

**DESCRIPTIONS** 15W AC/DC DIN-Rail Power Supply

UL62368-1 EN62368-1 BS EN62368-1

**FEATURES**

- Universal 85-264VAC (277VAC available) or 120-370VDC (390VDC available) input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range -40°C to +70°C
- High I/O isolation voltage up to 4000VAC
- Industrial-grade design
- OVC III (EN61558-1 standards)
- Low standby power consumption, high efficiency
- Low ripple & noise
- Output short circuit, over-current, over-voltage protection
- DIN rail TS35X7.5/ TS35X15 mountable
- Safety according to UL/IEC62368, IEC/EN61010, IEC60335, IEC/EN61558

**APPLICATIONS**

- Industrial control

**Selection Guide**

| Certification | Part No.    | Output Power (W) | Nominal Output Voltage and Current (Vo/Io) | Output Voltage Adjustable Range ADJ (V) | Efficiency at 230VAC (%) Typ. | Capacitive Load (μF) Max. |
|---------------|-------------|------------------|--------------------------------------------|-----------------------------------------|-------------------------------|---------------------------|
| EN/BS EN      | ADL15-2B-05 | 12               | 5V/2.4A                                    | 4.5-5.5                                 | 80                            | 2000                      |
| UL/EN/BS EN   | ADL15-2B-12 | 15               | 12V/1.25A                                  | 10.8-13.8                               | 85                            | 1500                      |
| UL/EN/BS EN   | ADL15-2B-15 | 15               | 15V/1A                                     | 13.5-18.0                               | 85.5                          | 1100                      |
|               | ADL15-2B-24 | 15.2             | 24V/0.63A                                  | 21.6-29.0                               | 86                            | 700                       |
| EN/BS EN      | ADL15-2B-48 | 15.4             | 48V/0.32AS                                 | 43.2-55.2                               | 87                            | 300                       |

Note: 1.The actual adjustment range may extend outside the values stated, care should be exercised to ensure that the output voltage and power levels remain within the published maximum values.

2.The product picture is for reference only. For details, please refer to the actual product.

## Characteristic

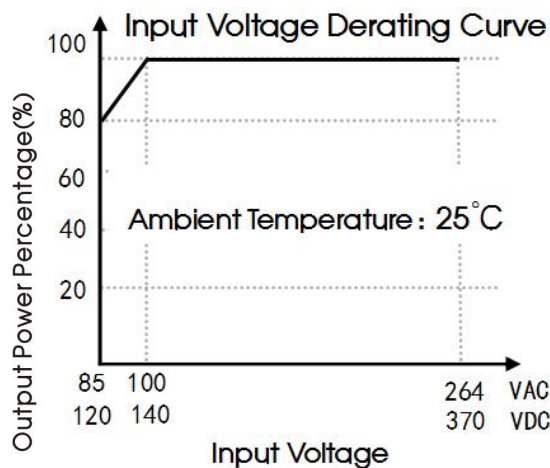
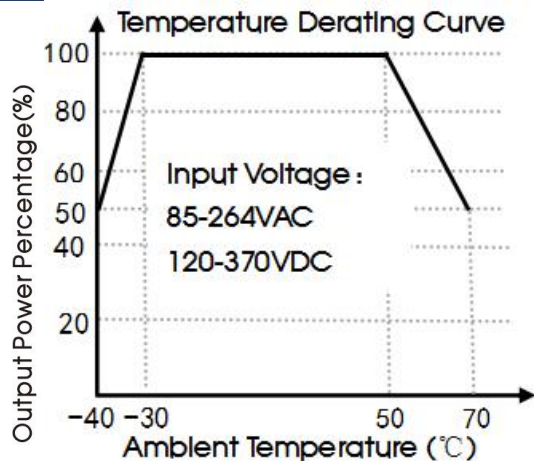
| Product characteristics | Item                       | Operating Conditions                 |              | Min.                                                                                                                                                                                | Typ.                  | Max. | Unit |
|-------------------------|----------------------------|--------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|------|
| Input Specifications    | Input Voltage Range        | AC input                             |              | 85                                                                                                                                                                                  | --                    | 264  | VAC  |
|                         |                            | DC input                             |              | 120                                                                                                                                                                                 | --                    | 370  | VDC  |
|                         | Input Frequency            |                                      |              | 47                                                                                                                                                                                  | --                    | 63   | Hz   |
|                         | Input Current              | 115VAC                               |              | --                                                                                                                                                                                  | --                    | 0.5  | A    |
|                         |                            | 230VAC                               |              | --                                                                                                                                                                                  | --                    | 0.25 |      |
|                         | Inrush Current             | 115VAC                               |              | --                                                                                                                                                                                  | 15                    | --   |      |
|                         |                            | 230VAC                               |              | --                                                                                                                                                                                  | 25                    | --   |      |
|                         | Leakage Current            | 240VAC                               |              | 0.5mA                                                                                                                                                                               |                       |      |      |
| Hot Plug                |                            |                                      | Unavailable  |                                                                                                                                                                                     |                       |      |      |
| Output Specifications   | Output Voltage Accuracy    | 0% - 100% load                       | 5V output    | --                                                                                                                                                                                  | ±2                    | --   | %    |
|                         |                            |                                      | Other output | --                                                                                                                                                                                  | ±1                    | --   |      |
|                         | Line Regulation            | Rated load                           |              | --                                                                                                                                                                                  | ±0.5                  | --   |      |
|                         | Load Regulation            | 230VAC                               |              | --                                                                                                                                                                                  | ±1                    | --   |      |
|                         | Output Ripple & Noise*     | 20MHz bandwidth (peak-to-peak value) | 5V output    | --                                                                                                                                                                                  | --                    | 80   | mV   |
|                         |                            |                                      | 12V output   | --                                                                                                                                                                                  | --                    | 120  |      |
|                         |                            |                                      | 15V output   | --                                                                                                                                                                                  | --                    | 120  |      |
|                         |                            |                                      | 24V output   | --                                                                                                                                                                                  | --                    | 150  |      |
|                         |                            |                                      | 48V output   | --                                                                                                                                                                                  | --                    | 240  |      |
|                         | Temperature Coefficient    |                                      |              | --                                                                                                                                                                                  | ±0.02                 | --   | %/°C |
|                         | Stand-by Power Consumption | 230VAC input                         |              | --                                                                                                                                                                                  | --                    | 0.3  | W    |
|                         | Short Circuit Protection   |                                      |              | Hiccup, continuous, self-recovery                                                                                                                                                   |                       |      |      |
|                         | Over-current Protection    | Constant voltage mode                |              | ≥110% Io, self-recovery                                                                                                                                                             |                       |      |      |
|                         |                            | Constant current mode                |              | Constant current limiting within 50% -100% rated output voltage, recovers automatically after fault condition is removed, it is not recommended to use when the output voltage <50% |                       |      |      |
|                         | Over-voltage Protection    | 5V output                            |              | ≤6.75V                                                                                                                                                                              | Output voltage hiccup |      |      |
|                         |                            | 12V output                           |              | ≤16.2V                                                                                                                                                                              |                       |      |      |
|                         |                            | 15V output                           |              | ≤22.5V                                                                                                                                                                              |                       |      |      |
|                         |                            | 24V output                           |              | ≤36V                                                                                                                                                                                |                       |      |      |
| 48V output              |                            | ≤64.8V                               |              |                                                                                                                                                                                     |                       |      |      |
| Minimum Load            |                            |                                      | 0            | --                                                                                                                                                                                  | --                    | %    |      |
| Start-up Time           |                            |                                      | --           | --                                                                                                                                                                                  | 2                     | s    |      |
| Hold-up Time            | 115VAC                     |                                      | --           | 12                                                                                                                                                                                  | --                    | ms   |      |

|                                                                                                                                                                            |                       |                    |                                                              |          |                |      |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|--------------------------------------------------------------|----------|----------------|------|--------|
|                                                                                                                                                                            |                       |                    | 230VAC                                                       | --       | 30             | --   |        |
| General Specifications                                                                                                                                                     | Isolation             | Input - output     | Electric Strength Test for 1min.,<br>(leakage current < 5mA) | 4000     | --             | --   | VAC    |
|                                                                                                                                                                            | Operating Temperature |                    |                                                              | -40      | --             | +70  | °C     |
|                                                                                                                                                                            | Storage Temperature   |                    |                                                              | -40      | --             | +85  |        |
|                                                                                                                                                                            | Storage Humidity      |                    |                                                              | --       | --             | 95   | %RH    |
|                                                                                                                                                                            | Operating Altitude    |                    |                                                              | --       | --             | 2000 | m      |
|                                                                                                                                                                            | Switching Frequency   |                    |                                                              | --       | 65             | --   | kHz    |
|                                                                                                                                                                            | Power Derating        |                    | -40°C to -30°C                                               | 5.0      | --             | --   | % / °C |
|                                                                                                                                                                            |                       |                    | +50°C to +70°C                                               | 2.5      | --             | --   |        |
|                                                                                                                                                                            |                       |                    |                                                              |          | 85VAC - 100VAC | 1.34 | --     |
|                                                                                                                                                                            | Safety Class          |                    |                                                              | CLASS II |                |      |        |
| MTBF                                                                                                                                                                       |                       | MIL-HDBK-217F@25°C | > 300,000 h                                                  |          |                |      |        |
| Mechanical Specifications                                                                                                                                                  | Case Material         |                    | Plastic, heat-resistant (UL94V-0)                            |          |                |      |        |
|                                                                                                                                                                            | Package Dimensions    |                    | 90.00 x 58.00 x 17.50mm                                      |          |                |      |        |
|                                                                                                                                                                            | Weight                |                    | 60g (Typ.)                                                   |          |                |      |        |
|                                                                                                                                                                            | Cooling Method        |                    | Free air convection                                          |          |                |      |        |
| Note:<br>*The "Tip and barrel method" is used for ripple and noise test, using a 12" twisted pair-wire terminated with a 0.1uf ceramic capacitor & 47uf parallel capacitor |                       |                    |                                                              |          |                |      |        |

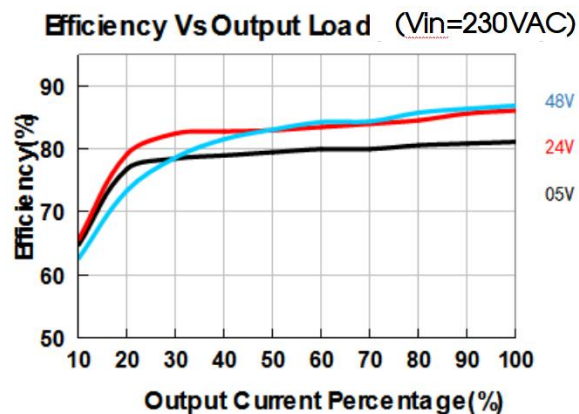
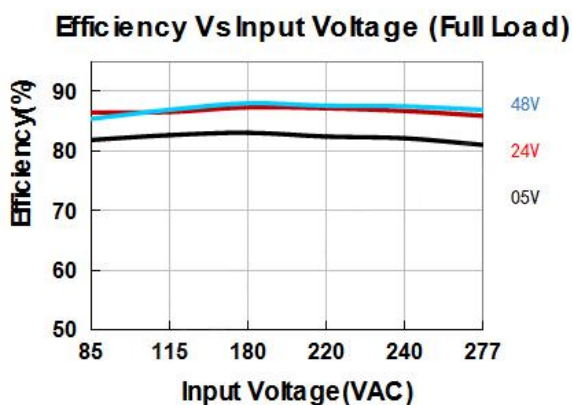
### Electromagnetic Compatibility (EMC)

|                                                |           |                                                                   |                  |                                                                        |                  |
|------------------------------------------------|-----------|-------------------------------------------------------------------|------------------|------------------------------------------------------------------------|------------------|
| Electromag<br>netic<br>Compatibili<br>ty (EMC) | Emissions | CE                                                                | CISPR32/EN55032  | CLASS B                                                                |                  |
|                                                |           | RE                                                                | CISPR32/EN55032  | CLASS B                                                                |                  |
|                                                |           | Harmonic current                                                  | IEC/EN61000-3-2  | CLASS A                                                                |                  |
|                                                | Immunity  | ESD                                                               | IEC/EN61000-4-2  | Contact ±4KV/ Air ±8KV                                                 | Perf. Criteria A |
|                                                |           | RS                                                                | IEC/EN61000-4-3  | 10V/m                                                                  | Perf. Criteria A |
|                                                |           | EFT                                                               | IEC/EN61000-4-4  | ±2KV                                                                   | Perf. Criteria A |
|                                                |           | Surge                                                             | IEC/EN61000-4-5  | line to line ±1KV                                                      | Perf. Criteria A |
|                                                |           | CS                                                                | IEC/EN61000-4-6  | 10Vr.m.s                                                               | Perf. Criteria A |
|                                                |           | Voltage dips, short interruptions and voltage variations immunity | IEC/EN61000-4-11 | 100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods | Perf. Criteria B |
|                                                |           |                                                                   |                  |                                                                        |                  |

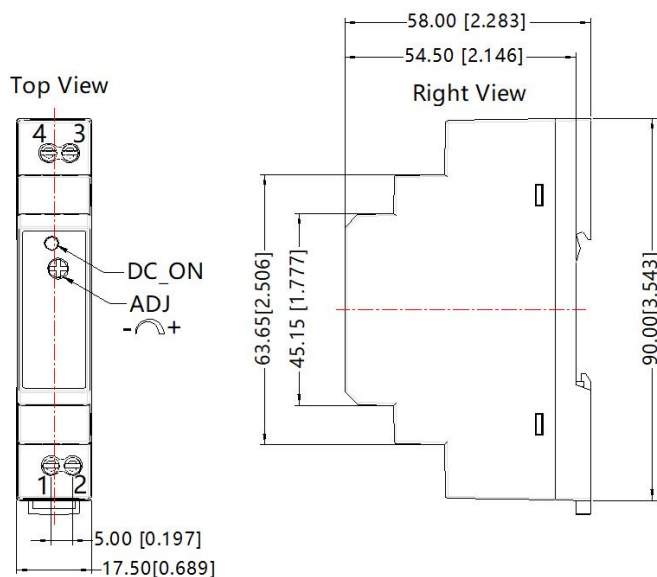
## Product Characteristic Curve



Note: ① With an AC input between 85-100VAC and a DC input between 120-140VDC, the output power must be derated as per temperature derating curves;  
② This product is suitable for applications using natural air cooling;



## Design Reference

THIRD ANGLE PROJECTION 

| Pin-Out |       |
|---------|-------|
| Pin     | Mark  |
| 1       | AC(N) |
| 2       | AC(L) |
| 3       | -Vo   |
| 4       | +Vo   |

## Note:

Unit: mm[inch]

ADJ: Adjustable resistance to change output voltage

Wire range: 24-12 AWG

Tightening torque: Max 0.4 N·m

Mounting rail: TS35, rail needs to connect safety ground

General tolerances:  $\pm 1.00 [\pm 0.039]$ 

## Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of  $T_a=25^\circ\text{C}$ , humidity<75% with nominal input voltage and rated output load;
2. All index testing methods in this datasheet are based on our company corporate standards;
3. We can provide product customization service, please contact our technicians directly for specific information;
4. Specifications are subject to change without prior notice.
5. Products are related to laws and regulations: see "Features" and "EMC";
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.