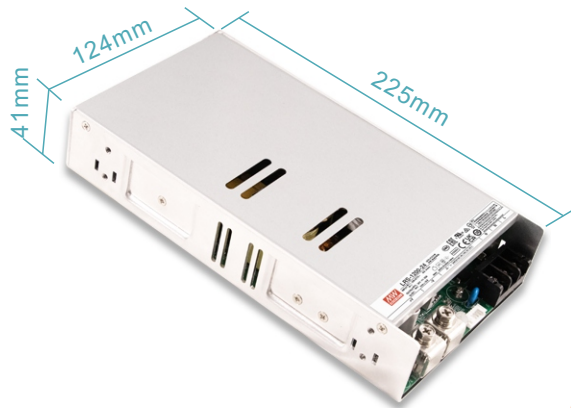
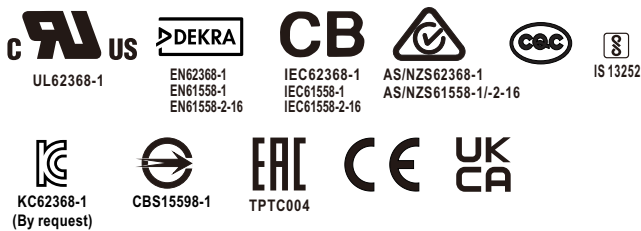




User's Manual



Features

- AC input 180~305Vac input
- Compact size with low profile(17W/inch³)
- 150% peak power @5s
- 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
- Withstand 5G vibration test
- -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 92%, with the built-in long life fan LRS-1200 can work under -30~+70°Cwith full load. LRS-1200 has the complete protection functions and 5G 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

Output voltage(12V/24V/36V/48V)
Output wattage
Series name

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>

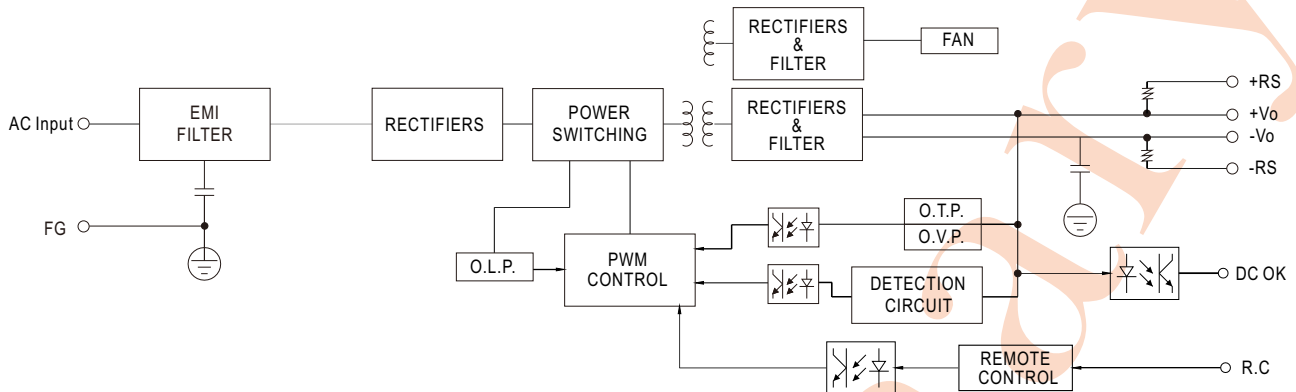
SPECIFICATION

MODEL		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, 50ms/230Vac 1500ms, 50ms/277Vac at full load				
	HOLD UP TIME (Typ.)	10ms at full load				
INPUT	VOLTAGE RANGE	Note.5	180 ~ 305Vac 255 ~ 431Vdc			
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	90%	90%	91%	92%	
	AC CURRENT (Typ.)	8A/230Vac 7A/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:3.3V ~ 5.6Vdc Power OFF: 0 ~ 1Vdc				
	FAN CONTROL(Typ.)	Built-in intelligent fan speed control detect by PSU'S internal temperature				
		10% load with Ta=25℃	50dB			
		70% load with Ta=25℃	60dB			
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, 5G 10min./1cycle, 60min. each along X, Y, Z axes				

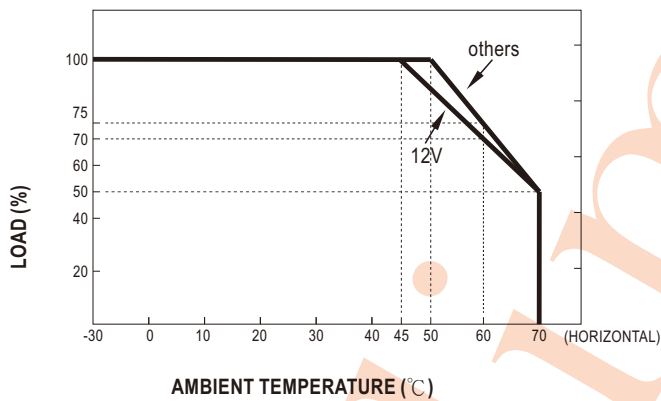
SAFETY & EMC (Note 6)	SAFETY STANDARDS		CB IEC62368-1, IEC61558-1/-2-16 UL UL62368-1 DEKRA BS EN/EN62368-1, BS EN/EN61558-1/-2-16 RCM AS/NZS 62368-1, AS/NZS 61558-1/-2-16 CQC GB 4943.1 BSMI CNS15598-1 EAC TPTC 004 approved KC KC62368-1 certified, no stock, contact sale for inquiries	
	OVER VOLTAGE CATEGORY		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	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	-----
		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
		EFT / Burst	BS EN/EN61000-4-4	Level 3
		Surge	BS EN/EN61000-6-2	2KV/Line-Line 4KV/Line-Earth
		Conducted	BS EN/EN61000-4-6	Level 3
		Magnetic Field	BS EN/EN61000-4-8	Level 4
		Voltage Dips and Interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods
OTHERS	MTBF	1533.4K hrs min. Telcordia SR-332(Bellcore) ; 301.7K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION (L*W*H)	225*124*41mm (L*W*H)		
	PACKING	0.95Kg/12pcs/12.4Kg/0.77CUFT		
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 ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx			

fosc : 50KHz~130KHz

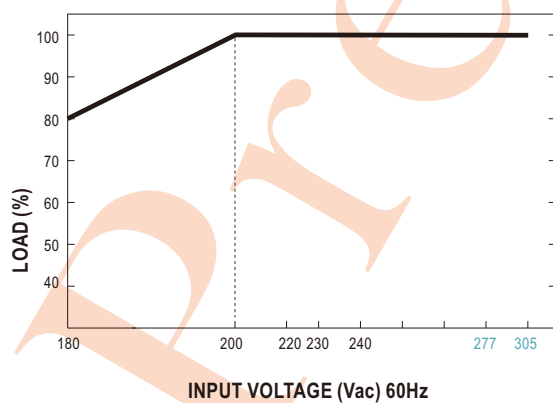
Block Diagram



Derating Curve



Static Characteristics



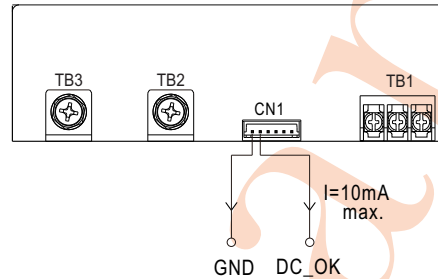
Function Manual

1. DC_OK Signal

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

PSU Vo status	Between DC_OK(pin1) and GND(pin2)
Power ON	3.3 ~ 5.6Vdc
Power OFF	0 ~ 1Vdc

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

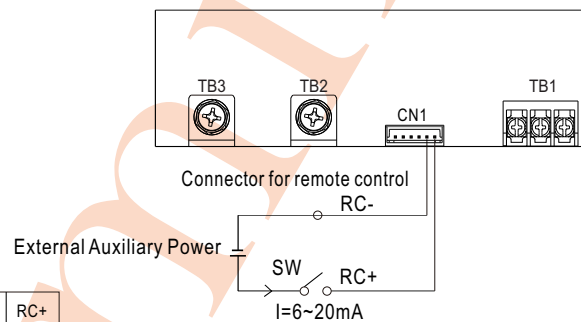


2. Remote Control

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

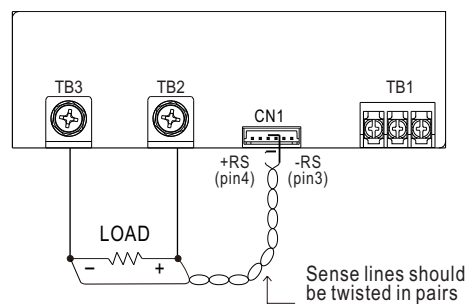
GND	DC OK	-RS	+RS	RC-	RC+
-----	-------	-----	-----	-----	-----



3. Remote Sense

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

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



4. 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)

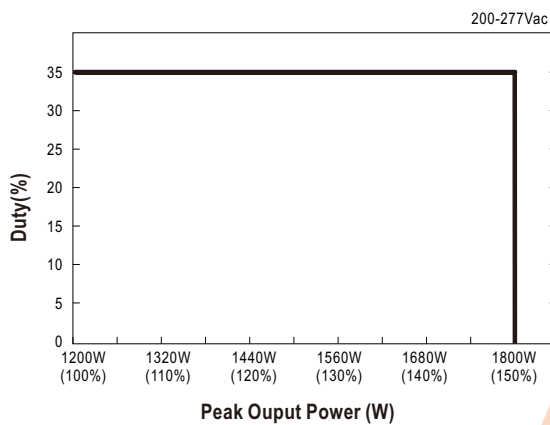
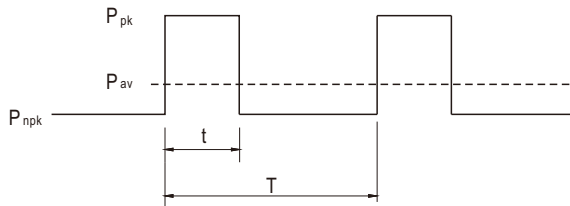
P_{pk} : Peak output power (W)

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)

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

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

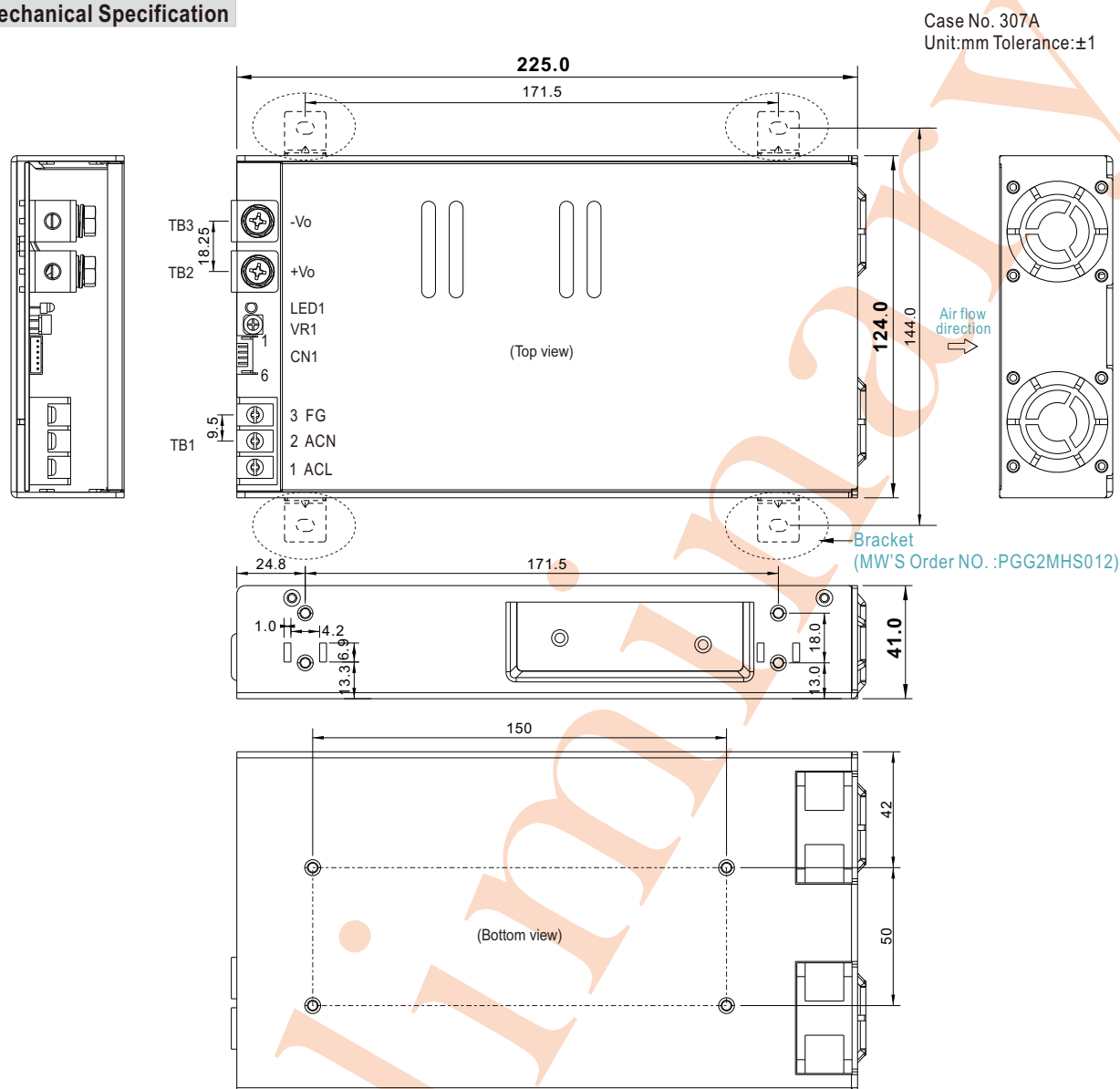
$P_{pk}=1800\text{W}$

$t \leq 5\text{sec}$

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

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

Mechanical Specification



AC Input Terminal(TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Screw Size	Max mounting torque
1	AC/L	DECA T42-ES11-03	M4	12Kgf-cm
2	AC/N			
3	⏏			

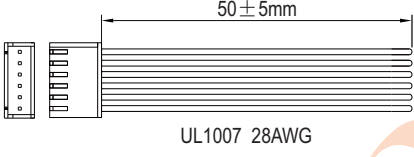
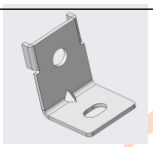
DC Output Terminal (TB2,TB3) Pin NO. Assignment

Pin No.	Assignment	Terminal	Screw Size	Max mounting torque
TB2	+Vo	(MW) HS455	M5	8Kgf-cm
TB3	-Vo			

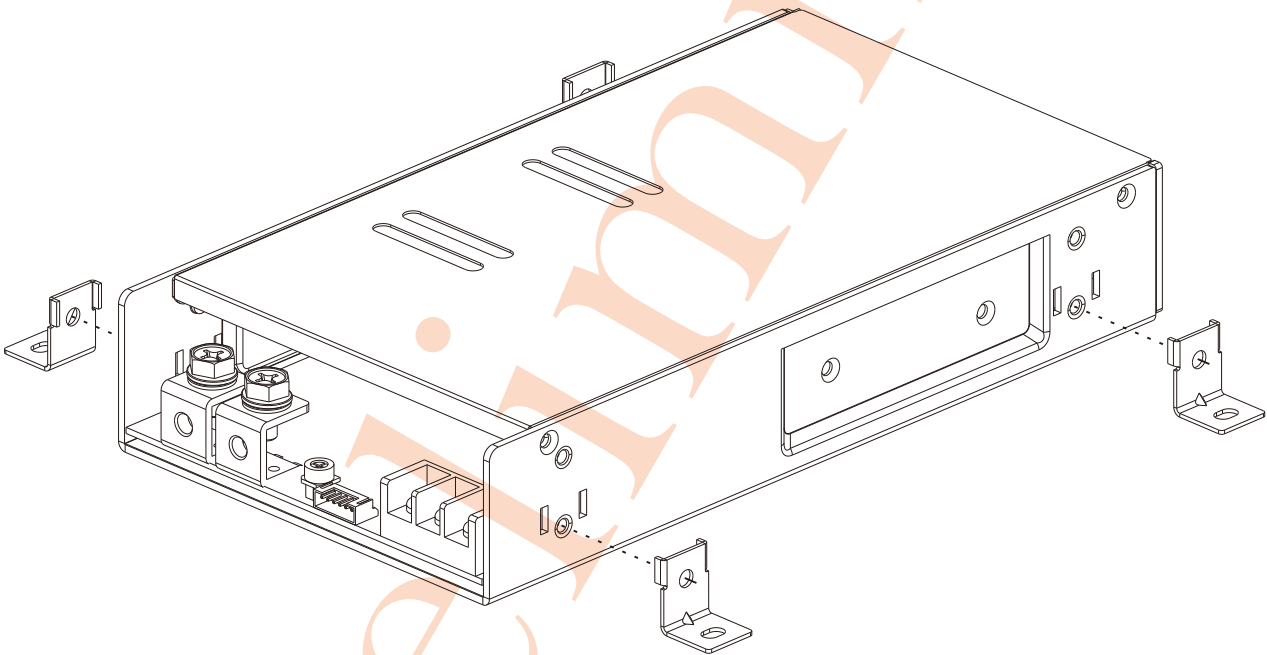
Control Pin (CN1) : JST B6B-XH or equivalent

Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	GND	4	+RS	JST XHP or equivalent	JST SXH-001T or equivalent
2	DC_OK	5	RC-		
3	-RS	6	RC+		

■ Accessory List

No.	Item		Quantity
1	Control function interface(CN1) mating wire along with LRS-1200 (standard accessory)	 50±5mm UL1007 28AWG	1pcs/per model
2	Bracket MW'S Order NO. :PGG2MHS012 (By request accessory,should ordered seperately)		4pcs/per model (Please refer to Installation Diagram)

■ Installation Diagram



■ Installation Manual

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