

# EDCL1500

V018-01-01A

## SPECIFICATIONS (1/3)

| ITEMS   |                     | MODEL       | EDCL1500<br>-60  | EDCL1500<br>-130 |
|---|---------------------|-------------|--|------------------|
| INPUT RATING                                      |                     |             |  |                  |
| Input Voltage Range                               |                     | VDC         | 70 - 220   |                  |
| Efficiency (Typ.)                                 |                     | %           | 91   |                  |
| Input Current (Typ.)                              |                     | A           | 15.2   |                  |
| Inrush Current (Typ.)                             |                     | (*2)(*3) A  | 40   |                  |
| OUTPUT RATING                                     |                     |             |  |                  |
| Nominal Output Voltage                            |                     | V           | 60   | 130              |
| Maximum Output Voltage                            |                     | (*1) V      | 66.0   | 156.0            |
| Maximum Output Current                            |                     | (*21) A     | 50   | 23.2             |
| Maximum Output Power                              |                     | (*21) W     | 1500   | 1508             |
| CONSTANT VOLTAGE MODE                             |                     |             |  |                  |
| Output Voltage Range by adjustment trimmer        |                     | (*1) V      | 48.0 - 66.0  | 104.0 - 156.0    |
| Output Voltage Range by Programming               |                     | (*1)(*4) V  | 0 - 66.0   | 0 - 156.0        |
| Maximum Line Regulation                           |                     | (*5) mV     | 240  | 520              |
| Maximum Load Regulation                           |                     | (*6) mV     | 600  | 1040             |
| Temperature Coefficient                           |                     | -           | 0.02%/°C   |                  |
| Maximum Ripple & Noise                            | 0 ≤ Ta ≤ 70°C       | mVp-p       | 500  | 866              |
|   | (*7) -20 ≤ Ta < 0°C | mVp-p       | 600  | 1083             |
| Remote Sensing                                    |                     | -           | Possible   |                  |
| Output Voltage External Control Using CV Terminal |                     | -           | Apply external voltage or current : 1 - 5V or 4 - 20mA<br>Output Voltage : 0% - Nominal output voltage |                  |
| Output Voltage External Control Using Modbus RTU  |                     | -           | 0-4,000<br>Output Voltage : 0% - Nominal output voltage  |                  |
|   |                     | (*16)       |  |                  |
| CONSTANT CURRENT MODE                             |                     |             |  |                  |
| Output Current External Control Range             |                     | (*1)(*11) A | 0 - 50.0   | 0 - 23.2         |
| Maximum Line Regulation                           |                     | (*4) mA     | 200  | 92.8             |
| Maximum Load Regulation                           |                     | (*12) mA    | 400  | 185.6            |
| Temperature Coefficient                           |                     | -           | 0.02%/°C   |                  |
| Output Current External Control Using CC Terminal |                     | -           | Apply external voltage or current : 1 - 5V or 4 - 20mA<br>Output Current : 0% - Maximum output Current |                  |
| Output Current External Control Using Modbus RTU  |                     | -           | 0-4,000<br>Output Current : 0% - Maximum output Current  |                  |
|   |                     | (*16)       |  |                  |
| PROTECTION  |                     |             |  |                  |
| Over Current Protection                           |                     | (*8) A      | 52.5 <   | 24.3 <           |
| Over Voltage Protection                           |                     | (*9) V      | 70.2 - 72.6  | 165.1 - 170.3    |
| Over Power Protection                             |                     | (*10) W     | 1687.5   |                  |
| ANALOG PROGRAMMING AND MONITORING                 |                     |             |  |                  |
| Remote ON/OFF Control                             |                     | -           | Possible   |                  |
| Parallel Operation                                |                     | (*13) -     | Possible, Current balancing function is provided   |                  |
| Series Operation                                  |                     | (*14) -     | Possible, Voltage balancing function is provided   |                  |
| Output Voltage Monitor using VB terminal          |                     | (*15) -     | Output Voltage : 0% - Nominal output voltage<br>VB terminal voltage : 1 - 5V                           |                  |
| Output Current Monitor using CB terminal          |                     | (*15) -     | Output Current : 0% - Maximum output Current<br>CB terminal voltage : 1 - 5V                           |                  |
| Monitoring Signal                                 |                     | -           | Power Fail(VPF, CPF), Input Fail(INF) (Open Collector Output)  |                  |

**EDCL1500**

**SPECIFICATIONS (2/3)**

| ITEMS                   |            | MODEL | EDCL1500<br>-60   | EDCL1500<br>-130 |
|-------------------------|------------|-------|---|------------------|
| COMMUNICATION           |            |       |   |                  |
| Digital Communication   | (*16)      | -     | Modbus RTU (RS-485)   |                  |
| AUXILIARY OUTPUT        |            |       |   |                  |
| Output Voltage (Typ.)   |            | V     | 5   |                  |
| Maximum Output Current  |            | A     | 2   |                  |
| ENVIRONMENT             |            |       |   |                  |
| Operating Temperature   |            | -     | -20 to +70°C, Guarantee Start up : -40 to -20°C   |                  |
| Storage Temperature     |            | -     | -40°C to +85°C  |                  |
| Operating Humidity      |            | -     | 20 to 90%RH (Non Condensing)  |                  |
| Storage Humidity        |            | -     | 10 to 95%RH (Non Condensing)  |                  |
| Vibration               | (*17)(*18) | -     | At no operating, 10 - 55Hz (Sweep for 1min)<br>19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.   |                  |
| Shock                   | (*17)(*18) | -     | Less than 196m/s <sup>2</sup>   |                  |
| Cooling                 | (*19)      | -     | Forced air cooling (Internal FAN)   |                  |
| ISOLATION               |            |       |   |                  |
| Withstand Voltage       |            | -     | Input-FG : 2.0kVAC (20mA) for 1min.<br>Input-Output : 3.0kVAC (20mA) for 1min.<br>Input-Signal, AUX : 3.0kVAC (20mA) for 1min.<br>Output-Signal, AUX : 2.0kVAC (20mA) for 1min.<br>Output-FG : 1.5kVAC (20mA) for 1min. |                  |
| Isolation Resistance    |            | -     | More than 100MΩ at 25°C and 70%RH, Output - FG 500VDC   |                  |
| STANDARD AND COMPLIANCE |            |       |   |                  |
| Safety                  |            | -     | -   |                  |
| Conducted Emission      | (*17)      | -     | Designed to meet EN55011/EN55032-A, FCC-ClassA, VCCI-A  |                  |
| Radiated Emission       | (*17)      | -     | Designed to meet EN55011/EN55032-A, FCC-ClassA, VCCI-A  |                  |
| Immunity                | (*17)(*20) | -     | Designed to meet IEC61000-6-2, IEC62236-3-2<br>(IEC61000-4-2, -3, -4, -5, -6, -8)   |                  |
| MECHANICAL              |            |       |   |                  |
| Weight (Typ.)           |            | kg    | 2.3   |                  |
| Size (W x H x D)        |            | mm    | 150x 61 x 270 (Refer to Outline Drawing)  |                  |

# EDCL1500

## SPECIFICATIONS (3/3)

\*Read Instruction Manual (V018-04-01\_) carefully, before using the power supply unit.

=NOTES=

\*1. When using the product above the nominal output voltage, derate the output current so that the maximum output power is not exceeded. Please refer to Fig. A.

(\*a) Limited by maximum output power value

\*2.  $T_a=25^{\circ}\text{C}$ , nominal output voltage and maximum output power.

\*3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.

\*4. Output voltage external control range using CV terminal and communication function.

\*5. 90-220VDC, constant load.

\*6. No load - Full load, constant input voltage.

\*7. Please refer to Instruction Manual (V018-04-01\_) for measurement of ripple noise voltage.

\*8. Overcurrent protection (OCP) allows you to select the protection operation: droop (factory default), hiccup, or latched shutdown.

Manual reset is performed by turning the power off and on, or by restarting via remote ON/OFF control.

The OCP threshold can be adjusted through the communication function.

A dynamic overload, such as an output short circuit, will cause the output to shut down.

\*9. Overvoltage protection (OVP) allows you to select the protection operation: latched shutdown (factory default) or hiccup.

Manual reset is performed by turning the power off and on, or by restarting via remote ON/OFF control.

The OVP threshold can be adjusted through the communication function.

\*10. Overpower protection (OPP) provides automatic recovery with constant power limitation.

If the overpower condition persists, the output voltage or current is limited so as not to exceed the set limit.

The OPP threshold can be adjusted through the communication function.

\*11. Output voltage external control range using CC terminal and communication function.

\*12. Minimum output voltage - Nominal output voltage, constant input voltage, maximum output current operation.

\*13. Up to 10 units.

\*14. Up to 3 units.

\*15. Use a measuring instrument whose input impedance is  $500\text{k}\Omega$  or more.

\*16. <Communication function example>

- Control of output voltage and output current. - Remote ON/OFF control.

- Product status including product life can be monitored.

- Operation history can be obtained.(OCP,OVP,INPUT Fail, etc.) etc.

Refer to instruction manual (V018-04-01\_) and communication manual (V013-04-02\_).

\*17. The specifications are based on TDK-Lambda standard measurement conditions.

The power supply is considered a component which will be installed into a final equipment.

The final equipment should be re-evaluated that it meets EMC, vibration and shock requirement. (\*) Maximum output power depends on output voltage. Refer to output ratings for values.

\*18. Mounting A only.

\*19. Variable speed fan. Fan noise is 45dB (typ) at  $25^{\circ}\text{C}$  and 70% load.

\*20. Signal and control ports interface cables length: Less than 3m, DC output power port cables length: Less than 30m.

\*21. Please refer to Fig.B for maximum output power of each input voltage.

Fig.A

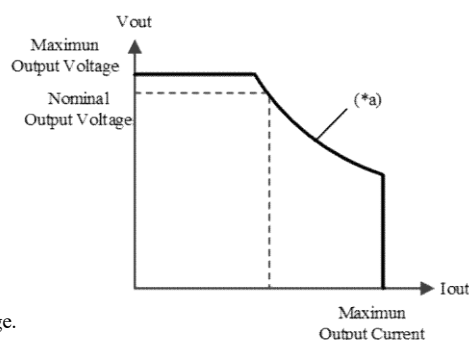


Fig.B Output power

