

MD310 AC Drive

Open loop, general purpose, compact drive

Features & functions

- Open-loop V/F & sensorless vector control
- Starting torque
 - 150% at 0.5 Hz (SVC)
 - 100% at 1.0 Hz (V/F)
- Modbus or CANlink^{*1} comms
- Automatic torque boost
- Slip compensation
- Simplified parameters for easy set-up
- 4 independent S-Ramps
- Flexible programmable I/Os
- Variable DC-injection braking
- Comprehensive trip diagnostics
- Output frequency: 500 Hz
- Built-in dynamic braking unit

Wide operating voltage
three-phase 323 to 484 Vac
0.4 kW to 18.5 kW



Onboard Modbus RTU
(optional CANlink^{*1})

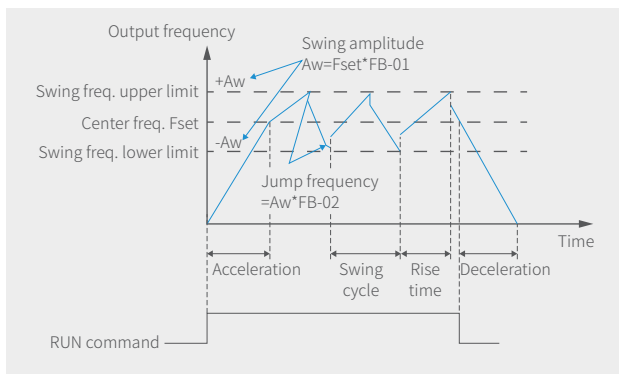
PC based software:
simplified start up and backup^{*2}

Operation in high ambient temperatures $\pm 50^{\circ}\text{C}$
Please note: If operating above 40°C , derating is required

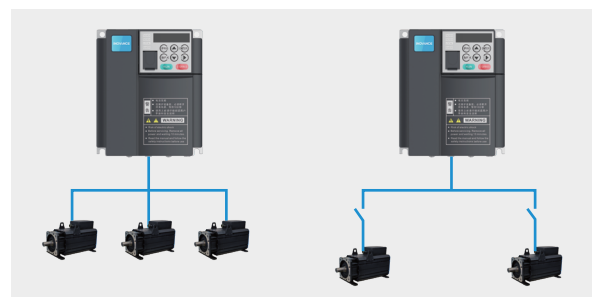


*1 CANlink is Inovance's proprietary serial comms offering.
*2 PC comms kit is required (optional accessory).

Textile wobble control



Able to control multiple motors



Control multiple motors simultaneously in V/F mode

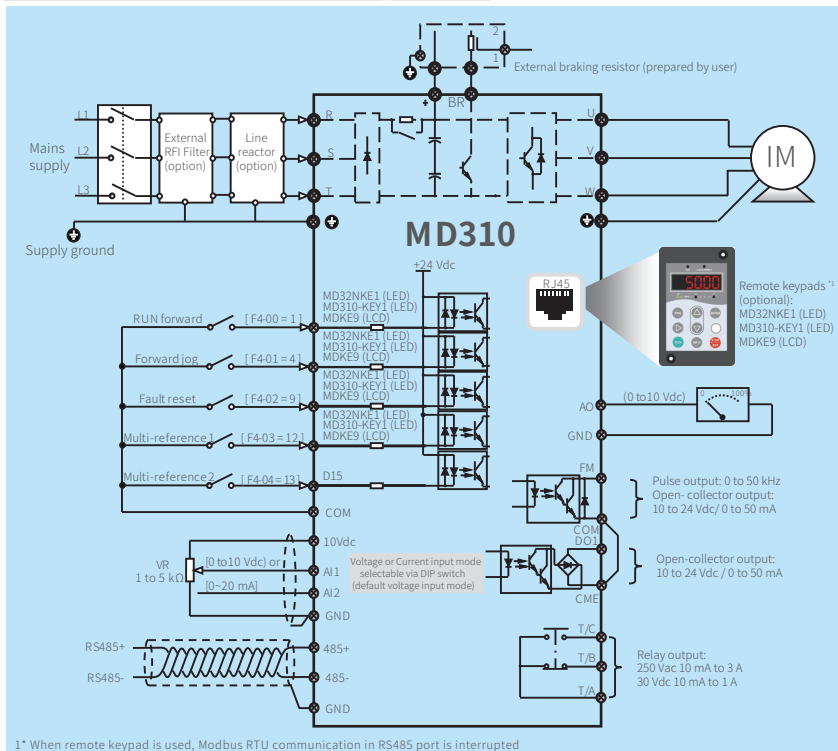
One drive can control 2 motors with different parameter sets at different times (SVC mode)

General specifications

| Voltage class | | Three-phase 380 Vac | | | | | | | | | |
|--------------------------------|---------------------------------|---|-------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|
| Drive model: MD310TxxxB-INT | | 0.4 | 0.7 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | 18.5 |
| Dimensions | Frame | Size 1 | | | | Size 2 | | Size 3 | | Size 4 | |
| | Height | [H]: 128 mm | | | | [H1]: 209 mm | | [H1]: 260 mm | | [H1]: 298 mm | |
| | Width | [W]: 108 mm | | | | [W]: 130 mm | | [W]: 140 mm | | [W]: 180 mm | |
| | Depth | [D]: 158 mm | | | | [D]: 164 mm | | [D]: 171 mm | | [D]: 176 mm | |
| Mass [kg] | | 1.1 | 1.1 | 1.3 | 1.3 | 2.3 | 2.3 | 3.4 | 3.4 | 5.6 | 5.6 |
| Drive input | Rated input voltage | Three-phase 380 to 440 Vac, -15% to +10% (323 to 484 Vac) | | | | | | | | | |
| | Rated input current [A] | 1.9 | 3.4 | 5 | 5.8 | 10.5 | 14.6 | 20.5 | 26 | 35 | 38.5 |
| | Power capacity [kVA] | 1 | 1.5 | 3 | 4 | 5.9 | 8.9 | 11 | 17 | 21 | 24 |
| | Rated input frequency | 50/60 Hz, $\pm 5\%$ (47.5 to 63 Hz) | | | | | | | | | |
| Drive output | Applicable motor [kW] | 0.4 | 0.75 | 1.5 | 2.2 | 3.7 | 5.5 | 7.5 | 11 | 15 | 18.5 |
| | Output current [A] ¹ | 1.5 | 2.1 | 3.8 | 5.1 | 9 | 13 | 17 | 25 | 32 | 37 |
| | Overload capacity | 150% for 60 s & 180% for 2 s | | | | | | | | | |
| | Max. output voltage | 380 to 440 Vac (proportional to input voltage) | | | | | | | | | |
| | Max. output frequency | 500 Hz | | | | | | | | | |
| Braking resistor | Recommended power [W] | 150 | 150 | 150 | 250 | 300 | 400 | 500 | 800 | 1,000 | 1,300 |
| | Minimum resistance [Ω] | ≥ 96.5 | ≥ 96.5 | ≥ 96.5 | ≥ 64.3 | ≥ 38.6 | ≥ 27.6 | ≥ 38.6 | ≥ 38.6 | ≥ 27.6 | ≥ 27.6 |
| Enclosure | | IP 20 | | | | | | | | | |

*1 Rated output current using a carrier frequency of 6 kHz

General connection diagram



Dimensions

