

AC drive VD i ... /21MS3-F/43MS3-F up to 22kW 4.05

**Features:**

- ☑ U/f-characteristics control
- ☑ open loop vector control
- ☑ induction motors, PM motors
- ☑ safe torque shutdown STO
- ☑ detachable operating unit
- ☑ max. rotating field frequency 599Hz
- ☑ integrated braking chopper
- ☑ degree of protection IP20
- ☑ integrated mains filter
- ☑ USB port
- ☑ integrated MODBUS
- ☑ replaceable fan



AC drive  
VD i 020 ... 220/21MS3-F  
VD i 037 ... 2200/43MS3-F  
CE 

**Function:**

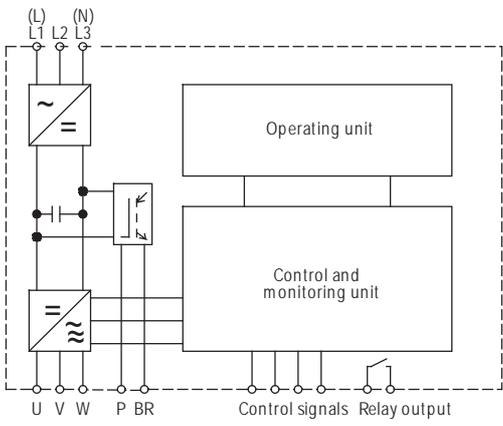
- ☑ control and setpoint entry via terminals, operating units and bus systems
- ☑ built-in PLC function
- ☑ potential-free control and signalling contact
- ☑ 4 motor parameter sets
- ☑ 150% overload for 60s
- ☑ PWM in-/output
- ☑ PI controller

**Typical Applications:**

- centrifuges
- pumps
- grinding machines
- printing machinery
- textile machines
- ventilators
- conveying systems
- woodworking machines
- packaging machines

**Options:** (please see accessories)

- ☑ extension cable for operating unit
- ☑ Profibus DP
- ☑ Modbus TCP
- ☑ EtherNet/IP
- ☑ EtherCAT
- ☑ DeviceNet module
- ☑ CANopen
- ☑ operating software

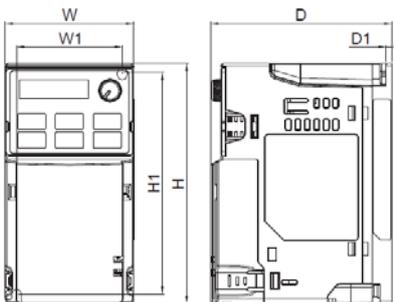


| Typical designation                              | VD i ...-21MS3-F                                    |       |             |       |             | VD i ...-43MS3-F                                   |       |             |       |             |       |       |             |       |       |       |
|--|---|-------|-------------|-------|-------------|--|-------|-------------|-------|-------------|-------|-------|-------------|-------|-------|-------|
|  | 020   | 037   | 075         | 150   | 220         | 037  | 075   | 150         | 220   | 400         | 550   | 750   | 1100        | 1500  | 1850  | 2200  |
| motor shaft power / kW                           | 0,20  | 0,37  | 0,75        | 1,5   | 2,2         | 0,37   | 0,75  | 1,5         | 2,2   | 4           | 5,5   | 7,5   | 11          | 15    | 18,5  | 22    |
| mains voltage according to DIN EN 50160 (IEC 38) | single-phase<br>200-240V, +10%, -15%<br>50/60Hz ±5% |       |             |       |             | three-phase<br>380-480V, +10%, -15%<br>50/60Hz ±5% |       |             |       |             |       |       |             |       |       |       |
| output rated current ND /A*                      | 1,8   | 3,2   | 5           | 8,5   | 12,5        | 1,8  | 3,2   | 5           | 6,5   | 10,5        | 15,7  | 20,5  | 28          | 36    | 41,5  | 49    |
| output rated current HD /A*                      | 1,6   | 2,8   | 4,8         | 7,5   | 11          | 1,5  | 2,7   | 4,2         | 5,5   | 9           | 13    | 17    | 25          | 32    | 38    | 45    |
| order number 2D000. ...                          | 21020   | 21037 | 21075       | 21150 | 21220       | 43037  | 43075 | 43150       | 43220 | 43004       | 43005 | 43007 | 43011       | 43015 | 43018 | 43022 |
| recommended mains filter (class C1)              | 27012.24016   |       | 27012.24030 |       | 27114.48006 |  |       | 27114.48016 |       | 27114.48030 |       |       | 27114.48055 |       |       |       |

\* HD – high duty, ND – normal duty

| Technical data                                  | VD i ... -21MS3-F  |      |      |     |      | VD i ... -43MS3-F                                  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
|---|--|------|------|-----|------|--|------|-----|-----|------|------|------|------|------|------|------|--|--|-----|--|--|
|   | 020  | 037  | 075  | 150 | 220  | 037  | 075  | 150 | 220 | 400  | 550  | 750  | 1100 | 1500 | 1850 | 2200 |  |  |     |  |  |
| motor shaft power / kW                          | 0,20   | 0,37 | 0,75 | 1,5 | 2,2  | 0,37   | 0,75 | 1,5 | 2,2 | 4    | 5,5  | 7,5  | 11   | 15   | 18,5 | 22   |  |  |     |  |  |
| mains voltage according to DIN EN 50160 IEC 38) | single-phase<br>200-240V, +10%, -15%<br>50/60Hz ±5%  |      |      |     |      | three-phase<br>380-480V, +10%, -15%<br>50/60Hz ±5% |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| output rated current ND/A*                      | 1,8  | 3,2  | 5    | 8,5 | 12,5 | 1,8  | 3,2  | 5   | 6,5 | 10,5 | 15,7 | 20,5 | 28   | 36   | 41,5 | 49   |  |  |     |  |  |
| output rated current HD/A*                      | 1,6  | 2,8  | 4,8  | 7,5 | 11   | 1,5  | 2,7  | 4,2 | 5,5 | 9    | 13   | 17   | 25   | 32   | 38   | 45   |  |  |     |  |  |
| control functions                               |  |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| control methods                                 | U/f, SVC, sensorless FOC   |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| frequency setting range                         | 0-599Hz  |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| clock speed                                     | 2-15kHz  |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| starting torque                                 | 150% / 3 Hz<br>100% / (1/20 f <sub>Nenn</sub> ) (at PM motors)                                       |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| overload capacity                               | ND: 120% for 60sek; 150% for 3sek<br>HD: 150% for 60sek; 200% for 3sek                               |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| motor protection                                | overcurrent protection, overvoltage protection, overtemperature protection, phase failure protection |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| specification of frequency setpoints            | 0 ... +10 V/-10 V ... +10 V, 4...20 mA/0...20mA, 1 pulse input (33 kHz), 1 pulse output (33 kHz)     |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| ambient / storage temperature                   | -20 ... 60°C (derating) / -40 ... 85°C   |      |      |     |      |  |      |     |     |      |      |      |      |      |      |      |  |  |     |  |  |
| size  | B  |      |      | C   |      |  | B    |     |     | C    |      |      | D    |      |      | E    |  |  | F   |  |  |
| weight / kg                                     | 1,4  |      |      | 1,8 |      |  | 1,4  |     |     | 1,8  |      |      | 3,0  |      |      | 5,2  |  |  | 8,5 |  |  |

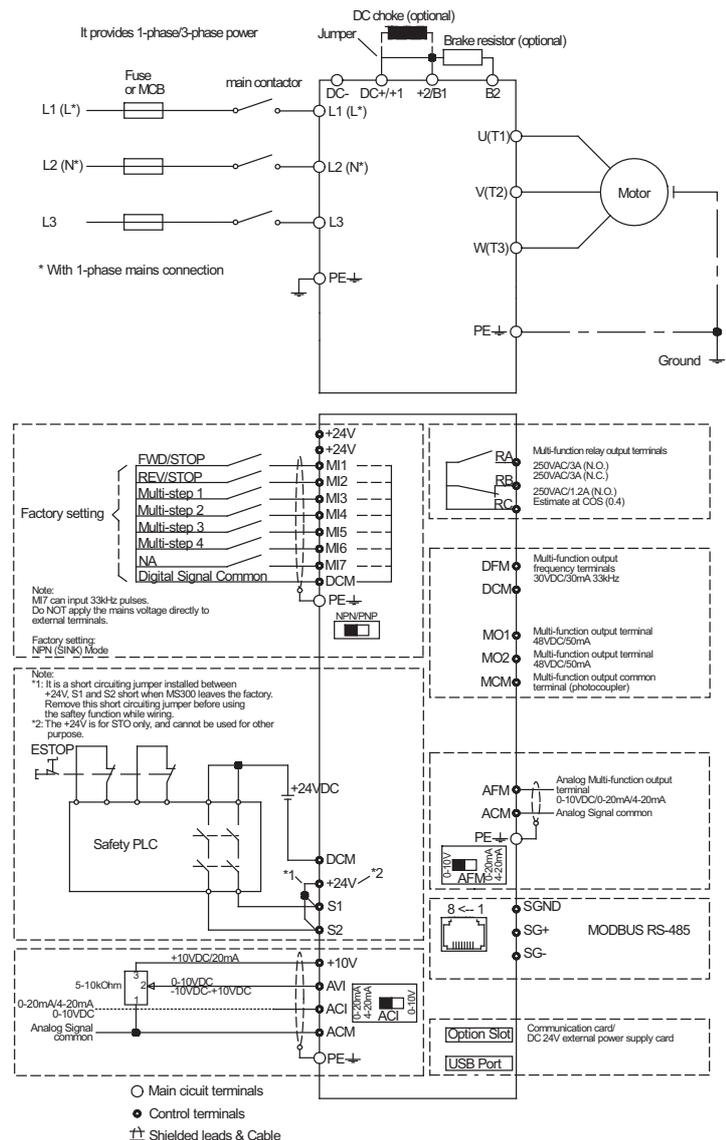
Dimensions:



| size | W   | H   | D   |
|------|-----|-----|-----|
| B    | 72  | 142 | 159 |
| C    | 87  | 157 | 179 |
| D    | 109 | 207 | 187 |
| E    | 130 | 250 | 219 |
| F    | 175 | 300 | 244 |

All dimensions in mm

Connection Diagram:



Subject to change without notice.