

MPOD Switch Module



Key Bullet Points — MPOD Mini Crate

- Compact 19" 4U mini crate with 4 slots for freely combinable high-voltage (HV) and low-voltage (LV) modules
- Supports up to 192 HV channels (100 V to 20 kV) and up to 32 LV channels (0–120 V), all channels individually controllable and monitorable
- Integrated controller card with Ethernet (10/100), CAN bus, and USB-2 interfaces; optionally with ISEG CC24 controller (Linux-based)
- Built-in 600 W power supply with low noise and ripple, integrated fan for active cooling
- Flexible configuration: HV only, LV only, or mixed modules possible; optional local control via LCD display
- Compliant with international EMC and safety standards; worldwide auto-ranging mains input (90–265 V AC)

Channels	32 low voltage channels, individually programmable
Channel Functions	Switch On/Off, Reverse Polarity
Switching Element	Semiconductor
Switching Time	Reaction time <5 ms (On/Off; Reverse Polarity)
Maximum Switching Rate	Up to 50 switches per second per channel
Input Connectors	2 × 37-pin D-sub male (DC input), 16 channels per connector
Output Connectors	2 × 37-pin D-sub female (DC output), 16 channels per connector
User Connectors	2 × 9-pin D-sub (female + male)
Control Interface	Ethernet (TCP/IP – SNMP) via MPOD controller
Status Indicators	Two front panel LEDs
Dimensions (HxWxD)	6U × 40.64 mm × 220 mm
Weight	Approx. 2 kg
Voltage Rating	Maximum 60 V per channel
Current Rating	Maximum continuous current 5 A per channel
Voltage Drop per Channel	Max 200 mV at 5 A (2 × 20 mΩ Rdson)
Power Dissipation per Channel	Max 1 W (200 mV × 5 A)
Total Power Dissipation	Max 32 W + 2 W (driver and microcontroller consumption)
Switching On Time	Between 25 µs (FET switch on) and 250 µs total; total switching time from command to fully open <10 ms
Switching Off Time	Between 2 µs and 20 µs
Load Characteristics	Load approx. 2–3 Ω with about 1 µH inductance
Communication Bus	Internal isolated CAN bus within the MPOD system
External Sense Feature	No longer available for connected MPV power supply modules

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