



20W Single Output Industrial DIN Rail Power Supply

MDR-20 series



■ Features :

- 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
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test
- 3 years warranty

User's Manual



■ GTIN CODE

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

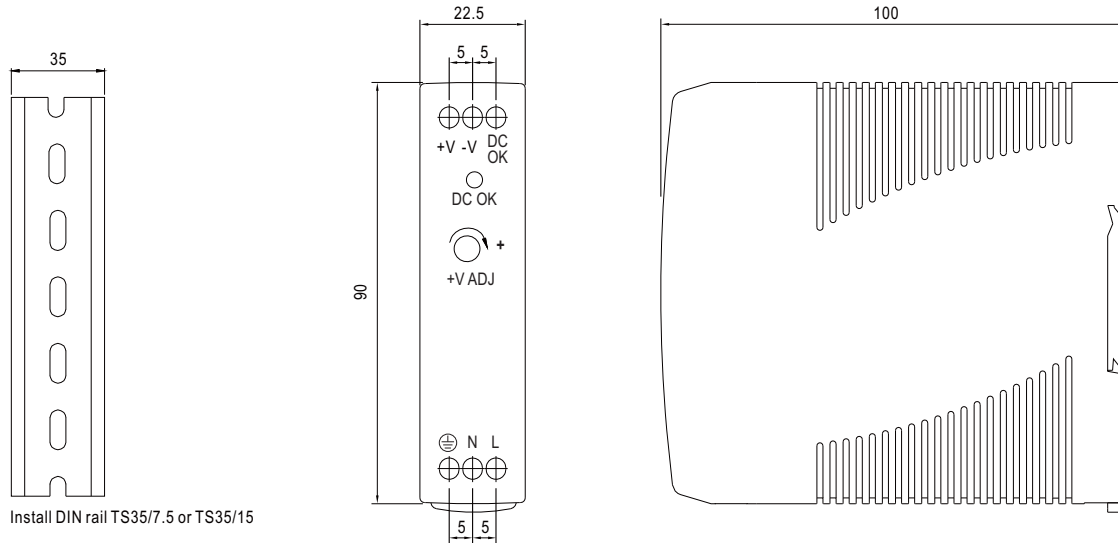


SPECIFICATION

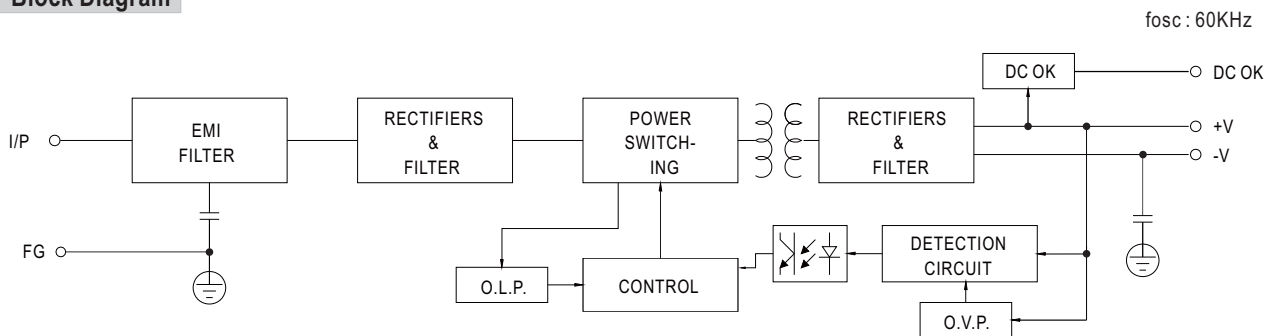
MODEL		MDR-20-5		MDR-20-12		MDR-20-15		MDR-20-24	
OUTPUT	DC VOLTAGE	5V		12V		15V		24V	
	RATED CURRENT	3A		1.67A		1.34A		1A	
	CURRENT RANGE	0 ~ 3A		0 ~ 1.67A		0 ~ 1.34A		0 ~ 1A	
	RATED POWER	15W		20W		20W		24W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p		120mVp-p		120mVp-p		150mVp-p	
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V		10.8 ~ 13.2V		13.5 ~ 16.5V		21.6 ~ 26.4V	
	VOLTAGE TOLERANCE Note.3	± 2.0%		± 1.0%		± 1.0%		± 1.0%	
	LINE REGULATION	± 1.0%		± 1.0%		± 1.0%		± 1.0%	
	LOAD REGULATION	± 1.0%		± 1.0%		± 1.0%		± 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.)	76%		80%		81%		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	5.75 ~ 6.75V		13.8 ~ 16.2V		17.25 ~ 20.25V		27.6 ~ 32.4V	
		Protection type : Shut down o/p voltage, re-power on to recover							
FUNCTION	DC OK ACTIVE SIGNAL (max.)	3.75 ~ 6V / 50mA		9 ~ 13.5V / 40mA		11.5 ~ 16.5V / 40mA		18 ~ 27V / 20mA	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to "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 BS EN/EN62368-1, EAC TP TC 004, BSMI CNS14336-1, AS/NZS 62368.1, IS13252(Part1)/IEC60950-1 approved							
	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC I/P-FG: 2KVAC O/P-FG: 0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25℃ / 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class B							
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN55035, BS EN/EN61000-6-1, BS EN/EN61204-3, light industry level, EAC TP TC 020							
OTHERS	MTBF	2780.8K hrs min. Telcordia SR-332 (Bellcore) ; 236.9K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	22.5*90*100mm (W*H*D)							
	PACKING	0.17Kg; 72pcs/13.2Kg/1.04CUFT							
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 0.1 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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 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. 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx								

Mechanical Specification

Case No. 956 Unit:mm

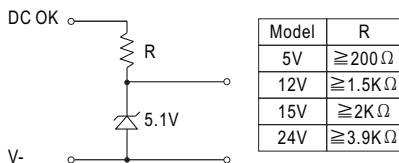


Block Diagram

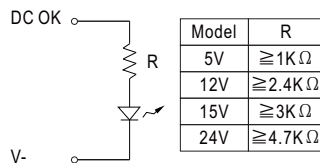


Application of DC OK Active Signal

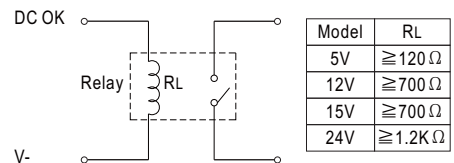
(a) 5V signal



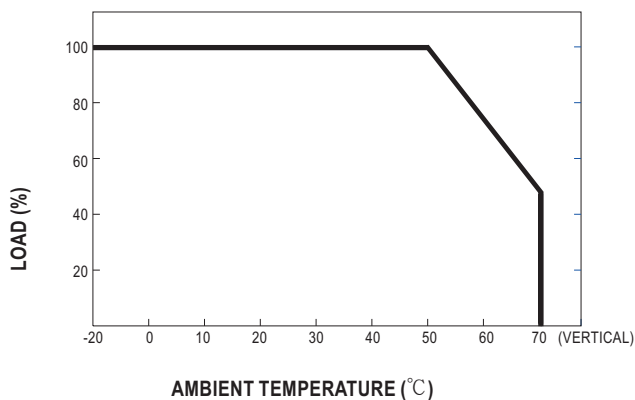
(b) LED



(c) Relay



Derating Curve



Output Derating VS Input Voltage

