

UNIT CODE	DESCRIPTION
C-TDR 960-24	Three Phase 960 Watt, 24V, Single Output, Compact DIN RAIL Power Supply with PFC and Parallel Function

SPECIFICATIONS		
AC Input	Output	Approvals
Three-Phase (340~550VAC Input Range)	+24VDC @ 0~40A	Parallel PFC UL CB CE

Features at a Glance:

Three-Phase 340 ~ 550VAC
(Dual phase operation possible) 480 ~ 780VDC

Current sharing up to 3840W (3+1)

High efficiency 94% and low power dissipation

Built-in: active PFC function, PF>0.94, Constant current limiting circuit, DC OK relay contact (alarm), Front panel DC voltage adjustment (100~115%), LED indicator for power ON

Wide operational temperature range -30 ~ +70°C
Slim 110mm Installed on DIN rail TS35 / 7.5 or 15

Protections: Short circuit / Over load /
Over voltage / Over temperature

Quiet - Cooling by natural (free air) convection

100% full load burn-in test & 3 year warranty

Safety standards & EMC: UL508 approved,
IEC60950-1 CB approved by SIQ
N61000-6-2 (EN50082-2) industrial immunity level

Certificates: UL / CB / CE

MTBF hours: 59.4K hrs. MIL-HDBK-217F (25°C)

Case: 214A

Weight: 5.4 Lbs. (2.47 Kgs)

Dimensions: 4.3" W x 4.9" H x 5.9" D
110 x 125.2 x 150mm (W*H*D)



The C-TDR-960 series is a three phase industrial DIN rail power supply with built-in PFC function, a compact design (110mm wide), high efficiency (94%) and parallel function.

C-TDR960 features a 340~550VAC input range and can be used in general three phase power systems. It can be operated at the full load of 960W at up ambient temperatures up +50°C (or up to +70°C with some derating). With an overload protection function designed as constant current limiting and delay shutdown, C-TDR-960 can be used in all kinds of critical loading conditions, such as inductive or capacitive loads. Functions include DC OK relay contact alarm signal output, parallel function (up to 4 units), as well as protections for short-circuit, overload, over voltage, and over temperature.

Suitable applications include include industrial control systems, semi-conductor fabrication equipment, factory automation, electro-mechanical applications, and any installations with requirements for fan-less or low noise operation.

Pricing	1-9	\$ 659.00
	10+	\$ 627.50
	25+	\$ 599.00

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■ Features :

- Three-Phase 340 ~ 550VAC wide range input (Dual phase operation possible)
- Width only 110mm
- Built-in active PFC function compliance to EN61000-3-2
- High efficiency 94.5% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Current sharing up to 3840W(3+1)
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty

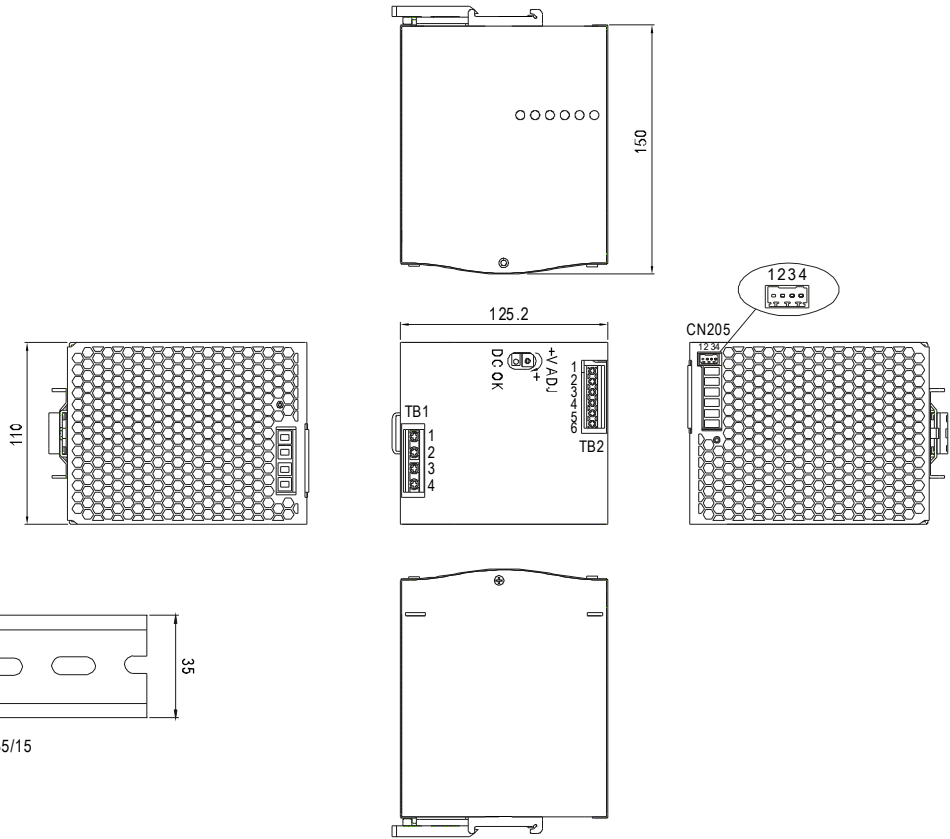


SPECIFICATION

MODEL		TDR-960-24	TDR-960-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	40A	20A
	CURRENT RANGE	0 ~ 40A	0 ~ 20A
	RATED POWER	960W	960W
	RIPPLE & NOISE (max.) Note.2	180mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	100ms, 100ms/400VAC 800ms, 100ms/500VAC at full load	
HOLD UP TIME (Typ.)	12ms / 400VAC 14ms / 500VAC at full load		
INPUT	VOLTAGE RANGE Note.4	Three-Phase 340 ~ 550VAC (Dual phase operation possible) 480 ~ 780VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF ≥ 0.88/400VAC PF ≥ 0.86/500VAC at full load	
	EFFICIENCY (Typ.)	94%	94.5%
	AC CURRENT (Typ.)	2A/400VAC 1.4A/500VAC	
	INRUSH CURRENT (Typ.)	COLD START 60A	
LEAKAGE CURRENT	<3.5mA / 530VAC		
PROTECTION	OVERLOAD	105 ~ 130% rated output power Protection type : Constant current limiting, unit will shut down after 3 sec. ,re-power on to recover	
	OVER VOLTAGE	29 ~ 33V	56 ~ 65V
	OVER TEMPERATURE	90°C ±5°C (TSW) detect on heatsink of power switch 85°C ±5°C (TSW) detect on heatsink of power switch Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load	
	CURRENT SHARING	Please refer to function manual	
ENVIRONMENT	WORKING TEMP. Note.5	-30 ~ +70°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)	
	VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ	
	WITHSTAND VOLTAGE	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	
	EMC EMISSION	Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3	
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A	
	MTBF	59.4K hrs min. MIL-HDBK-217F (25°C)	
	DIMENSION	110*125.2*150mm (W*H*D)	
NOTE	PACKING	2.47Kg ; 6pcs/15.8Kg/1.47CUFT	
	<p>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.</p> <p>5. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the 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.</p> <p>6. 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.</p>		

Mechanical Specification

Case No.214A Unit:mm



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG \oplus
2	AC/L3
3	AC/L2
4	AC/L1

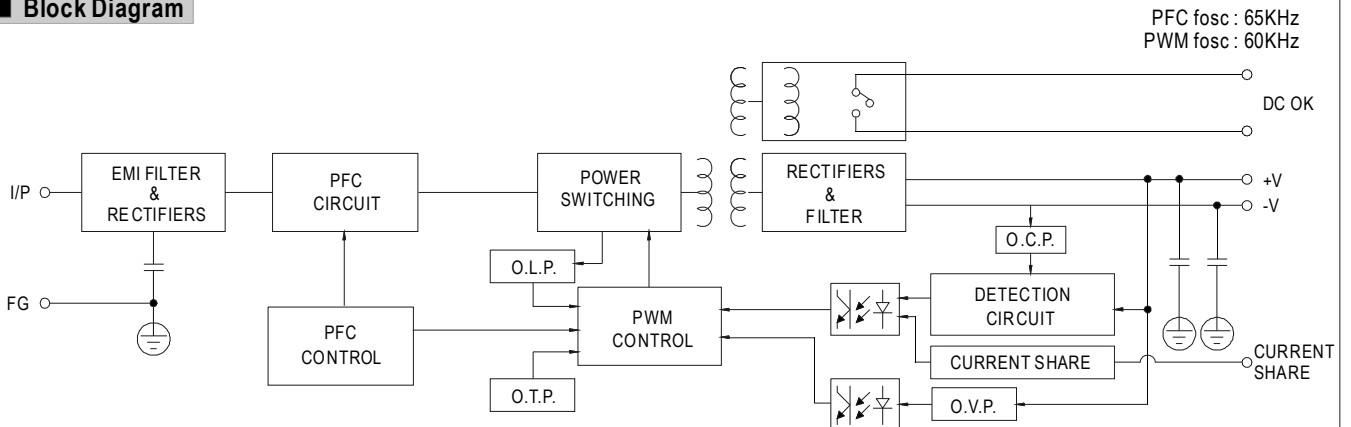
Terminal Pin No. Assignment (TB2)

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

Control Pin (CN205) : DINKLE ECH250R-04P or equivalent

Pin No.	Assignment	Mating Housing	Wire Diameter
1	P-(Current Share)	DINKLE ESC250V-04P or equivalent (Including in the single package)	0.081~0.517mm ² (28~20AWG)
2	P+(Current Share)		
3,4	DC OK Relay Contact		

Block Diagram



DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

