



## Variable frequency drives, 3p, 400 V, 4.3A, 1.5kW

**Part no.** MMX34AA4D3N0-0  
**Article no.** 122678  
**Catalog No.** MMX34AA4D3N0-0

### Delivery programme

|  |          |    |   |
|--|----------|----|---|
| Product range  |          |    | M-MAX (MMX)   |
| Rated operational voltage  |          |    | 3 AC 400 V  |
| Mains voltage (50/60Hz)  | $U_{LN}$ | V  | 380 (-15%) - 480 (+10%)   |
| <b>Assigned motor rating</b>   |          |    |   |
| at 400 V, 50 Hz  | P        | kW | 1.5   |
|  |          |    | Rated operational current at an operating frequency of 6 kHz and an ambient air temperature of +50 °C   |
| at 460 V, 60 Hz  | P        | HP | 2   |
|  |          |    | Assigned motor rating for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with 1500 rpm <sup>-1</sup> (at 50 Hz) or 1800 min <sup>-1</sup> (at 60 Hz) |
| Rated operational current  | $I_e$    | A  | 4.3   |
| <b>Rated motor current</b>   |          |    |   |
| at 400 V, 50 Hz  | $I_e$    | A  | 3.6   |
| at 440 - 480 V, 60 Hz  | $I_e$    | A  | 3.4   |
| Radio interference suppression filters                               |          |    | without internal radio interference suppression filter  |
| Degree of Protection   |          |    | IP20/NEMA 0   |
| Brake chopper  |          |    | with internal brake chopper   |
| Frame size   |          |    | FS2   |
| Notes  |          |    |   |
| Cross-reference Increased protection type IP21/NEMA 1, → Accessories |          |    |   |

### Technical data

#### Power section

|  |           |      |  |
|--|-----------|------|--|
| Input side   |           |      |  |
| Number of phases                                     |           |      | three-phase (e.g. L1, L2, L3)  |
| Mains voltage (50/60Hz)                              | $U_{LN}$  | V    | 380 (-15%) - 480 (+10%)  |
| Mains voltage UL/CSA (45-66 Hz ± 0%)                 | $U_{LN}$  | V    | 323 - 528 (±0%)  |
| Rated operational voltage                            |           |      | 3 AC 400 V   |
| Rated operational current                            | $I_e$     | A    | 4.3  |
| Input current  | $I_{LN}$  | T    | 5.6  |
| Overload current for 60 s every 600 s at 50 °C       |           | T    | 6.5  |
| Starting current for 2 s every 20 s at 50 °C         |           | T    | 8.6  |
| Maximum leakage current to ground (PE) without motor | $I_{PE}$  | mA   | 25.1   |
| Apparent power                                       |           |      |  |
| Apparent power at rated operation 400 V              | S         | kVA  | 2.98   |
| Apparent power at rated operation 480 V              | S         | kVA  | 3.57   |
| Assigned motor rating                                |           |      |  |
| at 400 V, 50 Hz                                      | P         | kW   | 1.5  |
| at 460 V, 60 Hz                                      | P         | HP   | 2  |
| Braking torque                                       |           |      |  |
| Standard braking torque                              |           |      | max. 30 % $M_N$  |
| DC braking torque                                    |           |      | max. 100% of rated operational current $I_e$ , variable                      |
| Braking torque with external braking resistance      |           |      | max. 100% rated operational current $I_e$ , with external braking resistance |
| minimum external braking resistance                  | $R_{min}$ | Ω    | 55   |
| Switch-on threshold for the braking transistor       | $U_{DC}$  | V DC | 765  |

|   |                  |     |  |
|---|------------------|-----|--|
| Switching frequency                           | f <sub>PWM</sub> | kHz | 6<br>adjustable 1 - 16 (real)          |
| Heat dissipation at rated operational current | P <sub>V</sub>   | W   | 66.4                                   |
| Efficiency                                    |                  | %   | 96                                     |
| Fitted with                                   |                  |     | Fan (internal, temperature controlled) |
| Frame size                                    |                  |     | FS2                                    |
| Weight  | m                | kg  | 0,700                                  |

## Technical data ETIM 5.0

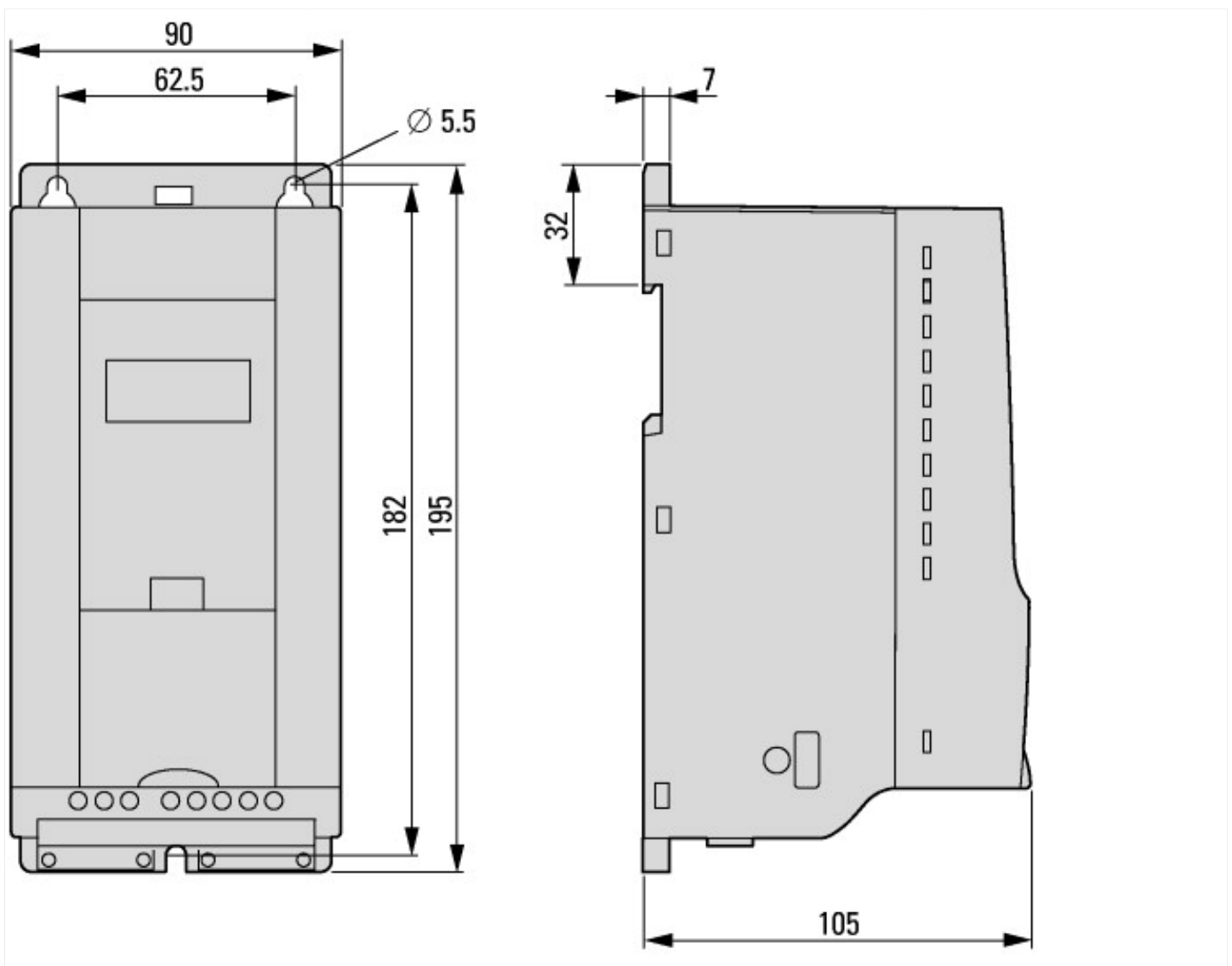
|   |  |    |          |
|---|--|----|----------|
| Low-voltage industrial components (EG000017) / Frequency controller =< 1 kV (EC001857)  |  |    |          |
| Electric engineering, automation, process control engineering / Electrical drive / Static frequency converter / Static frequency converter = < 1 kV (ecI@ss8-27-02-31-01 [AKE177010]) |  |    |          |
| Mains voltage   |  | V  | 0 - 480  |
| Mains frequency   |  |    | 50/60 Hz |
| Number of phases input  |  |    | 3        |
| Number of phases output   |  |    | 3        |
| Max. output frequency   |  | Hz | 320      |
| Rated output voltage  |  | V  | 400      |
| Measuring output current  |  | A  | 4.3      |
| Output power at rated output voltage  |  | kW | 1.5      |
| Max. output at quadratic load at rated output voltage   |  | kW | 1.5      |
| Max. output at linear load at rated output voltage  |  | kW | 1.5      |
| With control unit   |  |    | Yes      |
| Application in industrial area permitted  |  |    | Yes      |
| Application in domestic- and commercial area permitted  |  |    | No       |
| Supporting protocol for TCP/IP  |  |    | No       |
| Supporting protocol for PROFIBUS  |  |    | No       |
| Supporting protocol for CAN   |  |    | No       |
| Supporting protocol for INTERBUS  |  |    | No       |
| Supporting protocol for ASI   |  |    | No       |
| Supporting protocol for KNX   |  |    | No       |
| Supporting protocol for MODBUS  |  |    | Yes      |
| Supporting protocol for Data-Highway  |  |    | No       |
| Supporting protocol for DeviceNet   |  |    | No       |
| Supporting protocol for SUCONET   |  |    | No       |
| Supporting protocol for LON   |  |    | No       |
| Supporting protocol for PROFINET IO   |  |    | No       |
| Supporting protocol for PROFINET CBA  |  |    | No       |
| Supporting protocol for SERCOS  |  |    | No       |
| Supporting protocol for Foundation Fieldbus   |  |    | No       |
| Supporting protocol for EtherNet/IP   |  |    | No       |
| Supporting protocol for AS-Interface Safety at Work   |  |    | No       |
| Supporting protocol for DeviceNet Safety  |  |    | No       |
| Supporting protocol for INTERBUS-Safety   |  |    | No       |
| Supporting protocol for PROFIsafe   |  |    | No       |
| Supporting protocol for SafetyBUS p   |  |    | No       |
| Supporting protocol for other bus systems   |  |    | No       |
| Number of HW-interfaces industrial Ethernet   |  |    | 0        |
| Number of HW-interfaces PROFINET  |  |    | 0        |
| Number of HW-interfaces RS-232  |  |    | 0        |
| Number of HW-interfaces RS-422  |  |    | 0        |
| Number of HW-interfaces RS-485  |  |    | 1        |
| Number of HW-interfaces serial TTY  |  |    | 0        |
| Number of HW-interfaces USB   |  |    | 0        |
| Number of HW-interfaces parallel  |  |    | 0        |
| Number of HW-interfaces other   |  |    | 0        |

|  |    |             |
|--|----|-------------|
| With optical interface                     |    | No          |
| With PC connection                         |    | Yes         |
| Integrated braking resistance              |    | No          |
| 4-quadrant operation possible              |    | No          |
| Type of converter                          |    | U converter |
| Degree of protection (IP)                  |    | IP20        |
| Height                                     | mm | 195         |
| Width                                      | mm | 90          |
| Depth                                      | mm | 105         |
| Relative symmetric net frequency tolerance | %  | 10          |
| Relative symmetric net current tolerance   | %  | 10          |

## Approvals

|                                      |  |   |
|--------------------------------------|--|---|
| Product Standards                    |  | UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking |
| UL File No.                          |  | E134360   |
| UL Category Control No.              |  | NMMS, NMMS7   |
| CSA File No.                         |  | UL report applies to both US and Canada                             |
| CSA Class No.                        |  | 3211-06   |
| North America Certification          |  | UL listed, certified by UL for use in Canada                        |
| Specially designed for North America |  | No  |
| Suitable for                         |  | Branch circuits   |
| Max. Voltage Rating                  |  | 3- 480 V AC IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey)            |
| Degree of Protection                 |  | IEC: IP20; optionally UL/CSA NEMA 1                                 |

## Dimensions



## Additional product information (links)

IL04020006Z MMX adjustable frequency drives, size 1, 2 and 3

IL04020006Z MMX adjustable frequency drives, size 1, 2 and 3

MN04020001Z M-Max variable frequency drive, manual

MN04020001Z Frequenzumrichter M-Max, Handbuch - Deutsch

MN04020001Z M-Max variable frequency drive, manual - English

MN04020001Z Convertisseurs de fréquence M-Max, manuel - français

MN04020001Z Frekvenční měnič M-Max, manuál - čeština

MN04020001Z Convertitori di frequenza M-Max, manuale - italiano

MN04020001Z Przemienik częstotliwości M-Max, podręcznik - polski

MN04020001Z M-Max variable frequency drive, manual - русский