

■ Features

- 180~264Vac input with PFC
- Global certificates in multi-fields (ITE 62368-1, Industrial 61558-1/-2-16, 61010)
- 96mm slim width
- High efficiency up to 95.5% and no load power dissipation 3.9W
- Built-in constant current limiting circuit
- Current sharing up to 3840W (3+1) for parallel use
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fanless design, cooling by free air convection
- Over voltage category III (OVC III)
- -40~+70°C wide range operation temperature (>+50°C derating)
- Operating altitude up to 5000 meters
- Built-in DC OK relay contact
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty

■ Description

The XDR-960E series is a 960W AC/DC economical ultra slim industrial DIN rail power. Key features of this series include a narrow 96mm casing, optimizing system installation space. It boasts a maximum efficiency of 95.5% and a low standby power consumption 3.9W for energy savings and carbon reduction. It has built-in constant current, fanless design, a wide operating temperature range of -40 to +70°C (up to +50°C at full load); OVCIII compliance; parallel function capability up to 3840W; built-in DC OK signal. With comprehensive protection functions, complete safety certifications, and a 3-years warranty, the XDR-960E series is a compact, high-performance, and highly reliable DIN rail power supply.

■ Model Encoding

XDR - 960E - 24

- Output voltage(24V/36V/48V)
- Economical version
- Output wattage
- Series name

■ Applications

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

■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



960W AC/DC Economical Ultra Slim Industrial DIN Rail Power **XDR-960E** series

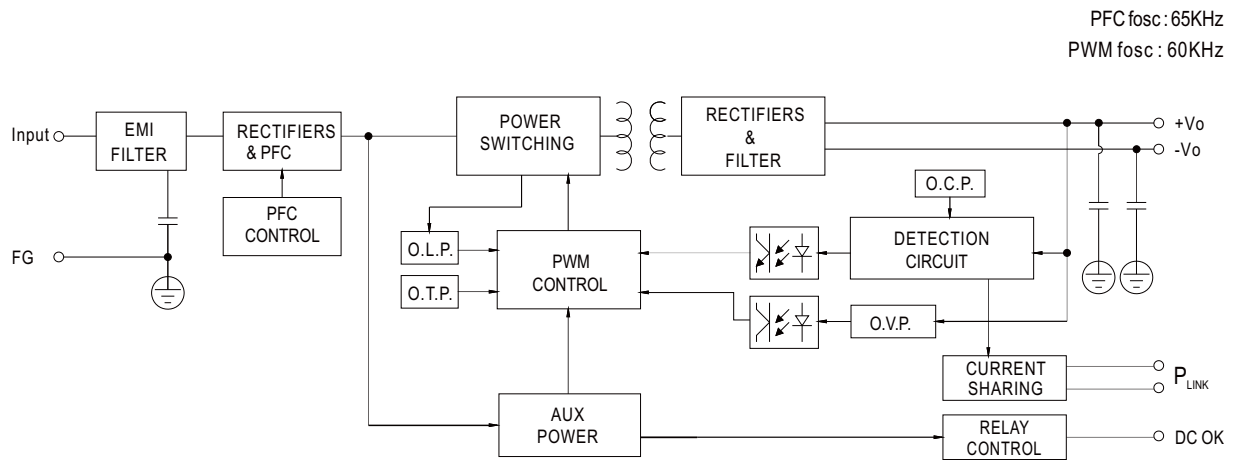
SPECIFICATION		XDR-960E-24	XDR-960E-36	XDR-960E-48
OUTPUT				
DC VOLTAGE		24V	36V	48V
RATED CURRENT		40A	26.6A	20A
CURRENT RANGE		0 ~ 40A	0 ~ 26.6A	0 ~ 20A
RATED POWER		960W	957.6W	960W
RIPPLE & NOISE (max.)	Note.2	120mVp-p	150mVp-p	150mVp-p
VOLTAGE ADJ. RANGE		24 ~ 29V	36 ~ 42V	48 ~ 55V
VOLTAGE TOLERANCE	Note.3	± 1.0%	± 1.0%	± 1.0%
LINE REGULATION		± 0.5%	± 0.5%	± 0.5%
LOAD REGULATION		± 1.0%	± 1.0%	± 1.0%
SETUP, RISE TIME		500ms, 50ms/230Vac at full load		
HOLD UP TIME (Typ.)		15ms/230Vac at full load		
INPUT				
AC VOLTAGE RANGE		180 ~ 264Vac		
DC VOLTAGE RANGE		254.5 ~ 370Vdc		
NO LOAD POWER CONSUMPTION (Typ.)		3.9W @ 230Vac		
FREQUENCY RANGE		47 ~ 63Hz		
POWDR FACTOR (Typ.)		PF>0.95/230Vac at full load		
EFFICIENCY (Typ.)		94.5%	95%	95.5%
AC CURRENT (Typ.)		5A/230Vac		
INRUSH CURRENT (Typ.)		COLD START 30A/230Vac		
LEAKAGE CURRENT		<3.5mA / 240Vac		
PROTECTION				
OVERLOAD		105~130% rated output power		
		Hiccup mode when output voltage <30%, recovers automatically after fault condition is removed Constant current limiting without shutdown within 30%~100% rated output voltage, recovers automatically after fault condition is removed		
OVER VOLTAGE		30 ~ 34V	43 ~ 50V	56 ~ 65V
		Protection type : Shut down o/p voltage, re-power on to recover		
OVER TEMPERATURE		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION				
PARALLEL(Droop Mode)		Up to 3840W or (3+1) units;Please refer to Function Manual for more details		
DC OK RELAY CONTACT		Relay Contact Ratings (max.):30Vdc/1A, 30Vac/0.5A resistive load		
ENVIRONMENT				
WORKING TEMP.		-40 ~ +70℃ (Refer to "Derating Curve")		
WORKING HUMIDITY		20 ~ 95% RH non-condensing		
STORAGE TEMP., HUMIDITY		-40 ~ +85℃, 10 ~ 95% RH non-condensing		
TEMP. COEFFICIENT		± 0.03% /℃ (0 ~ 50℃)		
VIBRATION		Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		



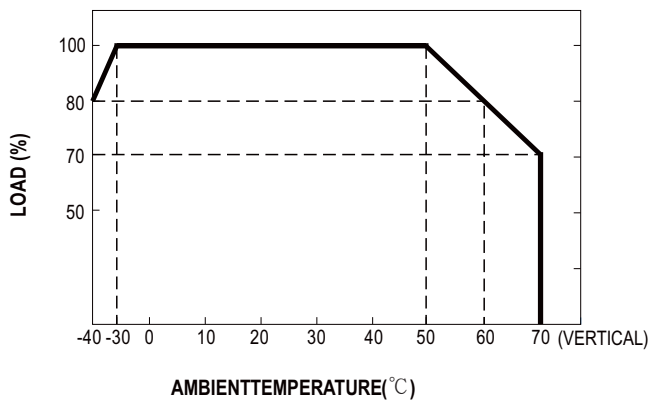
960W AC/DC Economical Ultra Slim Industrial DIN Rail Power **XDR-960E** series

SPECIFICATION		XDR-960E-24		XDR-960E-36		XDR-960E-48	
SAFETY & EMC		Note.6					
SAFETY STANDARDS		UL61010; TUV BS EN/EN62368-1, BS EN/EN61558-1/-2-16, BS EN/EN61010; CB IEC62368-1, IEC61558-1, IEC61010; RCM AS/NZS 62368-1, AS/NZS 61558-1/-2-16; BSMI CNS15598-1; CCC GB4943.1; EAC TPTC004 approved; KC KC62368-1 and BIS IS13252 (Part 1):2010 certified, no stock ,contact sale for inquiries					
OVER VOLTAGE CATEGORY		Note.4 IEC/EN 61558-1/-2-16 (OVC III, altitude up to 2000m) IEC/EN/UL 61010 (OVC II, altitude up to 5000m) IEC/EN 62368-1 (OVC II, altitude up to 5000m)					
SAFETY EXTRA-LOW VOLTAGE(SELV)		IEC/EN 61558-2-16 (SELV) IEC/EN/UL 61010-2-201 (SELV) IEC/EN 62368-1 (SELV / ES1)					
WITHSTAND VOLTAGE		I/P-O/P: 4KVac I/P-FG: 2KVac O/P-FG: 1.5KVac O/P-DC OK: 0.5KVac					
ISOLATION RESISTANCE		I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500Vdc/25℃/ 70%RH					
EMC EMISSION		Parameter		Standard		Test Level / Note	
		Conducted		BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936		Class B	
		Radiated		BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936		Class B	
		Harmonic Current		BS EN/EN61000-3-2		Class A	
		Voltage Flicker		BS EN/EN61000-3-3		-----	
EMC IMMUNITY		BS EN/EN55035 , BS EN/EN61204-3, BS EN/EN61000-6-2(BS EN/EN50082-2)					
		Parameter		Standard		Test Level / Note	
		ESD		BS EN/EN61000-4-2		Level 3, 8KV air ; Level 2, 4KV contact; criteria A	
		Radiated		BS EN/EN61000-4-3		Level 3, 10V/m ; criteria A	
		EFT / Burst		BS EN/EN61000-4-4		Level 3, 2KV ; criteria A	
		Surge		BS EN/EN61000-4-5		Level 4, 2KV/Line-Line ;Level 4, 4KV/Line-Line-Chassis ;criteria A	
		Conducted		BS EN/EN61000-4-6		Level 3, 10V ; criteria A	
		Magnetic Field		BS EN/EN61000-4-8		Level 4, 30A/m ; criteria A	
OTHERS							
MTBF		1147.2K hrs min. Telcordia SR-332 (Bellcore) ; 169.9K hrs min. MIL-HDBK-217F (25℃)					
DIMENSION		96*125.2*132mm (W*H*D)					
PACKING		1.93Kg; 6pcs/12.55Kg/1.47CUFT					
NOTE							
1. All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μ F & 47 μ F parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). 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. 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. (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx							

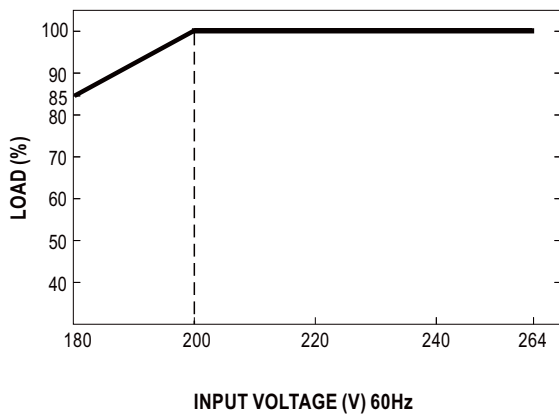
■ Block Diagram



■ Derating Curve



■ Static Characteristics

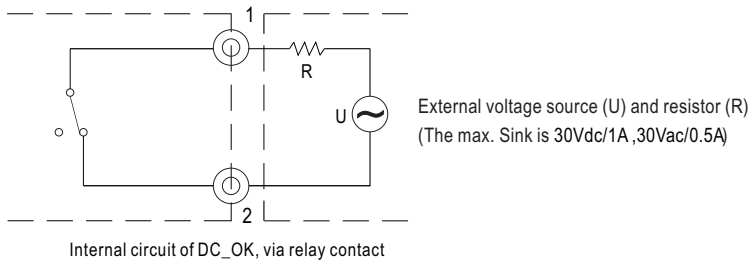


Function Manual

Pin No.	Function	Description
1,2	DC OK Relay Contact	Contact Close: PSU turns ON/DC_OK Contact Open: PSU turns OFF/DC_fail
3,4	Paraller Use Link(P _{LINK})	P _{LINK} should be short to enable droop parallel use.(Default disable)

1.DC OK Relay Contact

Contact Close	PSU turns ON/DC OK.
Contact Open	PSU turns OFF/DC Fail.
Contact Ratings (max.)	30Vdc/1A, 30Vac/0.5A resistive load.



2.Parallel Use

XDR-960E has the built-in **droop mode current sharing** function and can be connected in parallel, up to 4 units, to provide higher output power as exhibited below :

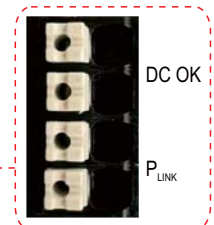
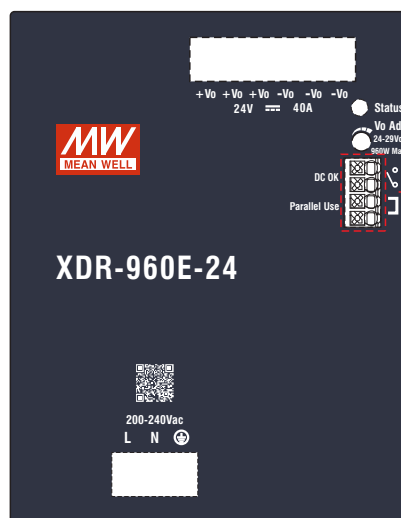
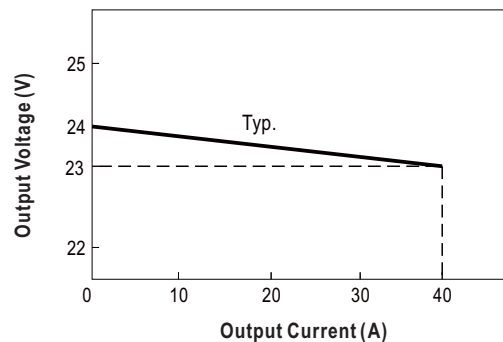
- (1) Difference of output voltages among parallel units should be less than **0.1V**.
- (2) The total output current must not exceed the value determined by the following equation (Output current at parallel operation)=(The rated current per unit) x (Number of unit) x 0.9.
- (3) In parallel operation 4 units is the maximum, please consult the manufacture for other applications.
- (4) The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
- (5) When in parallel operation, the minimum output load should be greater than 7% of total output load. (Min. load >7% rated current per unit x number of unit)
- (6) In parallel connection, maybe only one unit (master) operate if the total output load is less than 7% of rated load condition.
The other PSUs (slaves) may go into standby mode and their output LEDs & relays will not turn on.
- (7) **P_{LINK} lines should be shorted locally.**
- (8) In parallel operation, after overload or short circuit fault occurs, re-power on to recover.
- (8) The "Parallel Use" mode regulates the output voltage in such a manner that the voltage at no load is approx. 4% higher than at normal load.

For example XDR-960E-24:

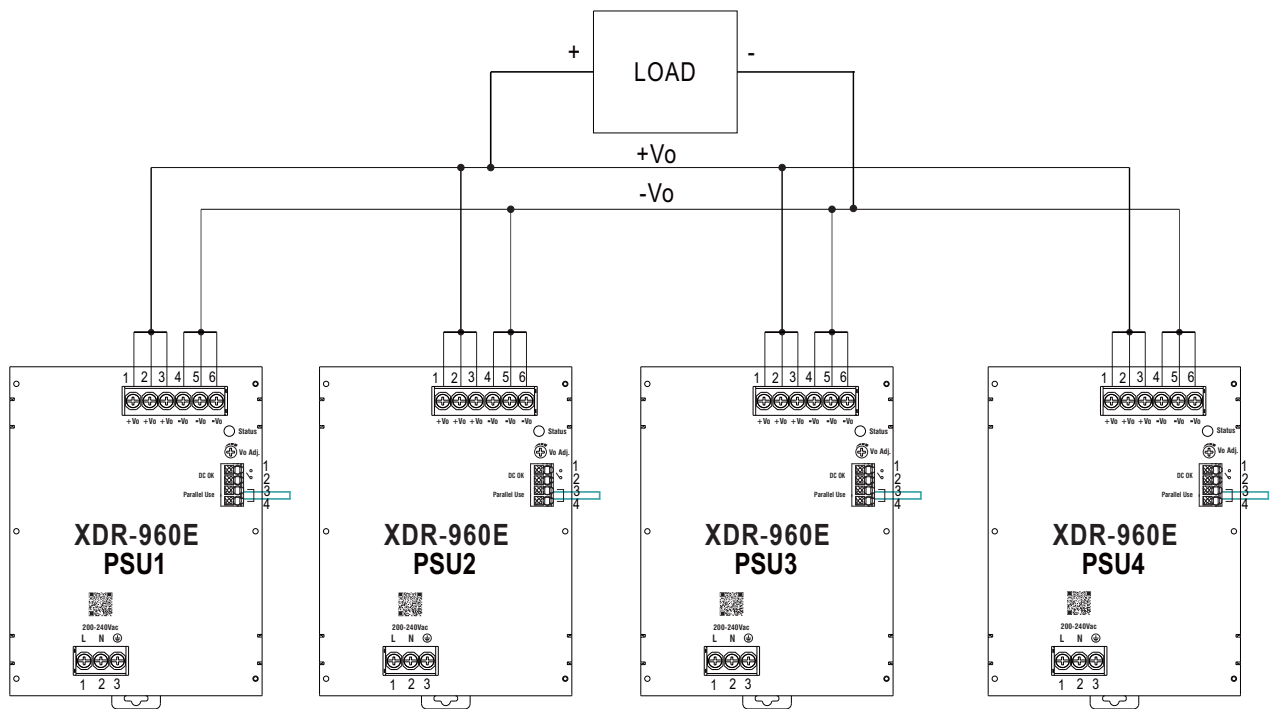
No load output voltage=24V

Normal load output current=40A

0~100% load output voltage=24V~23V



Enable : P_{LINK} should be short

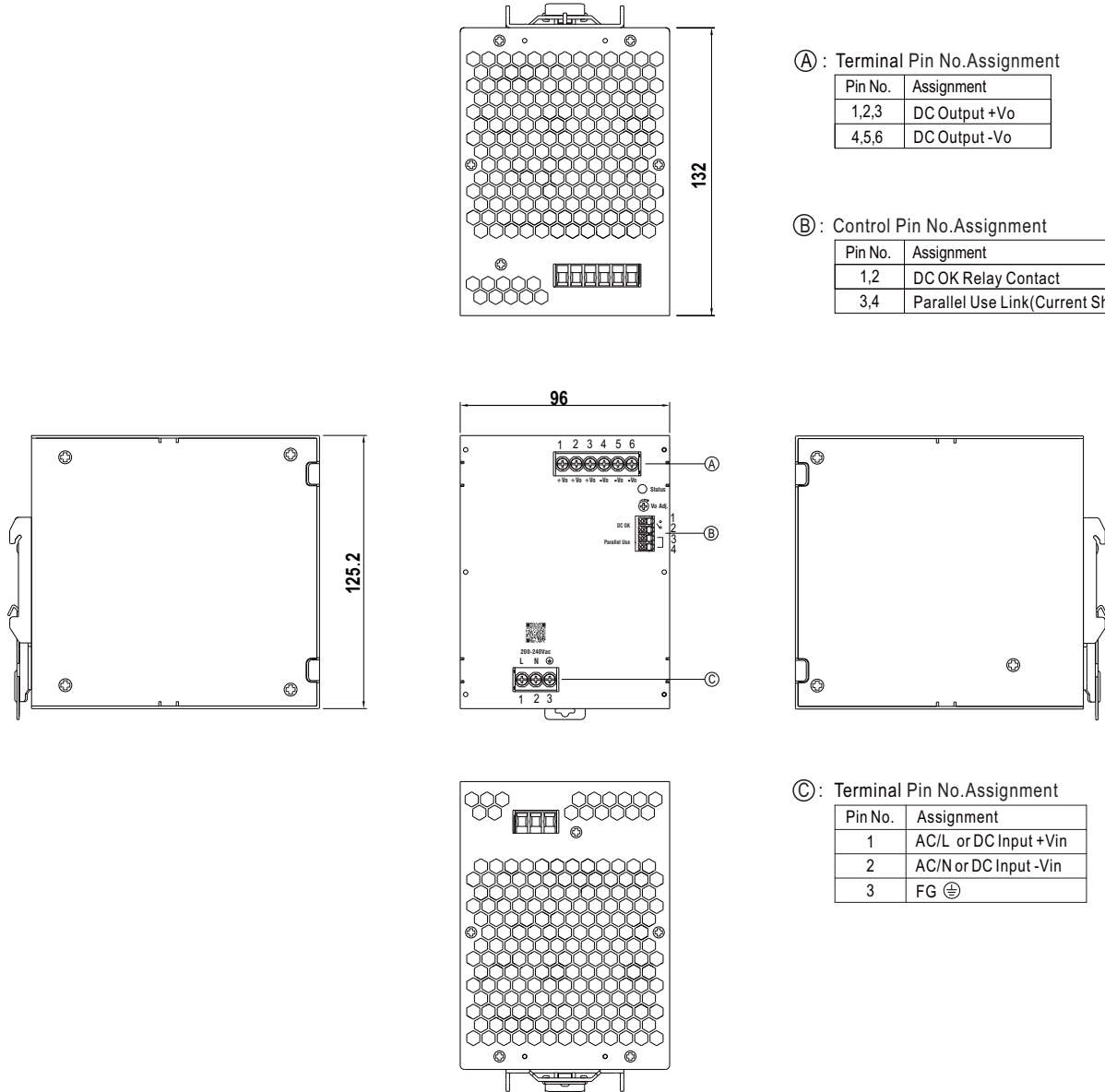


※ Please contact MEAN WELL for more details.

■ Mechanical Specification

(Unit:mm , Tolerance ± 1 mm)

Case No. 304



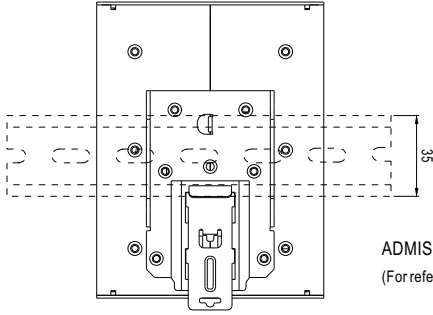
■ Recommend Wiring

	AC Input T.B	DC Output T.B	Signal connector
Solid Wire	6mm ² max.	6mm ² max.	1.5mm ² max.
A.W.G	18~10 AWG	18~8 AWG	24~16 AWG
Wire Stripping Length	10~11mm	10~11mm	8~9mm
Screw Terminal Torque	5 Lb-In	5 Lb-In	/



960W AC/DC Economical Ultra Slim Industrial DIN Rail Power **XDR-960E** series

■ Installation Instruction



This series fits DIN rail TS35/7.5 or TS35/15.
For installation details, please refer to the Instruction manual.

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>