

### Features :

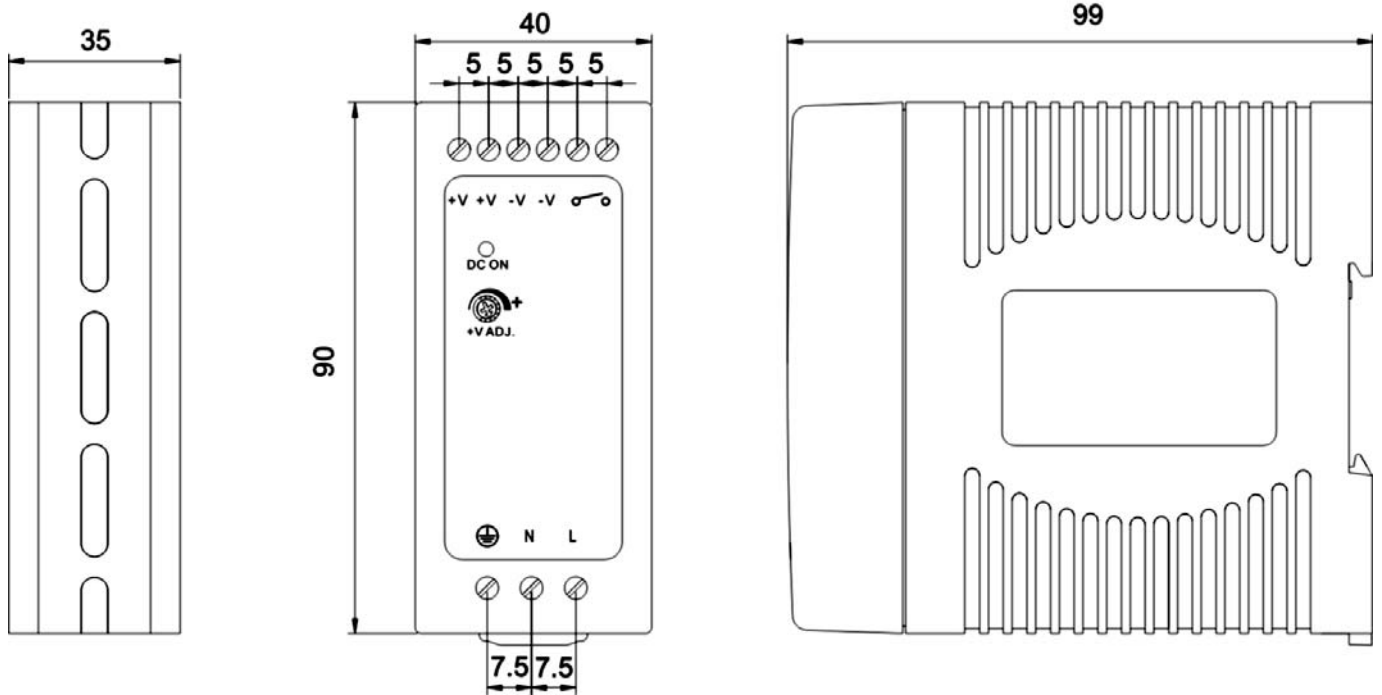
- Universal AC input 88 -- 264Vac
- Installed on DIN rail TS35 / 7.5 or 15
- Brown-out protection
- Protections : Short circuit / Over load / Over voltage
- All using 105°C long life electrolytic capacitors
- High operation temperature up to 70°C
- True DC OK relay contact.
- Withstand 5G vibration test
- High efficiency , long life and high reliability
- 3 years warranty
- UL508 ( Industrial control equipment ) listed
- UL1310 Class 2 Power unit / LPS pass



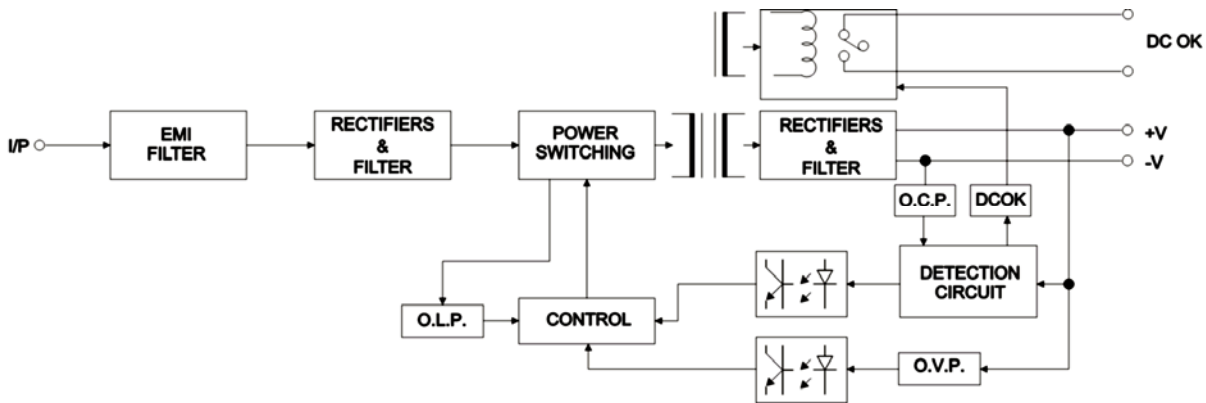
### Specification

Model	DN-60-12	DN-60-15	DN-60-24	DN-60-48	
Output	DC Voltage Range	12V	15V	24V	48V
	Rated Current	5A	4A	2.5A	1.25A
	Current Range	0~5A	0~4A	0~2.5A	0~1.25A
	Rated Power	60W	60W	60W	60W
	Ripple & Noise (max.) <small>Note.2</small>	100mVp-p	100mVp-p	120mVp-p	180mVp-p
	Voltage Adj. Range	10.8~13.2V	13.5 ~ 16.5V	21.6~26.4V	43.2~52.8V
	Voltage Tolerance <small>Note.3</small>	±1.0%	±1.0%	±1.0%	±1.0%
	Line Regulation	±1%	±1%	±1%	±1%
	Load Regulation	±1%	±1%	±1%	±1%
	Setup, Rise Time	<800ms, <50ms / 230Vac at full load			
Hold Up Time (Typ.)	>32ms / 230Vac, >16ms / 115Vac at full load				
Input	Voltage Range <small>Note.4</small>	88 ~ 264VAC 124 ~ 370VDC			
	Frequency Range	47 ~ 63Hz			
	Efficiency (Typ.)	86%	87%	87%	88%
	AC Current (Typ.)	1.3A/115VAC 0.6A/230VAC			
	Inrush Current (Typ.)	COLD START 30A/115VAC 60A/230VAC			
	Leakage Current	<1mA / 230VAC			
Protection	Over Load	>102% rated output power Protection type : constant current limiting , automatically after fault condition is removed			
	Over Voltage	115%~150% rated output voltage Protection type : latch-off mode			
Environment	Working Temp.	-20 ~ +70°C (Refer to output load de-rating curve)			
	Working Humidity	20 ~ 90% R.H non-condensing			
	Storage Temp., Humidity	-40 ~ +85°C, 10 ~95% R.H			
	Temp. Coefficient	± 0.03%/°C (0 ~ 50°C)			
	Vibration	10 ~ 500Hz, 5G 0.5Oct/min, period for 60min. Each along X,Y,Z axes			
Safety & EMC <small>Note. 5</small>	Safety Standards	UL 508, TUV EN60950-1, UL1310 NEC class 2 compliant			
	Withstand Voltage	I/P - O/P:4242 DC , I/P - FG:2121 DC 1 minute			
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100MΩ / 500VDC			
	EMI Conduction & Radiation	EN55022 : 2006(Class B), EN61204-3: 2000, EN61000-6-3: 2007			
	Harmonic Current	EN61000-3-2,3 :2006			
EMS Immunity	EN55024, EN61204-3: 2000, EN61000-6-1: 2007 (EN61000-4-2,3,4,5,6,8,11)				
Other	DC OK signal	Relay contact (24VDC / 1A , 120VAC / 1A)			
	Connection	I/P 3 poles, O/P : 6 poles screw DIN terminal			
	Cooling	Free Air convection			
	Dimension (W*H*D)	40*90*99mm			
	Packing	0.3Kg			
Note	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance: includes set up tolerance, line regulation and load regulation.</li> <li>4. De-rating may be needed under low input voltages. Please check the de-rating curve for more details.</li> <li>5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>6. In parallel connection, maybe only one unit operate if the total output load is less than 5% of rated load condition.</li> </ol>				

### ■ Mechanical Specification



### ■ Block Diagram



### ■ DC OK Relay Contact

Contact Close	When the output voltage reaches the adjusted output voltage
Contact Open	When the output voltage drop below 90% output voltage
Contact Ratings (max.)	30V / 1A resistive load

### ■ De-rating Curve

