



BS EN/EN62368-1 AS/NZS 62368.1



IEC62368-1



## ■ Features

- Universal input 90~305VAC ([277VAC available](#))
- All-in-one function with Power supply, DC-UPS, battery charger and status monitoring in ONE compact unit**
- Signal and alarms design meet UL2524, NFPA 1221, BS EN/EN54-4 and GB17945 requirement, with adjustable parameters configurable by communication interface
- [Form C relay](#) contacts and LED indicators for AC Fail, Battery Low, Charger Fail, and DC-OK
- Load-dependent high speed battery charging
- Built-in [MODBus](#) or [CANBus](#) protocol
- Protections: Short circuit / Overload / Over voltage / Over temperature(auto derating) / Battery reverse polarity ([No damage](#)) / Battery cut off
- Battery low protection / Battery reverse polarity protection
- 30 ~ +70°C wide operating temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- [Charging curve can be set with SBP-001](#)(only for CANBus model)  
(Smart programmer sold separately, please refer to: <https://www.meanwell.com/webapp/product/search.aspx?prod=SBP-001>)
- 20~100% charging current adjustable by VR
- 2 or 3-stage selectable by DIP S.W
- Suitable for lead acid and lithium-ion batteries
- 3 years warranty

## ■ Description

DRS-480 is a 480W AC/DC DIN rail type security power supply series. In addition to the primary output, there is an additional charger circuit that will automatically adjust charge current depending on the primary output current. DRS-480 accepts the universal input between 90VAC and 305VAC, and supports output 24VDC, 36VDC, and 48VDC nominal systems. With high efficiency up to 93.5%, it can operate with free air convection cooling under -30°C through 70°C ambient temperature. In addition to the key protection features such as overload protection, over voltage protection, battery low voltage disconnect, and battery reverse polarity protection, the DRS-480 also provides Form-C contacts and LED indicator alarm signals for AC-fail, battery low, charger fail, and DC-OK to allow easy integration into security systems that comply with local alarm codes.

## ■ Model Encoding

DRS - 480 -48 □



Function option(Blank: Built-in MODBus, CAN: Built-in CANBus)

## ■ Applications

- Public safety battery back-up (Red box)
- Security system
- Emergency lighting system
- Alarm system
- Uninterruptible DC-UPS system, battery detection system
- Central monitoring system
- Industrial automation

## ■ GTIN CODE

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



## SPECIFICATION

MODEL		DRS-480-24 <input type="checkbox"/>	DRS-480-36 <input type="checkbox"/>	DRS-480-48 <input type="checkbox"/>		
<input type="checkbox"/> =Blank, CAN						
OUTPUT	OUTPUT VOLTAGE Note.2	24V	36V	48V		
	LOAD CURRENT RANGE	0 ~ 20A	0 ~ 13.3A	0 ~ 10A		
	BATTERY CURRENT (CC)(max.)	15.4A	10.2A	7.7A		
	RECOMMENDED BATTERY CAPACITY(AMP HOURS) Note.3	20 ~ 200AH	13 ~ 133AH	10 ~ 100AH		
	TOTAL OUTPUT POWER Note.4	Combined power on all Channels must not exceed 480W, load has priority. 550W peak capability within 5s.				
	RIPPLE & NOISE (max.) Note.5	240mVp-p	360mVp-p	480mVp-p		
	VOLTAGE TOLERANCE Note.6	± 1.0%	± 1.0%	± 1.0%		
	LINE REGULATION	± 0.5%	± 0.5%	± 0.5%		
	LOAD REGULATION	± 0.5%	± 0.5%	± 0.5%		
INPUT	SETUP RISETIME Note.7	2400ms, 1000ms/230VAC	2400ms, 1000ms/115VAC at full load			
	HOLD UP TIME (Typ.)	16ms/230VAC	10ms/115VAC at full load			
PROTECTION	VOLTAGE RANGE	90 ~ 305VAC	127 ~ 431VDC			
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.98/115VAC at full load			
	EFFICIENCY (Typ.)	92.5%	93.5%	93.5%		
	AC CURRENT (Typ.)	5.4A/115VAC	2.7A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC	60A/230VAC			
FUNCTION	SHORT CIRCUIT	Protection type: Constant current limiting, power will shutdown after 5 sec, re-power on to recover.				
	OVERLOAD	105 ~ 135% rated output power				
		Protection type: Constant current limiting, shutdown output voltage after 5 sec.				
	OVER TEMPERATURE	Automatically drop load with temperature only for bat. load.				
	OVER VOLTAGE	Protection type : Shut down o/p voltage, recover automatically after temperature goes down.				
		Load main output : 32.4 ~ 37.3V	Load main output : 48.6 ~ 55.9V	Load main output : 64.8 ~ 74.5V		
		Protection type : Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	BATTERY CUT OFF	20.9±0.5V	31.3±0.7V	41.8±1V		
	REVERSE POLARITY	By internal MOSFET, no damage, recovers automatically after fault condition is removed.				
	FORM-C RELAY	AC FAIL	Signals AC failure and activates when input voltage drops below : 79~89VAC of 120AC, 132~187VAC of 220VAC. Relay contact output, ON : AC OK ; OFF : AC Fail ; max. rating : 30Vdc/1A			
		CHARGER FAIL	Relay contact output, ON : Charger OK ; OFF : Charger Fail ; max. rating : 30Vdc/1A			
		DC OK	Signals normal DC output and activates when output voltage > 90% rated value. Relay contact output, ON : DC OK ; OFF : DC Fail ; max. rating : 30Vdc/1A			
		BATTERY LOW/ ABNORMAL/ DISCONNECTED	Relay contact output, ON : Battery OK ; OFF : Battery Low ; max. rating : 30Vdc/1A	Battery low voltage : < 22V±0.3V	Battery low voltage : < 33V±0.4V	Battery low voltage : < 44V±0.5V
	BATTERY START	Restart system directly from battery and does not require AC power				
	DC-UPS	UPS switch to battery power within 10ms of AC failure				
	ADJUSTABLE CHARGING CURRENT	20% ~ 100% charging current adjustable by VR				
SAFETY & EMC (Note.10)	BATTERY TEMPERATURE COMPENSATION	The system can change the battery charging voltage by detecting the temperature (Please refer to page 9~10 for more details).				
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C ) on Load output				
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes				
	OPERATING ALTITUDE Note.8	2000 meters / OVC III				
SAFETY & EMC (Note.10)	OVER VOLTAGE CATEGORY	III; According to Dekra BS EN/EN62368-1; altitude up to 2000 meters				
	SAFETY STANDARDS	UL62368-1, Dekra BS EN/EN62368-1, RCM AS/NZS 62368.1, EAC TP TC 004 approved				
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC	I/P-FG: 2KVAC	O/P-FG: 1.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/25°C / 70%RH				
	EMC EMISSION	Parameter	Standard	Test Level / Note		
		Conducted	BS EN/EN55032 (CISPR32)	Class B		
		Radiated	BS EN/EN55032 (CISPR32)	Class B		
		Harmonic Current	BS EN/EN61000-3-2	-----		
		Voltage Flicker	BS EN/EN61000-3-2	-----		
	EMC IMMUNITY	BS EN/EN55035 , BS EN/EN1204-3, BS EN/EN61000-6-2(BS EN/EN50082-2)				
		Parameter	Standard	Test Level / Note		
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact; criteria A		
		Radiated	BS EN/EN61000-4-3	Level 3, 10V/m ; criteria A		
		EFT / Burst	BS EN/EN61000-4-4	Level 3, 2KV ; criteria A		
		Surge	BS EN/EN61000-4-5	Level 3, 1KV/Line-Line ;Level 3, 2KV/Line-Line-Chassis ;criteria A		
		Conducted	BS EN/EN61000-4-6	Level 3, 10V ; criteria A		
		Magnetic Field	BS EN/EN61000-4-8	Level 4, 30A/m ; criteria A		
	FIRE DETECTION AND FIRE ALARM SYSTEM	Compliance to BS EN/EN54-4				