

UPD640 series

640-kVA to 2560kVA | 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.

UPD640 SERIES OVERVIEW

The UPD (Universal Power Driver) is a modular designed system providing enhanced grid voltage and frequency regulation and stabilisation. The open-architecture used to design the UPD allows the inclusion of power factor correction, active harmonic cancellation and energy storage options thereby creating a highly customisable uninterruptible power supply (UPS) solution with an optional $\pm 40\%$ input voltage window. This can be further upgraded to a micro-grid frequency stabiliser with integration to renewable energy sources such as solar and wind power.

UPD640 SERIES ENERGY STORAGE OPTIONS

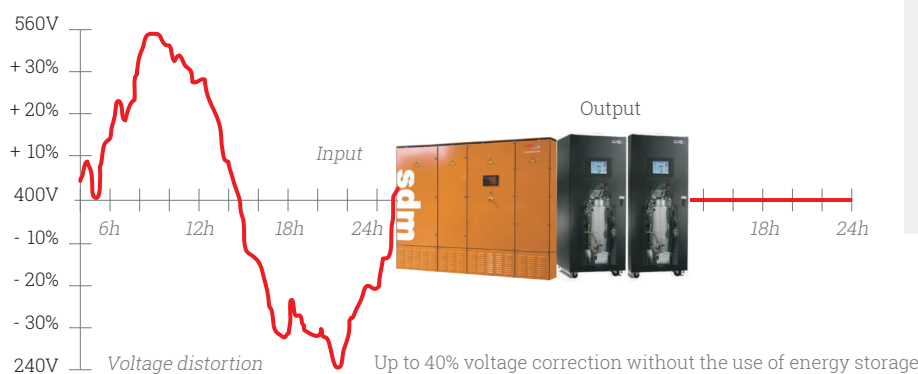
UPD640-LiC using Lithium Ion Capacitors:

The ultimate energy storage device possesses the advantages of both lithium ion battery and electric double layer capacitor (EDLC) resulting in a hybrid energy storage system capable of fast charge and discharge characteristics, wide operating temperature range, durable, safe and reliable operation.

UPD640-FLY using Flywheel Energy Storage System (FESS):

The Flywheel Direct Connect (FDC) system stores kinetic energy in the form of a rotating mass and is designed for high power, short discharge applications. The patented technology within the FDC system includes a high-speed motor generator, active magnetic bearings that are used to levitate and sustain the rotor during operation, and a superior control system that can provide information on the system performance. These technologies enable the FDC to charge and discharge at high rates for countless cycles making conventional technologies like batteries obsolete.

TIMELINE OF VOLTAGE DISTURBANCE



KEY BENEFITS & FEATURES

- ✓ Up to 98% efficient
- ✓ Expandable in power & bridging time
- ✓ 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

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.

UPD-SERIES 640 to 2560kVA | 380 | 400 | 415V

| Technical data | 640 | 1280 | 1920 | 2560 |
|---|-------------------|-------------------|-------------------|-------------------|
| Rating (kVA) | 640 | 1280 | 1920 | 2560 |
| Nominal power (kW) | 640 | 1280 | 1920 | 2560 |
| Dimensions WxHxD (mm) | 2560x2063 x860 | 5120x2063 x860 | 7680x2063 x860 | 1024x2063 x860 |
| UPS weight (kg) | 3950 | 7900 | 11850 | 15800 |
| Storage cabinet width for UPD640-LiC 15s (mm) | 1224 | 2248 | 3672 | 4896 |
| Storage cabinet width for UP640-Fly 20s (mm) | 1530 | 3060 | 4590 | 6120 |

| Input | |
|---------------------------|--|
| Connection type | Hardwired 3w / 4w optional |
| Nominal voltage | 380/400/415 Vac 3-phase |
| Voltage tolerance | ±15% with options for ±20% or ±30% or ±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% |

| System | |
|-----------------------------|--|
| Enclosure protection rating | IP 20 (other options) |
| Colour | RAL 7016 (other options) |
| Installation layout | Wall, back to back and side by side installation allowed |
| Accessibility | Front / Top / Bottom cable access entry |

| 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 accessories & features | 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 |

Other features

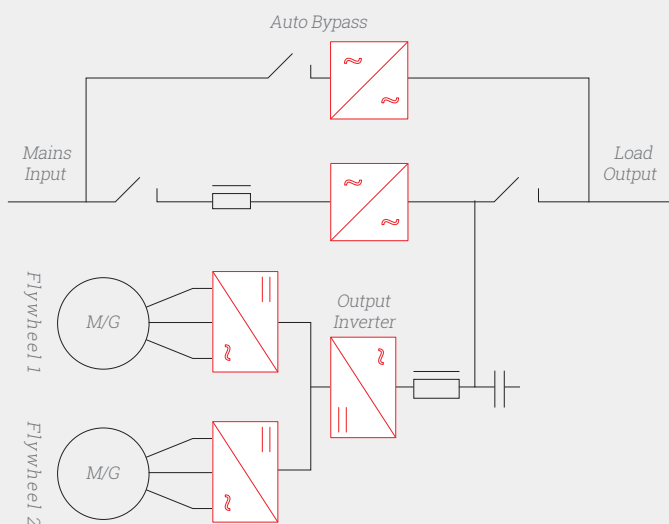
| Environmental | |
|-----------------------------|----------------|
| Operating temperature range | 0°C to +40°C |
| Storage temperature range | -10°C to +70°C |
| Altitude | <1000 m |
| Audible noise at 1m (dBA) | <70 |

| 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 |

Specifications subject to change without prior notice.

Sold By:

UPD ARCHITECTURE FOR FLYWHEEL



UPD ARCHITECTURE FOR LiC

