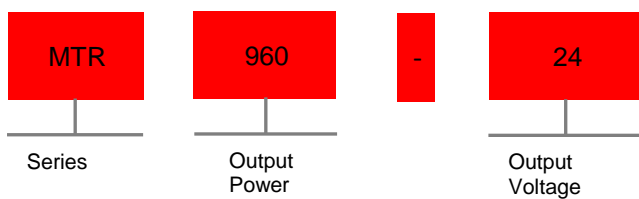


MTR960-□ Series**▲ Features**

- 340 ~ 550V 3-phase wide range input(2-phase input is possible)
- Width only 110mm
- Built-in active PFC function compliance to EN61000-3-2
- High efficiency 94.5% and low power dissipation
- Protetions: Short-circuit/Overload/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Install on DIN rail TS-35/7.5 or 15
- Paralell installation. Current sharing up to 3840W (3+1)
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

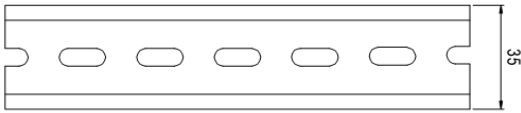
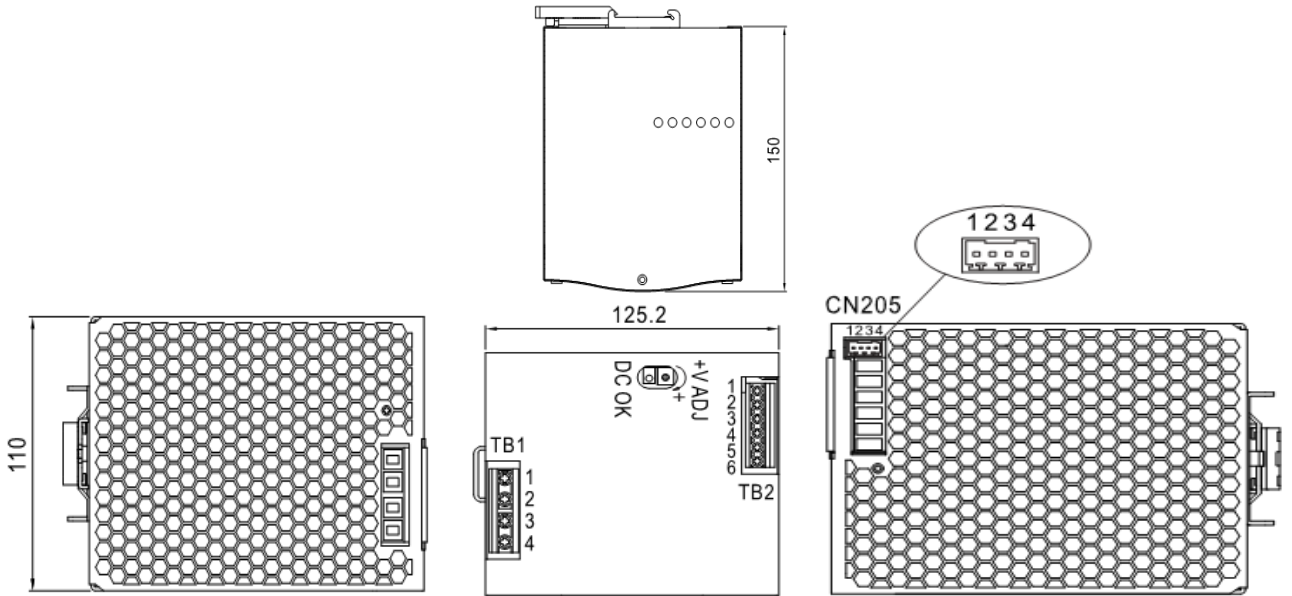
▲ Model Encoding

Specification

Input		
Input Voltage *4	3-phase 340~550VAC(2-phase is possible) / 480~780VDC	
Input Current (Typ)	2A/400VAC 1.4A/500VAC	
Input Frequency (Typ)	47-63Hz	
Inrush Current (Typ)	Cold start 60A	
Leakage Current	< 3.5mA/530VAC	
Output		
DC Voltage (V)	24V	48V
Rated Current (A)	40A	20A
Current Range (A)	0-40A	0-20A
Rated Power (W)	960W	960W
Ripple & Noise (Max.) *	180mVp-p	250mVp-p
Voltage ADJ Range	24-28V	48-55V
Voltage Tolerance *3	±1%	±1%
Line Regulation	±0.5%	±0.5%
Load Regulation	±1%	±1%
Efficiency (Typ)	94%	94.5%
Start Rise Time	1000ms 100ms/400VAC ; 800ms 100ms/500VAC(Full load)	
Hold Up Time (Typ)	12ms/400VAC 14ms/500VAC(Full load)	
Status Indicator	Green	
Protections		
Overload	105%-130% of rated output power	
	Protection type:Constant current limiting, shut down after 3s, recover when restarting	
Over Voltage (V)	29-33V	56-65V
	Protection type: Shut down output voltage, recover when restarting	
Over temperature	Shut down output voltage, recover automatically after temperature goes down	
DC OK Output Capacity	60Vdc/0.3A,30Vdc/1A,30Vac/0.5A (Resistive Load)	
Current sharing	Refer to function description	
Safety & EMC		
Dielectric strength	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC	
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500VDC/25°C/70%RH	
Safety standards	UL508	
EMC emission	EN55032 (CISPR32), EN61204-3 ClassB,EN61000-3-2,-3	
EMC immunity	EN61000-4-2,3,4,5,6,8,11,EN55024,EN61000-6-2(EN50082-2), EN61204-3, Heavy industrial level, criteria:A	
Environment		
Working temperature *5	- 30 ~ +70 °C (Refer to derateing curve)	
Storage Temp./Humidity	- 40 ~ +85°C, 10 ~ 95%RH	
Working Humidity	20 ~ 95%RH, Without condensing	
Temp. Coefficient	±0.03%/°C(0-50°C)	
Vibration	10-500Hz,2G 10Min/1 cycle, each along X,Y,Z axes 60min; Installation: compliance to IEC60068-2-6	
Others		
MTBF	≥59.4Khrs MIL-HDBK-217F(25°C)	
Protection class	IP20	
Weight	~2.47kg	
Dimenson	110*125.2*150mm(W*H*D)	
Ordering	Description	Models
	MTR 960W 40A/24V	MTR960-24
	MTR 960W 20A/48V	MTR960-48

Installation instruction

Unit: mm



Control Pin(CN205):DINKLEECH250R-04P or equivalent

Pin No.	Assignment	Mating connector	Wire diameter
1	P-(Current Share)	DINKLE ESC250V-04P or equivalent	0.081 ~ 0.517mm ² (28 ~ 20AWG)
2	P+(Current Share)		
3,4	DC OK Relay Contact		

Pin No. assignment(TB1)

Pin No.	Assignment
1	PG Ⓧ
2	AC/L3
3	AC/L2
4	AC/L1

Pin No. assignment(TB2)

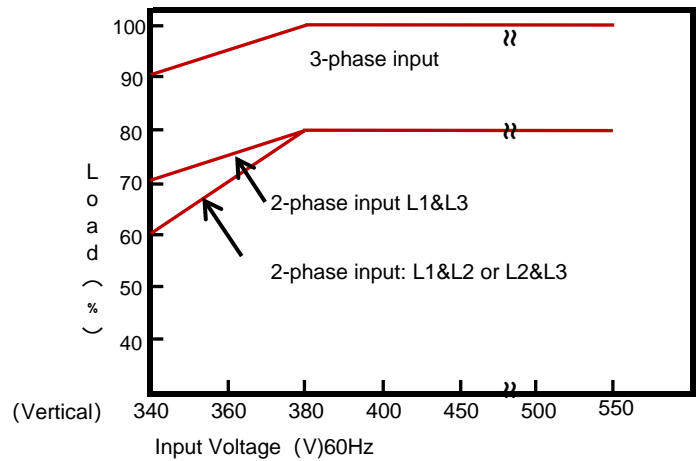
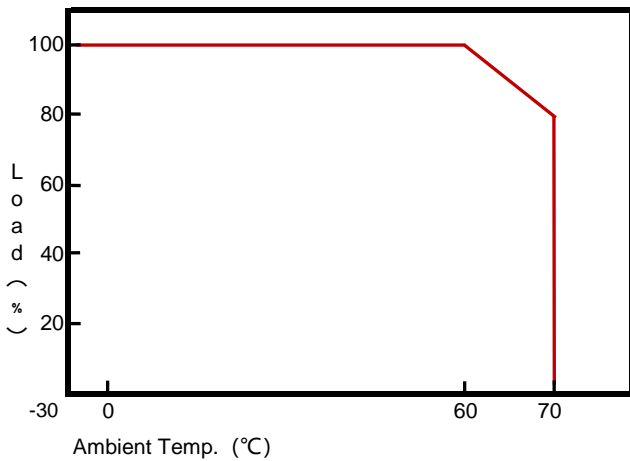
Pin No.	Assignment
1,2,3	DC OUTPUT + V
4,5,6	DC OUTPUT - V

DC OK Relay contact

Contact close	Power ON /DC OK
Contact Open	Power Off/DC fail
Contact rating(Max.)	30V/1A Resistive Load

Derating Curve

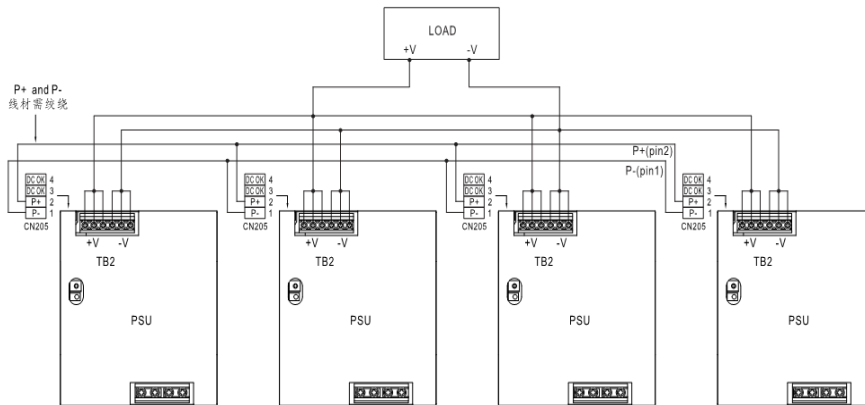
Ta=25°C



Function description

Current sharing

- 1.Paralell operation is available by connecting units as shown below (P+,P- are connected mutially in paralell)
- 2.Difference of output voltage among the paralell units should be less than 0.2V
- 3.The total output current must not exceed the value determined by the following equitation
(Output current of the paralell units)=(Rated output current per unit)x(Numbers of the units)x0.9
- 4.Max. number of the paralell units are 4 units. Please contact with manufacturer if more than 4 units
- 5.The power supplies should be paralelled using short and large wire and then connect to load
- 6.The Min. output load must be more than 5% of the total output load when paralell operation
(Min. load > Rated output current per unit x 5%xNumbers of units)
- 7.In paralell operation, maybe only one unit (master) operate if the output load is less than 5% of the total output , the orther unit will be in standby and the DC OK relay and output LEDs will turn off
- 8.Slight noise will be heard when operating in light load under the paralell condition. It's nomal and will not affect the performance



Notice:

- 1.All parameters without specially mention are measured at 400VAC 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.Tolerance:includes set up tolerance,line regulation and load regulation.
4. 2-phase operation is allowed under certain derating to output load. Please refer to Derating Curve for details
5. Installation clearance: 40mm on top,20mm on bottom, 5mm on left and right side are recommended when loaded permanently with full power, in case the adjacent device is a heat source, 15mm clearance is recommended.
- 6.The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).