



MW DDRH-60 Series 60W Ultra Wide Input DIN Rail Type DC-DC Converter Owner's Manual

[Home](#) » [MW](#) » MW DDRH-60 Series 60W Ultra Wide Input DIN Rail Type DC-DC Converter Owner's Manual 



DDRH-60 series
60W Ultra Wide Input DIN Rail Type DC-DC Converter



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Contents

- [1 Features](#)
- [2 Applications](#)
- [3 Description](#)
- [4 Model Encoding](#)
- [5 SPECIFICATION](#)
- [6 Block Diagram](#)
- [7 Derating Curve](#)
- [8 Static Characteristics](#)
- [9 DC OK Relay Contact](#)
- [10 Mechanical Specification](#)
- [11 External FUSE wiring instruction](#)
- [12 Installation Instruction](#)
- [13 Documents / Resources](#)
 - [13.1 References](#)
- [14 Related Posts](#)

Features

- 150.– 1500Vdc 10:1 ultra – wide input range
- 57mm slim width
- 4KVac I/O high isolation(Reinforced isolation)
- Protections: Short circuit / Overload / Over voltage / Over temperature DC input under voltage / DC input reverse polarity
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- -30-‘+80°C ultra-wide operating temperature (> +55°C derating)
- Over voltage category II
- Operating altitude up to 5000 meters
- DC OK relay contact
- DC output voltage adjustable(+20%)
- 3 years warranty



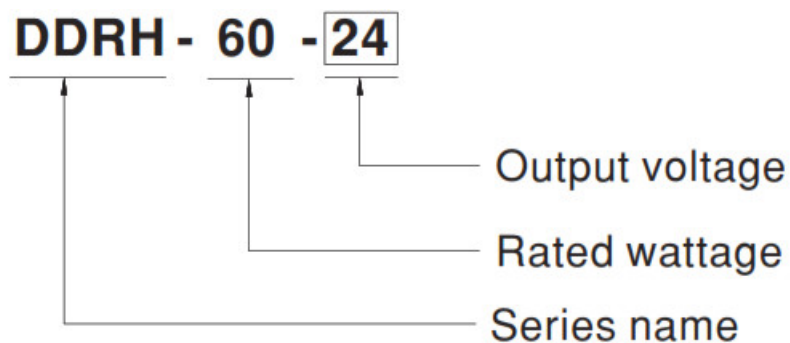
Applications

- Photovoltaic power generation
- High voltage frequency conversion
- Industrial control system
- Semiconductor fabrication equipment
- Electro-mechanical apparatus
- DC bus centralized application

Description

DDRH-60 series is a 150 r- 1500Vdc ultra-high input DIN rail type DC-DC converter which can supply stable working voltage for the load. It is suitable to be mounted on TS-35/7.5 or TS-35/15 rails. Main features are as following: easy to install DIN rail type, narrow width(57mm) in slim design, -30-+80°C wide range operating temperature, 4KVAC high isolation voltage, operation at 5000m altitude, high efficiency, low ripple & noise, complete protections and so on. DDRH-60 is compliant with BS EN/EN61000-6-2 standard regarding immunity for industrial environments. It is suitable for industrial automation, surveillance, telecommunication and can be widely deployed in the applications of new energy generation such as solar power, and windmill power generation, for instances, photovoltaic power systems, high voltage inverting , DC bus centralized application and so forth.

Model Encoding



SPECIFICATION

MODEL		DDRH-60-5	DDRH-60-12	DDRH-60-24	DDRH-60-48
OUT PUT	DC VOL TAGE	5V	12V	24V	48V
	RATED CURRE NT	10A	5A	2.5A	1.25A
	CURRE NT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A	0 ~ 1.25A
	RATED POWER	50W	60W	60W	60W
	RIPPLE & NOIS E (max.) Note.2	100mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTA GE ADJ . RANG E	5 ~ 6V	12 ~ 15V	24 ~ 29V	48 ~ 54V

	VOLTA GE TOL ERANC E Note. 3		±1.5%	±1.5%	±1.0%	±1.0%
	LINE R EGULA TION		±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGUL ATION		±1.5%	±0.5%	±0.5%	±0.5%
	EXTER NAL C APACIT ANCE L OAD (M ax.)		6000μF	4000μF	2500μF	1000μF
INP UT	VOLTA GE RA NGE Note. 4		150 ~ 1500Vdc			
	EF FI CI E N CY (T yp .)	20 0V dc	80%	83%	86%	87%
		80 0V dc	81%	85%	87%	88%
		15 00 Vd c	76%	81%	84%	83%
INRUS H CUR RENT (max.)		COLD START 120A /1500Vdc 80A/800Vdc 30A/150Vdc				
	OVERL OAD		105 ~ 135% rated output power			
			Protection type : Hiccup up mode when output voltage<55%, recovers automatically after con dition is removed; Constant current limiting, recovers automatically after fault condition is rem oved within 55% ~ 100% rated output voltage			
	OVER V OLTAG E		6.6 ~ 8.4V	16.5 ~ 21V	30 ~ 38V	55 ~ 60V
			Protection type : Hiccup up mode, recovers automatically after fault condition is removed			
	OVER T EMPER ATURE		Protection type : Hiccup up mode, recovers automatically after fault condition is removed			

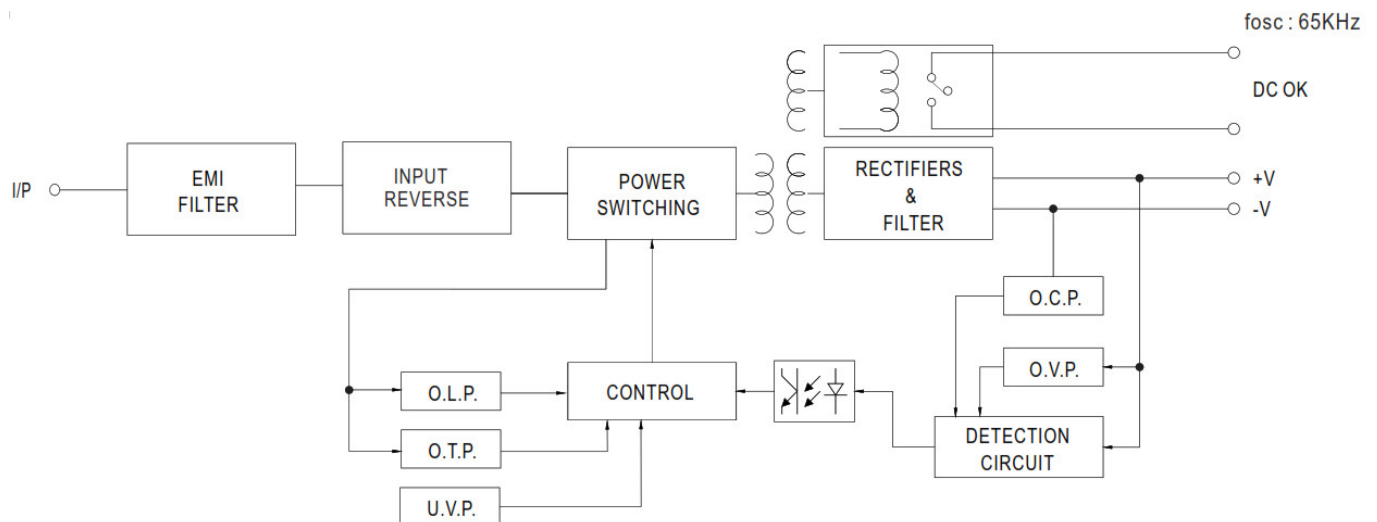
PRO TEC TION	D C I N P U T	RE VE RS E P OL ARI TY	By internal Bridge Diode, no damage, recovers automatically after fault condition removed
		UN DE RV OL TAG E LO CK OU T	Under voltage protection range:120 ~ 130Vdc , Under voltage release range:130 ~ 146.5Vdc
FUN CTI ON	DC OK SIGNAL		Relay contact rating(max.) : 30V / 1A resistive
ENV IRO NM ENT	WORKI NG TE MP.		-30 ~ +80°C (Refer to “Derating Curve”)
	WORKI NG HU MIDITY		20 ~ 90% RH non-condensing
	STORA GE TE MP., HU MIDITY		-40 ~ +80°C, 10 ~ 95% RH non-condensing
	TEMP. COEFFI CIENT		±0.03%/°C (0 ~ 55°C)
	VIBRAT ION		Component: 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting clip: C ompliance to IEC60068-2-6
	OPERA TING A LTITUD E Note. 5		5000 meters /OVCII
	OVER V OLTAG E CATE GORY		II; According to EN62109-1; altitude up to 5000 meters
	SAFET Y STAN DARDS		IEC62109-1(LVD) , EAC TP TC 004 approved; Design refer to UL1741(By request)

SAFETY & EMC (Note.7)	WITHSTANDING VOLTAGE	I/P-O/P:4KVAC O/P-DC OK:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, 100M Ohms / 500VDC / 25°C/ 70% RH		
	EMC EMISSION	Parameter	Standard	Test Level / Note
		Conducted	BS EN/EN55032(CISPR32)	Class A
		Radiated	BS EN/EN55032(CISPR32)	Class A
		Voltage Flicker	BS EN/EN61000-3-3	——
	EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2		
		Parameter	Standard	Test Level /Note
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A
		Radiated Susceptibility	BS EN/EN61000-4-3	Level 3, 10V, criteria A
		EFT/Burst	BS EN/EN61000-4-4	Level 3, 2KV, criteria A
		Surge	BS EN/EN61000-4-5	Level 4, 2KV/Vin+ ~ Vin-, criteria A
		Conducted	BS EN/EN61000-4-6	Level 3, 10V, criteria A
		Magnetic Field	BS EN/EN61000-4-8	Level 4, 30A, criteria A
		Voltage Dips and interruptions	BS EN/EN61000-4-11	95% dip 0.5 periods, 30 % dip 25 periods, 95% interruptions 250 periods
OTHERS	MTBF	454.5K hrs min. MIL-HDBK-217F (25°C); 503K hrs min. Telcordia TR/SR-332 (Bellcore) (25°C)		
	DIMENSION	57*93.5*105mm (W*H*D)		
	PACKING	0.8Kg; 16pcs/12.8Kg/0.84CUFT		

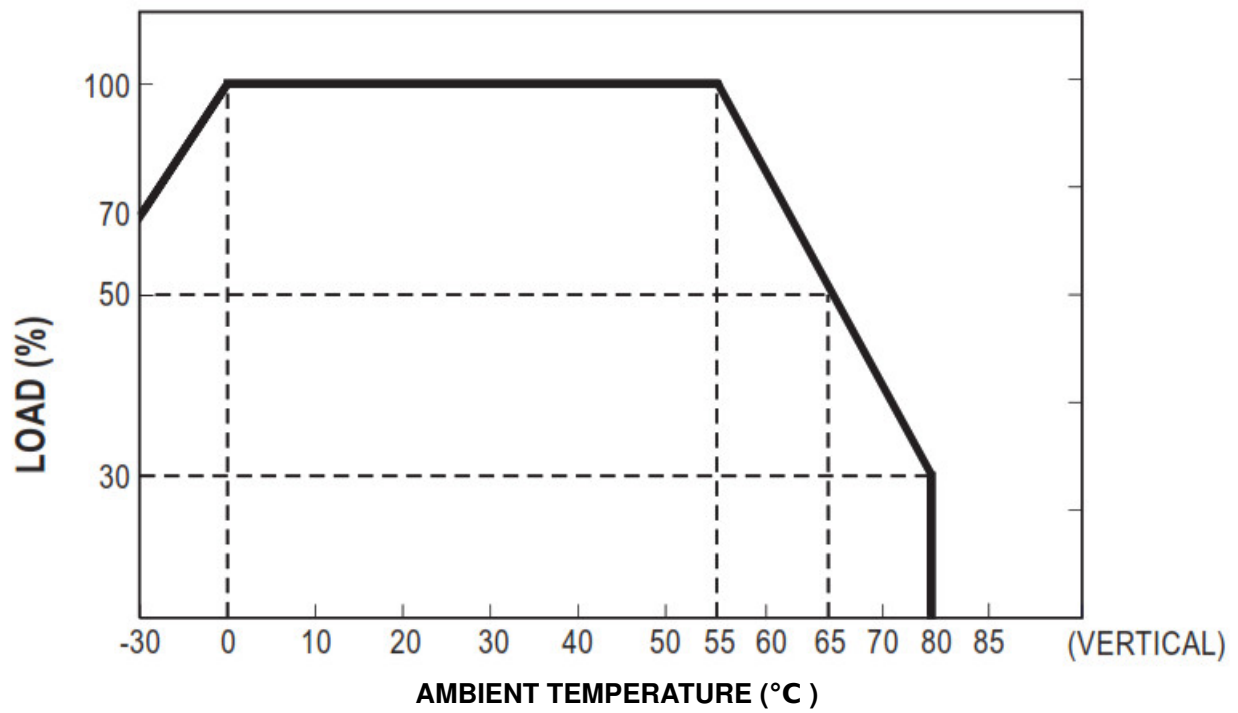
NOTE

1. All parameters NOT specially mentioned are measured at 600Vdc input, rated load and 25°C 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. Derating may be needed under low input voltage. Please check the derating curve for more details.
5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
6. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
7. 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 <http://www.meanwell.com>)
※ Product Liability Disclaimer For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

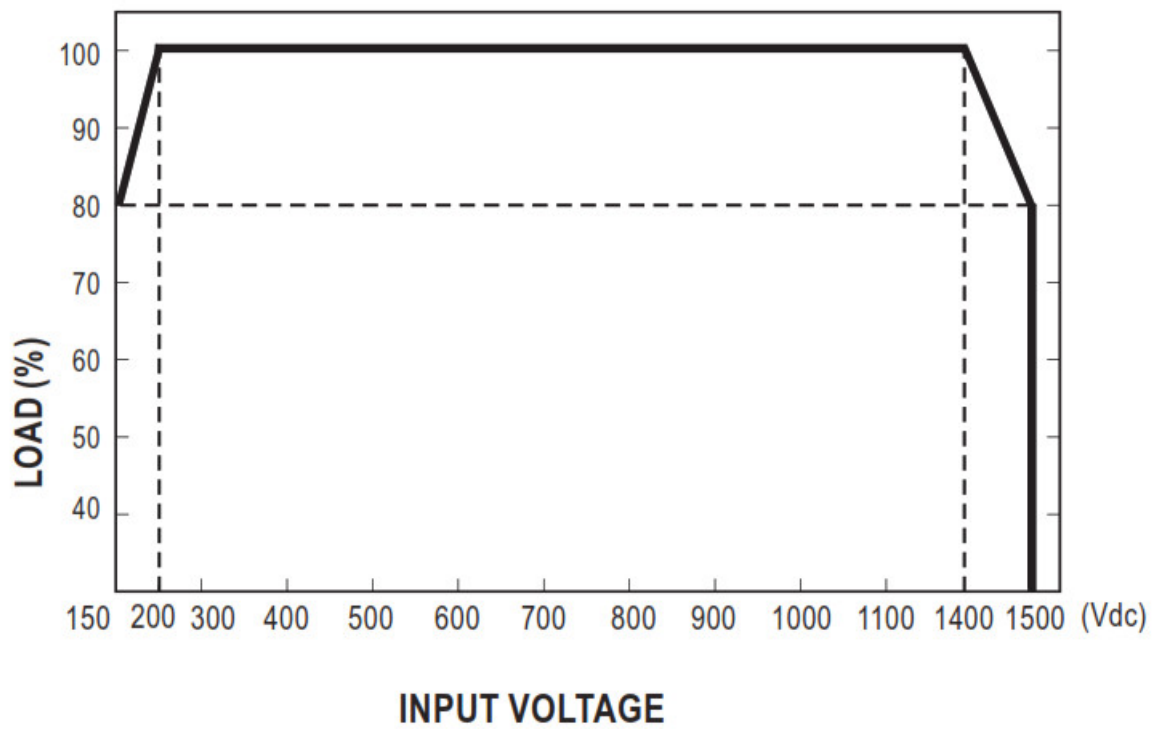
Block Diagram



Derating Curve



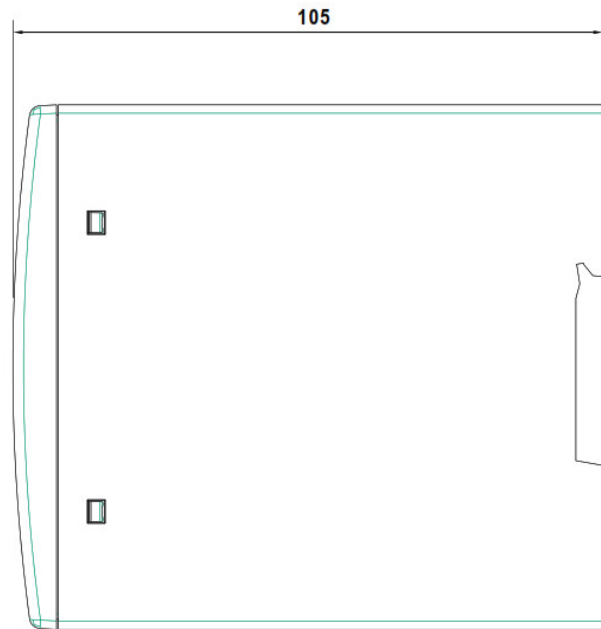
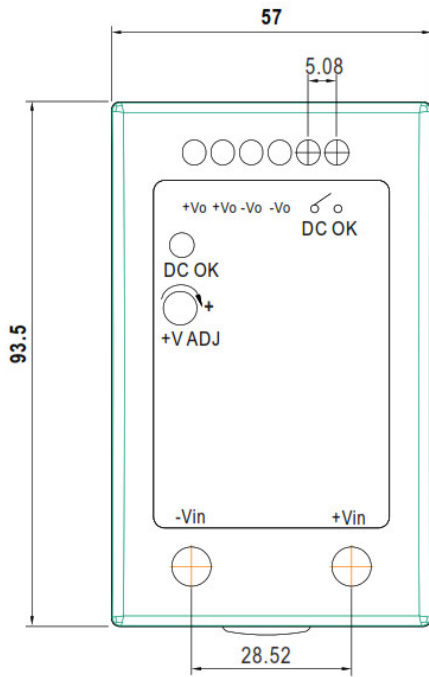
Static Characteristics



DC OK Relay Contact

Contact Close	PSU turns ON / DC OK.
Contact Open	PSU turns OFF / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

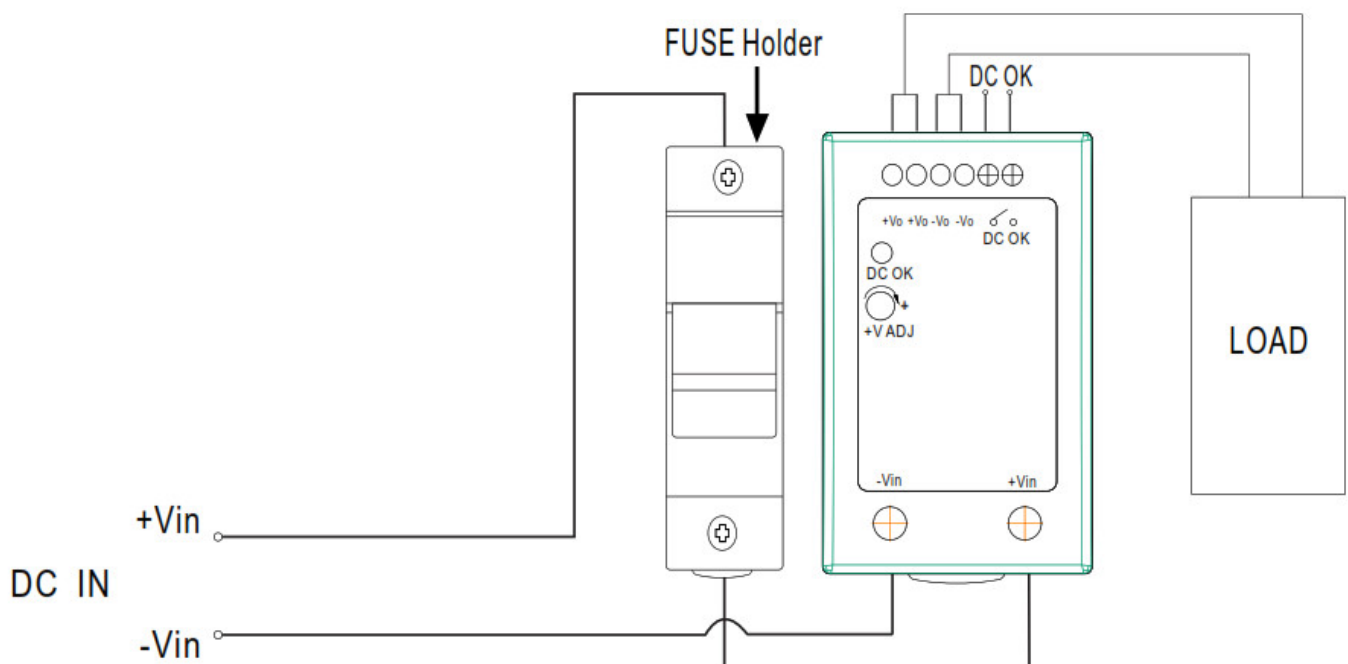
Mechanical Specification



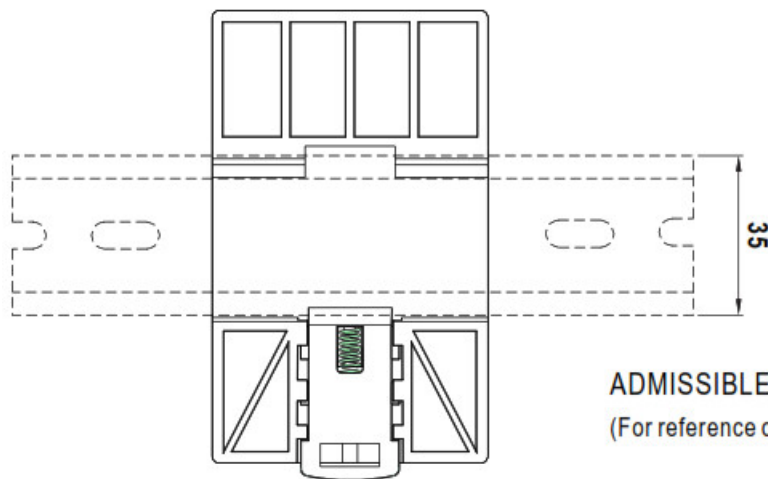
External FUSE wiring instruction

External FUSE is required.FUSE specification: 4A/1500Vdc.
Suggested model:

Fuse Brand	Manufacturer Part NO.		MW's Order NO.
	Fuse	Fuse Holder	Fuse + Fuse Holder
WalterFuse	WJ30-4	WJ30-H	DDRH-WJ30-4-H
Littelfuse	SPXV-4A	LFPXV/LPXV	Not provide
Bussmann	PV-4A10F85L	CHPV15L85	Not provide



Installation Instruction



Back View

Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>



<https://www.meanwell.com/Upload/PDF/DDRH.pdf>



Downloaded from Arrow.com.

Documents / Resources

	<p>MW DDRH-60 Series 60W Ultra Wide Input DIN Rail Type DC-DC Converter [pdf] Owner's Manual</p> <p>DDRH-60 Series 60W Ultra Wide Input DIN Rail Type DC-DC Converter, DDRH-60 Series, DD RH-60, 60W Ultra Wide Input DIN Rail Type DC-DC Converter, 60W Type DC-DC Converter, Ultra Wide Input DIN Rail Type DC-DC Converter, Type DC-DC Converter, Type DC Converter, Converter</p>
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References

-  [MEAN WELL Switching Power Supply Manufacturer](#)

Manuals+.