

CliQ^{II}

CliQ II Redundancy Module 20A 40A



Model No. DRR-20A , DRR-40A
Weight: 0.37Kg, 0.51Kg
Size: 121 mm X 50 mm X 122.1 mm (H x W x D)

Features

- RoHS Compliant
- Relay alarm indirection
- Built-in 2 channel DC OK signal
- caused by rugged handling
- Ease of wire connection to terminals
- Wide Input & Output Range 22-60 Vdc
- Full corrosion resistance aluminium chassis even with deep scratches

Description

The new Redundancy Module DRR 20A is the latest offering from one of the World's No.1 Power Supply Company. The product offers a variable input & output voltage from 22-60V, a wide temperature range from -40°C to 80°C. The state-of-the-art design is made to withstand harsh industrial environments. The rugged, compact aluminium case is shock and vibration resistant according to IEC60068-2-6. Due to the wide input & output voltage range from 22 to 60Vdc, the Delta's CliQ II Redundancy Module is able to support power supply in parallel operation. The DRR module has an alarm relay contact as an indicator.

DRR-20A

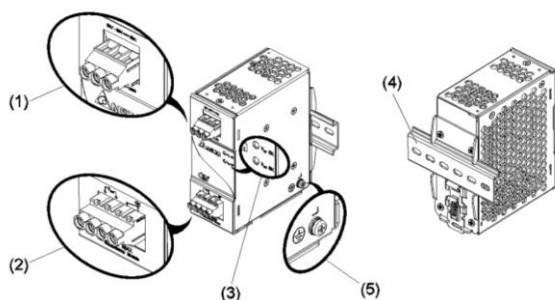


Figure 1

- 1) Input terminal block connector
- 2) Output terminal block connector
- 3) LED indicator of V in 1 & V in 2
- 4) Universal mounting rail system
- 5) Earth connection

DRR-40A

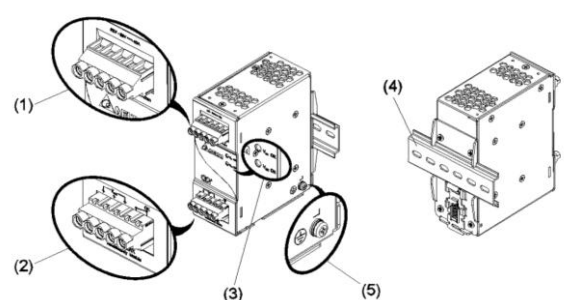


Figure 1



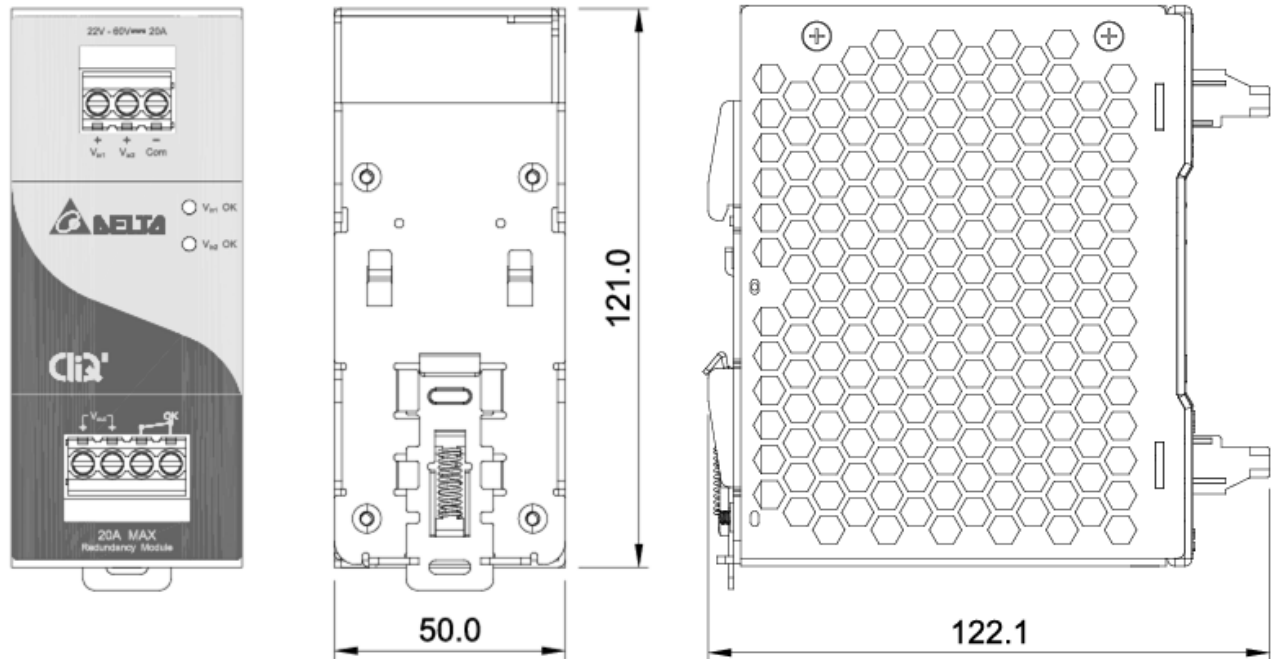
CliQ II Redundancy Module 20A 40A

Mechanical Drawing:

DRR-20A

Dimension (W x H x D) + Mounting Rail
Weight

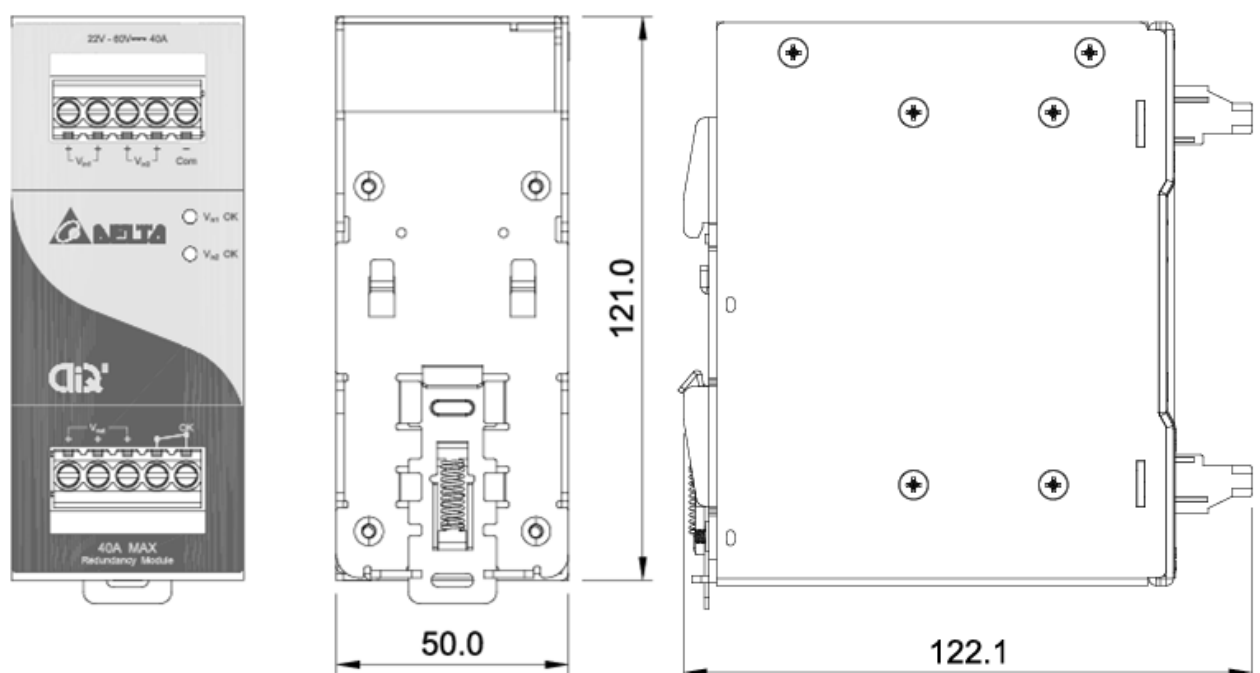
121mm x 50mm x122.1mm
0.37 Kg



DRR-40A

Dimension (W x H x D) + Mounting Rail
Weight

121mm x 50mm x122.1mm
0.51 Kg



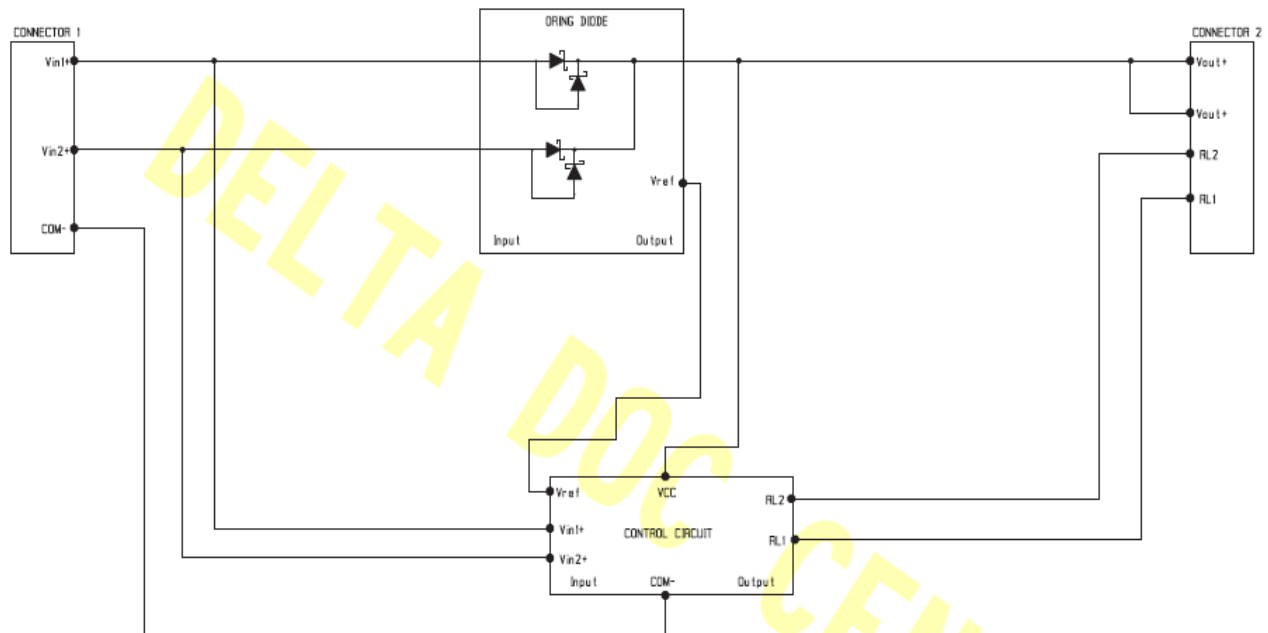


CliQ II Redundancy Module 20A 40A

Block Diagram:

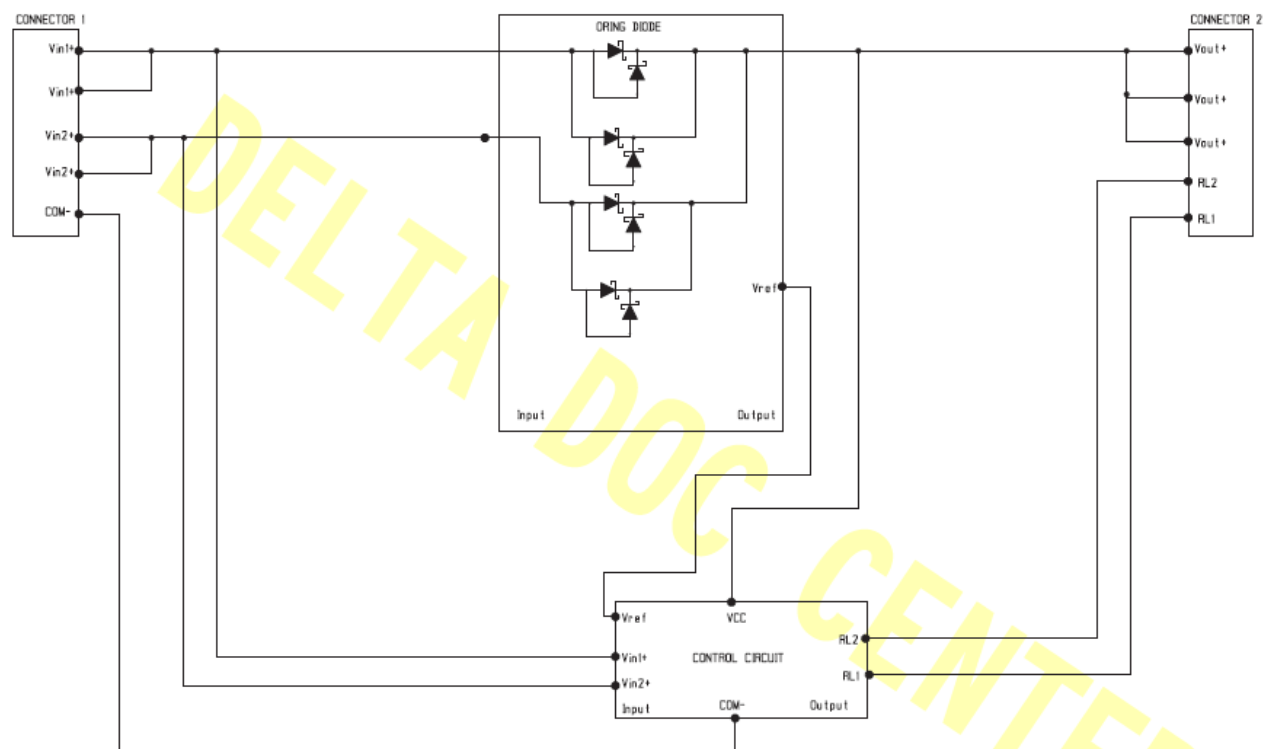
DRR-20A

Overall Block & Wiring Diagram EOE21010284

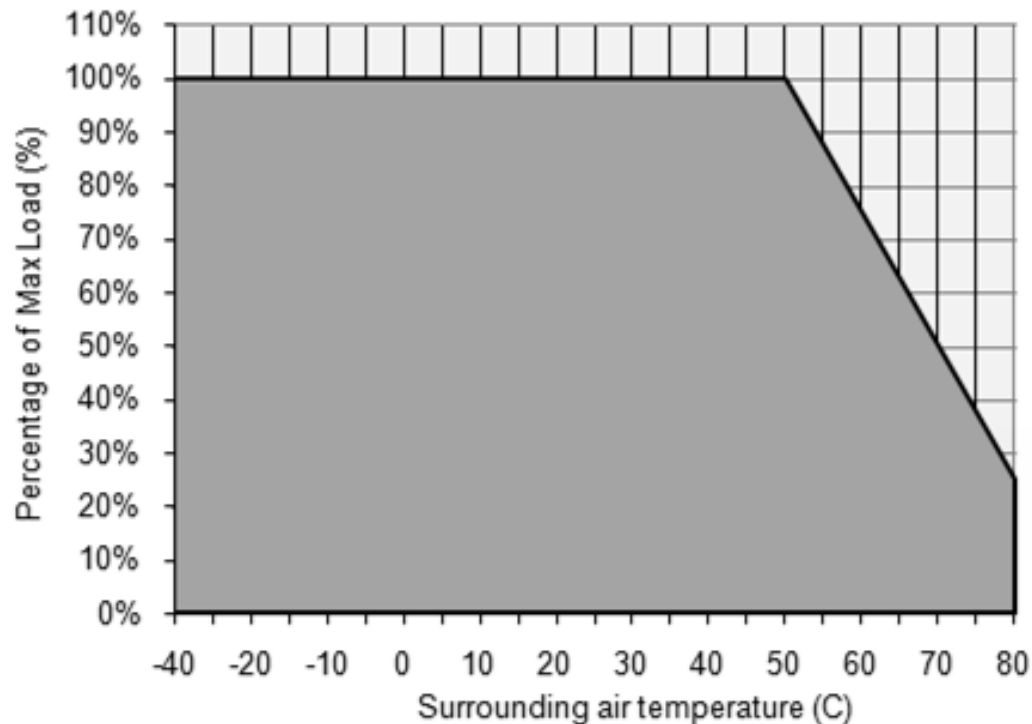


DRR-40A

Overall Block & Wiring Diagram EOE21010285



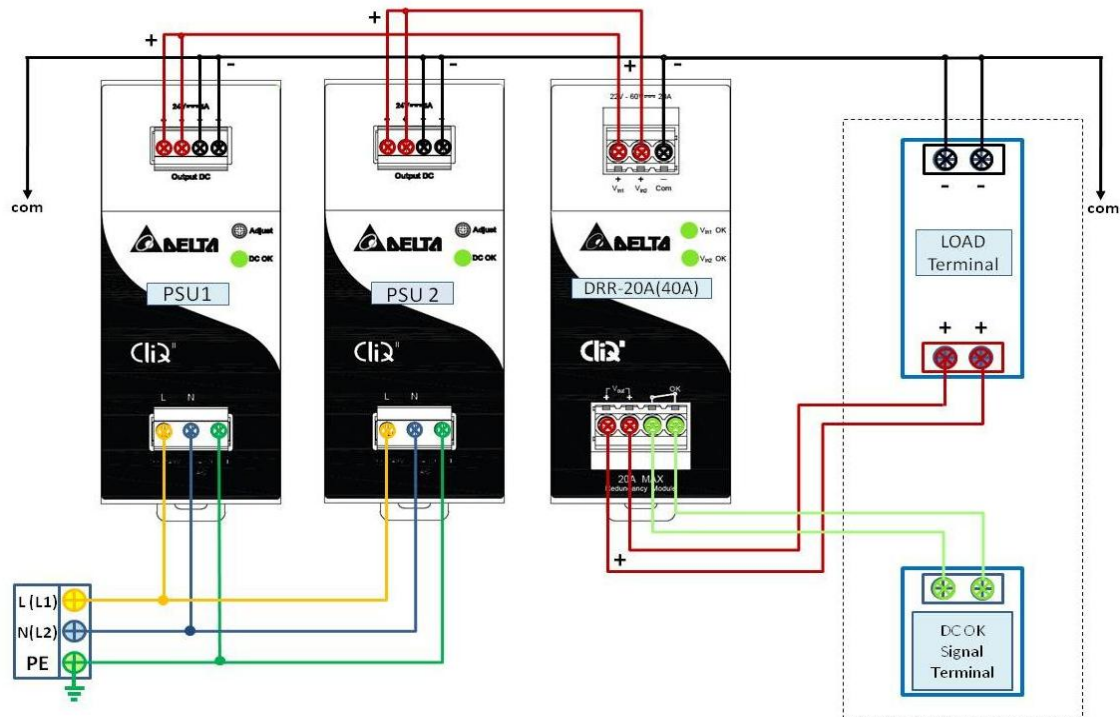
Derating Curve: Model DRR 20A, 40A



NOTE

1. Do not use the Redundancy Module in areas outside the shaded portion as shown in the above graph, internal parts may occasionally deteriorate or be damaged.
2. For the power derating refer above graph ambient temperature $> 50^{\circ}\text{C}$, the output capacity has to be reduced by 2.5% per degree Celsius increase in temperature. If the output capacity is not reduced when $\text{Amb} > 50^{\circ}\text{C}$, some device will run into thermal stress problem, the ORing diodes will get too hot.
3. If the Redundancy Module has to be mounted in any other direction please contact your service provider.
4. In order for the device to function in the manner intended, it is also necessary to observe lateral spacing of 20mm. to other modules.
5. Depending on the ambient temperature and load of the device, the temperature of the housing can become very high!

Redundancy operation with DRP 20A- (40A)



Parallel Operation

When 2 Power Supplies are connected in parallel, they can share the load if the following steps are taken.

Step1. Measure the output voltages at no load from Anode1 to Ground i.e. Voltage Anode1 to Ground of PSU1 and Voltage Anode2 to Ground of PSU2. If the voltages are not the same, follow Step 2. If they are the same, skip to Step 3.

Step2. . Adjust the output voltages, with the help of VR on the Power Supply front panel market as ADJUST, to the same level. For e.g. if PSU1 is measuring 24.15Vdc and PSU2 is measuring 24.25Vdc, adjust the output voltage of one to be the same as the other

Step3. Connect the Power Supply to the end system load and measure the output voltages from A1 to Ground i.e. Voltage Anode 1 to Ground of PSU1 and Voltage Anode 2 to Ground of PSU2. Ensure that the output voltages are the same even after the 2 Power Supplies are connected to load. If not, adjust them with the VR available on the front panel. A tolerance of +/-25mV would be acceptable.

Note

- 1) If the output voltage of any Power Supply is higher, it will take the initial load and share the maximum load.
- 2) If the output voltages are the same, then an equal load current sharing between the 2 Power Supplies can be achieved.
- 3) The ORing diode must be of an appropriate rating. The rating must be at least 4 times of the output load current and at least reverse voltage rating of 20Vrr.
- 4) The use of a heat sink is advised to ensure the ORing Diode does not overheat.
- 5) Recommended Redundancy Module: DRR-20A



CliQ II Redundancy Module 20A 40A

Redundancy Module		DRR- 20A	DRR- 40A
1.) INPUT DATA			
Nominal input voltage		24-48VDC	
Voltage range		22-60VDC	
Nominal current		20A max	40A max
Input voltage alarm / relay contacts		24V system: both Vin1 & Vin2 >18V +/- 5% or <30V max. relay contacts	48V system: both Vin1 & Vin2 >36V +/- 5% or <60V max. relay contacts
Note: The LED will turn on when The Vin1 & Vin2 > 18V +/- 5% (For 24V system) or > 36V +/- 5% (For 48V system) and not more than 30V (For 24V system) or not more than 60V (For 48V system), The relay contacts will be closed. If Vin1 & Vin2 is under or over this range, The LED will be turn off.			
2.) OUTPUT DATA			
Nominal output voltage U _N / tolerance		Vin-0.65V (Typ)	
Nominal current		20A max / 40A max	
Derating above +50 °C		> 50°C (2.5% / K.)	
Short circuit / Over Load Limit		(<25A for DRR- 20A)	(<50A for DRR- 40A)
Note: The overload condition must be controlled by The PSUs in parallel; The limit of input current would not more than 25A (For 20A module) or not more than 50A (For 60A module).			
Efficiency		> 97% typical.	
3.) CERTIFICATION / STANDARDS			
Electrical equipment of machines		IEC60204-1 (over voltage category III)	
Electrical safety (information technology equipment)		UR/cUR recognized to UL60950-1, SIQ BG to EN60950-1, CB test certificate and report to IEC60950-1 and CE.	
Industrial Control Equipment		UL/cUL recognize to UL508	
Electronic equipment for use in electrical power installations		EN50178 / IEC62103	
Safety entry low voltage		PELV (EN60204), SELV (EN60950)	
RoHS Compliant		Yes, RoHS directive, WEEE directive	
Protection against electric shock		DIN 57100-410	
4.) GENERAL DATA			
Isolation voltage:			
Input / PE	type		
test/routine test:		1.5 KVAC / 1.5 KVAC	
output / PE	type	1.5 KVAC / 1.5 KVAC	
test/routine test:			
Degree of protection		IP20	
Class of protection		Class II with PE connection	
MTBF		> 800,000hrs. as per BELL CORE STD or IEC61709	
Type of housing		Aluminium (AL1100F)	
Dimensions (W / H / D) + mounting rail		121 mm X 50 mm X 122.1 mm (L X W X H)	
Weight		0.375Kg	0.515Kg
LED (DC INPUT OK)		Vin1 OK and Vin2 OK (GREEN LED)	
5.) CLIMATIC DATA			
Ambient temperature (Operating)		- 40°C to 80°C (> 50°C derating)	
Ambient temperature (Storage)		- 40°C to 85°C	
Humidity at+25 °C, no condensation		< 95% RH	
Vibration (Non-Operating)		10Hz to 500Hz @ 30 m/S ² (3G peak); displacement of 0.35mm; 60min per axis for all X, Y, Z direction. Refer to IEC 60068-2-6. Note: all figures quoted are amplitudes (peak values)	
Shock (in all directions)		IEC60068-2-27, 30G (300m/s ²) for duration 18ms 1 Shock in 2 Directions tested with Fixture with EUT mounted on DINRAIL in Vertical and Horizontal position.	
Pollution degree		2 according to EN50178	
Climatic class		3K3 according to EN 60721	
	Conformance with EMC guideline 2004/108/EC and for low voltage guideline 2006/95/EC :	DRR-20A (EOE21010284)	DRR-40A(EOE21010285)
	EMC (electromagnetic compatibility)		
Immunity to interference : According to EN 61000-6-2		CE (EMC and Low Voltage directive)	
• EN 61000-4-2 ¹⁾ Discharge of static electricity (ESD) Housing: Contact discharge: Air Discharge:		LEVEL 4 8 KV 15 KV	
• EN 61000-4-3 ¹⁾ Radiate Field Immunity Housing: Frequency/Field intensity:		LEVEL 3 80MHz - 1GHz / 10V/M with 1kHz tone / 80% modulation	
• EN 61000-4-8 ²⁾ Power frequency magnetic fields Input: Current:		Level 3 10A/meter	
EN55011 corresponds to CISPR11 / EN55022 corresponds to CISPR22 / EM 61000 corresponds to IEC 1000			
1) Criterion A: Normal operating behavior within the defined limits.			
2) Criterion B: Temporary impairment to operational behavior that is corrected by the device itself.			
3) Symmetrical: Conductor to conductor.			
4) Asymmetrical: Conductor to ground.			
5) Class B: Area of application industry and residential.			