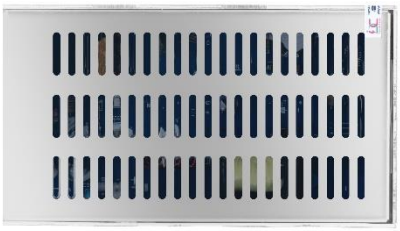
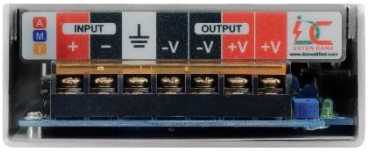
# 150W Single Output DC/DC Converter *MRS-150 series*



## Features:

**Standard DC input range**
**Protection: Short circuit /Overload/Over Voltage**
**DC INPUT REVERSE POLARITY PROTECTION**
**+Optional contact signal output for DC OK**
**+Optional Remote ON-Off control**
**Cooling by free air convection**
**100% full load burn-in test**
**2 years warranty**

## Applications:

**Security systems**
**Emergency POE system**
**Alarm system**
**UPS system**
**Central monitoring system**
**Access systems**

**100/150W** series is a DC/DC Converter,. In addition it can have to primary output, there is a charger output(option), with the smaller rated current, that provides the backup power supply application the security access system require.
**150W** delivers an efficiency up to 88%; It can operate with air convection under -20°C through +70°C. This series is designed with thorough alarm features, can adding DC Input OK signaling; Morever, the relay contact is provided to facilitate users system designs.

**MODEL:**

**12VDC: KB-150◯12**
**24VDC: KB -150◯24**
**48VDC: KB-150◯48(BY ORDERED)**
**110VDC: KB -150◯110(BY ORDERED)**

**DC INPUT RANGE: -◯ 12VDC (9-18) 24VDC (19-36) 48VDC (36-72) 110VDC (72-144)**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# 150W Single Output DC/DC Converter *MRS-150 series*

## SPECIFICATION:

| MODEL | | MRS-150◯12 | MRS-150◯24 | MRS-150◯48 | MRS-150◯110 |
|---|---|---|---|---|---|
| OUTPUT | OUTPUT NUMBER | CH1 | CH1 | CH1 | CH1 |
| | DC VOLTAGE | 12.0V | 24.0V | 48.0V | 110.0V |
| | RATED CURRENT | 12.0A | 6.5A | 3.0A | 1.3A |
| | CURRENT RANGE | 0~12.5A | 0~6.5A | 0~3.0A | 0~1.3A |
| | RATED POWER | 150W | 150W | 150W | 150W |
| | RIPPLE & NOISE(Note2) | 200mVp-p | 150mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | CH1: 12~15V | CH1: 24~29V | CH1: 47~59V | CH1: 100~120V |
| | VOLTAGE TOLERANCE(Note2) | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME Note.4 | 300ms, 50ms at full Load | | | |
| | HOLD UP TIME | 40ms at full Load | | | |
| INPUT | VOLTAGE RANGE | -◯ 12(9-18) 24VDC (19-36) 48VDC (36-72) 110(72-144) | | | |
| | | | | | |
| | EFFICIENCY (Typ.) | 84% | 86% | 87% | 89% |
| | | | | | |
| PROTECTION | OVERLOAD | 101~105% rated output power | | | |
| | | Protection type: Constant current, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 14.49~18.63VDC | 28.98~37.26VDC | 55.49~60.63VDC | 120~135VDC |
| | | Protection type: Shut down o/p voltage, re-power on to recover | | | |
| | OVER TEMP CONTROL | | | | |
| ALARM FUNCTION | DC OK Note.5 | OPTIONAL Relay contact output, ON: DC Okay; OFF: DC Fail; Max Rating: 30V-1A | | | |
| | Remote On/Off control | OPTIONAL Normal working CN3 is open, PSU is off if CN3 is short | | | |
| ENVIRONMENT | WORKING TEMP. | -20~+70°C REFER TO DERATING CURVE | | | |
| | WORKING HUMIDITY | 20~90% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -20~+85°C, 10~90% RH | | | |
| | TEMP. COEFFICIENT | ±0.03% /°C (0~45°C) on CH1 Output | | | |
| | VIBRATION | 10~500Hz 2G 10min./ 1cycle, 60min each along X, Y, Z | | | |
| SAFETY & EMC (NOTE4) | SAFETY STANDARD | UL60950-1, TUV EN60950-1, EAC TP TC 004 approved | | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 1.5KVAC I/P-FG: 2.0KVAC O/P-FG: 0.5KVAC | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG: 100MΩ / 500VDC / 25°C / 70%RH | | | |
| | EMC EMISSION | Compliance EN55032 (CISPR32) Class B, EN61000-3-2, -3, EAC TP TC 020 | | | |
| | EMC IMMUNITY | Compliance EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A | | | |
| OTHERS | MTBF | 257K hrs. min. MIL-HDBK-217F (25°C) | | | |
| | DIMENSION | 199*100*40mm | | | |
| | PACKING | 0.7Kg; 20pcs/14 Kg | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temp<br>2. Ripple & noise are measured at 20MHz of bandwidth by using 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor<br>3. Tolerance: includes set up tolerance. Line regulation and load regulation.<br>4. Length of set up time is measured at first cold start. Tuning ON/OFF the power supply may lead to increase of the set-up time.,<br>5. Please refer to suggested application<br>6. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to EMI testing of components power supplier<br>The ambient temp derating of 3.5°C/1000m with fan less model and 5°C/1000m with fan model for operating altitude higher than 2000m. | | | | |

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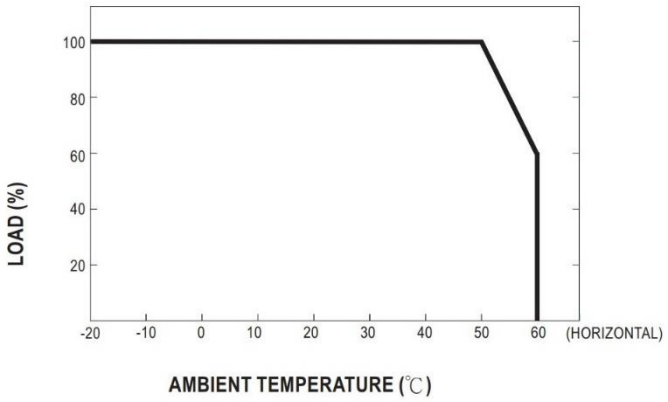
## ■ Derating Curve




## ■ Output Derating VS Input Voltage