

MDIN20W series

20W Constant Voltage Din Rail Power Supply



■ Features:

- Constant voltage design
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN Rail TS-35/7.5 or 15
- Universal input voltage range
- DC ok signal (Open collector type)

CE SELV LPS

Ⓢ ELECTRICAL SPECIFICATION

MODEL	MDIN20W12	MDIN20W24
OUTPUT		
Rated Voltage	12V	24V
Rated Current	1.67A	1A
Current Range	0 ÷ 1.67A	0 ÷ 1A
Rated Power	20W	24W
No Output Voltage (max.)	12.6V	25.2V
Voltage Adjustment Range [6]	11 – 13.80V	21 – 28V
Line Regulation	± 0.5%	
Load Regulation	± 2%	
Voltage Tolerance [3]	± 5%	
Ripple & Noise (max.) [2]	280mV _{p-p}	
Setup, Rise Time [4]	max. 820ms, max. 70ms / 230VAC at full load	
Hold up Time (typ.)	65ms / 230VAC at full load	
INPUT		
Voltage Range	90 ÷ 264VAC	
Frequency Range	47 ÷ 63Hz	
Efficiency (typ.)	80%	82%
AC current (typ.)	0.15A / 230VAC, 0.42A / 115VAC,	
Inrush current (max.)	60A / 230VAC(25°C)	
No Load Power Consumption (max.)	1W	
PROTECTIONS		
Over Current	Range: 110 ÷ 145%	
	Type: hiccup mode. Recovers automatically after fault condition is removed.	
Short Circuit	Type: hiccup mode.	
Over Voltage	14 ÷ 17V	28 ÷ 31V
	Type: shut down output voltage. Re-power on to recovery.	
Over Temperature	Range: 110°C ± 10°C	
	Type: shut down output voltage. Re-power on to recovery.	
WORKING ENVIRONMENT		

Working Temperature	-20°C ÷ +50°C
Working Humidity	45 ÷ 85% RH non-condensing
Storage Temperature and Humidity	-30°C ÷ +70°C, 10 ÷ 95% RH non-condensing

SAFETY AND EMC REGULATIONS

Safety Standards	Compliance to EN62368-1
Withstand Voltage	IN/OUT: 3kVAC, IN/GND: 2kVAC, OUT/GND: 0.5kVAC
EMC Emission	Compliance to EN55032
EMC Immunity	Compliance to EN55024
Harmonic Current	Compliance to EN61000-3-2, EN61000-3-3

OTHERS

Dimensions	100 x 94 x 23mm (L x W x H)	
Weight and Packing	0.15kg	
EAN Code		

1. All parameters NOT specially mentioned are measured at 230VAC 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 0.1μF i 47μF parallel capacitor.

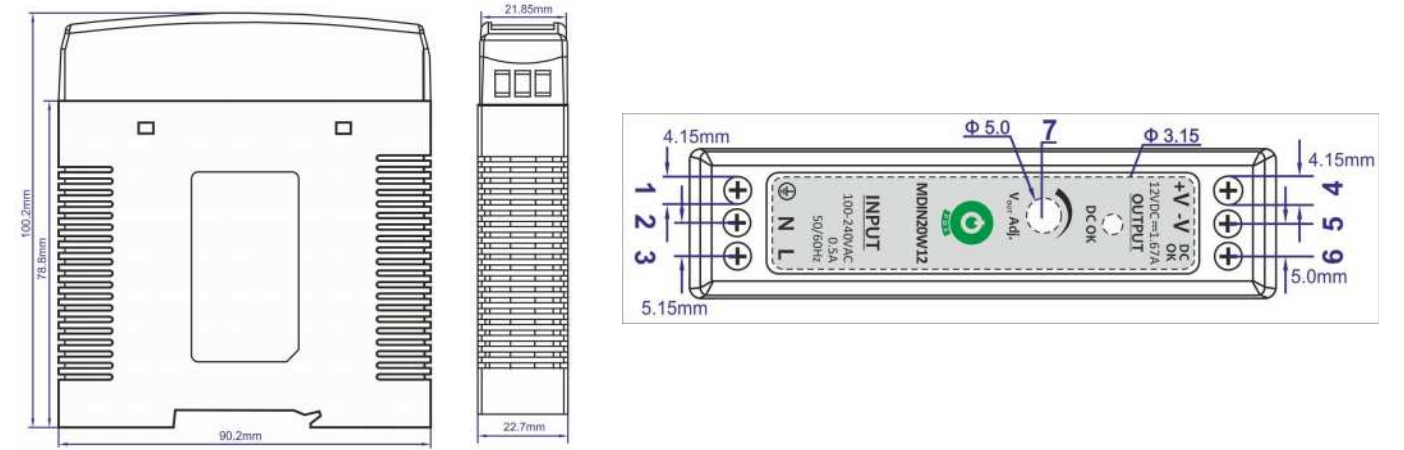
3. Tolerance includes set up tolerance, line regulation and load regulation.

4. Setup and rise time is measured from 0 to 90% rated output voltage.

5. Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC Directives.

6. By built-in potentiometer.

Ⓢ MECHANICAL SPECIFICATION



PIN ASSIGNMENT			
No.	Assignment	No.	Assignment
1	Input: GND	5	Output: U _{OUT} -
2	Input: AC/N	6	Output: DC OK
3	Input: AC/L	7	U _{OUT} Potentiometer
4	Output: U _{OUT} +		

DEKLARACJA ZGODNOŚCI UE

/EU DECLARATION OF CONFORMITY

Deklarujemy zgodność produktu: */For the following equipment:*

Oznaczenie: <i>/Part No.:</i>	MDIN20W X (X = 5, 12, 15, 24, 48)
Numer partii: <i>/Batch No.</i>	GLP24 Y xxxxxxxxxx-zz (Y = 01, ..., 06)

z wymaganiami następujących przepisów oraz norm Unii Europejskiej: */is herewith confirmed to comply with the requirements set out in the Council Directive, the following standards were applied:*

Dyrektywy ROHS 2011/65/UE, 2015/863/UE, 2020/659/UE
/ROHS Directives 2011/65/EU, 2015/863/EU, 2020/659/EU

Zastosowana norma <i>/Standard</i>	Opis <i>/Description</i>
EN IEC 63000:2018	Dokumentacja techniczna do oceny produktów elektrycznych i elektronicznych w odniesieniu do ograniczenia substancji niebezpiecznych <i>/Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances</i>

Dyrektywa LVD 2014/35/UE
/Low Voltage Directive 2014/35/EU

Zastosowana norma <i>/Standard</i>	Opis <i>/Description</i>
EN 62368-1:2020 + A11:2020	Urządzenia techniki fonicznej/wizyjnej, informatycznej i telekomunikacyjnej -- Część 1: Wymagania bezpieczeństwa <i>/Audio/video, information and communication technology equipment. Safety requirements</i>

Dyrektywa EMC 2014/30/UE
/Electromagnetic Compatibility Directive 2014/30/EU

Zastosowana norma <i>/Standard</i>	Opis <i>/Description</i>
EN 55032:2015 + A1:2020 + A11:2020	Kompatybilność elektromagnetyczna urządzeń multimedialnych -- Wymagania dotyczące emisji <i>/Electromagnetic compatibility of multimedia equipment. Emission Requirements</i>
EN 55035:2017 + A11:2020	Kompatybilność elektromagnetyczna urządzeń multimedialnych -- Wymagania dotyczące odporności <i>/Electromagnetic compatibility of multimedia equipment. Immunity requirements</i>
EN61000-3-2:2019 + A1:2021	Kompatybilność elektromagnetyczna (EMC) -- Część 3-2: Poziomy dopuszczalne -- Poziomy dopuszczalne emisji harmoniczných prądu (fazowy prąd zasilający odbiornika ≤ 16 A) <i>/Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)</i>
EN61000-3-3:2013 + A1:2019 + A2:2021	Kompatybilność elektromagnetyczna (EMC) -- Część 3-3: Poziomy dopuszczalne -- Ograniczanie zmian napięcia, wahań napięcia i migotania światła w publicznych sieciach zasilających niskiego napięcia, powodowanych przez odbiorniki o fazowym prądzie znamionowym < lub = 16 A przyłączone bezwarunkowo <i>/Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection</i>

Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta.

/This declaration of conformity is issued under the sole responsibility of the manufacturer.

MPL Power Elektro Sp z o.o.
ul. Handlowa 13, 41-807 Zabrze
NIP 6312457646, REGON 240105606

Pieczęć firmy */Company stamp*

KIEROWNIK
Działu Technicznego
Łukasz Jaromin

Podpis i pieczęć osoby */Person signature and stamp*

CERTIFICATE

of Conformity

EC Council Directive (EU) 2014/30

Electromagnetic Compatibility

Registration No.: AE 50618165 0001
Report No.: CN23LSFB 001
Holder: MPL Power Elektro Sp. z o.o
ul. Handlowa 13 41-807
Zabrze,
Poland
Product: Power Supply
(DIN RAIL POWER SUPPLIES)

Type designation listed on the next page

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive (EU) 2014/30. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive.

Date: 2024-01-26

Certification Body



Gary Chen



TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives/Regulations are complied with. CE

CERTIFICATE

of Conformity

EC Council Directive (EU) 2014/30

Electromagnetic Compatibility

Registration No.: AE 50618165 0001

Product: Power Supply
(*DIN RAIL POWER SUPPLIES*)

Tested according to: EN 55032:2015+A11+A1
EN 55035:2017+A11
EN IEC 61000-3-2:2019+A1
EN 61000-3-3:2013+A1+A2

Identification: Type Designation
MDIN20W5, MDIN20W12, MDIN20W15, MDIN20W24, MDIN20W48
Serial No.: n.a.
Remark: Refer to test report CN23LSFB 001 for details.



TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives/Regulations are complied with. CE

UK DECLARATION OF CONFORMITY

For the following equipment:

Part No.:	MDIN20W X (X = 12, 15, 24, 48)
Batch No.:	GLP23xxxxxxxxxxxxxx

is herewith confirmed to comply with the following standards and regulations:

STATUTORY INSTRUMENTS 2012 No. 3032 - The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

COMMISSION REGULATION (EU) 2019/2020 – Ecodesign for light sources and separate control gears.

Electrical Equipment (SAFETY) Regulations 2016

STANDARD	DESCRIPTION
BS EN IEC 62368-1:2020+A11:2020	Audio/video, information and communication technology equipment - Safety requirements

Electrical Compatibility Regulations 2016

STANDARD	DESCRIPTION
BS EN 55032:2015 + A11:2020	Electromagnetic compatibility of multimedia equipment. Emission Requirements
BS EN 55035:2017+A11:2020	Electromagnetic compatibility of multimedia equipment. Immunity requirements
BS EN IEC 61000-3-2:2019+A1:2021	Electromagnetic compatibility (EMC) - Limits. Limits for harmonic current emissions (equipment input current ≤16 A per phase)
BS EN 61000-3-3:2013+A2:2021	Electromagnetic compatibility (EMC) - Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection

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Zabrze, 16.01.2023r.

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Company stamp

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Działu Technicznego
Lukasz Jaromin

Person signature and stamp