

| Brand | INOMAX | Danfoss |
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| Series | MAX500 | FC301/302 |
| photo |  |  |
| inverter application purpose | general purpose | general purpose |
| match motor | asynchronous+PMSM | asynchronous+PMSM |
| power range | 0.4kw-630kw | 0.2kw-75KW |
| input voltage | 3-phase 380-480V (+10%, -15%) 1-phase 220-240V (±15%) 3-phase 220-240V (±15%) | 3-phase 380-480V (+10%, -15%) 1-phase 220-240V (±15%) 3-phase 220-240V (±15%) 525-690 V ±10% (FC302 only) |
| input frequency | 50Hz or 60Hz Allowed range: 47~63Hz | 50Hz or 60Hz Allowed range: 47~63Hz |
| output voltage | 3phase,0-input voltage | 3phase,0-input voltage |
| output frequency | 0.00~3200.00Hz(V/f) 0.00~200.00Hz(SVC) 0.00~400.00Hz(VC) | 0~590Hz |
| I/O terminal | | |
| digital input | 6 | 7 |
| digital output | standard:4 optional:4 | 7 |
| analog input | 2 | 2 |
| analog output | 2 | 2 |
| relay output | 1 standard+1optional | 2 standard,4 optional |
| Keypad control | LED | LCD |
| Control mode | | |
| control method | V/f control Sensorless flux vector control without PG card (SVC) Sensor speed flux vector control with PG card (VC) | V/f control Sensorless flux vector control without PG card (SVC) |
| start mode | speed+torque+ tension | speed+torque |
| speed range | 1:100 (V/f) 1:200(SVC) 1:1000 (VC) | 1:100 (V/f) 1:1000(SVC) |
| speed control accuracy | ±0.5% (V/f) ±0.2% (SVC) ±0.02% (VC) | 0-6000 rpm: error ±0.15 rpm |
| speed response | 5Hz(V/f) 20Hz(SVC) 50Hz(VC) | 5Hz(V/f) 20Hz(SVC) 50Hz(VC) |
| start torque | 150%/0.5Hz(V/f) 180%/0.25Hz(SVC) 200%/0Hz(VC) | 0.5Hz/160% (SVC) |
| over load ability | 150% of rated current: 1 minute 180% of rated current: 10 seconds 200% of rated current: 1 second | 110% of rated current: 30 second |
| torque control accuracy | SVC: within 5Hz10%, above 5Hz 5% VC:3.0% | max error ±5% of rated torque |
| frequency giving ramp | Support linear and S curve acceleration and deceleration; 4 groups of acceleration and deceleration time, setting range 0.00s ~ 60000s | 3 kinds of modes: quadratic type, square type and userdefined V/Hz curve. |
| Carrier frequency | 1kHz~12kHz | 3.0 -4.5 kHz |

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| Basic function | Jog control, droop control, up to 16-speed operation, 8-stage speed auto circulating. dangerous speed avoidance, swing frequency operation, acceleration and deceleration time switching, VF separation, over excitation braking, process PID control, sleep and wake-up function, built-in simple PLC logic, virtual Input and output terminals, built-in delay unit, built-in comparison unit and logic unit, parameter backup and recovery, perfect fault record,fault reset, two groups of motor parameters free switching, software swap output wiring, terminals UP / DOWN,Fast startup, Deceleration Energy Back (DEB) function, Wobble frequency function, Fast deceleration function, Over-torque detection, Torque limit, S-curve accel/decel, DC | Jog control, droop control, up to 15-speed operation, 8-stage speed auto circulating. dangerous speed avoidance, swing frequency operation, acceleration and deceleration time switching, VF separation, over excitation braking, process PID control, sleep and wake-up function, built-in simple PLC logic, virtual Input and output terminals, built-in delay unit, built-in comparison unit and logic unit, parameter backup and recovery, perfect fault record,fault reset, terminals UP / DOWN,Fast startup, Wobble frequency function, Fast deceleration function, Over-torque detection, Torque limit, S-curve accel/decel, DC injection braking at start and stop |
| special function | energy saving function + logic programming function | energy saving function + logic programming function +Time lock function,optional STO ,Dynamic Braking threshold |
| braking+harmonic | | |
| Braking units | 0.4KW-22KW with standard built-in braking units,30-75KW optional built-in braking units,90kw and above optional external braking units | optional for all series |
| Harmonic interference | Standard: above 200KW optional :5.5kw-200kw | optional for all series |
| Electromagnetic interference | Standard: EMC C3 filter for all series Optional: C1 C2 filter 5.5KW-400kw | standard EMC C3 for all sereies, optional C1 C2 |
| du / dt and common mode voltage | optional for all series | optional for all series |
| Communication | standard: RS485、USB、Modbus RTU; | standard: RS485、Modbus RTU; optional: VLT® PROFIBUS DP V1 MCA 101 • VLT® DeviceNet MCA 104 • VLT® CAN Open MCA 105 • VLT® EtherCAT MCA 124 • VLT® PROFIBUS Converter MCA 114 • VLT® PROFINET MCA 120 • VLT® EtherNet/IP MCA 121 • VLT® Modbus TCP MCA 122 • VLT® POWERLINK MCA 122 • VLT® DeviceNet Converter MCA 194 |
| optional parts | | |
| I/O extention card | 4 DI, 2 AI,4 DO. AI4 can be used as ordinary voltage type input analog quantity, and can also be used as PT100. Type or PT1000 type temperature detection input | 4 DI, 2 AI,4 DO. AI4 can be used as ordinary voltage type input analog quantity, and can also be used as PT100. Type or PT1000 type temperature detection input |
| PG card | INCREMENTAL PG,Incremental encoder PG card with Frequency division,RESOLVER PG | Incremental Encoder,SinCos Encoder Hiperface®,EnDat Encoder,SSI Encoder |
| protec level | IP20 | IP20 ,IP55,IP66 optional |
| Installation environment | | |
| Altitude | 0-3000m.inverter will be derated if altitude higher than1000m and rated output current will reduce by 1% if altitude increase by 100m | 1000m or below (3000m with derating) |
| Ambient temperature | :-10°C~ +40°C,maximum 50°C (derated if the ambient temperature is between 40°C and 50°C)Rated output current decrease by 1.5% if temperature increase by 1°C | :-10°C~ +40°C,maximum 50°C (derated if the ambient temperature is between 40°C and 50°C)Rated output current decrease by 1.5% if temperature increase by 1°C |
| Humidity | Less than 95%RH, without condensing | Less than 95%RH, without condensing |
| Vibration | Less than 5.9 m/s2 (0.6 g) | Below 0.7g over the range of 18 to 1,000 Hz random |
| Storage Temperature | :-20°C ~ +60°C | :-10oC ~ +50oC (50oC with derating) |
| Installation method | Wall-mounted, floor-controlled cabinet, transmural | Wall-mounted, floor-controlled cabinet, transmural |
| Cooling method | air cooling | air cooling |

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| Protect functions | over-voltage stall, under-voltage, current limit, overload, overheat, over speed, Input phase loss, Output phase loss, , external disturbance, analog line disconnected,etc... | over-voltage stall, under-voltage, current limit, overload, overheat, over speed, Input phase loss, Output phase loss, , external disturbance, analog line disconnected,etc... |
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