







- Three-Phase 340 ~ 550VAC wide range input (Dual phase operation possible)
- · Width only 85.5mm
- Built-in active PFC function compliance to EN61000-3-2
- · High efficiency 93% 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
- · Optional DC OK relay contact
- 3 years warranty

# Automate







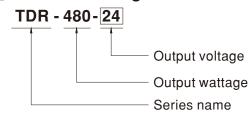
# Applications

- · Industrial control system
- · Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

# Description

TDR-480 is one economical slim 480W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 85.5mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from  $3\psi$  340VAC to 550VAC (Dual Phase operation possible) and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current. TDR-480 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 93 %, the entire series can operate at the ambient temperature between -20°C and 70°C under air convection. It is equipped with constant current mode for overload protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL508, IEC 60950-1 CB approved by UL.) make TDR-480 a very competitive power supply solution for industrial applications.

#### Model Encoding

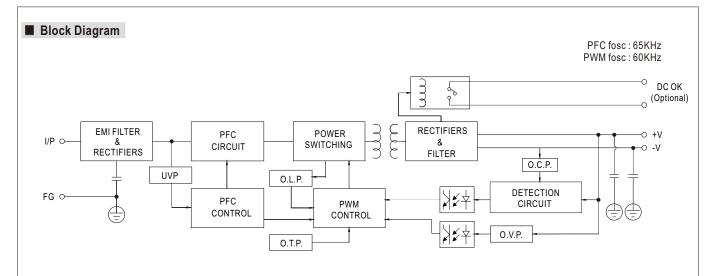




#### **SPECIFICATION**

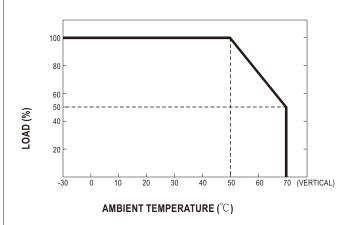
		TDR-480-24		TDR-480-48			
	DC VOLTAGE	24V		48V			
	RATED CURRENT	20A		10A			
	CURRENT RANGE	0 ~ 20A		0 ~ 10A			
	RATED POWER	480W		480W			
ОИТРИТ	RIPPLE & NOISE (max.) Note.2			150mVp-p			
	VOLTAGE ADJ. RANGE	24 ~ 28V		48 ~ 55V			
	VOLTAGE TOLERANCE Note.3			±1.0%			
	LINE REGULATION	±0.5%		±0.5%			
	LOAD REGULATION	±1.0%		±1.0%			
	SETUP, RISE TIME	,	ms/500VAC at full load	_ 1.0 /0			
	HOLD UP TIME (Typ.)	1200ms, 60ms/400VAC 800ms, 60ms/500VAC at full load 20ms / 400VAC 20ms / 500VAC at full load					
	( ) ,						
		Three-Phase 340 ~ 550VAC (Dual phase operation possible) 480 ~ 780VDC					
	POWER FACTOR (Typ.)	47 ~ 63Hz PF≥0.9/400VAC PF≥0.88/500VAC at full load					
	( ) ,						
NPUT	EFFICIENCY (Typ.)	92.5%		93%			
	AC CURRENT (Typ.)	0.85A/400VAC					
	INRUSH CURRENT (Typ.)	COLD START 50A					
	LEAKAGE CURRENT	<3.5mA / 530VAC					
	OVERLOAD	105 ~ 130% rated output power					
	OTEREDAD	Protection type : Constant current limiting	ng, unit will shut down afte		to recover		
PROTECTION	OVER VOLTAGE	29 ~ 33V		56 ~ 65V			
		Protection type : Shut down o/p voltage,	•				
	OVER TEMPERATURE	Shut down o/p voltage, recovers automa		goes down			
	WORKING TEMP. Note.5	-30 ~ +70°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
NVIRONMENT	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 STANDARDS	UL508, IEC60950-1 CB approved by UL					
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P	-FG:0.5KVAC O/P-DC	OK(optional):0.5KVAC			
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms /	500VDC / 25°C / 70% RH				
(Note 4)		Parameter	Standard		Test Level / Note		
Note 4)							
Note 4)		Conducted	EN55022 (CISPR22), EN55	5032(CISPR32) / EN61204-3			
Note 4)	EMC EMISSION	Conducted Radiated	, ,	5032(CISPR32) / EN61204-3 5032(CISPR32) / EN61204-3	Class B		
Note 4)	EMC EMISSION		, ,	,	Class B		
Note 4)	EMC EMISSION	Radiated Harmonic Current	EN55022 (CISPR22), EN55	,	Class B Class B		
(Note 4)	EMC EMISSION	Radiated Harmonic Current Voltage Flicker	EN55022 (CISPR22), EN55 EN61000-3-2	,	Class B Class B Class A		
Note 4)	EMC EMISSION	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3	,	Class B Class B Class A		
Note 4)	EMC EMISSION	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3	,	Class B Class A Test Level / Note		
Note 4)	EMC EMISSION	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3 Standard EN61000-4-2	,	Class B Class B Class A Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact		
Note 4)	EMC EMISSION	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3 Standard EN61000-4-2 EN61000-4-3	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact Level 3		
Note 4)	EMC EMISSION  EMC IMMUNITY	Radiated Harmonic Current Voltage Flicker EN55024, EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT/Burst	EN55022 (CISPR22), EN58 EN61000-3-2 EN61000-3-3 Standard EN61000-4-2 EN61000-4-3 EN61000-4-4	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact Level 3 Level 3		
Note 4)		Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3 Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3 Level 3 Level 4, 2KV / Line-Line, Level 4, 4KV / Line-E		
Note 4)		Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge Conducted	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3  Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3 Level 3 Level 4, 2KV / Line-Line, Level 4, 4KV / Line-Ei Level 3		
Note 4)		Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3 Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3 Level 3 Level 4, 2KV / Line-Line, Level 4, 4KV / Line-E Level 3 Level 4 >95% dip 0.5 periods, 30% dip 25		
Note 4)	EMC IMMUNITY	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge Conducted Magnetic Field Voltage Dips and Interruptions	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3  Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-6 EN61000-4-8 EN61000-4-11	5032(CISPR32) / EN61204-3	Class B Class B Class A  Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3 Level 3 Level 3 Level 4, 2KV / Line-Line, Level 4, 4KV / Line-E Level 3 Level 4 > 95% dip 0.5 periods, 30% dip 25 periods > 95% interruptions 250 periods		
	EMC IMMUNITY	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge Conducted Magnetic Field Voltage Dips and Interruptions 391.7K hrs min. Telcordia SR-332(Be	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3  Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-8	,	Class B Class B Class A  Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3 Level 3 Level 3 Level 4, 2KV / Line-Line, Level 4, 4KV / Line-E Level 3 Level 4 > 95% dip 0.5 periods, 30% dip 25 periods > 95% interruptions 250 periods		
OTHERS	EMC IMMUNITY	Radiated Harmonic Current Voltage Flicker EN55024 , EN60601-1-2, EN61204-3 Parameter ESD Radiated Field EFT / Burst Surge Conducted Magnetic Field Voltage Dips and Interruptions	EN55022 (CISPR22), EN55 EN61000-3-2 EN61000-3-3  Standard EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-6 EN61000-4-8 EN61000-4-11	5032(CISPR32) / EN61204-3	Class B Class B Class A  Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact Level 3 Level 3 Level 3 Level 3 Level 3 Level 4 295% dip 0.5 periods, 30% dip 25 periods > 95% interruptions 250 period		

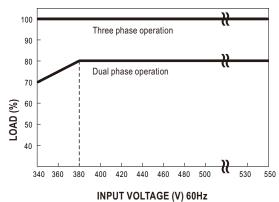




## ■ Derating Curve

# ■ Output derating VS input voltage





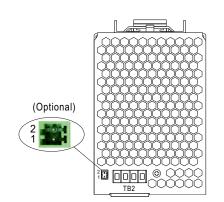
## ■ DC OK Relay Contact (Optional)

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load.

## Control Pin (Optional): DINKLE ECH250R-02P or equivalent (CN25)

Pin	No.	Assignment	Mating Housing	Wire Diameter
1,2		DC OK Relay Contact	Dinkle ESC250V-02P or equivalent (Including in the package)	0.081~0.517mm <sup>2</sup> (20~28AWG)

\* Please contact MEAN WELL for more details.





# ■ Mechanical Specification Case No.984E Unit:mm Top View 85.5 128.5 1 2 3 4 0.000 125.2 O DC OK Side View Front View Side View Terminal Pin No. Assignment (TB1) Pin No. | Assignment PE 🖶 AC/L3 2 AC/L2 4 AC/L1 Terminal Pin No. Assignment (TB2) Pin No. Assignment DC OUTPUT +V 1,2 3,4 DC OUTPUT-V Bottom View ■ Installation Instruction This series fits DIN rail TS35/7.5 or TS35/15. For installation details, please refer to the Instruction manual. 000 ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15 (For reference only. Not included with unit.)

#### ■ Installation Manual

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

**Back View** 

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