

# Installation Manual

● **Type : TDR DIN rail with Three Phase or High Input Range**

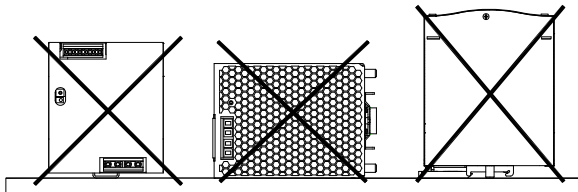
TDR-240-24	INPUT: 380 -480VAC	0.69A 50/60Hz	OUTPUT: 24V	10A
TDR-240-48	INPUT: 380 -480VAC	0.69A 50/60Hz	OUTPUT: 48V	5A
TDR-480-24	INPUT: 380 -500VAC	1A 50/60Hz	OUTPUT: 24V	20A
TDR-480-48	INPUT: 380 -500VAC	1A 50/60Hz	OUTPUT: 48V	10A
TDR-960-24	INPUT: 380 -500VAC	2A 50/60Hz	OUTPUT: 24V	40A
TDR-960-48	INPUT: 380 -500VAC	2A 50/60Hz	OUTPUT: 48V	20A

● **Introduction**

TDR series is the next generation of Mean Well DIN rail power supplies with three-phase or high input range, this three-phase DIN unit not only has a slim design of 110mm in width but also possesses a high efficiency of up to 94.5%. Like other Mean Well's DIN series, they can be mounted on a TS35 Standard DIN rail.

● **Installation**

- (1) Always allow good ventilation clearances, 5mm left and right, 40mm above and 20mm below, around the unit in use to prevent it from overheating. Also a 10-15 cm clearance must be kept when the adjacent device is a heat source.
- (2) The appropriate mounting orientation for the unit is vertical, the input terminals at the bottom and output on the top. Mounting orientations other than that, such as upside down, horizontal, or table-top mounting, is not allowed.



- (3) Use copper wire only, and recommended wires are shown as below.

AWG	18	16	14	12	10
Rated Current of Equipment (Amp)	6A	6-10A	13-16A	16-25A	25-32A
Cross-section of Lead(mm <sup>2</sup> )	0.75	1.00	1.5	2.5	4
Note: Current each wire carries should be de-rated to 80% of the current suggested above when using 5 or more wires connected to the unit.					

Make sure that all strands of each stranded wire enter the terminal connection and the screw terminals are securely fixed to prevent poor contact. If the power supply possesses multi-output terminals, please make sure each contact is connected to wires to prevent too much current stress on a single contact.

- (4) Use wires that can withstand temperatures of at least 80°C for TDR-480/960, 85°C for TDR-240.
- (5) Recommended wire strapping length is 5mm (0.197").
- (6) Recommended screwdriver is 4mm, slotted type.
- (7) The recommended torque setting for terminals is shown as below.

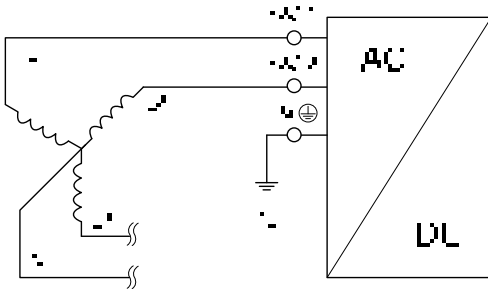
Model	I/P	O/P
TDR-240	10 kgf-cm (9 Lb-in)	10 kgf-cm (7 Lb-in)
TDR-480	10 kgf-cm (9 Lb-in)	10 kgf-cm (9 Lb-in)
TDR-960	10 kgf-cm (9 Lb-in)	8 kgf-cm (7 Lb-in)

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( 8 ) Suggested fuse and maximum number of the unit that can be connected to a circuit breaker at 400V are shown as below.

Model	Fuse	Circuit breaker	
		C16	D16
TDR-240	T4A/H500V	19	19
TDR-480	T4A/H500V	15	15
TDR-960	T6.3A/H500V	7	7

( 9 ) The unit is capable of being connected between any 2 phases on a 3-phase-4-wire Wye (Star) connected system (TDR-480 & TDR-960). 2 phases on a 3-phase-4 wire wye (star) operation possible in connecting L1, L3, FG or L2, L3, FG (TDR-240).

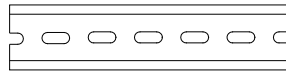


( 10 ) The unit is capable of dual phase operation, but that requires de-rating output current by at least 20%.

( 11 ) Mounting Instruction :

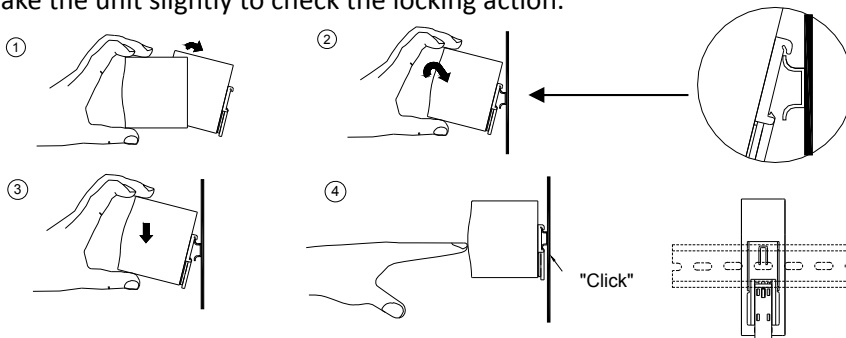
Mount as shown in figure only, with input terminals down, or else sufficient cooling will not be possible.

Admissible DIN rail : TS35/7.5 or TS35/15



For rail fastening :

- ① Tilt the unit slightly rearwards.
- ② Fit the unit over top hat rail.
- ③ Slide it downward until it hits the stop.
- ④ Press against the bottom for locking.
- ⑤ Shake the unit slightly to check the locking action.



( 12 ) For other information about the products, please refer to [www.meanwell.com](http://www.meanwell.com) for details.



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## ● **Warning / Caution !!**

- ( 1 ) Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!
- ( 2 ) Risk of electric arcs and electric shock (danger to life). Connecting both the primary and the secondary sides together is not allowed.
- ( 3 ) Risk of burn hazard. Do not touch the unit in operation and shortly after disconnection!
- ( 4 ) Risk of fire and short circuit. The openings should be protected from foreign objects or dripping liquids.
- ( 5 ) The maximum operating temperature are 50°C for TDR-480/960, 60°C for TDR-240, please do not install the unit in places with high ambient temperature or near fire source.
- ( 6 ) Instructions for installation in a Pollution Degree 2 environment (Note.1).
- ( 7 ) Please do not install the unit in places with high moisture or near the water.
- ( 8 ) The FG (⊕) must be connected to PE (Protective Earth).
  
- ( 9 ) Output current and output wattage must not exceed the rated values on its specification.
- ( 10 ) Disconnect system from supply voltage:  
Before commencing any installation, maintenance or modification work: Disconnect your system from supply voltage. Make sure that inadvertent connection in circuit will be impossible!
- ( 11 ) For continued protection against risk of fire, replace only with same type and rating of fuse.  
Pour ne pas compromettre la protection contre les risqué d'incendie, remplacer par un fusible de même type et de memes caractéristiques nominales.

Note.1: Pollution Degree 2 applies where there is only non-conductive pollution that might temporarily become conductive due to occasional condensation. Generally refer to dry, well-ventilated locations, such as control cabinets.

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## Declaration of China RoHS Conformity

In order to reduce the impacts on the environment and take the more responsibility for protecting the earth, MEAN WELL is confirming and announcing the conformity to China RoHS, an Administrative Measures for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products.

### Environment Friendly Use Period Label

	Observing SJT 11364-2014, Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products
	Observing SJ/Z 11388-2009, General Guidelines of Environment-friendly Use Period of Electronic Information Products Appendix B, adopting table look-up to verify the Environment Friendly Use Period

### Names and Contents of Hazardous Substances Lists

Part Name	Hazardous Substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr <sup>6+</sup> )	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCB and its components	X	O	X	O	O	O
Metal structure parts	X	O	O	O	O	O
Plastic structure parts	O	O	O	O	O	O
Accessories	O	O	O	O	O	O
Cables	X	O	O	O	O	O

O: The concentration of the hazardous substances within the homogeneous material of that product is less than the concentration limits set by GB/T 26572-2011.  
X: The concentration of the hazardous substances within the homogeneous material of that product is over the concentration limits set by GB/T 26572-2011; however, it follows the standard advised by 2011/65/EU.



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## Declaration of China VOC Conformity

In order to reduce the impacts on the environment and take the more responsibility for protecting the earth, MEAN WELL is confirming and announcing the conformity to China's Standardization Administration Releases VOC Standards

Standard No.	Name of the Standard
GB 30981-2020	Limit of harmful substances of industrial protective coatings
GB 33372-2020	Limits for volatile organic compounds content in adhesive
GB 38507-2020	Limits for volatile organic compounds (VOCs) In printing ink
GB 38508-2020	Limits for volatile organic compounds content in cleaning agents

ISO-9001 CERTIFIED

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## Declaration of Five PBT TSCA Conformity

In order to reduce the impacts on the environment and take the more responsibility for protecting the earth, MEAN WELL hereby confirms that MEAN WELL product series comply with Use and Risk Management for Five PBT Chemicals under TSCA section 6(h)

CAS No.	Substance Name
1163-19-5	Decabromodiphenyl ether (DecaBDE)
68937-41-7	Phenol, isopropylated, phosphate (3:1) PIP (3:1)
732-26-3	2,4,6-Tris (tert-butyl) phenol (2,4,6-TTBP)
133-49-3	Pentachlorothiophenol (PCTP)
87-68-3	Hexachlorobutadiene (HCBD)