

DIN-RAIL COMPUTER EXTENSION MODULE: POWER SUPPLY UNIT

- Ultra-wide range power input: 24 V DC to 110 V DC nominal
- Full range supply voltage: 16.8 V DC to 138 V DC
- DIN rail, wall or 19" rack mounting
- EN 50155 compliant
- -40 °C to +70 °C (+85 °C), fanless



RUGGED ULTRA-WIDE PSU FOR TRANSPORTATION

The MP1 is a PSU module for use in transportation, e.g., in trains. The power input allows an operating input voltage range from 24 V DC to 110 V DC nominal, which is EN 50155 compliant.

MODULAR SYSTEM FOR EASY CONFIGURATION

Due to duagon's modular concept, the MP1 offers flexibility in built-to-order configurations. The PSU can be easily combined with the pre-fabricated CPU module MC50M, providing short delivery times.

In the modular system, the data transfer between the modules as well as the power supply of the individual components takes place via the extension connectors standardized by duagon.

FLEXIBLE SYSTEM INSTALLATION

Various mounting options facilitate the integration of the module into an existing environment. The standard 35 mm DIN Rail mounting offers space saving mounting of all system modules on a single rail. Wall mounting and mounting in a 19" rack using adaption brackets are an option.

The aluminum housing with cooling fins allows fanless operation. MP1 has no moving parts, making it maintenance free.

IN-VEHICLE QUALIFIED AND LONG-TERM AVAILABILITY

The MP1 is qualified for rolling stock. Long term availability until 2027 minimizes life-cycle management by making the MP1 available at least for this period of time.

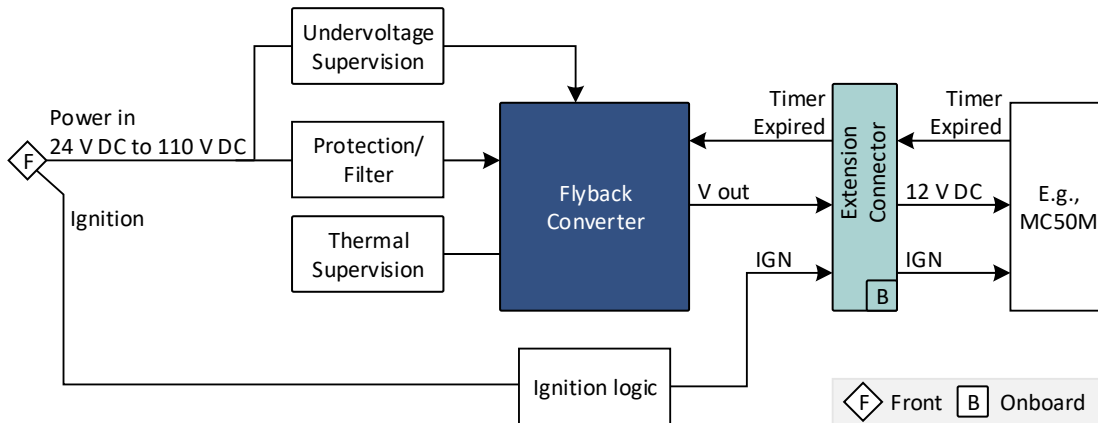


www.duagon.com/products/mp1/

DATA SHEET



MP1 | DIAGRAM



MP1 | TECHNICAL DATA

PSU CHARACTERISTICS

- Protection features
 - Inrush current limitation
 - Overvoltage protection
 - Reverse polarity protection
- Output voltage: +12 V DC
- Output voltage accuracy: -10% / +10%
- Output power: 40 W max.

INTERFACES

- Power
 - 1 × power in, M12, B-coded, plug
- Ignition input
- Earthing connection: M6 screw

SUPERVISION AND CONTROL

- Temperature measurement

ELECTRICAL SPECIFICATIONS

- Supply voltage: 24 V DC to 110 V DC nom. (EN 50155)

MECHANICAL SPECIFICATIONS

- Dimensions: (W) 42 mm, (D) 144 mm, (H) 132 mm
- Weight: 700 g

- Mounting
 - DIN rail
 - Wall/flat surface
 - Rack in 19" cabinet
- Cooling: Air cooling, natural convection, airflow 0.4 m/s
- Protection rating: IP20

PRODUCT COMPLIANCE: RAIL - ROLLING STOCK

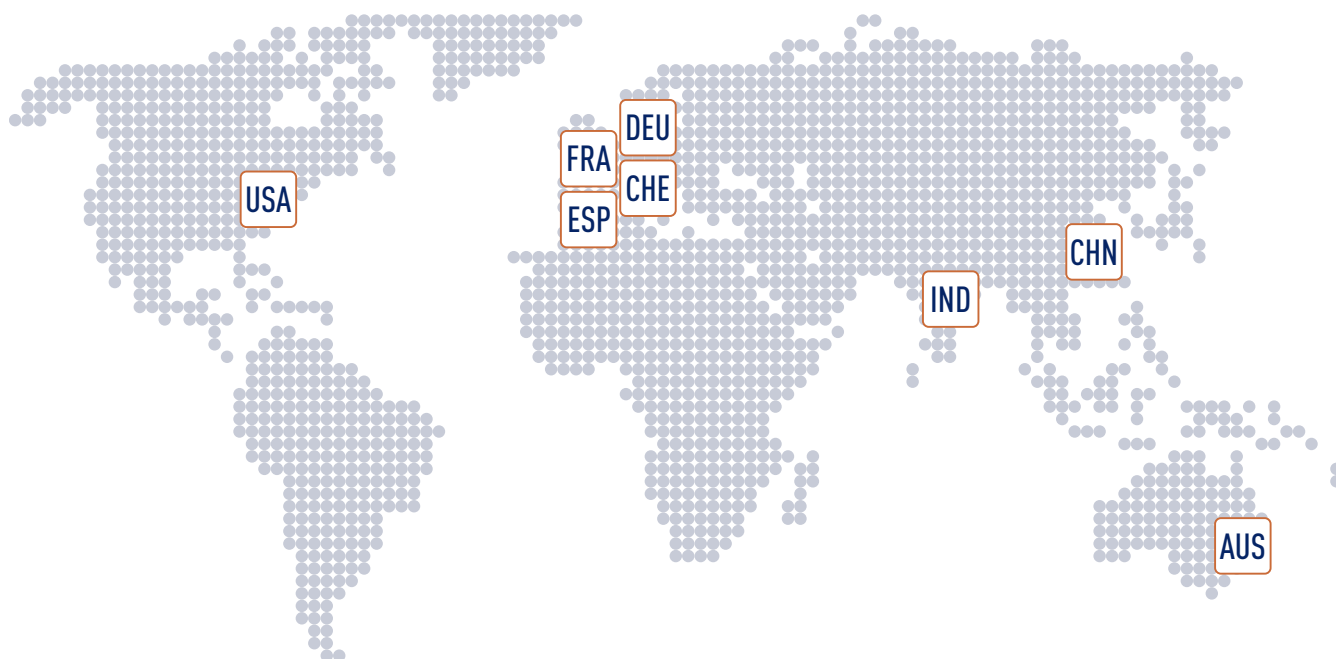
- Operating temperature: -40 °C to +70 °C, +85 °C for 10 min (EN 50155:2017, class OT4, ST1)
- Rapid temperature variations: EN 50155:2017, class H1, no requirements
- Storage temperature: -40 °C (EN 50155:2017) to +85 °C (EN 60068-2-2, Bb)
- Altitude: +3000 m max. (EN 50125-1:2014, class AX)
- Pollution degree: EN 50124-1:2017, class PD3
- Humidity: +55 °C and +25 °C, 100 % RH max. (EN 50155:2017)
- Shock: 30 ms @ 50 m/s² (EN 61373:2010/AC:2017-09, vehicle body, cat. 1, class B)
- Vibration: 10 min @ 2.02 m/s² (functional) and 5 h @ 11.44 m/s² (long-life) (EN 61373:2010/AC:2017-09, vehicle body, cat. 1, class B x 2)



- Power supply
 - Interruption of voltage supply: 10 ms (EN 50155:2017, class S2)
 - General compliance with power supply requirements of EN 50155:2017
- Electrical safety
 - EN 50124-1:2017
 - EN 50153:2014 + A1:2017
 - EN 50155:2017
 - EN ISO 13732-1:2008
- Fire protection: EN 45545-2:2013 + A1:2015, HL3
- EMC emission
 - EN 50121-3-2:2016
 - Regelung Nr. EMV 06 :2014-07-29, Anhang E: Messung an Geräten
- EMC immunity: EN 50121-3-2:2016
- Protective coatings: EN 50155:2017, class PC2 (Any PCB protected on both sides)
- Useful life: 20 years (EN 50155:2017, class L4)

RELIABILITY

- 1 000 000 h predicted @ 40 °C according to IEC/TR 62380 (RDF 2000)



duagon | WORLDWIDE

duagon has a global presence with support and sales representatives across 8 countries. With three decentralized engineering and production sites, our customers take advantage of the added competence and flexibility.

www.duagon.com

SWITZERLAND (HQ)

Dietikon
Phone +41 44 743 73 00
sales@duagon.com

AUSTRALIA

Artarmon
Phone +61 2 9966 9424
sales-aus@duagon.com

CHINA

Shanghai
Phone +86 159 0077 2985
sales-chn@duagon.com

FRANCE

Gaillard
Phone +33 450 955 312
sales-fra@duagon.com

GERMANY

Nuremberg
Phone +49 911 99 335 0
sales-deu@duagon.com

INDIA

New Delhi
Phone +91 11 41 61 12 48
sales-ind@duagon.com

SPAIN

Madrid
Phone +34 917 880 610
sales-esp@duagon.com

USA

Blue Bell
Phone +1 215 542 9575
sales-usa@duagon.com