

50W to 600W Single Output General Purpose Power Supplies

<https://product.tdk.com/en/power/rws-b>
www.emea.lambda.tdk.com/rws-b



The RWS50B to RWS600B AC-DC power supplies are designed to provide solid performance at an economical price. 50, 100, 150, 300 and 600W ratings are available with output voltages from 5V to 48V. All models are certified to IEC62368-1 with UL508 on select models. These 7-year warranty⁽¹⁾ products meet both Class B radiated and conduction EMI standards. The 300W models have a remote on/off option and the 600W have options for remote on/off, parallel operation, DC Good and remote sense.

Features

- Seven Year Warranty⁽¹⁾
- Conservatively Rated Electrolytic Capacitors
- Class B Conducted and Radiated EMI
- UL508 Certified on Select Models

Benefits

- Low Cost of Ownership
- Long Field Life
- Easier System EMC Compliance
- Suitable for Industrial Control Equipment

Model Selector

Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Output Power (W)	Ripple & Noise (mV)	Input Current (A) 115/230Vac	Efficiency (typ)% 115/230Vac	UL508 Certification
RWS50B-5	5	4.5 - 5.75	10	50	120	1.0 / 0.65	78 / 79	Yes
RWS100B-5	5	4.5 - 5.75	14	70	120	0.9 / 0.45	77.5 / 79	Yes
RWS150B-5	5	4.5 - 5.75	21	105	120	1.3 / 0.7	77.5 / 79.5	Yes
RWS300B-5	5	4.5 - 5.75	50	250	120	3.1 / 1.6	75 / 78.5	-
RWS600B-5	5	4.5 - 5.75	100	500	120	6.2 / 3.2	74 / 77.5	-
RWS50B-12	12	10.8 - 13.8	4.3	51.6	150	1.0 / 0.65	83 / 84	Yes
RWS100B-12	12	10.8 - 13.8	8.5	102	150	1.2 / 0.6	83 / 84	Yes
RWS150B-12	12	10.8 - 13.8	13	156	150	1.8 / 0.9	84.5 / 87.5	Yes
RWS300B-12	12	10.8 - 13.8	25	300	150	3.6 / 1.9	79.5 / 82.5	Yes
RWS600B-12	12	10.8 - 13.8	50	600	150	6.6 / 3.6	82 / 84.5	-
RWS100B-15	15	13.5 - 17.25	6.8	102	150	1.2 / 0.6	84 / 85	-
RWS150B-15	15	13.5 - 17.25	10	150	150	1.8 / 0.9	84.5 / 87.5	-
RWS300B-15	15	13.5 - 17.25	20	300	150	3.6 / 1.9	81.5 / 84.5	Yes
RWS600B-15	15	13.5 - 17.25	40	600	150	6.6 / 3.6	82 / 84.5	-
RWS50B-24	24	21.6 - 27.6	2.2	52.8	150	1.0 / 0.65	86 / 87	Yes
RWS100B-24	24	21.6 - 27.6	4.5	108	150	1.2 / 0.6	86 / 87.5	Yes
RWS150B-24	24	21.6 - 27.6	6.5	156	150	1.8 / 0.9	86.5 / 89.5	Yes
RWS300B-24	24	21.6 - 27.6	12.5	300	150	3.6 / 1.9	85 / 88	Yes
RWS600B-24	24	21.6 - 27.6	25	600	150	6.6 / 3.6	85 / 88.5	Yes
RWS150B-28	28	25.2 - 32.2	5.4	151.2	180	1.8 / 0.9	86.5 / 89.5	-
RWS300B-36	36	32.4 - 414	8.4	302.4	200	3.6 / 1.9	85 / 88	Yes
RWS600B-36	36	32.4 - 414	16.7	601.2	200	6.6 / 3.6	85 / 88.5	-
RWS50B-48	48	43.2 - 52.8	1.1	52.8	200	1.0 / 0.65	87 / 88	-
RWS100B-48	48	43.2 - 52.8	2.1	100.8	200	1.2 / 0.6	86 / 87	-
RWS150B-48	48	43.2 - 52.8	3.3	158.4	200	1.8 / 0.9	86.5 / 89.5	-
RWS300B-48	48	43.2 - 52.8	6.3	302.4	200	3.6 / 1.9	85 / 88	Yes
RWS600B-48	48	43.2 - 52.8	12.5	600	200	6.6 / 3.6	85 / 88.5	-

RWS50B-	12	/	-
Output voltage 5, 12, 15, 24, 28, 36, 48			
			blank No options /CO2 Double sided board coating /FO DC Good and parallel (600W only) /R Remote On/Off (300W and 600W only) /RFO Remote on/off, DC Good and parallel (600W only)

Related Products		
Type	Part Number	Description
Higher power RWS-B models	RWS1000B , RWS1500B	1000W to 1500W single output AC-DC power supplies
DIN rail mounting bracket	DIN-04	RWS50B DIN rail bracket
DIN rail mounting bracket	DIN-05	RWS100B DIN rail bracket
DIN rail mounting bracket	DIN-06	RWS150B DIN rail bracket
DIN rail mounting bracket	DIN-07	RWS300B DIN rail bracket

Specifications						
Model	RWS50B	RWS100B	RWS150B	RWS300B	RWS600B	
Input						
Input Voltage Range (Operating)	Vac			85 - 265		
Nominal Input Voltage Range	Vac			100 - 240 (Note: Safety certified for 90-264Vac)		
Input Surge Voltage	Vac			300 for 5s		
Input Frequency	Hz			47 - 63 (Note: Safety certified for 50-60Hz only)		
DC Input Voltage Range	Vdc			RWS50-300B: 120 - 370, RWS600B: 120 - 330 (Note: Safety certified for AC input only)		
Input Current (115/230Vac)	A			See model selector table		
Inrush Current at 200Vac (typ) (Cold Start)	A	36	30	32	34	40
Leakage Current	uA			<750, typically 175 at 115Vac 63Hz		
Power Factor (100/200Vac)	-	Not specified		0.95 / 0.90		
Harmonic Compliance	-			Designed to meet IEC61000-3-2		
Hold Up Time (typ) at 110/220Vac Input	ms	20 (15 at 100Vac input)		20		
Efficiency	-			See model selector table		
Conducted & Radiated EMI	-			EN55011/EN55032-B, FCC Class B, VCCI-B		
Immunity	-			See immunity table		
Safety Certifications and Markings	-			IEC/UL/CSA/EN62368-1, UL508 (see model selector), CE Mark and UKCA Mark		

Immunity				
Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	Air \pm 8kV and contact \pm 4kV 80M -1GHz: 10V/m	B	
Radiated Susceptibility	EN61000-4-3	1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	\pm 2kV	B	
Surge	EN61000-4-5	Normal \pm 2kV Common \pm 4kV	B	See IEC61000 immunity test report on website
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11	30% 500ms 60% 10ms 100% 20ms 100% 5000ms	B B A B	
SEMI F47 Line Dip	SEMI F47			At input voltages > 200Vac

Specifications						
Model		RWS50B	RWS100B	RWS150B	RWS300B	RWS600B
Output						
Output Voltage Adjustment	-			See model selector table		
Switching Frequency	kHz	100		120, PFC 65		190, PFC 50-70
Line Regulation	mV		5V: 20, 12V: 48, 15V: 60, 24V: 96, 28V: 112, 36V: 144, 48V: 192			
Load Regulation	mV		5V: 40, 12V: 96, 15V: 120, 24V: 192, 28V: 224, 36V: 288, 48V: 384			
External Load Capacitance	uF		RWS50B: 5-12V, 10,000, 24V: 3,300, 48V: 400, RWS100B-600B: 10,000			
Ripple & Noise	-			See model selector table		
Temperature Coefficient	%/°C			0.02		
Minimum Load	-			No minimum load required		
Overcurrent Protection	%			>105. Constant current characteristics		
Oversupply Protection	%			115-140. Cycle AC line to reset		
Remote Sense	-			None		See options
Remote On/Off	-		None		See options	
Parallel Operation	-			None		See options
Environmental						
Operating Temperature ⁽²⁾	°C		-20 to +70. See note (2) or installation manuals on website			
Humidity (non condensing)	%RH		Operating: 30 - 90, storage: 10 - 90			
Storage Temperature	°C			-30 to +75		
Cooling	-		Convection		Forced air - internal fan	
Altitude	m			3000		
Withstand Voltage (For 1 minute)	Vac		Input to Ground 2,000, Input to Output 3,000, Output to Ground 500 for 1 minute			
Vibration (Non operating)	-		10-55Hz (Sweep for 1min.) 19.6m/s ² Constant X,Y,Z 1 hour each			
Shock (Non operating)	-		Less than 196m/s ² , 11ms, ±X, ±Y, ±Z 3 times each			
Other						
Weight (Typ)	g	230	400	480	900	1600
Size (LxWxH)	mm	81.5 x 82 x 34	108 x 94 x 39	128 x 94 x 41	170 x 102 x 41	190 x 120 x 61
Size (LxWxH)	Inches	3.21 x 3.23 x 1.34	4.25 x 3.7 x 1.54	5.04 x 3.7 x 1.61	6.7 x 4.02 x 1.61	7.48 x 4.72 x 2.4
Case Material	-			Metal		
MTBF - Telcordia SR-332 issue 3*	Hours	4,170,949	1,978,533	2,235,743	2,027,824	2,157,340
Warranty	yrs			7 ⁽¹⁾		

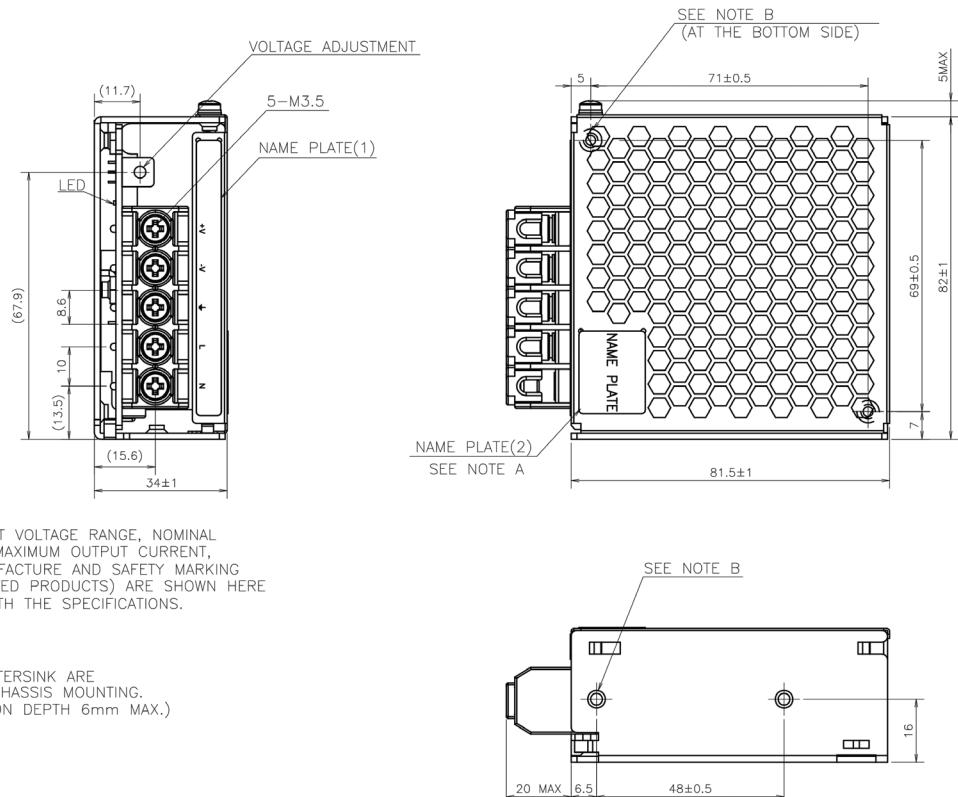
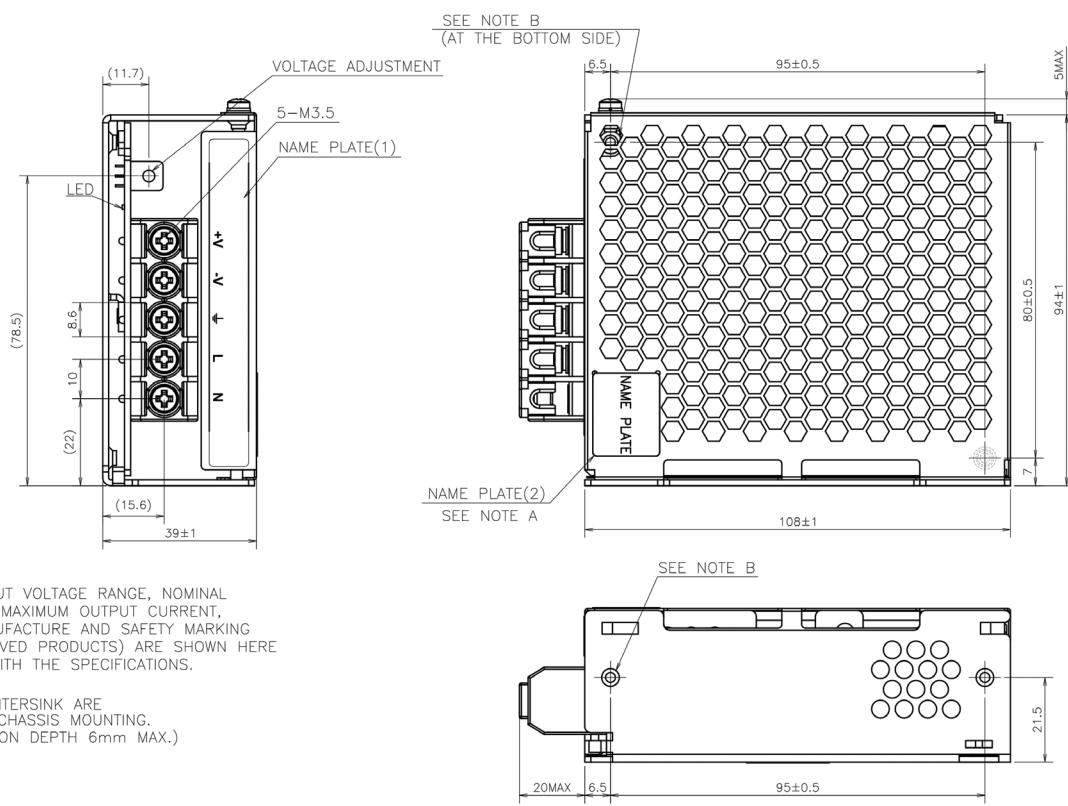
Notes

See website for detailed specifications, test methods and [installation manual](#)

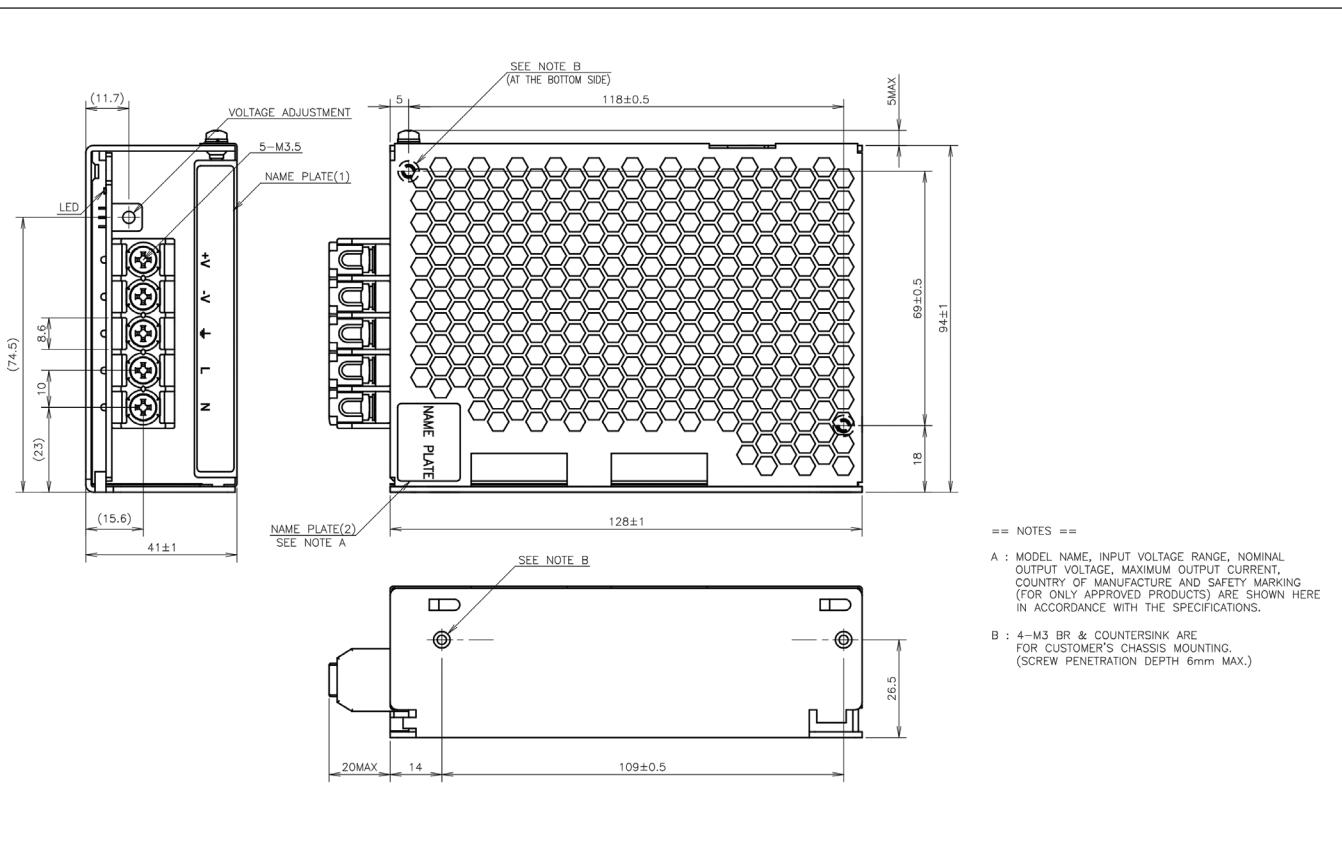
*25°C ambient, full load, 24Vdc input

(1) The Americas and EMEA regions: 7 years. Other regions: 5 years. See applicable regional terms of sale.

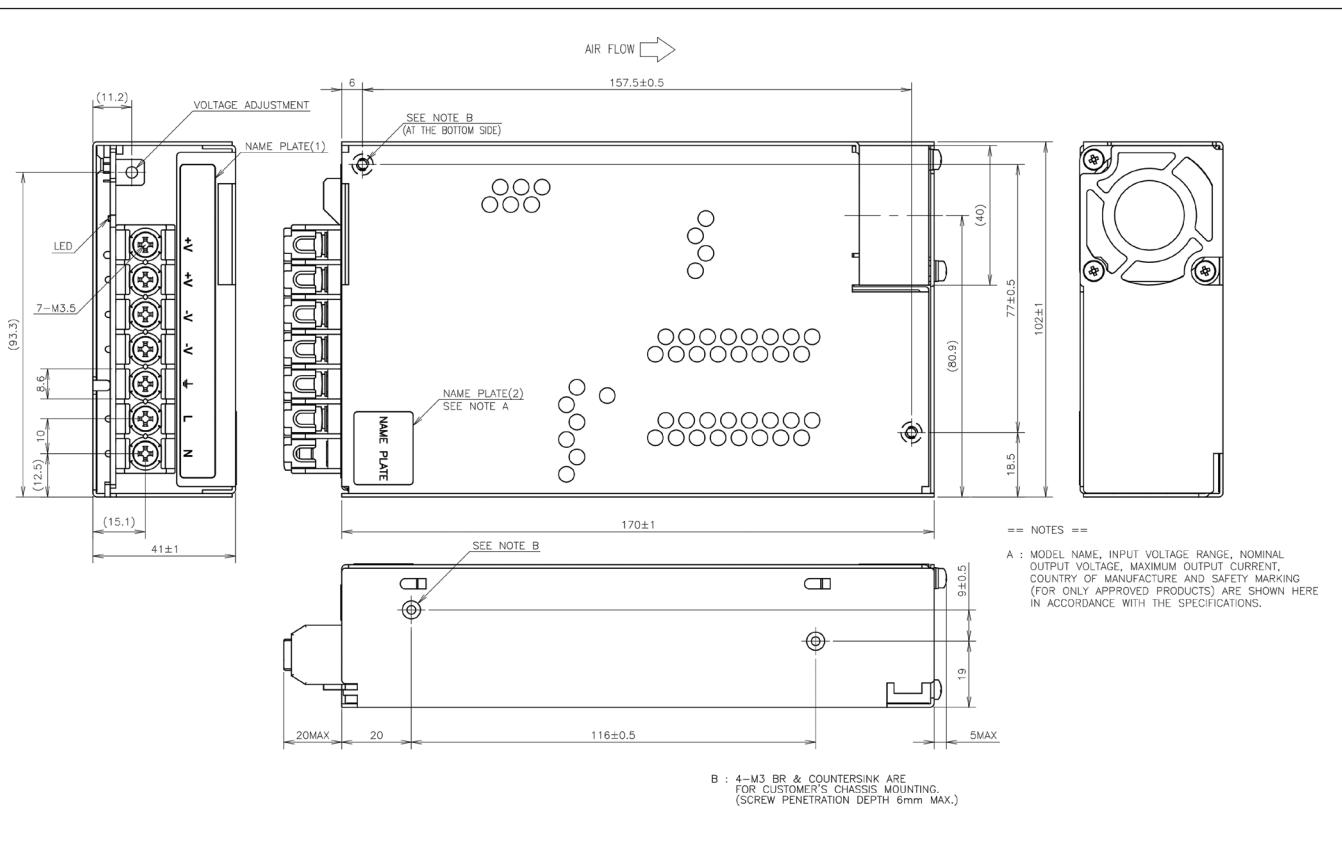
(2) RWS50-100B derates linearly above 45°C to 20% load at 70°C, 150B derates above 40°C and 300-600B derates above 50°C to 50% load at 70°C

Outline Drawing RWS50B**Outline Drawing RWS100B**

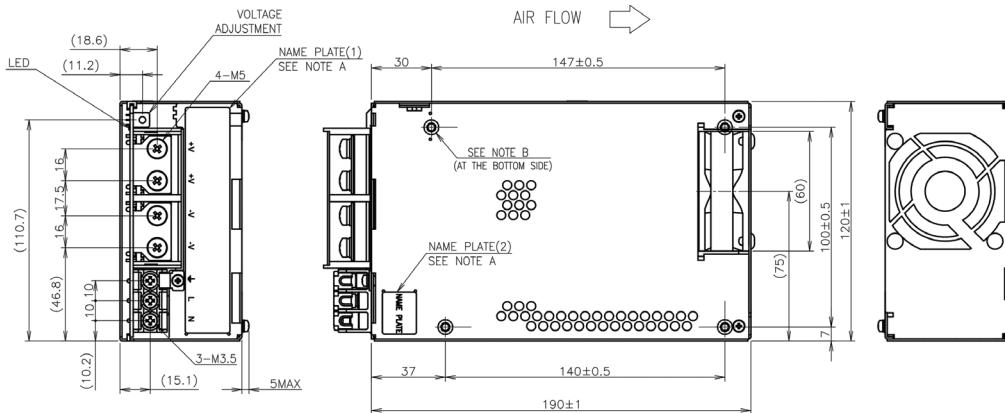
Outline Drawing RWS150B



Outline Drawing RWS300B



Outline Drawing RWS600B



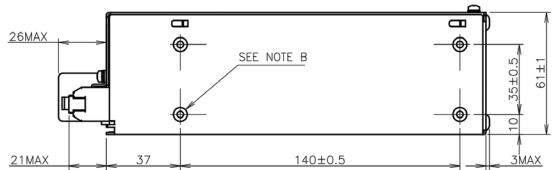
== NOTES ==

A : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND SAFETY MARKING (FOR ONLY APPROVED PRODUCTS) ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

B : 8-M4 BR & COUNTERSINK ARE FOR CUSTOMER'S CHASSIS MOUNTING.
(SCREW PENETRATION DEPTH 6mm MAX.)

== ACCESSORIES ==

- * COVER FOR BARRIER TERMINAL STRIP -----1
(ATTACHED ON TERMINAL AT SHIPMENT)





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