

# UPD-series

250-1000kVA | 380 | 400 | 415V



## TOTAL COST OF OWNERSHIP

Up to 99% efficiency and no cooling required up to 40°C. Works with any existing energy source and storage. Low maintenance cost.



## RELIABILITY

Proven technology with minimal electronics and a fail safe controls design.



## SUSTAINABILITY

Due to high efficient operation, no need for cooling and no use of chemical energy storage.

## OVERVIEW UPD-SERIES

The UPD (Universal Power Driver) is a modular designed device which in base is a grid voltage and a power factor corrector that can be upgraded into a micro-grid frequency stabilizer, a renewable energy storage or with full UPS functionalities.

*Standard:*

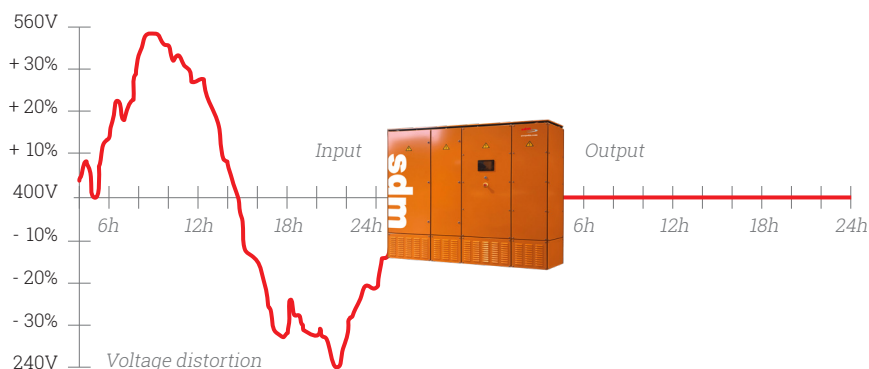
**UPD-V:** A voltage restorer to restore AC voltage to nominal with an input voltage window up to  $\pm 40\%$ . A low voltage version and medium voltage versions are available while the medium voltage version can easily be integrated into a mains distribution system.

*Optional:*

**UPD-Tx:** Provides runtime in case of mains failures. Any DC energy storage can be integrated to provide runtime from 3 seconds up to hours.

**UPD-F:** Stabilizes frequencies in grid and micro-grid applications.

## TIMELINE OF VOLTAGE DISTURBANCE



Up to 40% voltage correction without the use of energy storage

## KEY BENEFITS & FEATURES

- ✓ Up to 99% efficient
- ✓ Expandable in power
- ✓ Parallel unlimited
- ✓ Lower installation costs
- ✓ Minor heat rejection
- ✓ Low cooling requirements
- ✓ Low maintenance
- ✓ Color LCD touch-screen display
- ✓ Remote monitoring capability
- ✓ Built-in power factor correction
- ✓ Generator compatibility
- ✓ Dual input option
- ✓ Integrated maintenance bypass option
- ✓ Seismic provisions (optional)
- ✓ 20-year design life
- ✓ Universal compatibility to any DC storage technology and manufacturer

## UPD-SERIES 250-1000kVA | 380 | 400 | 415V

Technical data UPD-V/T/F	250	500	750	1000
Rating (kVA)	250	500	750	1000
Nominal power (kW)	225	450	675	900
Dimensions WxHxD (mm)	1600x2063 x860	4200x2063 x860	5800x2063 x860	6400x2063 x860
UPS weight (kg)	1500	3300	4800	6300
Battery/Cap configuration W (mm) 3s - 13s	400	800	1200	1600

Input	
Connection type	Hardwired 3w / 4w optional
Nominal voltage	380/400/415 Vac 3-phase
Voltage tolerance	-40%, +40%
Frequency and range	50/60 Hz (45+65 Hz)
Power factor	0.99
Current distortion (THDi)	<3%

Output	
Connection type	Hardwired 3w / 4w optional
Nominal voltage	380/400/415 Vac 3-phase
Frequency	50/60 Hz
Voltage regulation	±1% static; dynamic: IEC EN 62040-3 Class 1
Power factor	up to 0.9, lagging or leading without power derating
Overload capacity	Inverter: 101-125% for 10 min, 126-150% for 1 min, 151-199% for 10 s, 200% for 100 ms; bypass: 115% continuous, 900% for 1 cycle
Efficiency (AC/AC)	up to 98%

Connectivity and function extensions	
Front panel	Graphic touch display, local EPO
Remote communication	Serial RS232 and USB; input terminal block for: remote emergency power off (REPO), battery circuit breaker aux. cont., external maintenance bypass circuit breaker aux. cont., diesel mode aux. cont.; optional: SNMP adapter (Ethernet), Web interface (Ethernet), ModBus-TCP/IP (Ethernet); ModBus-RTU (RS485); ModBus-RTU to PROFIBUS DP adapter; SPDT contact relay board; remote system monitoring panel; UPD managing and server shutdown software
Optional function extensions	Isolation transformer; transformers/autotransformers for voltage adjustment; external maintenance bypass; custom battery cabinets; wall-mounted battery fuse switch box; battery thermal probe; parallel kit for load sharing multiple UPDs; top cable entry

System	
Protection degree	IP 20 (other options)
Colour	RAL 7016 (other options)
Installation layout	Wall, back to back and side by side installation allowed
Accessibility	Front and top access, bottom cable entry

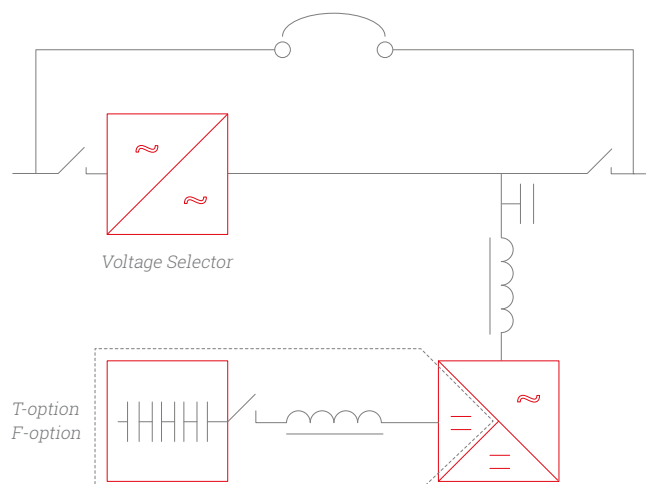
### Other features

Environmental	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +70°C
Altitude	<1000 m
Audible noise at 1m (dBA)	<70

### Standards and certifications

Quality assurance, environment, health and safety	ISO 9001:2008
Safety	IEC EN 62040-1
EMC	IEC EN 62040-2
Test and performance	IEC EN 62040-3
Protection degree	IEC 60529
Marking	CE

## UPD ARCHITECTURE



### SDM-GROUP MISSION

Electric energy, although invisible and inconspicuous, has inevitably become a part of our daily lives. The realization of such dependence on electricity is often only realized when it is suddenly no longer available. The consequence of cutting off electricity and resulting power failures are seen in certain parts of the country and have led to devastating outcomes. Power disturbances and outages have proven to no longer be a possibility but instead a reality and can no longer be overlooked. The SDM-Group's mission is to confront and alleviate electrical and power disturbance problems and offer alternative means of reliable energy equipment.

### SDM-ELEKTRO

SDM-Elektro is an international specialist for Power Quality. Our team of specialists has proven industry expertise at improving operations by optimizing the power quality within the electrical infrastructure of your facility. Due to a growing sophistication of (production) processes, the Power Quality is increasingly important to run a flawless operation.

From our experience, it pays off when improving power factor, correcting the input voltage and cancelling harmful harmonic content on the line. The efficiency and growth of a business can only happen when equipment doesn't break or shut down. SDM-Elektro developed specific devices and works with state-of-the-art suppliers to fit these requirements.