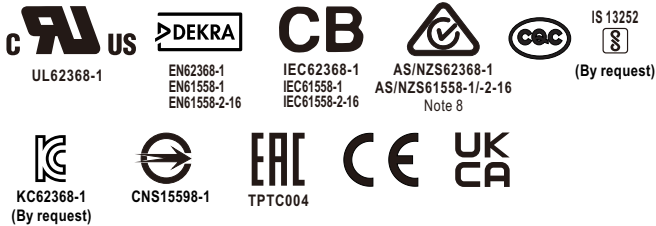




# 1200W Low Profile Economical Enclosed Type Power Supply **LRS-1200** series



## ■ 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/inch<sup>3</sup>)
- 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

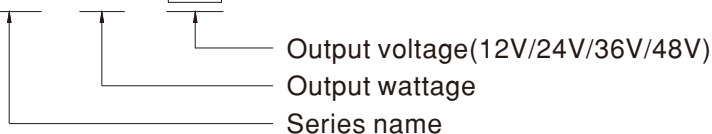
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ 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**





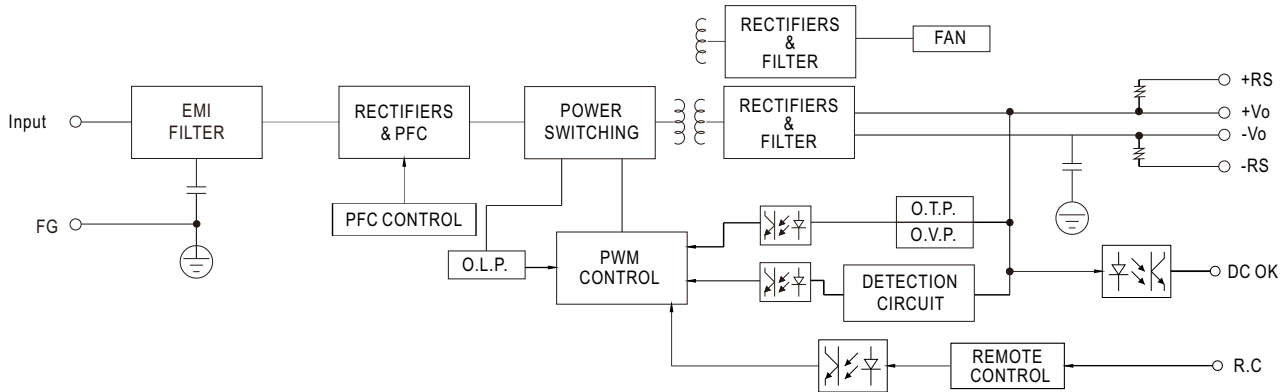
SPECIFICATION		LRS-1200-12	LRS-1200-24	LRS-1200-36	LRS-1200-48
<b>OUTPUT</b>					
DC VOLTAGE		<b>12V</b>	<b>24V</b>	<b>36V</b>	<b>48V</b>
RATED CURRENT		92A	50A	33.3A	25A
CURRENT RANGE		0 ~ 92A	0 ~ 50A	0 ~ 33.3A	0 ~ 25A
RATED POWER		1104W	1200W	1198.8W	1200W
PEAK	CURRENT(5 sec.)	138A	75A	50A	37.5A
	POWER(5 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			
<b>INPUT</b>					
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			
<b>PROTECTION</b>					
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			
<b>FUNCTION</b>					
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		
<b>ENVIRONMENT</b>					
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			



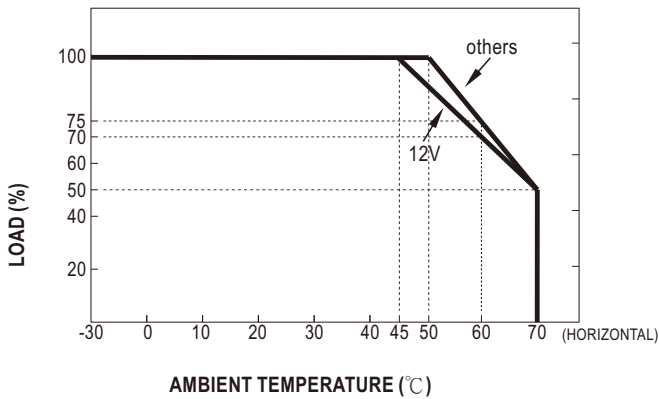
SAFETY & EMC (Note 6)																									
<b>SAFETY STANDARDS</b>	CB IEC62368-1, IEC61558-1/-2-16 UL UL62368-1 DEKRA BS EN/EN62368-1, BS EN/EN61558-1/-2-16 RCM AS/NZS 62368-1, AS/NZS 61558-1/-2-16 CQC GB 4943.1 BSMI CNS15598-1 EAC TPTC 004 approved <b>KC/BIS KC62368-1 and BIS IS 13252 (Part 1) :2010 certified,            no stock by request, contact sale for inquires</b>																								
<b>OVER VOLTAGE CATEGORY</b>	IEC/EN 61558-1/-2-16 (OVC III, altitude up to 2000M) IEC/EN/UL 62368-1 (OVC II, altitude up to 5000M)																								
<b>WITHSTAND VOLTAGE</b>	I/P-O/P:4.2KVac I/P-FG:2.1KVac O/P-FG:1.25KVac																								
<b>ISOLATION RESISTANCE</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH																								
<b>EMC EMISSION</b>	<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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<b>OTHERS</b>																									
<b>MTBF</b>	924.6K hrs min. Telcordia SR-332(Bellcore) ; 93.2K hrs min. MIL-HDBK-217F (25°C)																								
<b>DIMENSION (L*W*H)</b>	225*124*41mm (L*W*H)																								
<b>PACKING</b>	1.28Kg/9pcs/12Kg/0.81CUFT																								
<b>NOTE</b>																									
1. All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. 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. 4. Tolerance : includes set up tolerance, line regulation and load regulation. 5. Derating may be needed under low input voltages. Please refer to "Static Characteristics" sections for details. 6. 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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> ) 7. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). 8. 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 <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>																									

■ Block Diagram

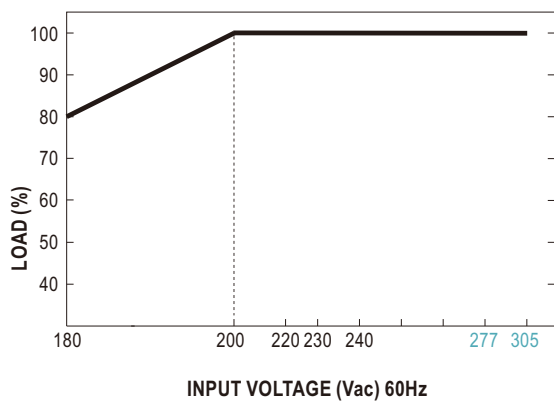
fosc : 50KHz~130KHz



■ 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)

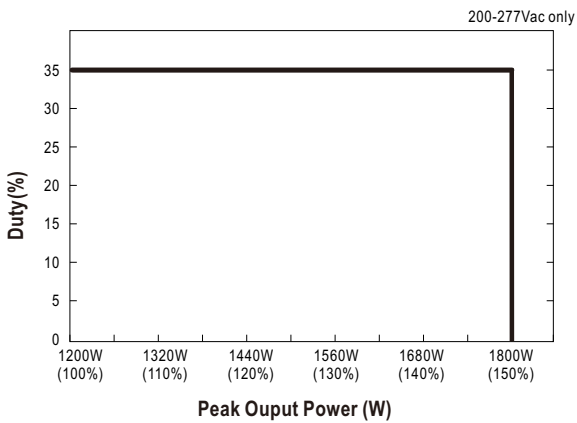
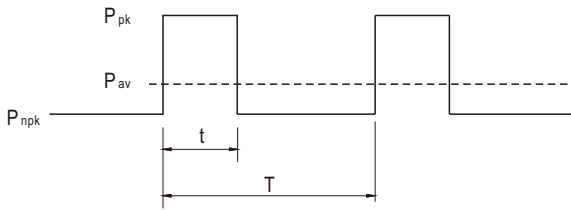
$P_{pk}$  : Peak output power (W)

$P_{npk}$  : 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%

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

$P_{pk}=1800W$

$t \leq 5sec$

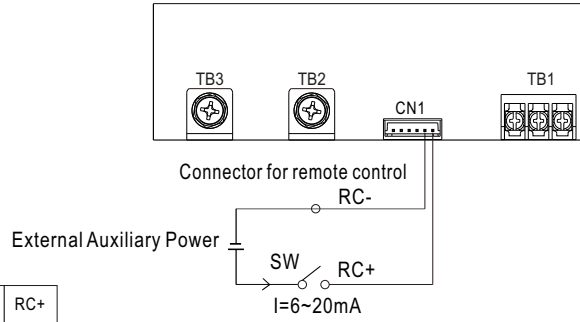
$$T \geq \frac{5sec}{10\%} = 50sec$$

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

### 2. Remote Control

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

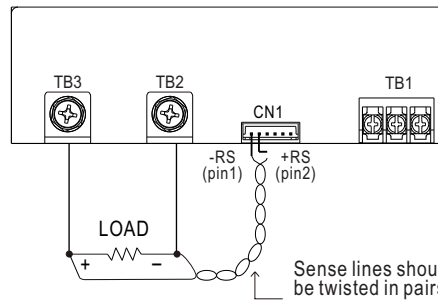
PSU Vo status	Between RC-(pin5) and RC+(pin6)
Power ON	SW open or keep 0~0.8Vdc
Power OFF	SW short or keep 3.3~10Vdc



-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

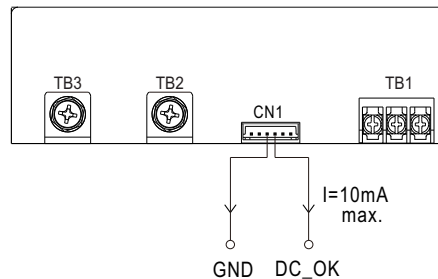


-RS	+RS	GND	DC OK	RC-	RC+
-----	-----	-----	-------	-----	-----

### 4. DC\_OK Signal

DC\_OK Signal is a TTL level signal. "High" when PSU turns on.

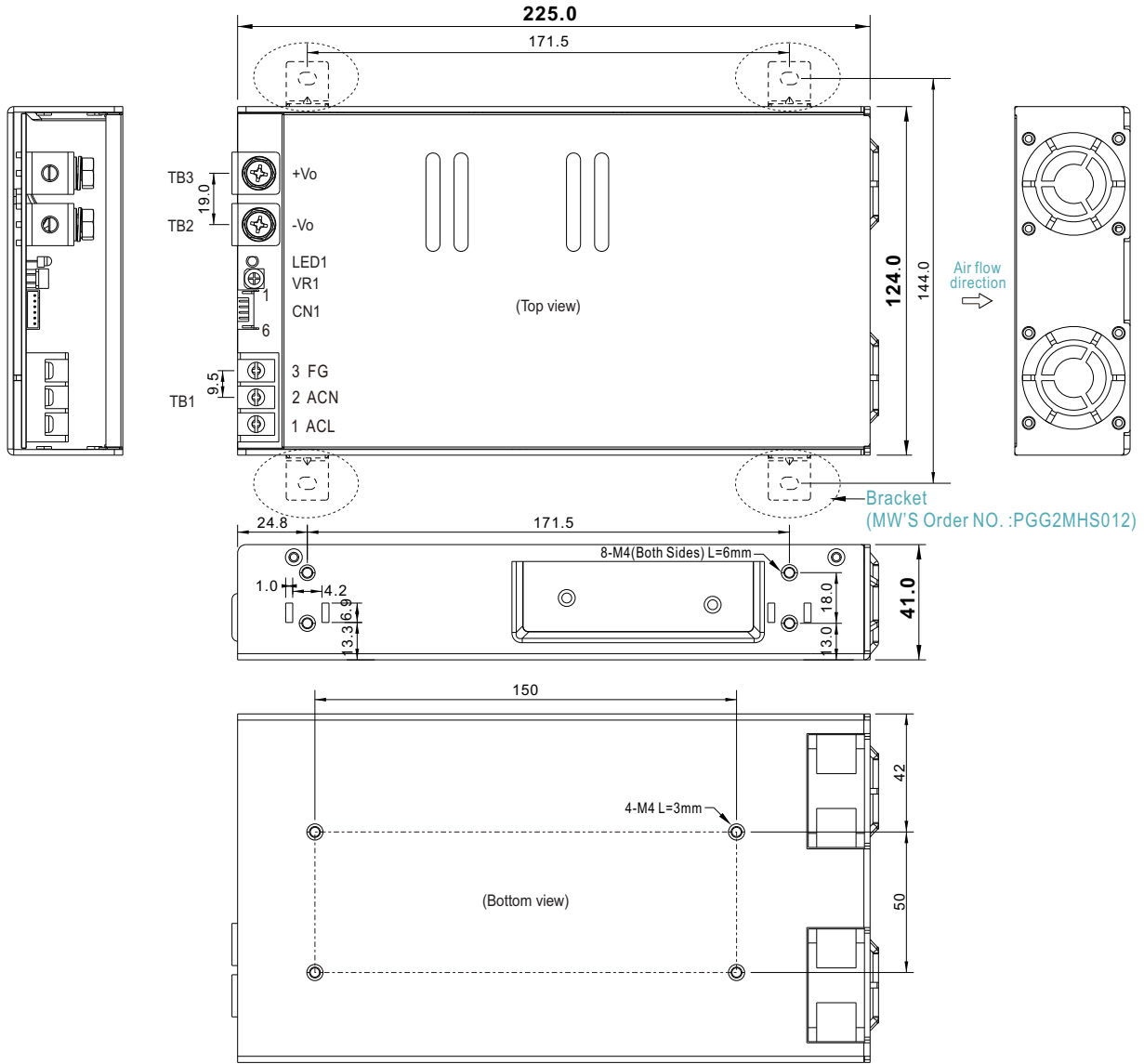
PSU Vo status	Between DC_OK(pin4) and GND(pin3)
Power ON	3.3 ~ 5.6Vdc
Power OFF	0 ~ 1Vdc



-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	⊥			

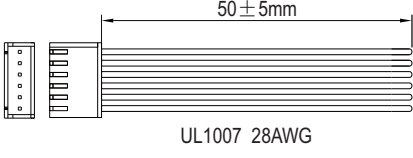
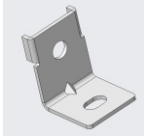
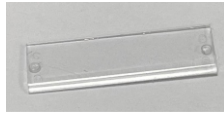
DC Output Terminal (TB2,TB3) Pin NO. Assignment

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

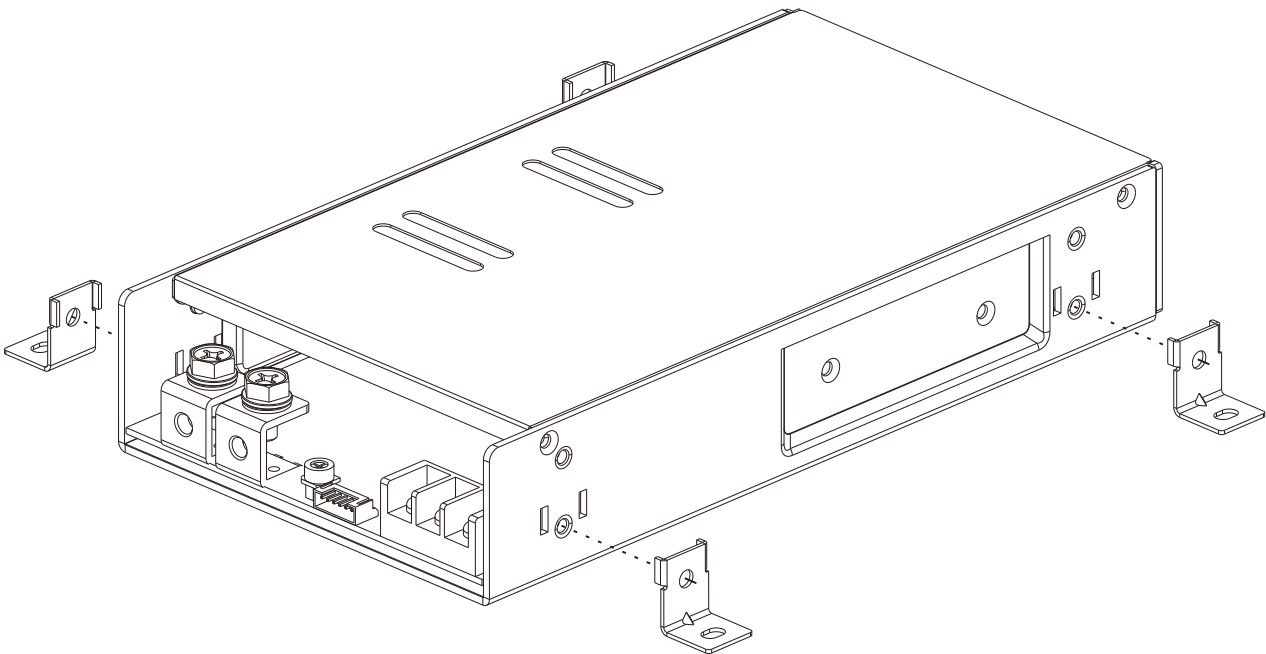
Control Pin (CN1) : DJS-9001R1-06 or equivalent

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>