



Variable frequency drive, 500 V AC, 3-phase, 54 A, 37 kW, IP55/NEMA 12, OLED display, DC link choke



Powering Business Worldwide™



Тип **DA1-35054NB-B55C**  
 Каталог № **176969**  
 Alternate Catalog No. **DA1-35054NB-B55C**

## Delivery program

|                                  |          |    |                                                                                                                                                                 |
|----------------------------------|----------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product range                    |          |    | Variable frequency drives                                                                                                                                       |
| Part group reference (e.g. DIL)  |          |    | DA1                                                                                                                                                             |
| Rated operational voltage        | $U_e$    |    | 500 V AC, 3-phase<br>600 V AC, 3-phase                                                                                                                          |
| Output voltage with $V_e$        | $U_2$    |    | 500 V AC, 3-phase<br>600 V AC, 3-phase                                                                                                                          |
| Mains voltage (50/60Hz)          | $U_{LN}$ | V  | 500 (-10%) - 600 (+10%)                                                                                                                                         |
| <b>Rated operational current</b> |          |    |                                                                                                                                                                 |
| At 150% overload                 | $I_e$    | A  | 54                                                                                                                                                              |
| Note                             |          |    | Rated operational current at a switching frequency of 8 kHz and an ambient air temperature of +40 °C                                                            |
| <b>Assigned motor rating</b>     |          |    |                                                                                                                                                                 |
| Note                             |          |    | 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 |
| Note                             |          |    | Overload cycle for 60 s every 600 s                                                                                                                             |
| Note                             |          |    | at 500 V, 50 Hz                                                                                                                                                 |
| 150 % Overload                   | P        | kW | 37                                                                                                                                                              |
| 150 % Overload                   | $I_M$    | A  | 54                                                                                                                                                              |
| Note                             |          |    | at 525 V, 50 Hz                                                                                                                                                 |
| 150 % Overload                   | P        | kW | 37                                                                                                                                                              |
| 150 % Overload                   | $I_M$    | A  | 51.5                                                                                                                                                            |
| Note                             |          |    | at 550 - 600 V, 60 Hz                                                                                                                                           |
| 150 % Overload                   | P        | HP | 50                                                                                                                                                              |
| 150 % Overload                   | $I_M$    | A  | 52                                                                                                                                                              |
| Degree of Protection             |          |    | IP55/NEMA 12                                                                                                                                                    |
| Interface/field bus (built-in)   |          |    | OP-Bus (RS485)/Modbus RTU, CANopen®                                                                                                                             |
| Fieldbus connection (optional)   |          |    | Ethernet IP<br>DeviceNet<br>PROFIBUS<br>PROFINET<br>Modbus-TCP<br>EtherCAT<br>SmartWire-DT                                                                      |
| Fitted with                      |          |    | Brake chopper<br>OLED display<br>Additional PCB protection<br>DC link choke                                                                                     |
| Parameterization                 |          |    | Keypad<br>Fieldbus<br>drivesConnect<br>drivesConnect mobile (App)                                                                                               |
| Frame size                       |          |    | FS5                                                                                                                                                             |
| Connection to SmartWire-DT       |          |    | yes<br>in conjunction with DX-NET-SWD1 SmartWire DT module                                                                                                      |

## Technical data

|                |  |  |                                                                                                                                     |
|----------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b> |  |  |                                                                                                                                     |
| Standards      |  |  | Specification for general requirements: IEC/EN 61800-2<br>EMC requirements: IEC/EN 61800-3<br>Safety requirements: IEC/EN 61800-5-1 |
| Certifications |  |  | CE, UL, cUL, RCM, UkrSEPRO, EAC                                                                                                     |

|                                    |          |    |                                                                                        |
|------------------------------------|----------|----|----------------------------------------------------------------------------------------|
| Approvals                          |          |    | DNV                                                                                    |
| Production quality                 |          |    | RoHS, ISO 9001                                                                         |
| Climatic proofing                  | $\rho_w$ | %  | < 95%, average relative humidity (RH), non-condensing, non-corrosive                   |
| Air quality                        |          |    | 3C3, 3S3                                                                               |
| Ambient temperature                |          |    |                                                                                        |
| Operating ambient temperature min. |          | °C | -10                                                                                    |
| Operating ambient temperature max. |          | °C | + 40                                                                                   |
|                                    |          |    | operation (with 150 % overload)                                                        |
| Storage                            | $\theta$ | °C | -40 - +60                                                                              |
| Mounting position                  |          |    | Vertical                                                                               |
| Altitude                           |          | m  | 0 - 1000 m above sea level<br>Above 1000 m: 1% derating for every 100 m<br>max. 4000 m |
| Degree of Protection               |          |    | IP55/NEMA 12                                                                           |
| Protection against direct contact  |          |    | BGV A3 (VBG4, finger- and back-of-hand proof)                                          |

## Main circuit

|                                                             |            |     |                                                                                                                                                                   |
|-------------------------------------------------------------|------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply                                                      |            |     |                                                                                                                                                                   |
| Rated operational voltage                                   | $U_e$      |     | 500 V AC, 3-phase<br>600 V AC, 3-phase                                                                                                                            |
| Mains voltage (50/60Hz)                                     | $U_{LN}$   | V   | 500 (-10%) - 600 (+10%)                                                                                                                                           |
| Input current (150% overload)                               | $I_{LN}$   | A   | 59.9                                                                                                                                                              |
| System configuration                                        |            |     | AC supply systems with earthed center point                                                                                                                       |
| Supply frequency                                            | $f_{LN}$   | Hz  | 50/60                                                                                                                                                             |
| Frequency range                                             | $f_{LN}$   | Hz  | 48 - 62                                                                                                                                                           |
| Mains switch-on frequency                                   |            |     | Maximum of one time every 30 seconds                                                                                                                              |
| Power section                                               |            |     |                                                                                                                                                                   |
| Function                                                    |            |     | Variable frequency drive with internal DC link, DC link choke and IGBT inverter                                                                                   |
| Overload current (150% overload)                            | $I_L$      | A   | 81                                                                                                                                                                |
| max. starting current (High Overload)                       | $I_H$      | %   | 200                                                                                                                                                               |
| Note about max. starting current                            |            |     | for 4 seconds every 40 seconds                                                                                                                                    |
| Output voltage with $V_e$                                   | $U_2$      |     | 500 V AC, 3-phase<br>600 V AC, 3-phase                                                                                                                            |
| Output Frequency                                            | $f_2$      | Hz  | 0 - 50/60 (max. 500)                                                                                                                                              |
| Switching frequency                                         | $f_{PWM}$  | kHz | 8<br>adjustable 4 - 24 (audible)                                                                                                                                  |
| Operation Mode                                              |            |     | U/f control<br>Speed control with slip compensation<br>sensorless vector control (SLV)<br>optional: Vector control with feedback (CLV)                            |
| Frequency resolution (setpoint value)                       | $\Delta f$ | Hz  | 0.1                                                                                                                                                               |
| Rated operational current                                   |            |     |                                                                                                                                                                   |
| At 150% overload                                            | $I_e$      | A   | 54                                                                                                                                                                |
| Note                                                        |            |     | Rated operational current at a switching frequency of 8 kHz and an ambient air temperature of +40 °C                                                              |
| Power loss                                                  |            |     |                                                                                                                                                                   |
| Heat dissipation at rated operational current $I_e = 150\%$ | $P_V$      | W   | 1110                                                                                                                                                              |
| Efficiency                                                  | $\eta$     | %   | 97                                                                                                                                                                |
| Maximum leakage current to ground (PE) without motor        | $I_{PE}$   | mA  | 54                                                                                                                                                                |
| Fitted with                                                 |            |     | Brake chopper<br>OLED display<br>Additional PCB protection<br>DC link choke                                                                                       |
| Safety function                                             |            |     | STO (Safe Torque Off, SIL2, PLd Cat 3)                                                                                                                            |
| Frame size                                                  |            |     | FS5                                                                                                                                                               |
| Motor feeder                                                |            |     |                                                                                                                                                                   |
| Note                                                        |            |     | for normal internally and externally ventilated 4 pole, three-phase asynchronous motors with $1500 \text{ rpm}^{-1}$ at 50 Hz or $1800 \text{ min}^{-1}$ at 60 Hz |
| Note                                                        |            |     | Overload cycle for 60 s every 600 s                                                                                                                               |
| Note                                                        |            |     | at 500 V, 50 Hz                                                                                                                                                   |
| 150 % Overload                                              | P          | kW  | 37                                                                                                                                                                |

|                                                 |           |          |                                                                                                          |
|-------------------------------------------------|-----------|----------|----------------------------------------------------------------------------------------------------------|
| Note                                            |           |          | at 525 V, 50 Hz                                                                                          |
| 150 % Overload                                  | P         | kW       | 37                                                                                                       |
| Note                                            |           |          | at 550 - 600 V, 60 Hz                                                                                    |
| 150 % Overload                                  | P         | HP       | 50                                                                                                       |
| maximum permissible cable length                | l         | m        | screened: 100<br>screened, with motor choke: 200<br>unscreened: 150<br>unscreened, with motor choke: 300 |
| Apparent power                                  |           |          |                                                                                                          |
| Apparent power at rated operation 600 V         | S         | kVA      | 56.12                                                                                                    |
| Braking function                                |           |          |                                                                                                          |
| 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% of rated operational current $I_e$ with external braking resistor                              |
| minimum external braking resistance             | $R_{min}$ | $\Omega$ | 16                                                                                                       |
| Switch-on threshold for the braking transistor  | $U_{DC}$  | V        | 975 V DC                                                                                                 |

### Control section

|                                |       |   |                                                                                          |
|--------------------------------|-------|---|------------------------------------------------------------------------------------------|
| External control voltage       | $U_c$ | V | 24 V DC (max. 100 mA)                                                                    |
| Reference voltage              | $U_s$ | V | 10 V DC (max. 10 mA)                                                                     |
| Analog inputs                  |       |   | 2, parameterizable, 0 - 10 V DC, 0/4 - 20 mA                                             |
| Analog outputs                 |       |   | 2, parameterizable, 0 - 10 V, 0/4 - 20 mA                                                |
| Digital inputs                 |       |   | 3, parameterizable, max. 30 VDC, max. 5 for non-parameterized analog inputs              |
| Digital outputs                |       |   | 2, parameterizable, 24 V DC                                                              |
| Relay outputs                  |       |   | 2, parameterizable, 1 N/O and 1 changeover contact, 6 A (250 V, AC-1) / 5 A (30 V, DC-1) |
| Interface/field bus (built-in) |       |   | OP-Bus (RS485)/Modbus RTU, CANopen <sup>®</sup>                                          |

### Assigned switching and protective elements

|                                                   |  |   |                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------|--|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Wiring                                      |  |   |                                                                                                                                                                                                                                                                                            |
| Safety device (fuse or miniature circuit-breaker) |  |   |                                                                                                                                                                                                                                                                                            |
| IEC (Type B, gG), 150 %                           |  |   | 80NHG000B<br>NZMC1-S80                                                                                                                                                                                                                                                                     |
| Notes                                             |  |   | NH fuse used together with TB00-D fuse base                                                                                                                                                                                                                                                |
| UL (Class CC or J)                                |  | A | 80                                                                                                                                                                                                                                                                                         |
| Notes                                             |  |   | LPJ fuse used together with JM60100-3 fuse base                                                                                                                                                                                                                                            |
| UL (Class CC or J)                                |  | A | LPJ-80SP                                                                                                                                                                                                                                                                                   |
| Mains contactor                                   |  |   |                                                                                                                                                                                                                                                                                            |
| 150 % overload (CT/ $I_H$ , at 50 °C)             |  |   | DILM50                                                                                                                                                                                                                                                                                     |
| Main choke                                        |  |   |                                                                                                                                                                                                                                                                                            |
| 150 % overload (CT/ $I_H$ , at 50 °C)             |  |   | DX-LN3-080                                                                                                                                                                                                                                                                                 |
| DC link connection                                |  |   |                                                                                                                                                                                                                                                                                            |
| Braking resistance                                |  |   |                                                                                                                                                                                                                                                                                            |
| 10 % duty factor (DF)                             |  |   | DX-BR022-9K2                                                                                                                                                                                                                                                                               |
| 20 % duty factor (DF)                             |  |   | R:2 x DX-BR012-18K1                                                                                                                                                                                                                                                                        |
| 40 % duty factor (DF)                             |  |   | P:3 x DX-BR047-9K1                                                                                                                                                                                                                                                                         |
| Notes concerning braking resistances:             |  |   | P:n = "n" resistors connected in parallel<br>R:m = "m" resistors connected in series<br>The brake resistors are assigned based on the maximum rated power of the variable frequency drive. Additional brake resistors and designs (e.g. different duty cycles) are available upon request. |
| Motor feeder                                      |  |   |                                                                                                                                                                                                                                                                                            |
| motor choke                                       |  |   |                                                                                                                                                                                                                                                                                            |
| 150 % overload (CT/ $I_H$ , at 50 °C)             |  |   | DX-LM3-063                                                                                                                                                                                                                                                                                 |
| Sine filter                                       |  |   |                                                                                                                                                                                                                                                                                            |
| 150 % overload (CT/ $I_H$ , at 50 °C)             |  |   | SIN-0085-6-0-P                                                                                                                                                                                                                                                                             |

### Design verification as per IEC/EN 61439

|                                                               |       |   |    |
|---------------------------------------------------------------|-------|---|----|
| Технические характеристики для подтверждения типа конструкции |       |   |    |
| Номинальный ток для указания потери мощности                  | $I_n$ | A | 54 |

|                                                                    |                  |    |                                                                                                                                                                               |
|--------------------------------------------------------------------|------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Потеря мощности на полюс, в зависимости от тока                    | P <sub>vid</sub> | W  | 0                                                                                                                                                                             |
| Потеря мощности оборудования, в зависимости от тока                | P <sub>vid</sub> | W  | 1110                                                                                                                                                                          |
| Статическая потеря мощности, не зависит от тока                    | P <sub>vs</sub>  | W  | 0                                                                                                                                                                             |
| Способность отдавать потери мощности                               | P <sub>ve</sub>  | W  | 0                                                                                                                                                                             |
| Мин. рабочая температура                                           |                  | °C | -10                                                                                                                                                                           |
| Макс. рабочая температура                                          |                  | °C | 40                                                                                                                                                                            |
|                                                                    |                  |    | Эксплуатация (с перегрузкой 150 %)                                                                                                                                            |
| Проверка конструкции IEC/EN 61439                                  |                  |    |                                                                                                                                                                               |
| 10.2 твёрдость материалов и деталей                                |                  |    |                                                                                                                                                                               |
| 10.2.2 Коррозионная стойкость                                      |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.2.3.1 Нагревостойкость изоляции                                 |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.2.3.2 Сопротивление изоляционных материалов при обычном нагреве |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.2.3.3 Сопротивление изоляционных материалов при сильном нагреве |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.2.4 Устойчивость к ультрафиолетовому излучению                  |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.2.5 Подъём                                                      |                  |    | Не имеет значения, поскольку необходимо оценить всё коммутационное оборудование.                                                                                              |
| 10.2.6 Испытание на удар                                           |                  |    | Не имеет значения, поскольку необходимо оценить всё коммутационное оборудование.                                                                                              |
| 10.2.7 Ярлыки                                                      |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.3 Класс защиты изоляции                                         |                  |    | Не имеет значения, поскольку необходимо оценить всё коммутационное оборудование.                                                                                              |
| 10.4 Воздушные промежутки и пути утечки тока                       |                  |    | Требования производственного стандарта выполнены.                                                                                                                             |
| 10.5 Защита от удара электрическим током                           |                  |    | Не имеет значения, поскольку необходимо оценить всё коммутационное оборудование.                                                                                              |
| 10.6 Монтаж оборудования                                           |                  |    | Не имеет значения, поскольку необходимо оценить всё коммутационное оборудование.                                                                                              |
| 10.7 Внутренние электрические цепи и соединения                    |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства.                                                                                         |
| 10.8 Подключения проводов, введённых снаружи                       |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства.                                                                                         |
| 10.9 Свойства изоляции                                             |                  |    |                                                                                                                                                                               |
| 10.9.2 Электрическая прочность при рабочей частоте                 |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства.                                                                                         |
| 10.9.3 Прочность по отношению к импульсному напряжению             |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства.                                                                                         |
| 10.9.4 Проверка оболочек кабелей из изолирующего материала         |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства.                                                                                         |
| 10.10 Нагрев                                                       |                  |    | Расчёт параметров нагрева находится в сфере ответственности компании, монтирующей распределительные устройства. Компания Eaton указывает данные по потере мощности устройств. |
| 10.11 Стойкость к коротким замыканиям                              |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства. Соблюдать указания для коммутационных устройств.                                        |
| 10.12 Электромагнитная совместимость                               |                  |    | Находится в сфере ответственности компании, монтирующей распределительные устройства. Соблюдать указания для коммутационных устройств.                                        |
| 10.13 Механическая функция                                         |                  |    | Для устройства требования считаются выполненными, если были соблюдены данные инструкции по монтажу (IL).                                                                      |

## Technical data ETIM 7.0

|                                                                                                                                                                                                                 |    |  |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|-----------|
| Low-voltage industrial components (EG000017) / Frequency converter =< 1 kV (EC001857)                                                                                                                           |    |  |           |
| Электротехника, электроника, системы автоматизации / Электроприводы, электродвигатели / Вентильные преобразователи частоты / Вентильные преобразователи частоты = < 1 kV (ecl@ss10.0.1-27-02-31-01 [AKE177014]) |    |  |           |
| Mains voltage                                                                                                                                                                                                   | V  |  | 540 - 660 |
| Mains frequency                                                                                                                                                                                                 |    |  | 50/60 Hz  |
| Number of phases input                                                                                                                                                                                          |    |  | 3         |
| Number of phases output                                                                                                                                                                                         |    |  | 3         |
| Max. output frequency                                                                                                                                                                                           | Hz |  | 500       |
| Max. output voltage                                                                                                                                                                                             | V  |  | 600       |
| Nominal output current I2N                                                                                                                                                                                      | A  |  | 54        |
| Max. output at quadratic load at rated output voltage                                                                                                                                                           | kW |  | 37        |

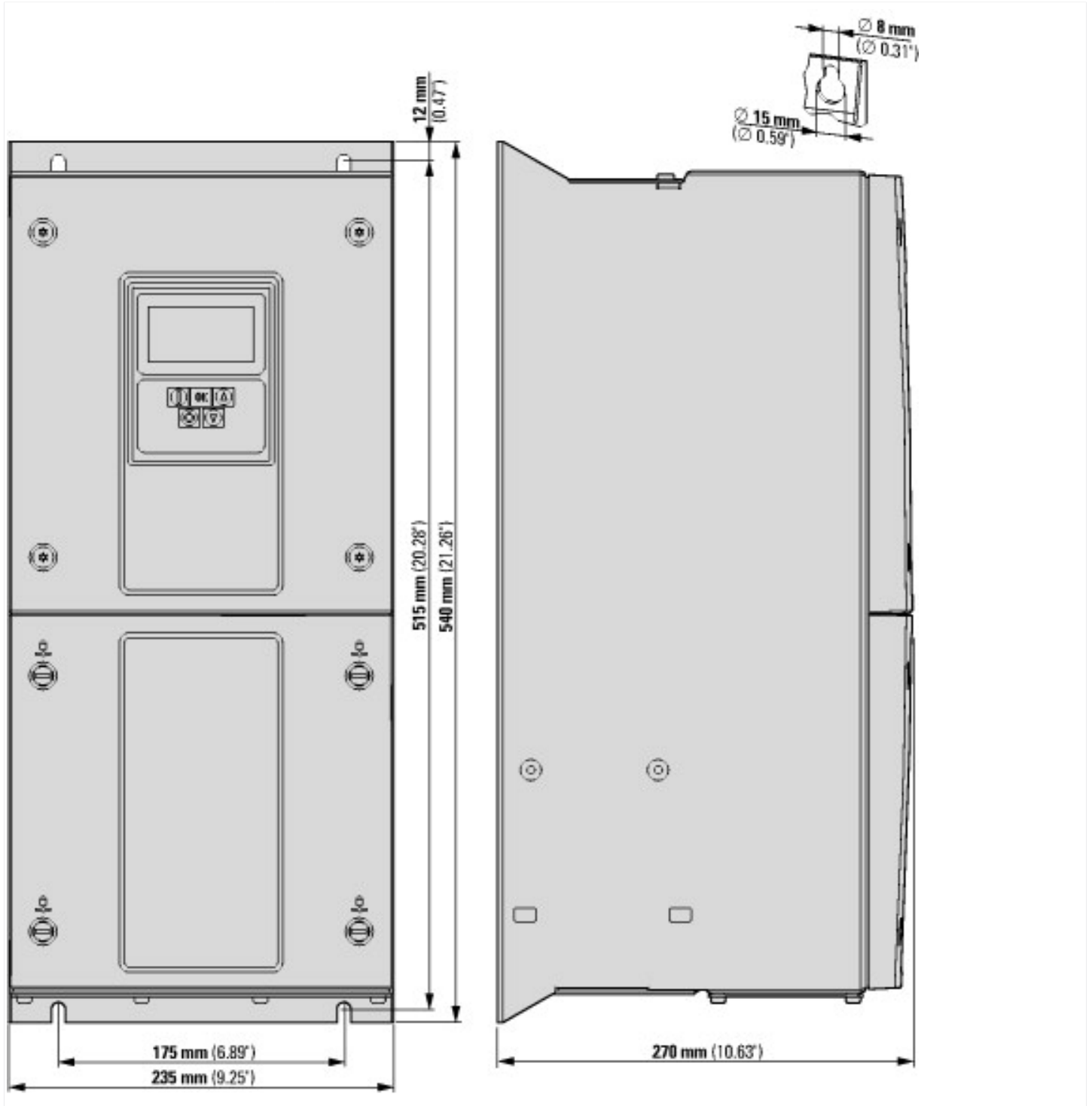
|                                                        |  |    |             |
|--------------------------------------------------------|--|----|-------------|
| Max. output at linear load at rated output voltage     |  | kW | 37          |
| Relative symmetric net frequency tolerance             |  | %  | 10          |
| Relative symmetric net voltage tolerance               |  | %  | 10          |
| Number of analogue outputs                             |  |    | 2           |
| Number of analogue inputs                              |  |    | 2           |
| Number of digital outputs                              |  |    | 2           |
| Number of digital inputs                               |  |    | 5           |
| With control unit                                      |  |    | Yes         |
| Application in industrial area permitted               |  |    | Yes         |
| Application in domestic- and commercial area permitted |  |    | No          |
| Supporting protocol for TCP/IP                         |  |    | Yes         |
| Supporting protocol for PROFIBUS                       |  |    | Yes         |
| Supporting protocol for CAN                            |  |    | Yes         |
| 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                      |  |    | Yes         |
| Supporting protocol for SUCONET                        |  |    | No          |
| Supporting protocol for LON                            |  |    | No          |
| Supporting protocol for PROFINET IO                    |  |    | Yes         |
| Supporting protocol for PROFINET CBA                   |  |    | No          |
| Supporting protocol for SERCOS                         |  |    | No          |
| Supporting protocol for Foundation Fieldbus            |  |    | No          |
| Supporting protocol for EtherNet/IP                    |  |    | Yes         |
| 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 BACnet                         |  |    | Yes         |
| Supporting protocol for other bus systems              |  |    | Yes         |
| Number of HW-interfaces industrial Ethernet            |  |    | 0           |
| Number of 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 breaking resistance                         |  |    | Yes         |
| 4-quadrant operation possible                          |  |    | Yes         |
| Type of converter                                      |  |    | U converter |
| Degree of protection (IP)                              |  |    | IP55        |
| Degree of protection (NEMA)                            |  |    | 12          |
| Height                                                 |  | mm | 540         |
| Width                                                  |  | mm | 235         |
| Depth                                                  |  | mm | 270         |

## Approvals

|                   |  |                                                                     |
|-------------------|--|---------------------------------------------------------------------|
| Product Standards |  | UL 508C; CSA-C22.2 No. 14; IEC/EN61800-3; IEC/EN61800-5; CE marking |
|-------------------|--|---------------------------------------------------------------------|

|                                      |  |                                                                  |
|--------------------------------------|--|------------------------------------------------------------------|
| UL File No.                          |  | E172143                                                          |
| UL Category Control No.              |  | NMMS, NMMS7                                                      |
| CSA File No.                         |  | UL report applies to both US and Canada                          |
| 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- 600 V AC (+10 %) IEC: TN-S UL/CSA: "Y" (Solidly Grounded Wey) |
| Degree of Protection                 |  | IEC: IP55                                                        |

## Dimensions



## Additional product information (links)

### IL04020011Z Преобразователь частоты DA1 (FS4 - 7)

IL04020011Z Преобразователь частоты DA1 (FS4 - 7) [https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL04020011Z2018\\_04.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL04020011Z2018_04.pdf)

### MN04020005Z Преобразователи частоты DA1, руководство Подключение

MN04020005Z Frequenzumrichter DA1, Installationshandbuch - Deutsch [https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN04020005Z\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020005Z_DE.pdf)

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|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MN04020005Z DA1 variable frequency drives, Installation manual - English                                             | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020005Z_EN.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020005Z_EN.pdf</a>                                                             |
| MN04020005Z Convertitore di frequenza DA1, manuale Installazione - italiano                                          | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020005Z_IT.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020005Z_IT.pdf</a>                                                             |
| <b>MN04020006Z Преобразователи частоты DA1, руководство Параметры</b>                                                |                                                                                                                                                                                                                             |
| MN04020006Z Frequenzumrichter DA1, Parameterhandbuch - Deutsch                                                       | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_DE.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_DE.pdf</a>                                                             |
| MN04020006Z DA1 variable frequency drives, Parameters manual - English                                               | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_EN.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_EN.pdf</a>                                                             |
| MN04020006Z Convertitore di frequenza DA1, manuale Parametri - italiano                                              | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_IT.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN04020006Z_IT.pdf</a>                                                             |
| CA04020001Z-DE Ассортиментный каталог: эффективное проектирование приводной техники, двигатели - запуск и управление | <a href="http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238_de.pdf">http://www.eaton.eu/DE/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1095238_de.pdf</a> |