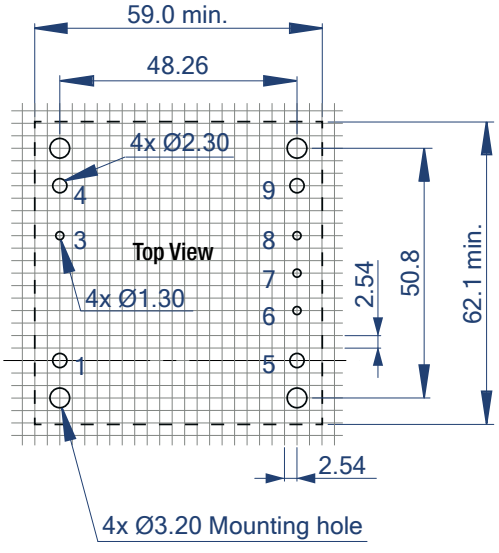
FC= fixing center
*screw locked torque:
MAX 5.0kgf-cm/0.49N-m







Recommended Footprint Detail



Tolerances:
x.x= ±0.5mm
x.xx= ±0.25mm

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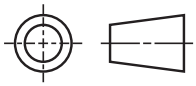
RP300H-(R)W Series ◊ DC-DC Converter

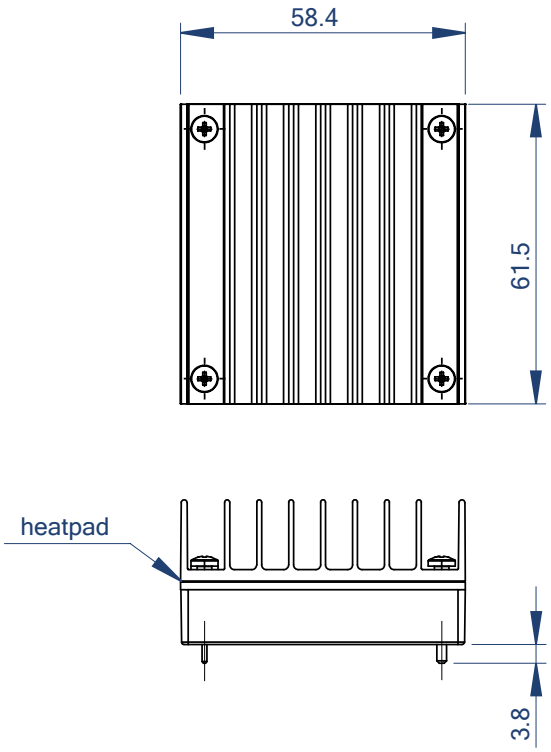
300W ◊ 4:1 Wide Input: 9V-36VDC / 18V-75VDC / 40V-160VDC

RECOM DC/DC Converter

DIMENSION & PHYSICAL CHARACTERISTICS

Dimension Drawing (mm)
Heat sink option
nom. V_{IN}= 110VDC

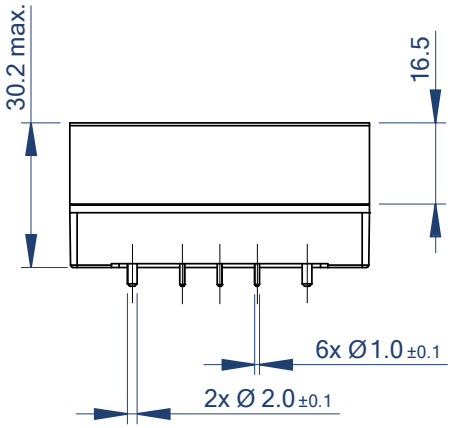


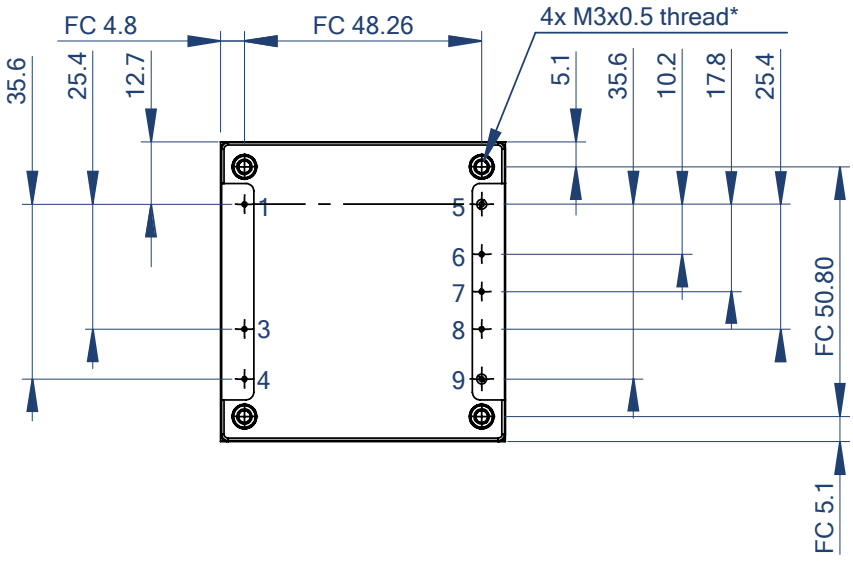


Pinning Information

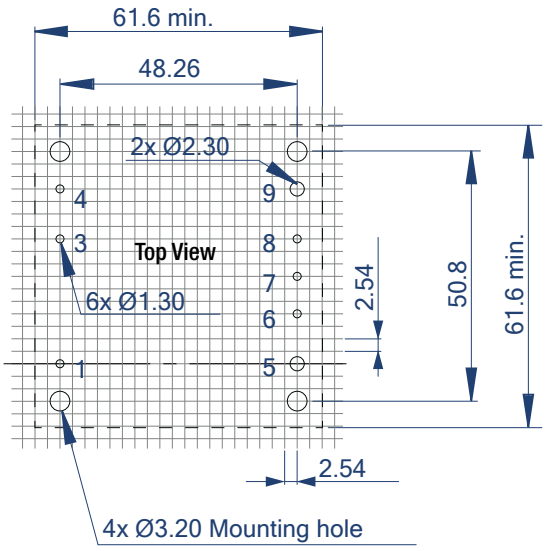
Pin #	Single	Pin diameter
1	-Vin	1mm
3	CTRL	1mm
4	+Vin	1mm
5	-Vout	2mm
6	-Sense	1mm
7	Trim	1mm
8	+Sense	1mm
9	+Vout	2mm

FC= fixing center
*screw locked torque:
MAX 3.5kgf-cm/0.34N-m





Recommended Footprint Detail



Tolerances:
x.x= ±0.5mm
x.xx= ±0.25mm

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PACKAGING INFORMATION

Parameter	Type		Value
Packaging Dimension (LxWxH)	single box	without heat sink	70.0 x 60.0 x 30.0mm
	cardboard box	with heat sink ("-HC")	400.0 x 184.0 x 126.0mm
Packaging Quantity	single box	without heat sink	1pc
	cardboard box	with heat sink ("-HC")	30pcs
Storage Temperature Range			-55°C to +125°C
Storage Humidity	non-condensing		5% - 95% RH

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.

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