

## NMD

### Three-phase direct online power supplies

Two central power modules are available to power SV-M or COMPAX-M drives, with continuous ratings of 10 kW (NMD10) and 20 kW (NMD20). These supplies operate from a 3-phase AC input up to 480V. The DC output is connected to one or more servo drives by jumper cables fitted behind a removable front plate. A separate 24 VDC supply is required to power the control circuits, permitting communication and diagnostic facilities to be retained should the main power supply fail.

Energy regenerated during deceleration will be stored in the power supply capacitors unless the DC bus voltage exceeds a preset level, in which case a ballast resistor is automatically switched in to dissipate the surplus energy. The high-power NMD20 module may be used in conjunction with an external ballast resistor to handle high regenerated energy levels.

#### Power Supply Characteristics

|                        |                                   |
|------------------------|-----------------------------------|
| AC supply voltage      | 100-480V +10% -15%                |
| Supply frequency       | 50-60 Hz                          |
| Safety specification   | VDE0160                           |
| Control voltage        | +24 VDC $\pm$ 10%, ripple <1V p-p |
| Control current        | See ratings                       |
| Standby contact rating | 0.5 A, 125V, 30 W                 |
| Overheating protection | Heatsink temperature >85°C        |

Undervoltage protection  
 Overvoltage protection  
 Phase failure monitoring

DC output <80V  
 Braking resistor switched in at preset level  
 Red LED flashes on phase failure, system disabled after 40s



Drives & Drive/Controllers

#### Power Supply Ratings

| Model No. | Continuous Power | Peak (<3s) Power | AC Supply Voltage | DC Output Voltage | AC Supply Protection* |
|-----------|------------------|------------------|-------------------|-------------------|-----------------------|
| NMD10     | 10kW             | 20kW             | 480V 3 $\phi$     | 680V              | 16A                   |
| NMD20     | 20kW             | 40kW             | 480V 3 $\phi$     | 680V              | 35A                   |

\* External cutout or equivalent cartridge fuse, supplied by customer

#### Power Supply Braking & Ballast Ratings

| Model No.           | Continuous Power Dissipation | Intermittent ratings |              |               | DC Bus Capacity      | Storable Energy |
|---------------------|------------------------------|----------------------|--------------|---------------|----------------------|-----------------|
|                     |                              | Power                | Duration     | Cooling Time  |                      |                 |
| NMD10               | 120W*                        | 4.5kW                | <1s<br>17kW  | >50s<br><50ms | 1100 $\mu$ F<br>>10s | 173 Ws          |
| NMD20               | 120W*                        | 3kW                  | <1s<br>9.5kW | >50s<br><50ms | 1650 $\mu$ F<br>>10s | 260 Ws          |
| BMR4/1 <sup>†</sup> | 570W                         | 37kW                 | <0.4s        | >120s         | -                    | -               |
| BMR4/2 <sup>†</sup> | 740W                         | 37kW                 | <0.6s        | >120s         | -                    | -               |
| BMR4/3 <sup>†</sup> | 1.5kW                        | 37kW                 | <1.2s        | >120s         | -                    | -               |

\* Increased to 250W with fan option <sup>†</sup>External ballast used with NMD20

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