



(XDR-120-xx)



(XDR-120-xxLA)



(XDR-120-xxPI)



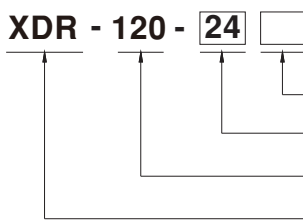
## ■ Features

- 85~305Vac input with PFC (277Vac available)
- Global certificates in multi-fields(ITE 62368-1, Industrial 61558-1/-2-16,61010) & Marine DNV, SEMI47, CID2 HazLoc approved
- 30mm ultra slim width
- High efficiency up to 94% and no load power dissipation 0.9W~1W by R.C.
- 200% peak power capability
- 600% transient peak current capability
- Built-in constant current limiting circuit
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fanless design, cooling by free air convection
- Over voltage category III (OVC III)
- -40~+85°C wide range operation temperature(>+60°C derating)
- Operating altitude up to 5000 meters
- Built-in remote ON/OFF control and DC OK relay contact
- Ultra low inrush current <6~15A
- Built-in ORing FET
- Tool free terminal block (LA Type)
- Conformal coating
- Can be installed on DIN rail TS-35/75 or15
- 5 years warranty

## ■ Description

The XDR-120 series is a 120W AC/DC high-end ultra slim industrial DIN rail power. Key features of this series include a narrow 30mm casing, optimizing system installation space, and an ultra-wide input range of 85~305Vac suitable for global use. It boasts a maximum efficiency of 94% and a low standby power consumption of 0.9W~1W for energy savings and carbon reduction. It provides constant current with up to 200% peak power, and can handle instantaneous peak current of 600%. It has a fanless design, ultra-wide operating temperature range of -40 to +85°C (up to +60°C at full load); OVCIII compliance; ultra-low inrush current of <6~15A, and includes DC OK and remote ON/OFF functions. It also has a built-in ORing FET, the internal PCB has a coating for basic moisture and dust protection, and it has multiple terminal blocks for selection. With comprehensive protection functions, complete safety certifications, and a 5-years warranty, the XDR-120 series is a compact, high-performance, and highly reliable DIN rail power supply.

## ■ Model Encoding



Output terminal type  
Output voltage(12V/24V/36V/48V)  
Output wattage  
Series name

## ■ Applications

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

## ■ GTIN CODE

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

| Terminal Type Options |                | Note     |
|-----------------------|----------------|----------|
| Blank                 | Screw Terminal | In stock |
| LA                    | Lever Actuated | In stock |
| PI                    | Push In        | In stock |



# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

| SPECIFICATION                    |                  | XDR-120-12□                                                                                                                                                               | XDR-120-24□ | XDR-120-36□        | XDR-120-48□ |
|----------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|-------------|
|                                  |                  | □ =Blank, LA, PI                                                                                                                                                          |             |                    |             |
| OUTPUT                           |                  |                                                                                                                                                                           |             |                    |             |
| DC VOLTAGE                       |                  | 12V                                                                                                                                                                       | 24V         | 36V                | 48V         |
| LOAD CURRENT RANGE               |                  | 0 ~ 10A                                                                                                                                                                   | 0 ~ 5A      | 0 ~ 3.33A          | 0 ~ 2.5A    |
| RATED POWER                      |                  | 120W                                                                                                                                                                      | 120W        | 119.88W            | 120W        |
| PEAK                             | CURRENT (5sec.)  | 20A                                                                                                                                                                       | 10A         | 6.66A              | 5A          |
|                                  | POWER (5sec.)    | 240W                                                                                                                                                                      | 240W        | 239.76W            | 240W        |
| RIPPLE & NOISE (max.)<br>Note.2  |                  | 100mVp-p                                                                                                                                                                  | 100mVp-p    | 120mVp-p           | 120mVp-p    |
| VOLTAGE ADJ. RANGE               |                  | 12 ~ 15V                                                                                                                                                                  | 24 ~ 29V    | 36 ~ 42V           | 48 ~ 55V    |
| VOLTAGE TOLERANCE<br>Note.3      |                  | ±1.0%                                                                                                                                                                     | ±1.0%       | ±1.0%              | ±1.0%       |
| LINE REGULATION                  |                  | ±0.5%                                                                                                                                                                     | ±0.5%       | ±0.5%              | ±0.5%       |
| LOAD REGULATION                  |                  | ±1.0%                                                                                                                                                                     | ±1.0%       | ±1.0%              | ±1.0%       |
| SETUP, RISE TIME                 |                  | 1500ms, 60ms/230Vac    3000ms, 60ms/115Vac at full load                                                                                                                   |             |                    |             |
| HOLD UP TIME (Typ.)              |                  | 20ms/230Vac    20ms/115Vac at full load                                                                                                                                   |             |                    |             |
| INPUT                            |                  |                                                                                                                                                                           |             |                    |             |
| AC VOLTAGE RANGE                 |                  | 85 ~305Vac                                                                                                                                                                |             |                    |             |
| DC VOLTAGE RANGE                 |                  | 80 ~ 431Vdc (Derating 50% Load @80Vdc)                                                                                                                                    |             |                    |             |
| NO LOAD CONSUMPTION(Typ.)        | Remote Power OFF | 0.9W@115Vac & 230Vac                                                                                                                                                      |             | 1W@115Vac & 230Vac |             |
|                                  | Remote Power ON  | 2W@115Vac & 230Vac                                                                                                                                                        |             |                    |             |
| FREQUENCY RANGE                  |                  | 47 ~ 63Hz                                                                                                                                                                 |             |                    |             |
| POWER FACTOR (Typ.)              |                  | PF>0.98/115Vac    PF>0.95/230Vac    PF>0.9/277Vac at full load                                                                                                            |             |                    |             |
| EFFICIENCY (Typ.)                |                  | 93.5%                                                                                                                                                                     | 94%         | 94%                | 94%         |
| AC CURRENT (Typ.)                |                  | 2.3A/115Vac    1.2A/230Vac                                                                                                                                                |             |                    |             |
| INRUSH CURRENT (Typ.)            |                  | COLD START    6A/115Vac    10A/230Vac    15A/277Vac                                                                                                                       |             |                    |             |
| LEAKAGE CURRENT                  |                  | <1mA / 240Vac    <1.5mA / 277Vac                                                                                                                                          |             |                    |             |
| PROTECTION                       |                  |                                                                                                                                                                           |             |                    |             |
| OVERLOAD                         |                  | 105%~200% rated output power for more than 5 sec then constant current limiting at rate current without shutdown when Vo=30%~100% ; Hiccup mode when Vo<30% rated voltage |             |                    |             |
| OVER VOLTAGE                     |                  | 16 ~ 19V                                                                                                                                                                  | 30 ~ 34V    | 43 ~ 50V           | 57 ~ 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                         |                  |                                                                                                                                                                           |             |                    |             |
| DC OK RELAY CONTACT              |                  | Relay Contact Ratings (max.):30Vdc/1A, 30Vac/0.5A resistive load                                                                                                          |             |                    |             |
| REMOTE CONTROL                   |                  | Power ON :RC + ~ RC- keep <0.8Vdc or open                                                                                                                                 |             |                    |             |
|                                  |                  | Power OFF:RC + ~ RC- keep 3.3~5Vdc by external voltage                                                                                                                    |             |                    |             |
| TRANSIENT PEAK CURRENT CAPABILTY |                  | 12V:600% rated current for 4ms;    24V/36V/48V:600% rated current for 10ms                                                                                                |             |                    |             |
| ENVIRONMENT                      |                  |                                                                                                                                                                           |             |                    |             |
| WORKING TEMP.                    |                  | -40 ~ +85℃ (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 ~ 60℃) on Load output                                                                                                                                         |             |                    |             |
| VIBRATION                        |                  | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6                                                              |             |                    |             |



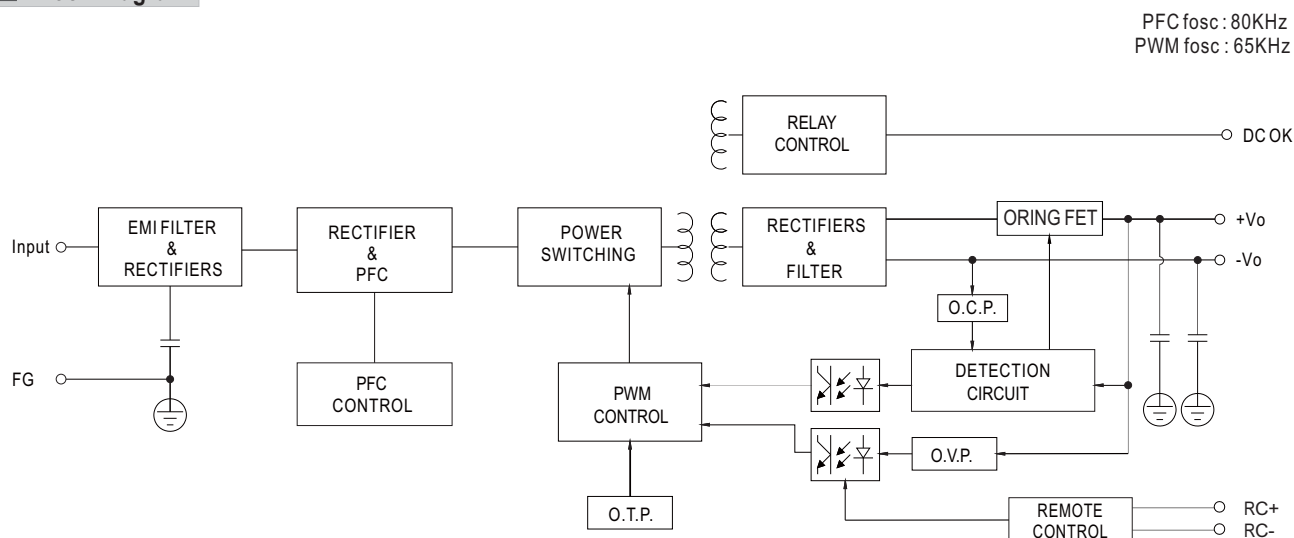
# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

| SPECIFICATION                                                                                                                                                                                                                                                                                                                 |                                                                                                          | XDR-120-12                                                                                                      | XDR-120-24                        | XDR-120-36                                                         | XDR-120-48 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------|------------|
|                                                                                                                                                                                                                                                                                                                               |                                                                                                          | □ =Blank, LA, PI                                                                                                |                                   |                                                                    |            |
| SAFETY & EMC                                                                                                                                                                                                                                                                                                                  |                                                                                                          | Note.4&5&6                                                                                                      |                                   |                                                                    |            |
| SAFETY STANDARDS                                                                                                                                                                                                                                                                                                              | CB                                                                                                       | IEC62368-1, IEC61558-1/-2-16, IEC61010-1/-2-201                                                                 |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | TUV                                                                                                      | BS EN/EN62368-1,BS EN/EN61558-1/-2-16,BS EN/EN61010-1/-2-201                                                    |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | UL                                                                                                       | UL 121201/CSA C22.2 NO.213.17 Class I,DIV2 Group A,B,C,D Hazardous Locations T4;UL61010-1/-2-201                |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | CCC                                                                                                      | GB4943.1                                                                                                        |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | BSMI                                                                                                     | CNS15598-1                                                                                                      |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | EAC                                                                                                      | TPTC004                                                                                                         |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | Marine DNV SEMI F47                                                                                      | approved                                                                                                        |                                   |                                                                    |            |
| KC/BIS                                                                                                                                                                                                                                                                                                                        | KC62368-1 and BIS IS 13252 (Part 1) certified, No stock ,contact sales by request                        |                                                                                                                 |                                   |                                                                    |            |
| OVER VOLTAGE CATEGORY                                                                                                                                                                                                                                                                                                         | Note.7                                                                                                   | IEC/EN 61558-1/-2-16                                                                                            | (OVC III , altitude up to 2000m ) |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               |                                                                                                          | IEC/EN/UL 61010-1/-2-201                                                                                        | (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 62368-1                                                                                                  | (SELV / ES1 )                     |                                                                    |            |
| WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                             |                                                                                                          | I/P-O/P: 4KV <sub>ac</sub> I/P-FG: 2KV <sub>ac</sub> O/P-FG: 1.5KV <sub>ac</sub> O/P-DC OK: 0.5KV <sub>ac</sub> |                                   |                                                                    |            |
| ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                          |                                                                                                          | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/25°C / 70%RH                                                          |                                   |                                                                    |            |
| EMC EMISSION                                                                                                                                                                                                                                                                                                                  | Parameter                                                                                                | Standard                                                                                                        |                                   | Test Level / Note                                                  |            |
|                                                                                                                                                                                                                                                                                                                               | Conducted                                                                                                | BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936 / KS C 9832                                                |                                   | Class B                                                            |            |
|                                                                                                                                                                                                                                                                                                                               | Radiated                                                                                                 | BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936 / KS C 9832                                                |                                   | 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) ,KS C 9835,SEMI F47 tested at 200Vac |                                                                                                                 |                                   |                                                                    |            |
|                                                                                                                                                                                                                                                                                                                               | Parameter                                                                                                | Standard                                                                                                        |                                   | Test Level / Note                                                  |            |
|                                                                                                                                                                                                                                                                                                                               | ESD                                                                                                      | BS EN/EN61000-4-2                                                                                               |                                   | Level 4, 15KV air ; Level 4, 8KV contact; criteria A               |            |
|                                                                                                                                                                                                                                                                                                                               | Radiated                                                                                                 | BS EN/EN61000-4-3                                                                                               |                                   | Level 3, 10V/m ; criteria A                                        |            |
|                                                                                                                                                                                                                                                                                                                               | EFT / Burst                                                                                              | BS EN/EN61000-4-4                                                                                               |                                   | Level 4, 4KV ; 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                                                                                                                                                                                                                                                                                                                          | 1550.7K hrs min. Telcordia SR-332 (Bellcore); 246.3K hrs min. MIL-HDBK-217F (25°C)                       |                                                                                                                 |                                   |                                                                    |            |
| DIMENSION                                                                                                                                                                                                                                                                                                                     | 30*125.2*116mm (W*H*D)                                                                                   |                                                                                                                 |                                   |                                                                    |            |
| PACKING                                                                                                                                                                                                                                                                                                                       | 0.595Kg; 20pcs/ 12.9Kg / 1.27CUFT                                                                        |                                                                                                                 |                                   |                                                                    |            |
| NOTE                                                                                                                                                                                                                                                                                                                          |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 1. All parameters NOT specially mentioned are measured at 230Vac 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 0.1 μ F & 47 μ F parallel capacitor.                                                                                                                                                                                  |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 3. Tolerance : includes set up tolerance, line regulation and load regulation.                                                                                                                                                                                                                                                |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 4. 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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> ) |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 5. The Regulatory Compliance Mark (RCM) is applied on a voluntary basis. The equipment meets the relevant IEC or AS/NZS standards, or AS/NZS 3820 where applicable. The use of the RCM mark complies with AS/NZS 4417.1.                                                                                                      |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 6. Some factory or model may not have the BIS logo, please contact your MEAN WELL sales for more information.                                                                                                                                                                                                                 |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 7. 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).                                                                                                                                                                     |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| 8. 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.                                                                                            |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |
| ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>                                                                                                                                      |                                                                                                          |                                                                                                                 |                                   |                                                                    |            |



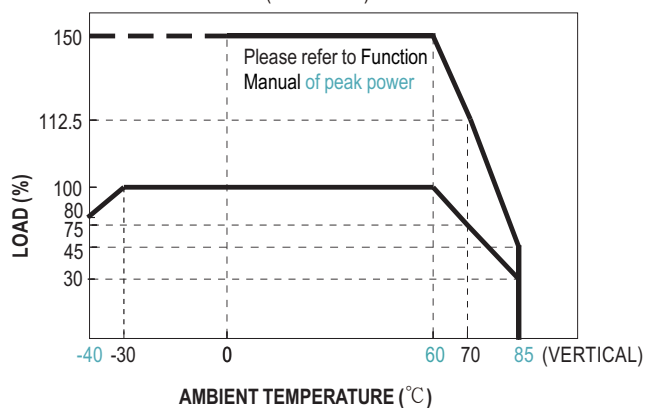
# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

## Block Diagram

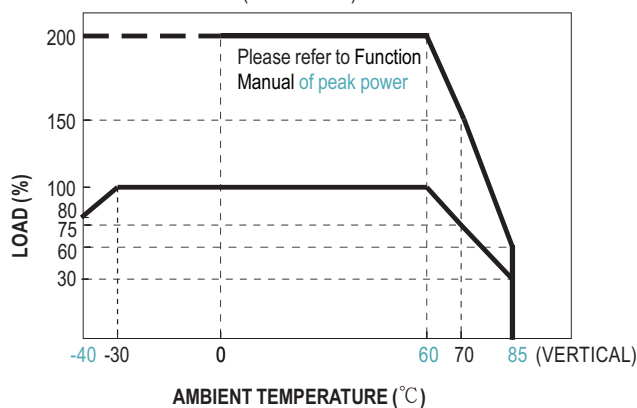


## Derating Curve

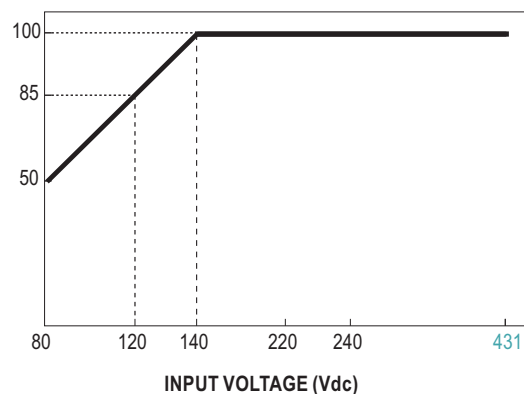
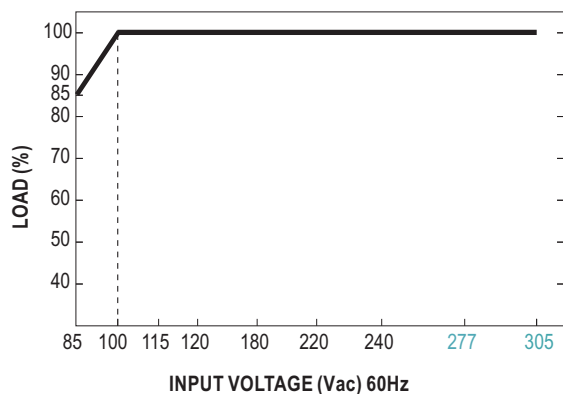
Suitable for 100/110/115/120Vac System  
(85~132Vac)



Suitable for 220/230/240/277Vac System  
(180~305Vac)



## Output derating VS input voltage





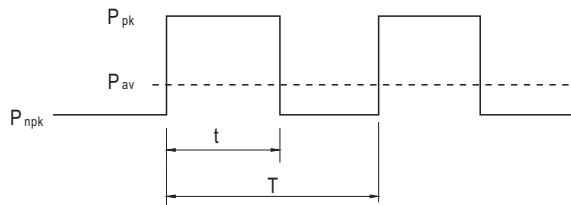
# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

## Peak Power

$$P_{av} = \frac{P_{pk} \times t + P_{npk} \times (T-t)}{T} \leq P_{rated}$$

$$Duty = \frac{t}{T} \times 100\% \leq 35\%$$

$$t \leq 5 \text{ sec}$$



$P_{av}$  : Average output power (W)

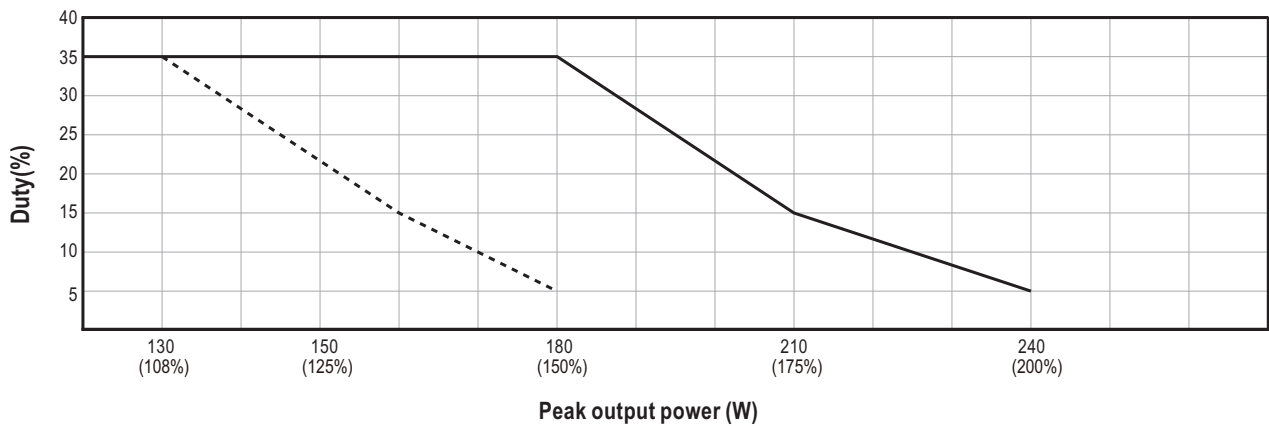
$P_{pk}$  : Peak output power (W)

$P_{npk}$  : Non-peak output power(W)

$P_{rated}$  : Rated output power(W)

$t$  : Peak power width(sec)

$T$  : Period(sec)



**For example (24V model) :**

$V_{in} = 200Vac$      $Duty_{max} = 5\%$

$P_{av} = P_{rated} = 120W$

$P_{pk} = 240W$

$t \leq 5 \text{ sec}$

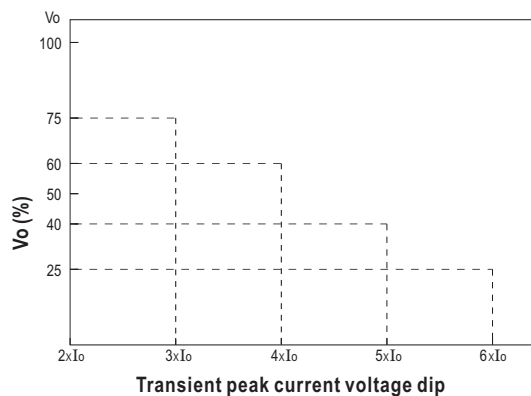
$$T \geq \frac{5 \text{ sec}}{5\%} \geq 100 \text{ sec}$$

$$P_{npk} \leq \frac{T P_{av} - t P_{pk}}{T-t}$$

$$P_{npk} \leq 113.7W$$

## Transient peak current Capability

The device can deliver peak currents (up to several milliseconds) which are higher than the specified short term currents.



| Load | Vo(%) | 12V  | 24V/36V/48V |
|------|-------|------|-------------|
|      |       | Time | Time        |
| 3xIo | 75    | 15ms | 35ms        |
| 4xIo | 60    | 8ms  | 17ms        |
| 5xIo | 40    | 5ms  | 13ms        |
| 6xIo | 25    | 4ms  | 10ms        |

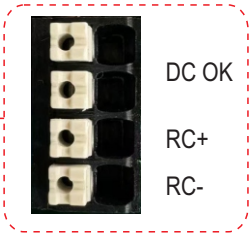
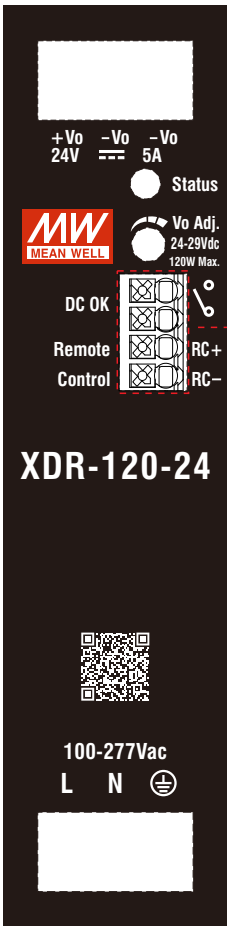
Note: The 4ms~35ms in the table must be after AC mains is turned on.



120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

■ Function Manual

| Pin No. | Function               | Description                                                                                                                                       |
|---------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,2     | DC OK<br>Relay Contact | Contact close : PSU turns ON/DC_OK ;<br>Contact open : PSU turns OFF/DC_fail;<br>Contact ratings (max.): 30Vdc/1A ,30Vac/0.5A resistive load.     |
| 3       | RC+                    | Turns the output ON and OFF by electrical signal<br>Remote power ON : Keep <0.8Vdc or open<br>Remote power OFF: Keep 3.3~5Vdc by external voltage |
| 4       | RC-                    |                                                                                                                                                   |

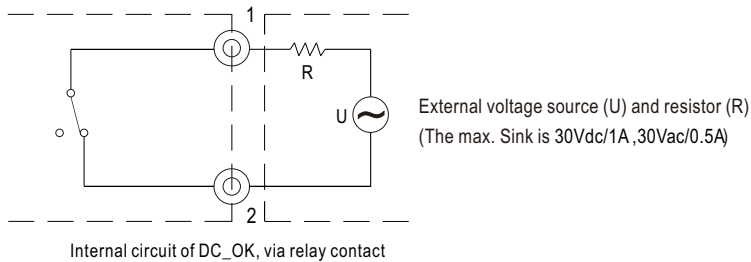
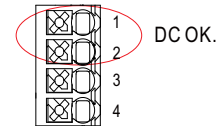




# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

## 1.DC OK Relay Contact

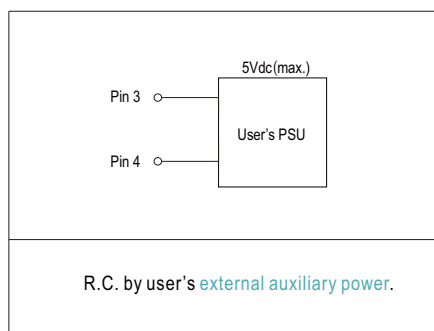
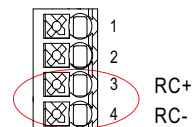
|                        |                                      |
|------------------------|--------------------------------------|
| Contact Close          | PSU turns ON / DC OK.                |
| Contact Open           | PSU turns OFF / DC Fail.             |
| Contact Ratings (max.) | 30Vdc/1A ,30Vac/0.5A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



## 2.Remote ON/OFF Control

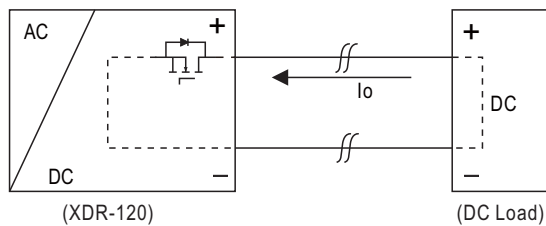
The PSU can be turned ON/OFF by using the "Remote Control" function.

|                  |                                    |
|------------------|------------------------------------|
| PSU Vo Status    | Between RC+ (Pin3) and RC- (Pin 4) |
| Remote power ON  | Keep <0.8Vdc or open               |
| Remote power OFF | Keep 3.3~5Vdc by external voltage  |



## 3.Protection Against Inverse Voltages From The Load

Prevent PSU damage from Back Electro magnetic Force during deceleration of motor or inductive load.



| PSU'S ORing FET turn OFF voltage |                                |
|----------------------------------|--------------------------------|
| MODEL                            | Max. allowable reverse voltage |
| XDR-120-12                       | <16V                           |
| XDR-120-24                       | <35V                           |
| XDR-120-36                       | <50V                           |
| XDR-120-48                       | <63V                           |

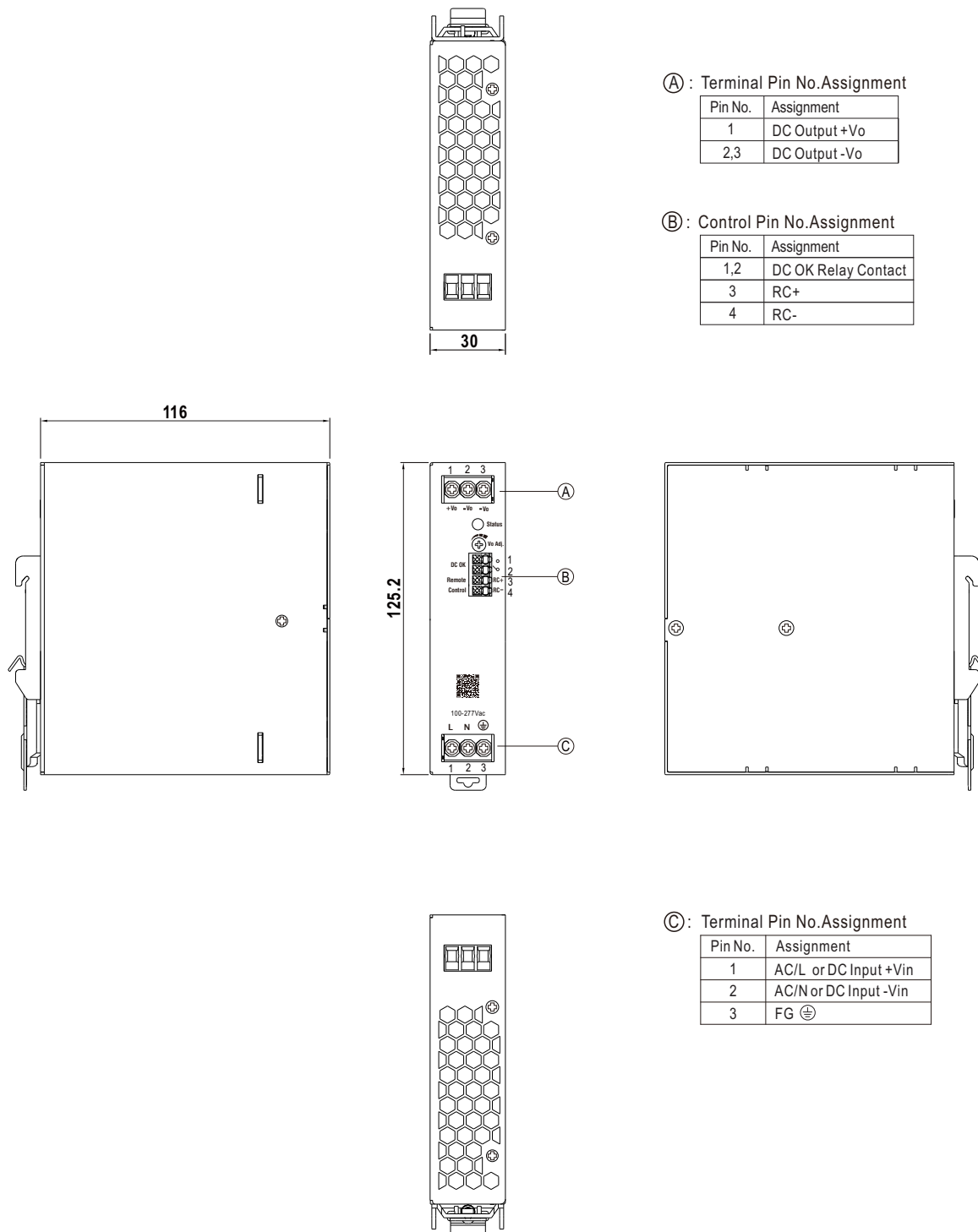


# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

## Mechanical Specification

(Unit:mm , Tolerance  $\pm 1$ mm)

Case No.301



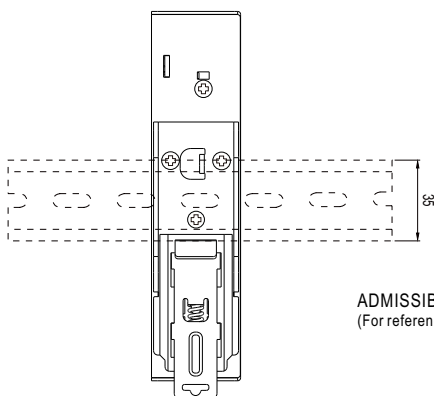


# 120W AC/DC High-End Ultra Slim Industrial DIN Rail Power **XDR-120** series

## ■ Recommend Wiring

|                       |       | AC Input T.B          | DC Output T.B         | Signal connector        |
|-----------------------|-------|-----------------------|-----------------------|-------------------------|
| Solid Wire            |       | 6mm <sup>2</sup> max. | 6mm <sup>2</sup> max. | 1.5mm <sup>2</sup> max. |
| A.W.G                 |       | 16~10 AWG             | 16~10 AWG             | 24~16 AWG               |
| Wire Stripping Length | Blank | 10~11mm               | 10~11mm               | 8~9mm                   |
|                       | LA    | 11~12mm               | 11~12mm               |                         |
|                       | PI    | 14~15mm               | 14~15mm               |                         |
| Screw Terminal Torque | Blank | 5 Lb-In               | 5 Lb-In               | /                       |
|                       | LA/PI | Not applicable        |                       |                         |

## ■ 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>