

Uninterruptible motor drive type UMD S400



UMD S400 is a complete system for uninterruptible motor drive where the transition from mains drive to battery drive is automatic. UMD S400 is built on well-ried techniques to provide maximum availability and flexibility. UMD S400 is a module-built system that both saves space and is simple to install. Examples of drives are turbine systems, sluice gates, seepage water pumps, cooling pumps, fans and valves.

- **UMD guarantees the operation of AC-motors** in critical process by uninterruptible operation from batteries and can be expanded to several drives for maximum availability.
- **Uninterruptible transition with full effect** between mains drive and battery drive. Quicker start compared to DC-motors.
- **Higher availability and reduced maintenance cost** with UMD and AC-motor compared with extra standby system with starter and DC-motor.
- **Increased efficiency** in the production process by speed control with frequency converters from leading manufacturers.
- **Easy installation** because UMD S400 is a complete factory-tested unit. We help you with the dimensioning.
- **Safe operation and high availability**
We help you with commissioning and service and provide training in the management and maintenance.

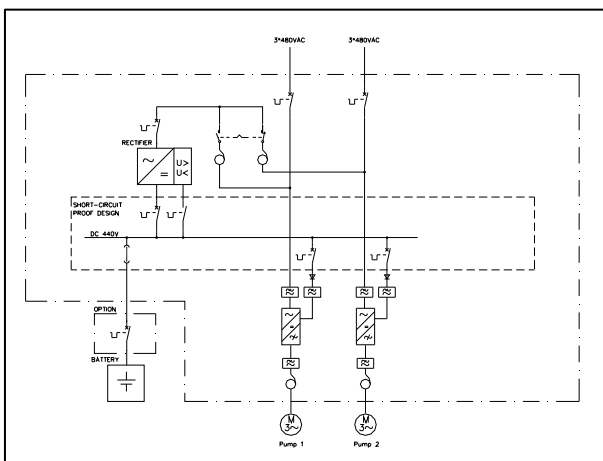
UMD S400 Uninterruptible motor drive

Technical data, general

UMD S400 is a system intended for the uninterruptible operation of motors. It is based on frequency converters that can be powered not only from the existing mains drive but also from batteries. The system consists of batteries, a battery centre and UMD cabinet. The UMD cabinet in its turn can, depending on requirements, contain: rectifier, frequency converter for motor drive, frequency converter for UPS, DC/DC-converter, AC and DC distribution, transformers and filters, motor protection and UPS-distribution.

| Motor power (typical) | | | Rated output current | Cabinet size, height 2200mm | | |
|-----------------------|-----|------|----------------------------|-----------------------------|-------------|-------|
| 3x400VAC/50Hz | | | | width | | depth |
| | | | | single drive | dual drives | |
| kW | Hp | A | mm | mm | mm | |
| 3 | 4 | 6,3 | 840 | 840 | 654 | |
| 4 | 5 | 8,2 | 840 | 840 | 654 | |
| 5,5 | 7,5 | 10,9 | 840 | 840 | 654 | |
| 7,5 | 10 | 14,5 | 840 | 840 | 654 | |
| 11 | 15 | 21,1 | 840 | 840 | 854 | |
| 15 | 20 | 28,6 | 840 | 1540 | 854 | |
| 18,5 | 25 | 34 | 840 | 1540 | 854 | |
| 22 | 30 | 41 | 840 | 1540 | 854 | |
| 30 | 40 | 54,7 | 840 | 1540 | 854 | |
| 37 | 50 | 66,4 | 840 | 1540 | 854 | |
| 45 | 60 | 80,4 | 1540 | 2240 | 854 | |
| 55 | 75 | 94 | 1540 | 2240 | 854 | |
| 75 | 100 | 136 | 1540 | 2240 | 854 | |
| 90 | 125 | 158 | 1540 | 2240 | 854 | |
| 110 | 150 | 192 | Contact Kraftelektronik | | | |
| 132 | 179 | 228 | | | | |
| 160 | 217 | 273 | | | | |
| 200 | 272 | 341 | | | | |

Table 1, Rated power for drive module and cabinet size with single or dual drives. Contact us for layout with larger or multiple drives.



Single line diagram UMD S400 – example of dual pumps.

| Rated power at constant load (kW) | | | | Rated capacity Ah | Battery stand + VRLA batteries | | | |
|-----------------------------------|-------|--------|--------|----------------------|--------------------------------|-------|--------|--------|
| 1 min | 5 min | 30 min | 60 min | | Dimensions (mm) | | | weight |
| | | | | | width | depth | height | kg |
| 13 | 11 | 4 | 3 | 15 | Built in cabinet | | | 238 |
| 22 | 18 | 6 | 4 | 24 | 900 | 500 | 1690 | 396 |
| 25 | 24 | 11 | 7 | 35 | 600 | 715 | 1704 | 526 |
| 35 | 33 | 15 | 9 | 50 | 1200 | 360 | 1746 | 661 |
| 43 | 40 | 19 | 11 | 60 | 1200 | 360 | 1779 | 831 |
| 63 | 59 | 27 | 17 | 90 | 1050 | 500 | 1786 | 1073 |
| 65 | 61 | 29 | 18 | 105 | 1200 | 715 | 1745 | 1286 |
| 76 | 72 | 36 | 23 | 125 | 1200 | 715 | 1799 | 1704 |
| 91 | 84 | 42 | 27 | 155 | 2400 | 715 | 1799 | 1915 |
| 107 | 101 | 53 | 35 | 200 | 2550 | 500 | 1766 | 2442 |

Table 2, Battery size for floor installation with different back-up times and loads. Other battery sizes and types are quoted on request.

Technical data, general

Input AC

Input voltage 3x380-415VAC, 3x440-480/600VAC 50-60Hz
 Connection Terminal block
 Other See table 1

Output AC

Frequency converter with sine filter and transformer output
 Output voltage, nominal 3x400VAC
 Connection Terminal block
 Efficiency >91%
 Other See table 1

Input DC

Input voltage 440VDC +/-15%
 Connection Terminal block

Options

UPS-output, 3x400VAC/50Hz
 UPS-output, 24VDC output
 Output for engine brake
 IP-enclosure, IP43
 Thermistor relay
 Control of motor heaters
 Battery disconnecter
 Commissioning

Standards

Safety EN 50178:1997
 EMC, immunity EN/EC 61800-3:2004
 EMC, emission EN/EC 61800-3:2004
 Battery installations EN 50272-2

KRV 120GB-C



Kraftelektronik AB
 Verkstadsgatan 18
 S-352 46 Växjö

Telefon +46 470-705200
 Telefax +46 470-705201
 www.kraftelektronik.se