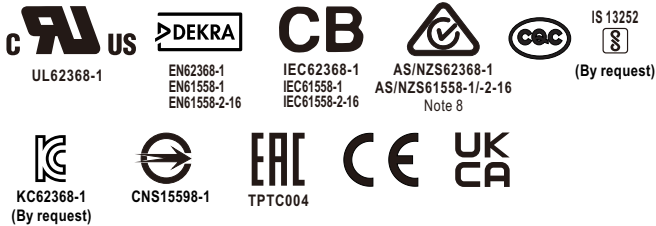




1200W Low Profile Economical Enclosed Type Power Supply **LRS-1200** series



■ Features

- AC input 180~305Vac input
- Global certificates in multi-fields (ITE 62368-1, Industrial 61558-1/-2-16)
- Compact size with low profile(17W/inch³)
- 150% peak power @5s
- High efficiency up to 94%
- Built-in constant current limiting circuit
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling, cooling fan speed control
- Built-in DC OK/Remote Control/Remote Sense
- -30~+70°C wide range operation temperature
- Over voltage category(OVC III)
- Operating altitude up to 5000 meters
- Conformal coating
- 3 years warranty

■ Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus

■ GTIN CODE

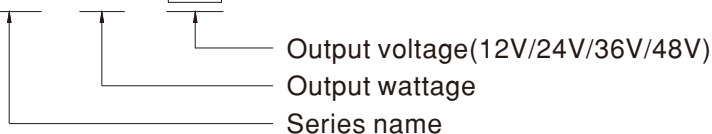
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

■ Description

LRS-1200 series is a 1200W single-output enclosed type economical power supply with 41mm of low profile design. Adopting the input of 180~ 305Vac , the entire series provides an output voltage line of 12V, 24V,36V and 48V. In addition to the high efficiency up to 94%, with the built-in long life fan LRS-1200 can work under -30~+70°C with full load. LRS-1200 has the complete protection functions and 3G anti-vibration capability; It is complied with complete international safety regulations. LRS-1200 series serves as a high price-to-performance power supply solution for various industrial applications.

■ Model Encoding

LRS -1200 - 24





1200W Low Profile Economical Enclosed Type Power Supply **LRS-1200** series

SPECIFICATION		LRS-1200-12	LRS-1200-24	LRS-1200-36	LRS-1200-48
OUTPUT					
DC VOLTAGE		12V	24V	36V	48V
RATED CURRENT		92A	50A	33.3A	25A
CURRENT RANGE		0 ~ 92A	0 ~ 50A	0 ~ 33.3A	0 ~ 25A
RATED POWER		1104W	1200W	1198.8W	1200W
PEAK	CURRENT(5 sec.)	138A	75A	50A	37.5A
	POWER(5 sec.)	1656W	1800W	1800W	1800W
RIPPLE & NOISE (max.)	Note.2	200mVp-p	240mVp-p	360mVp-p	360mVp-p
VOLTAGE ADJ. RANGE	Note.3	12~ 15V	24 ~ 28V	34 ~ 40V	48 ~ 56V
VOLTAGE TOLERANCE	Note.4	±1.0%	±1.0%	±1.0%	±1.0%
LINE REGULATION		±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION		±0.5%	±0.5%	±0.5%	±0.5%
SETUP, RISE TIME		1500ms, 70ms/230Vac 1500ms, 70ms/277Vac at full load			
HOLD UP TIME (Typ.)		10ms/230Vac 10ms/277Vac at full load			
INPUT					
VOLTAGE RANGE	Note.5	180 ~ 305Vac 255 ~ 431Vdc			
FREQUENCY RANGE		47 ~ 63Hz			
POWER FACTOR (Typ.)		PF≥0.95/230Vac, PF≥0.93/277Vac at full load			
EFFICIENCY (Typ.)		91%	93%	94%	94%
AC CURRENT (Typ.)		7A/230Vac	5A/277Vac		
INRUSH CURRENT (Typ.)		60A/230Vac	75A/277Vac		
LEAKAGE CURRENT		<2mA / 240Vac / 277Vac			
PROTECTION					
OVER LOAD	Output power >105% rated for more than 5 seconds then shut down o/p voltage, re-power on to recover				
	Constant current limiting for output power >150% rated for more than 5 seconds and then shut down o/p voltage, re-power on to recover				
OVER VOLTAGE	16 ~ 20V	29 ~ 36V	41 ~ 50V	57 ~ 67V	
	Protection type : Shut down o/p voltage, re-power on to recover				
OVER TEMPERATURE		Shut down o/p voltage, re-power on to recover			
FUNCTION					
REMOTE CONTROL	Power ON: RC+~RC- 0~0.8Vdc or open Power OFF: RC+~RC- 3.3~10Vdc by external voltage				
REMOTE SENSE	Compensate voltage drop on the load wiring up to 0.3Vdc. Please refer to the Function Manual				
DC OK SIGNAL	Power ON:3.3 ~ 5.6Vdc Power OFF: 0 ~ 1Vdc				
FAN NOISE(Typ.)	Built-in intelligent fan speed control detect by PSU'S internal temperature				
	10% load with Ta=25℃	45dB			
	70% load with Ta=25℃	53dB			
ENVIRONMENT					
WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")				
WORKING HUMIDITY	20 ~ 90% RH non-condensing				
STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing				
TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 30℃)				
VIBRATION	10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes				

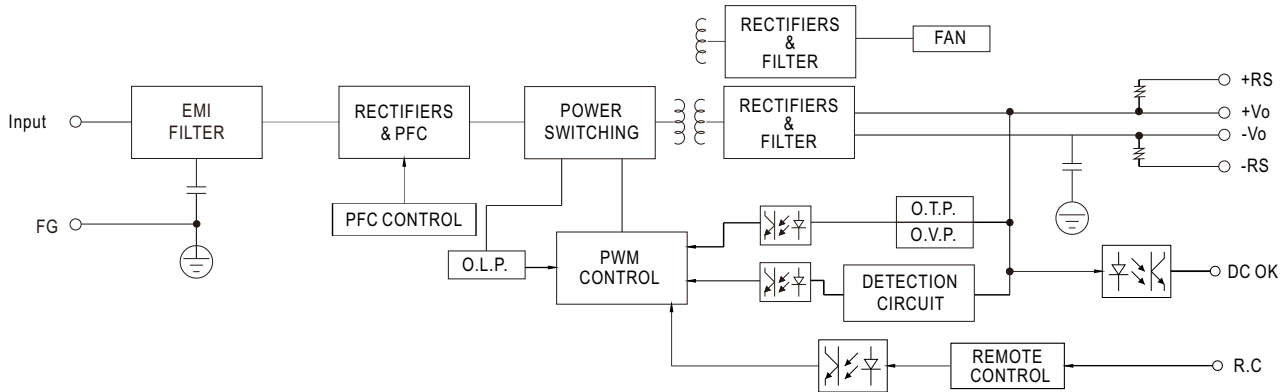


1200W Low Profile Economical Enclosed Type Power Supply **LRS-1200** series

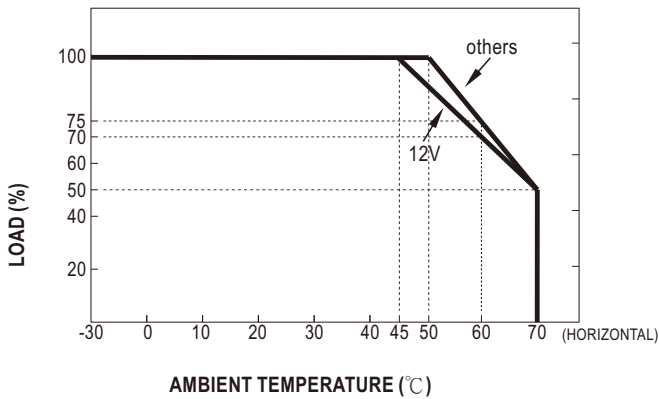
SAFETY & EMC (Note 6)																									
SAFETY STANDARDS	CB IEC62368-1, IEC61558-1/-2-16 UL UL62368-1 DEKRA BS EN/EN62368-1, BS EN/EN61558-1/-2-16 RCM AS/NZS 62368-1, AS/NZS 61558-1/-2-16 CQC GB 4943.1 BSMI CNS15598-1 EAC TPTC 004 approved KC/BIS KC62368-1 and BIS IS 13252 (Part 1) :2010 certified, no stock by request, contact sale for inquires																								
OVER VOLTAGE CATEGORY	IEC/EN 61558-1/-2-16 (OVC III, altitude up to 2000M) IEC/EN/UL 62368-1 (OVC II, altitude up to 5000M)																								
WITHSTAND VOLTAGE	I/P-O/P:4.2KVac I/P-FG:2.1KVac O/P-FG:1.25KVac																								
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH																								
EMC EMISSION	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Standard</th> <th>Test Level / Note</th> </tr> </thead> <tbody> <tr> <td>Conducted</td> <td>BS EN/EN55032 (CISPR32), CNS15936</td> <td>Class A</td> </tr> <tr> <td>Radiated</td> <td>BS EN/EN55032 (CISPR32), CNS15936</td> <td>Class A</td> </tr> <tr> <td>Harmonic Current</td> <td>BS EN/EN61000-3-2</td> <td>Class A</td> </tr> <tr> <td>Voltage Flicker</td> <td>BS EN/EN61000-3-3</td> <td>----</td> </tr> </tbody> </table>	Parameter	Standard	Test Level / Note	Conducted	BS EN/EN55032 (CISPR32), CNS15936	Class A	Radiated	BS EN/EN55032 (CISPR32), CNS15936	Class A	Harmonic Current	BS EN/EN61000-3-2	Class A	Voltage Flicker	BS EN/EN61000-3-3	----									
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Voltage Dips and Interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods																							
OTHERS																									
MTBF	924.6K hrs min. Telcordia SR-332(Bellcore) ; 93.2K hrs min. MIL-HDBK-217F (25°C)																								
DIMENSION (L*W*H)	225*124*41mm (L*W*H)																								
PACKING	1.28Kg/9pcs/12Kg/0.81CUFT																								
NOTE																									
<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Voltage adjustment can only be operated within the input range of 220-277Vac. If the voltage adjustment is performed outside this range, it may cause abnormal output. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltages. Please refer to "Static Characteristics" sections for details. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 720mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). RCM is on voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NZS 441.1 																									
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx																									

■ Block Diagram

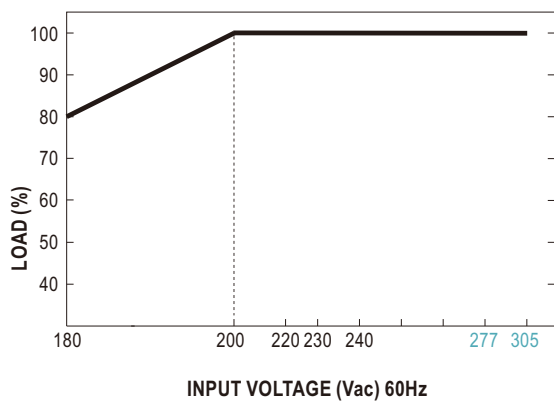
fosc : 50KHz~130KHz



■ Derating Curve



■ Static Characteristics



■ **Function Manual**

1. Peak Power

$$P_{av} = \frac{P_{pk} \times t + P_{npk} \times (T-t)}{T} \leq P_{rated}$$

$$Duty = \frac{t}{T} \times 100\% \leq 35\%$$

$$t \leq 5 \text{ sec}$$

P_{av} : Average output power (W)

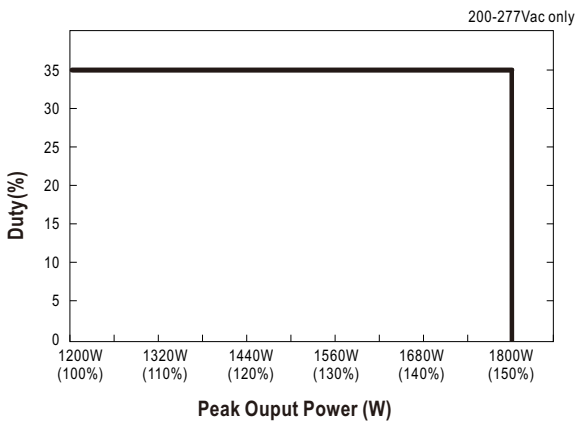
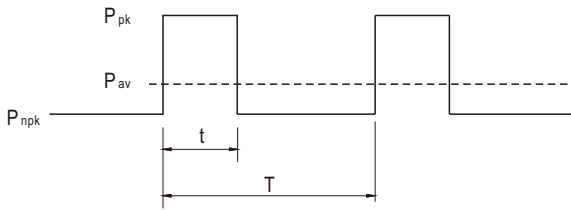
P_{pk} : Peak output power (W)

P_{npk} : Non-peak output power(W)

P_{rated} : Rated output power(W)

t : Peak power width(sec)

T : Period(sec)



For example (24V model)

$V_{in}=220Vac, Duty_max=10\%$

$P_{av}=P_{rated}=1200W$

$P_{pk}=1800W$

$t \leq 5sec$

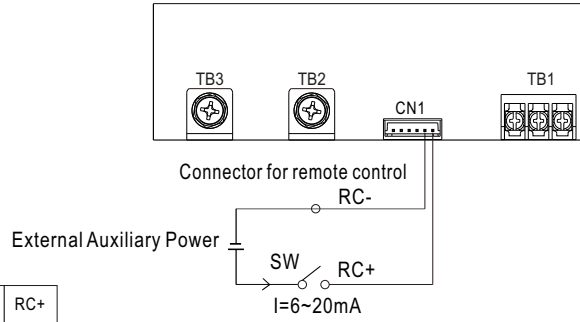
$$T \geq \frac{5sec}{10\%} = 50sec$$

$$P_{nPk} \leq \frac{TP_{av}-tP_{pk}}{T-t} = 1133.3W$$

2. Remote Control

The PSU can be turned ON/OFF by using the "Remote Control" function with external switch and auxiliary power.

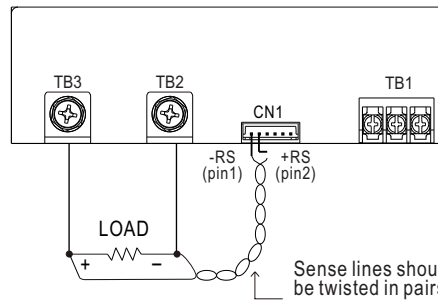
PSU Vo status	Between RC-(pin5) and RC+(pin6)
Power ON	SW open or keep 0~0.8Vdc
Power OFF	SW short or keep 3.3~10Vdc



-RS	+RS	GND	DC OK	RC-	RC+
-----	-----	-----	-------	-----	-----

3. Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.3 Vdc

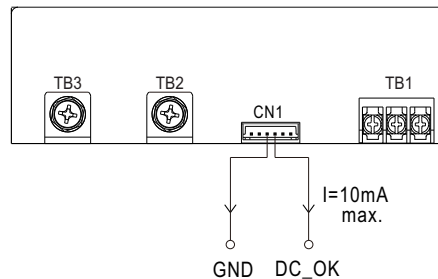


-RS	+RS	GND	DC OK	RC-	RC+
-----	-----	-----	-------	-----	-----

4. DC_OK Signal

DC_OK Signal is a TTL level signal. "High" when PSU turns on.

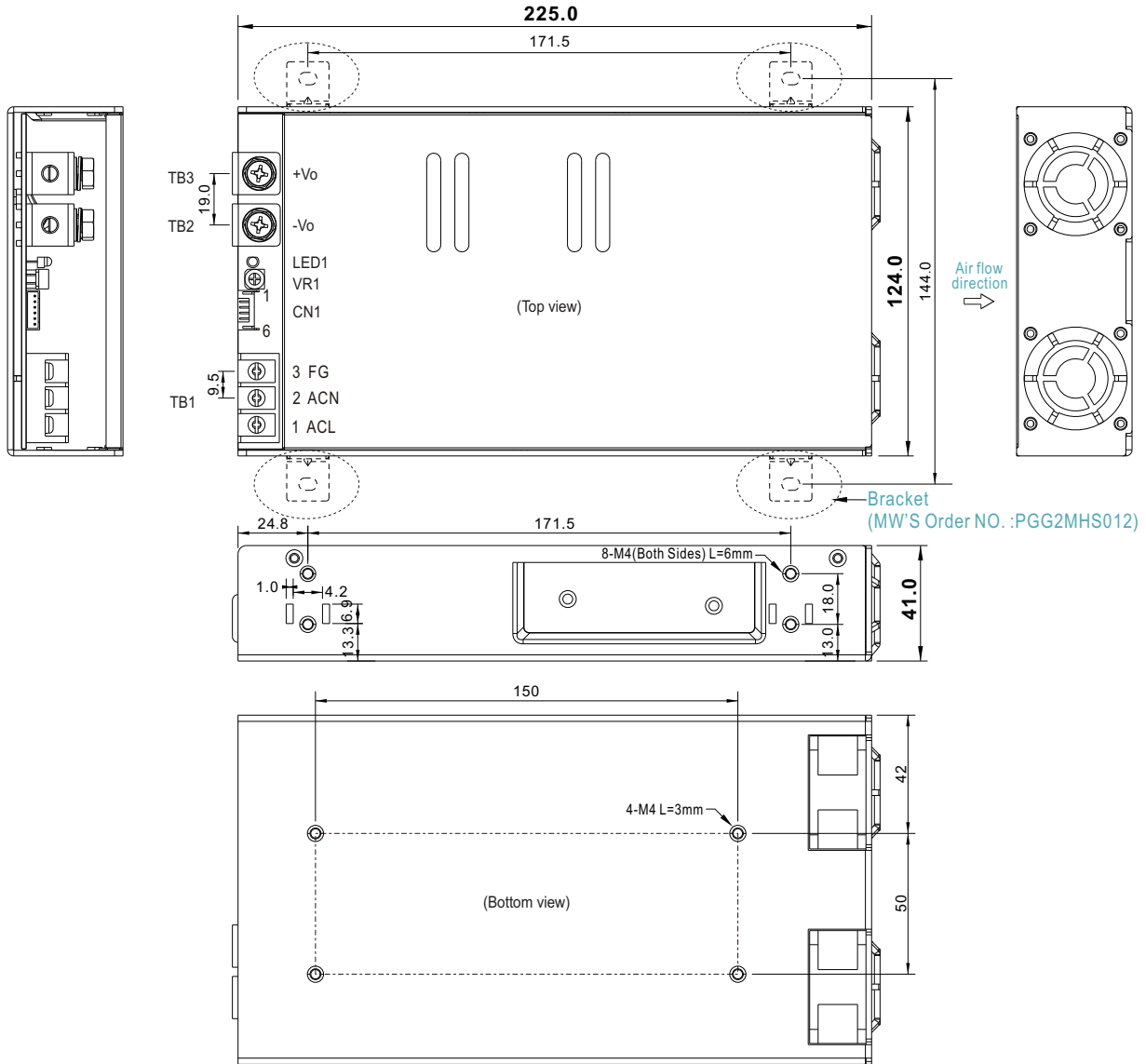
PSU Vo status	Between DC_OK(pin4) and GND(pin3)
Power ON	3.3 ~ 5.6Vdc
Power OFF	0 ~ 1Vdc



-RS	+RS	GND	DC OK	RC-	RC+
-----	-----	-----	-------	-----	-----

Mechanical Specification

Case No. 307A
Unit:mm Tolerance:±1



AC Input Terminal(TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Screw Size	Mounting torque
1	AC/L	DEGSON DG46S-B-03P-13	M3.5	8~10 Kgf-cm
2	AC/N			
3	⊥			

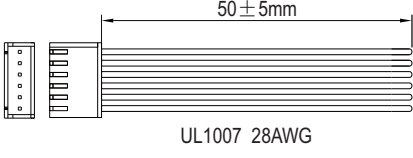
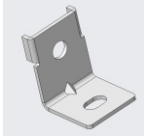
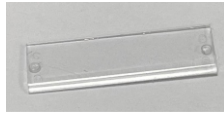
DC Output Terminal (TB2,TB3) Pin NO. Assignment

Pin No.	Assignment	Terminal	Screw Size	Mounting torque
TB2	-Vo	(MW) HS455	M5	10~12 Kgf-cm
TB3	+Vo			

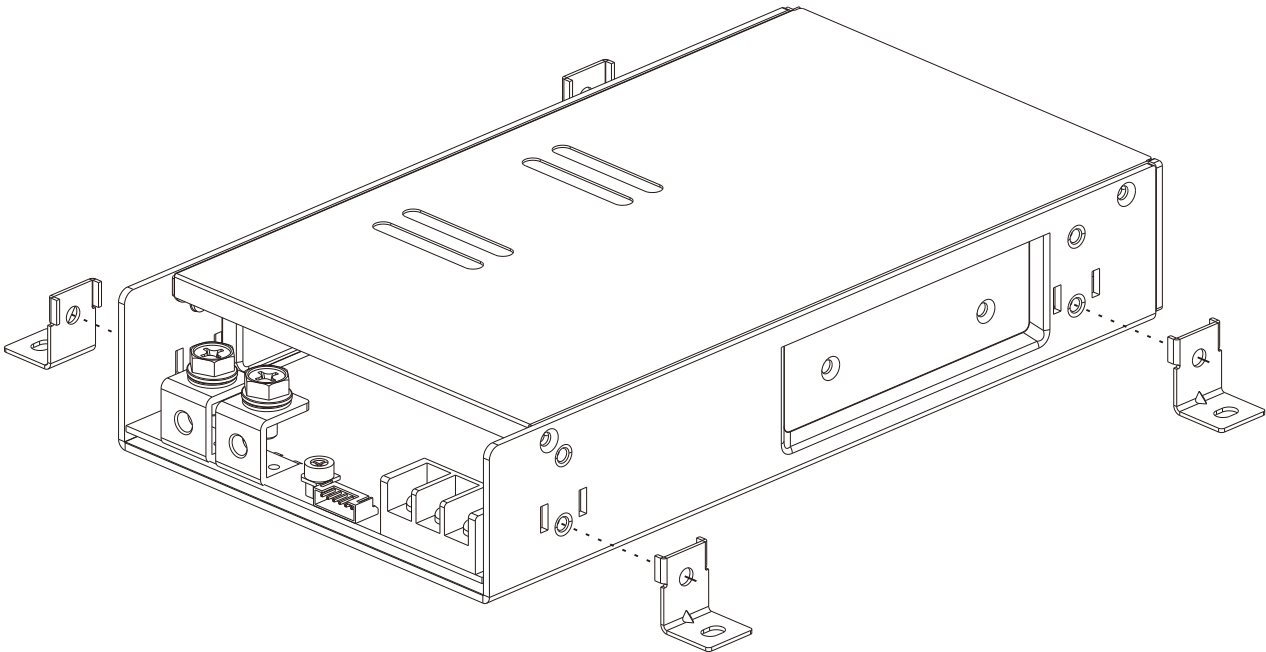
Control Pin (CN1) : DJS-9001R1-06 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	-RS	JS-1101-06 or equivalent	JS-1101-TXX or equivalent
2	+RS		
3	GND		
4	DC_OK		
5	RC-		
6	RC+		

Accessory List

No.	Item	Quantity
1	Control function interface(CN1) mating wire along with LRS-1200 (standard accessory) 	1pcs/per model
2	Bracket MW'S Order NO. :PGG2MHS012 (By request accessory,should ordered seperately) 	4pcs/per model (Please refer to Installation Diagram)
3	Terminal cover MW'S Order NO. :PEE4TBC-03 (By request accessory,should ordered seperately) 	1pcs/per model

Installation Diagram



Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>