



UL62368-1

ENG62368-1
ENG1558-1
ENG1558-2-16

IEC62368-1
IEC61558-1
IEC61558-2-16

AS/NZS62368-1
AS/NZS61558-1/-2-16
Note 8

IS 13252
(By request)

KC62368-1
(By request)


CNS15598-1



TPTC004



CE


UK
CA


ECO



Automate



Industrial



Security



Network



Telecom

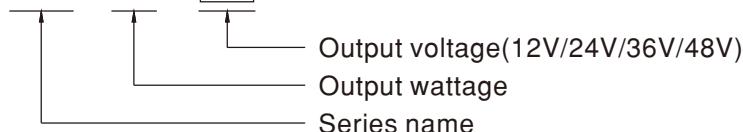
■ Features

- 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

■ 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


■ 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>



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°C	45dB									
	70% load with Ta=25°C	53dB									
ENVIRONMENT											
WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")										
WORKING HUMIDITY	20 ~ 90% RH non-condensing										
STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing										
TEMP. COEFFICIENT	±0.03%/°C (0 ~ 30°C)										
VIBRATION	10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes										

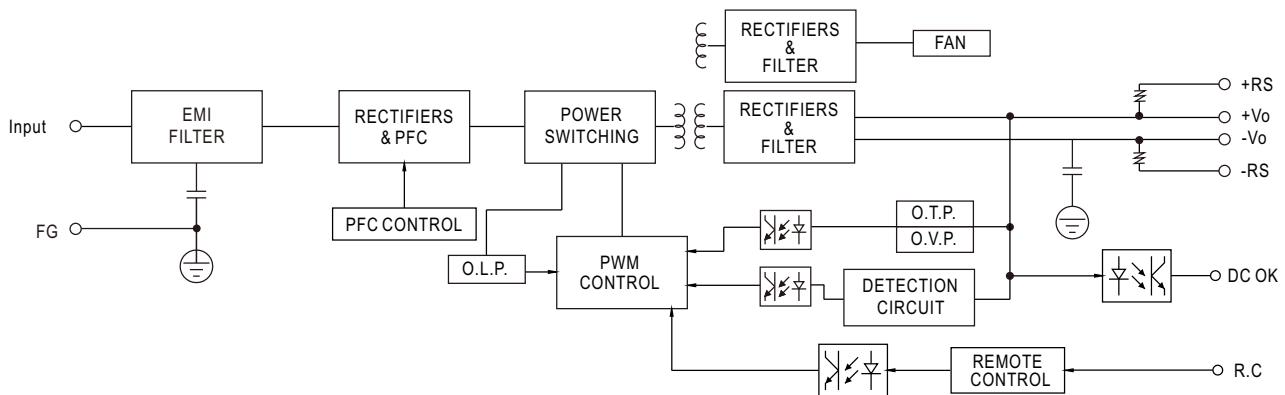


1200W Low Profile Economical Enclosed Type Power Supply **LRS-1200** series

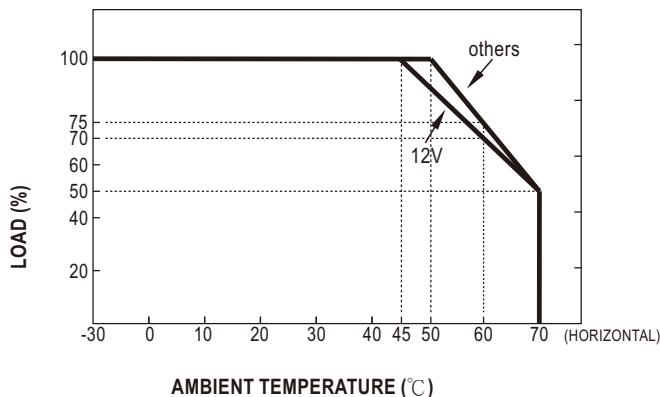
SAFETY & EMC (Note 6)						
SAFETY STANDARDS	CB IEC62368-1,IEC61558-1/-2-16 UL UL62368-1 DEKRA BS EN/EN62368-1,BS EN/EN61558-1/-2-16 RCM AS/NZS 62368-1,AS/NZS 61558-1/-2-16 CQC GB 4943.1 BSMI CNS15598-1 EAC TPTC 004 approved KC/BIS KC62368-1 and BIS IS 13252 (Part 1) :2010 certified, no stock by request, 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 500M)					
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	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	----			
EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2					
	Parameter	Standard	Test Level / Note			
	ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact			
	Radiated	BS EN/EN61000-4-3	Level 3, 10V/m			
	EFT / Burst	BS EN/EN61000-4-4	Level 3, 2KV/5KHz			
	Surge	BS EN/EN61000-4-5	Level 4, 2KV/Line-Line 4KV/Line-Earth			
	Conducted	BS EN/EN61000-4-6	Level 3, 10V			
	Magnetic Field	BS EN/EN61000-4-8	Level 4, 30A/m			
	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						
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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 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 https://www.meanwell.com/serviceDisclaimer.aspx						

■ Block Diagram

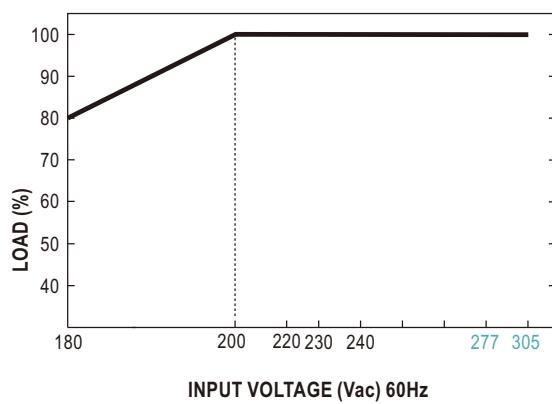
fosc : 50KHz~130KHz



■ Derating Curve



■ Static Characteristics



■ Function Manual

1. Peak Power

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

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

$t \leq 5 \text{ sec}$

P_{av} : Average output power (W)

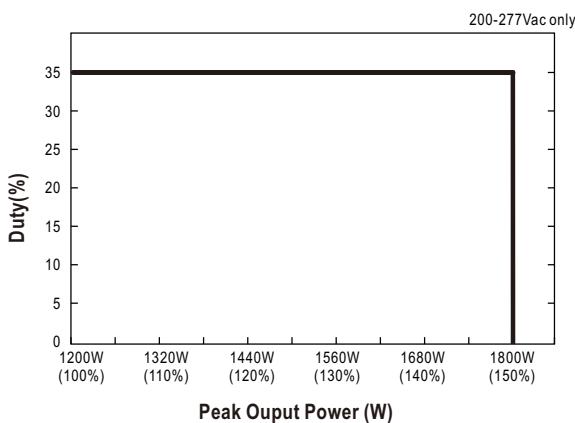
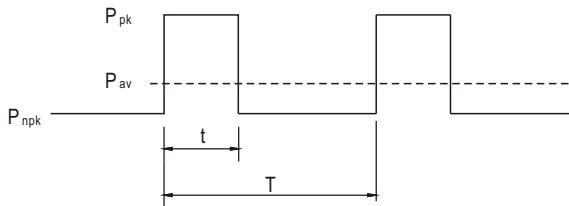
P_{pk} : Peak output power (W)

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)

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

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

$P_{pk}=1800\text{W}$

$t \leq 5\text{sec}$

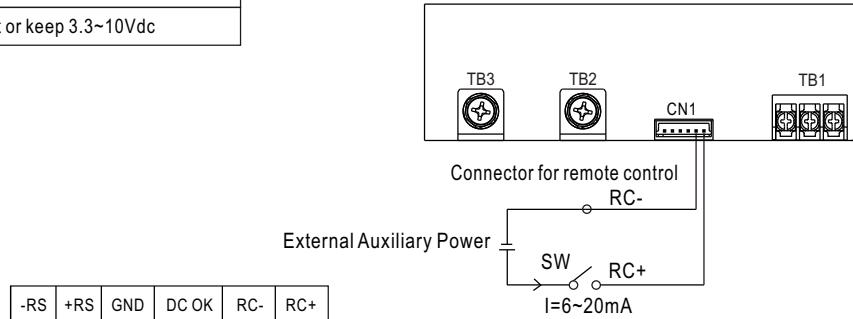
$$T \geq \frac{5\text{sec}}{10\%} = 50\text{sec}$$

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

2. Remote Control

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

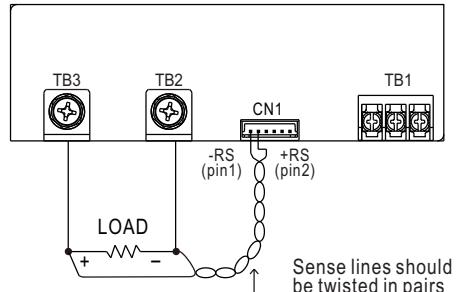
PSU Vo status	Between RC-(pin5) and RC+(pin6)
Power ON	SW open or keep 0~0.8Vdc
Power OFF	SW short or keep 3.3~10Vdc



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+
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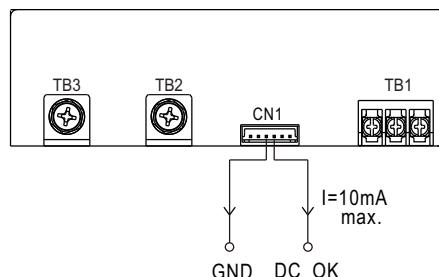


4. DC_OK Signal

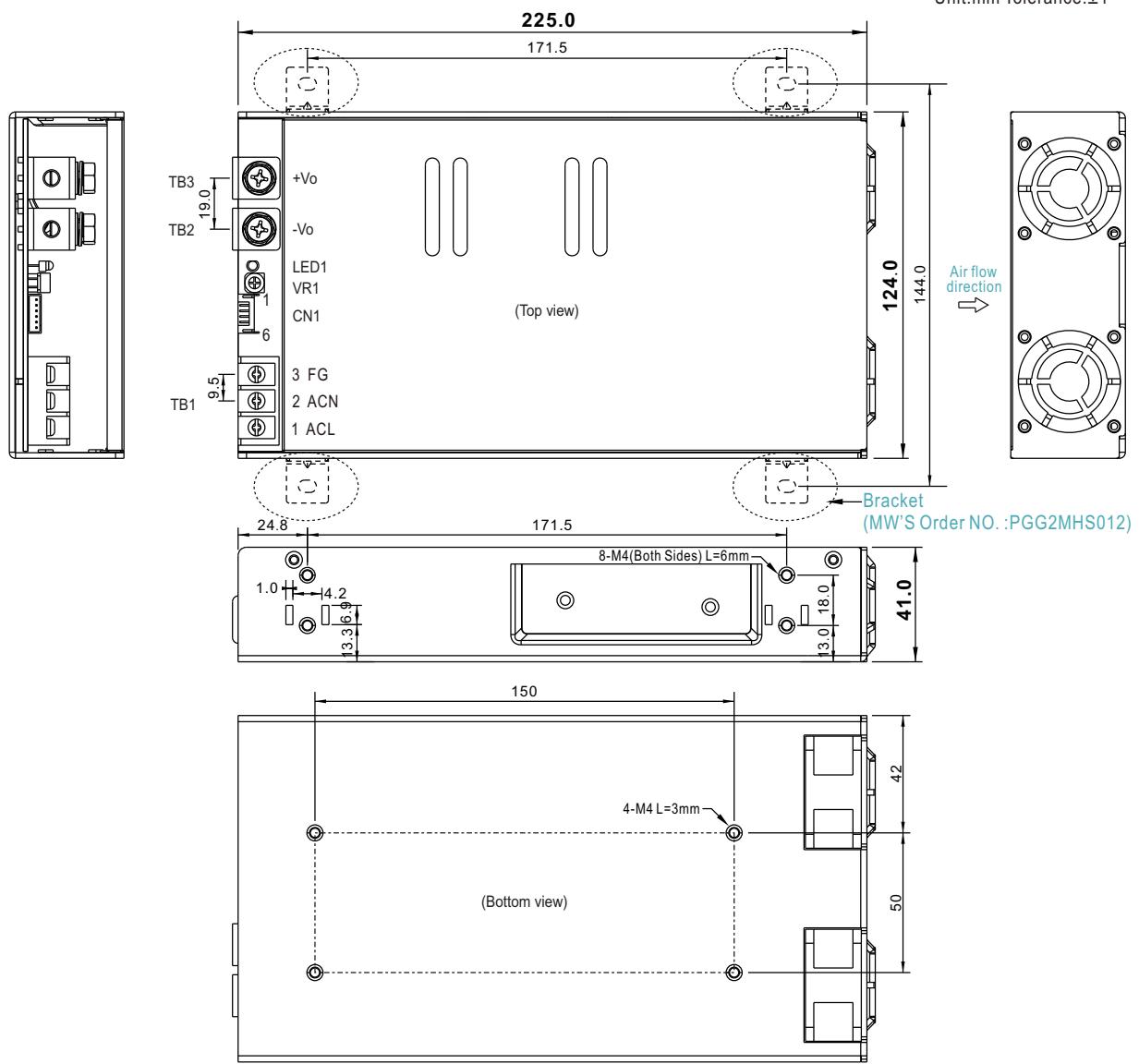
DC_OK Signal is a TTL level signal. "High" when PSU turns on.

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+
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■ 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	\pm			

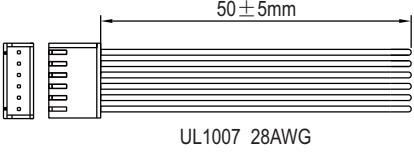
DC Output Terminal (TB2,TB3) Pin NO. Assignment

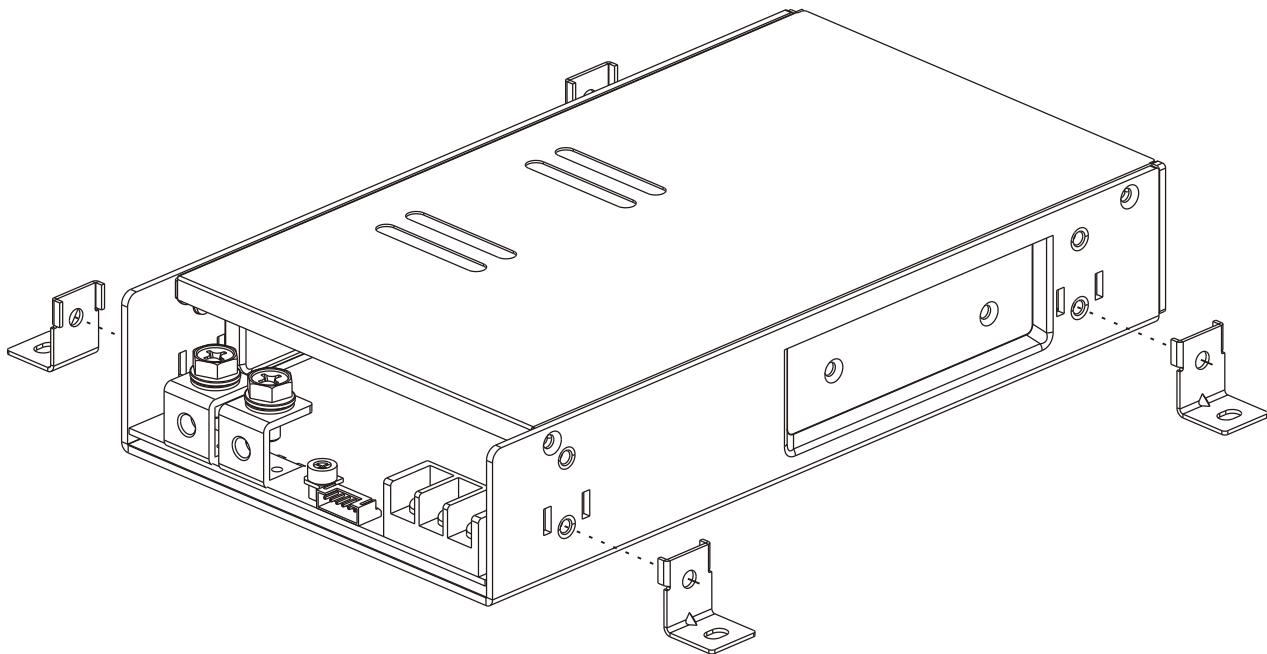
Pin No.	Assignment	Terminal	Screw Size	Mounting torque
TB2	-Vo	(MW) HS455	M5	10~12 Kgf-cm
TB3	+Vo			

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)	 UL1007 28AWG
2	Bracket MW'S Order NO. :PGG2MHS012 (By request accessory, should ordered separately)	 4pcs/per model (Please refer to Installation Diagram)
3	Terminal cover MW'S Order NO. :PEE4TBC-03 (By request accessory, should ordered separately)	 1pcs/per model

■ Installation Diagram**■ Installation Manual**

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