- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test

SPECIFICATION

MODEL		MDR-20-24
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	1A
	CURRENT RANGE	0 ~ 1A
	RATED POWER	24W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE ADJ. RANGE	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	± 1.0%
	LINE REGULATION	± 1.0%
	LOAD REGULATION	± 1.0%
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC 1000ms, 30ms/115VAC at full load
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	84%
	AC CURRENT (Typ.)	0.55A/115VAC 0.35A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC
PROTECTION	OVERLOAD	105 ~ 160% rated output power
		Protection type : Constant current limiting, recovers automatically after fault condition is removed
	OVER VOLTAGE	27.6 ~ 32.4V
		Protection type : Shut down o/p voltage, re-power on to recover
FUNCTION	DC OK ACTIVE SIGNAL (max.)	18 ~ 27V / 20mA
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950-1 approved, NEC class 2 / LPS compliant
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC
	EMI CONDUCTION & RADIATION	Compliance to EN55011,EN55022 (CISPR22), EN61204-3 Class B
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024,EN61000-6-1,EN61204-3, light industry level, criteria A
OTHERS	MTBF	236.9K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	22.5*90*100mm (W*H*D)
	PACKING	0.19Kg; 72pcs/14.7Kg/0.91CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf 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. 5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.	

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant (12V,24V,48V only)
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test

SPECIFICATION

MODEL		MDR-40-24
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	1.7A
	CURRENT RANGE	0 ~ 1.7A
	RATED POWER	40.8W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 30V
	VOLTAGE TOLERANCE Note.3	± 1.0%
	LINE REGULATION	± 1.0%
	LOAD REGULATION	± 1.0%
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	88%
	AC CURRENT (Typ.)	1.1A/115VAC 0.7A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC
PROTECTION	OVERLOAD	105 ~ 150% rated output power
		Protection type : Constant current limiting, recovers automatically after fault condition is removed
	OVER VOLTAGE	31.2 ~ 36V
		Protection type : Shut down o/p voltage, re-power on to recover
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistive
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting : Compliance to IEC60068-2-6
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, UL60950-1, TUV EN60950-1 approved, NEC class 2 / LPS compliant (12V,24V,48V only)
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500VDC 25℃ 70%RH
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A
OTHERS	MTBF	301.7K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	40*90*100mm (W*H*D)
	PACKING	0.3Kg; 42pcs/13.6Kg/0.82CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf 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. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.	

- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant (24V,48V only)
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test

SPECIFICATION

MODEL		MDR-60-24
OUTPUT	DC VOLTAGE	24V
	RATED CURRENT	2.5A
	CURRENT RANGE	0 ~ 2.5A
	RATED POWER	60W
	RIPPLE & NOISE (max.) Note.2	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 30V
	VOLTAGE TOLERANCE Note.3	± 1.0%
	LINE REGULATION	± 1.0%
	LOAD REGULATION	± 1.0%
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz
	EFFICIENCY (Typ.)	88%
	AC CURRENT (Typ.)	1.8A/115VAC 1A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC
PROTECTION	OVERLOAD	105 ~ 150% rated output power
		Protection type : Constant current limiting, recovers automatically after fault condition is removed
	OVER VOLTAGE	31.2 ~ 36V
		Protection type : Shut down o/p voltage, re-power on to recover
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistive
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting : Compliance to IEC60068-2-6
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, UL60950-1, TUV EN60950-1 approved, NEC class 2 / LPS compliant (24V,48V only)
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500VDC 25℃ 70%RH
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A
OTHERS	MTBF	299.2K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	40*90*100mm (W*H*D)
	PACKING	0.33Kg; 42pcs/14.8Kg/0.82CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf 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. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.	

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- ZCS / ZVS technology to reduce power dissipation
- Cooling by free air convection
- Can be installed on DIN rail TS-35 / 7.5 or 15
- DC OK relay contact
- No load power consumption<1W
- NEC class 2, limited power source (for 24V,48V only)
- LED indicator for power on
- 100% full load burn-in test

SPECIFICATION

MODEL		MDR-100-24	MDR-100-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	4A	2A
	CURRENT RANGE	0 ~ 4A	0 ~ 2A
	RATED POWER	96W	96W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 30V	48 ~ 56V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME Note.5	3000ms, 50ms/230VAC	3000ms, 50ms/115VAC at full load
	HOLD UP TIME (Typ.)	50ms/230VAC	20ms/115VAC at full load
INPUT	VOLTAGE RANGE Note.6	85 ~ 264VAC	120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≧0.95/230VAC	PF≧0.98/115VAC at full load
	EFFICIENCY (Typ.)	86%	88%
	AC CURRENT (Typ.)	1.3A/115VAC	0.8A/230VAC
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC	60A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC	
PROTECTION	OVERLOAD	105 ~ 150% rated output power	
		Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	31.2 ~ 36V	57.6 ~ 64.8V
		Protection type : Shut down o/p voltage, re-power on to recover	
	OVER TEMPERATURE	90℃ ±10℃(RTH2) detect on heatsink of power transistor	
		Protection type : Shut down o/p voltage, re-power on to recover	
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistive	
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes ; Mounting : Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, TUV EN60950-1 approved, design refer to NEC CLASS 2 (for 24V,48V only)	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms/500VDC 25℃ 70%RH	
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B	
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3	
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A	
OTHERS	MTBF	346K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	55*90*100mm (W*H*D)	
	PACKING	0.42Kg; 30pcs/13.6Kg/0.82CUFT	
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf 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. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 6. Deating maybe needed under low input voltages, please check the derating curve for more detail.		